



50th

AIIMS Golden Jubilee Annual Report 2005-06



ALL INDIA INSTITUTE OF MEDICAL SCIENCES
New Delhi-110029

AIIMS
50th Golden Jubilee
ANNUAL REPORT

2005–2006



All India Institute of Medical Sciences
New Delhi - 110029

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AIIMS 2005-2006



All India Institute of Medical Sciences

The All India Institute of Medical Sciences (AIIMS) was established by an Act of Parliament in 1956 as an institution of national importance. Its main objectives were to develop patterns of teaching in undergraduate and postgraduate medical education in all its branches, so as to demonstrate a high standard of medical education to all medical colleges and other allied institutions in India; to bring together in one place educational facilities of the highest order for the training of personnel in all important branches of health activity; and to attain self-sufficiency in postgraduate medical education.

AIIMS has comprehensive facilities for teaching, research and patient care. Medical and paramedical courses are taught at AIIMS. The institution awards its own undergraduate, postgraduate and doctorate degrees.

Teaching and research are conducted in 50 disciplines. AIIMS plays a leading role in the field of medical research, having more than 1200 research publications by its faculty and researchers in a year. AIIMS also has a College of Nursing, which awards BSc (Hons) Nursing and BSc Nursing (Post-certificate) degrees.

Twenty-five clinical departments, including six superspecialty centres, manage practically all types of disease conditions with support from pre-clinical and para-clinical departments. AIIMS also runs a 60-bedded hospital at the Comprehensive Rural Health Centre at Ballabgarh in Haryana and provides health cover to about 7.7 lakh people through the Centre for Community Medicine.



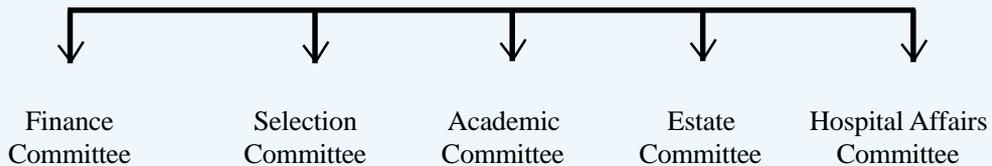
AIIMS

ORGANIZATION

Institute Body



Governing Body



**All India Institute of Medical Sciences
New Delhi**

AIIMS AT A GLANCE

2005–2006

Year of establishment 1956

Teaching Departments and Centres	50	Medical graduates	2129
Faculty members	543	Postgraduates	6043
Non-faculty staff	7702	Nursing graduates	1411
Undergraduate students	548	Publications/abstracts in journals	1220
Postgraduate students	894	Books/monographs/chapters in books	344

Hospital Services

Facility	Outpatients	Admissions	Surgery	Beds	
				General	Private
Main Hospital	16,30,479	64,760	82,122	861	125
R.P. Centre for Ophthalmic Sciences	4,56,078	26,315	24,045	280	21
Dr B.R. Ambedkar Institute Rotary Cancer Hospital	70,783	19,699	3,306	106	–
Cardiothoracic Sciences Centre	10,29,251	11,389	3,451	166	14
Neurosciences Centre	87,929	7,410	3,546	166	14
National Drug Dependence Treatment Centre	54,140	1,151	–	50	–

Average bed occupancy	82.4%
Average period of hospital stay	5.4 days
Net death rate	3.0%
Infection rate (crude)	8.48%

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1. Director's Review

I am glad to present the Fiftieth Annual Report and audited statement of accounts for the year 2005-2006.

In pursuance of the recommendations made by the Bhoré Committee in 1946, the All India Institute of Medical Sciences (AIIMS) was established in 1956, by an Act of Parliament, as an institution of national importance. AIIMS was entrusted to develop the highest standards of teaching, research and patient care. It has the mandate to demonstrate patterns of undergraduate and postgraduate medical education in all its branches. It aims to bring together at one place educational facilities of the highest order for the training of personnel in all important branches of health activity; and to attain self-sufficiency in postgraduate medical education.

During this year, AIIMS entered the 50th year of its existence as a leader in the field of medical education, research and patient care. Besides, the main hospital, AIIMS now comprises of seven centres, which by themselves are centres of excellence catering to a large population from our country and also to patients from neighbouring countries. These centres are the Cardiothoracic Sciences Centre, Neurosciences Centre, Dr B.R. Ambedkar Institute Rotary Cancer Hospital, Dr Rajendra Prasad Centre for Ophthalmic Sciences, Centre for Behavioural Sciences (National Drug Dependence Treatment Centre), Centre for Dental Education and Research and Jai Prakash Narayan Apex Trauma Centre. AIIMS continues to provide consultant services to several neighbouring countries under bilateral agreements or under the aegis of international agencies. During these 50 years the Institute has awarded a total of 10,192 degrees (Doctoral, Postgraduate and Graduate).

AIIMS is at the forefront of Medical Research, be it in the numbers of papers published, the impact factors of the Journals they were published in, or the total number of citations. This was verified by independent database related methodologies. However, research at AIIMS is not just about academics. Progress has also been made on product development and patenting a number of discoveries and inventions. Right from basic medical sciences to public health, AIIMS endeavours to generate newer understanding and insight in order to improve the well being of the people of India. This year 388 extramurally funded research projects are in progress. Research grants totalling Rs 34 crores (approx.) have been received from various international and national funding agencies during 2005-2006. A total of 67 intramural research projects have also been awarded, with a focus of encouraging faculty members at initial stages of their careers.

AIIMS is a university created by an Act of Parliament and awards its own degrees. AIIMS is fully funded by the Government of India. However, for research activities, grants are also received from various sources including national and international agencies. The major part of the hospital services are highly subsidized for patients coming to AIIMS and are free for poor patients. Certain categories of patients are charged only the cost of consumables for treatment rendered to them.

During the 2005-2006 academic session (i.e. for courses commencing in July 2005 and January 2006), 346 students were admitted to various postgraduate, post-doctoral and superspecialty courses, i.e. MD, MS, MDS, MHA, PhD, MCh, DM and MSc in various specialties (including 20 state sponsored and 11 foreign nationals). AIIMS provides full-time postgraduate and post-doctoral courses in over 45 disciplines. This year, 216 students qualified for the above degrees. The postgraduate students are

trained to be dedicated teachers, committed researchers and, above all, competent doctors who can fulfil these roles independently.

This year, AIIMS admitted 50 students to the MB, BS course, 16 to BSc Nursing (Post-certificate) course, 50 to BSc (Hons) Nursing course, 13 to the BSc (Hons) in Ophthalmic Techniques and 7 to the BSc (Hons) in Medical Technology in Radiography. The MSc Nursing course is in its second year since inception in 2004, and covers specialized areas such as Oncology, Cardiology, Nephrology, Neurosciences, Paediatrics, Psychiatry and Critical Care nursing. Fifteen new students have been admitted to this course in the current year.

AIIMS also provides short-term and long-term training to doctors, undergraduate and postgraduate students from various organizations and State Governments, and to WHO fellows. During the year 552 received short- and long-term training at AIIMS. The details are provided below:

1. Short-term training	460
2. Long-term training	18
3. WHO in-country fellowship	58
4. WHO fellowship	16
5. Elective training	64
6. Foreign nationals	51

The MB,BS course is spread over five and a half years and continues to be highly rated by peers and students. National surveys by leading media publications have ranked AIIMS the best medical college in India for the fifth consecutive year. Courses such as the paramedical courses BSc (Hons) in Nursing, Ophthalmic Techniques and Medical Technology in Radiography continue to be popular and attract students from all over India and other countries. The curricula of these courses are periodically reviewed and improved by the faculty of AIIMS.

Scheduled Caste and Scheduled Tribe candidates are given due consideration and weightage in accordance with the Government of India guidelines in all selections. During the current year, 28 candidates were selected for various undergraduate courses – 11 SC/ST candidates were selected to the MB, BS course, 3 candidates were admitted to the BSc (Hons) Ophthalmic Techniques, 1 candidate was admitted to the BSc (Hons) Medical Technology in Radiography course and 11 candidates were admitted to the BSc (Hons) Nursing Course.

The Institute organized a number of workshops, symposia, conferences and training programs in collaboration with various national and international agencies during the year. Professionals from various institutions all over the country participated in these seminars and workshops and benefited. Guest and public lectures were organized by visiting experts and the faculty of AIIMS. Academic activities and public lectures received an additional impetus because of our Golden Jubilee celebrations.

During the 34th Convocation of AIIMS held in September 2005, Dr Manmohan Singh, Honourable Prime Minister of India, was conferred the Honorary Fellowship of the Institute. During this convocation, 380 students were awarded their degrees (45 PhD, 34 MCh and DM, 157 postgraduates degrees and 144 graduate degrees).

Utilizing our abilities and resources to the maximum we were able to provide the highest level of patient care services to an ever increasing number of patients. During the year 2005-2006, AIIMS catered not only to patients from India but also from neighbouring countries such as Nepal, Bangladesh, Sri Lanka, Bhutan and other Asian countries. It catered to over 33,28,660 outpatients, over 1,30,724 inpatients, and conducted over 1,16,470 surgical procedures.

During the year, 16,30,479 patients attended the OPD of the main hospital; 10,29,251 patients attended the OPD of the Cardiothoracic Sciences Centre and 87,929 patients attended the Neurosciences Centre. A total of 83,559 patients were admitted to the AIIMS (Main Hospital, Cardiothoracic Sciences and Neuroscience Centres). In addition 2,24,732 patients attended the emergency services at AIIMS. A total of 89,119 major and minor surgical operations were conducted at AIIMS (Main Hospital, Cardiothoracic Sciences and Neuroscience Centres). The Institute has kept abreast with state-of-the-art surgical procedures. The Cardiothoracic Sciences Centre, while standardizing various surgical procedures with very high success rate, have brought down the cost of operation. Minimal access surgery in different disciplines is gaining popularity and has already become the standard of care in some areas.

The expanded Dr B.R. Ambedkar I.R.C.H., has modern up-to-date and sophisticated machinery and equipment matching international standards. It takes on the challenge of ever increasing patient care activities as also the academic requirements related to research and teaching. Dr B.R. Ambedkar I.R.C.H. attended to 70,783 patients in the OPD (new 13,276; old 50,507) and admitted 19,699 patients (short admissions 16,979; regular admissions 2,720). A total of 3306 operations (499 major; 2811 minor) were conducted at the centre. Stem cell transplantation has been a major thrust area of the centre.

The Dr Rajendra Prasad Centre for Ophthalmic Sciences attended to 2,28,266 patients in the General OPD, 46,892 patients in the emergency services and 1,80,924 patients in specialty clinics (a total of 4,56,078 patients) during 2005-2006. The number of admitted patients was 26,315 and 24,045 surgical procedures were conducted during this period.

The Centre for Dental Education and Research is nearly ready to start functioning in its new role as a full fledged Dental College under the aegis of AIIMS. This centre has been identified as a nodal centre for the launch of the national oral health policy of the Government of India. The centre would provide new postgraduate courses in various areas of dentistry and endodontics.

The National Drug Dependence Treatment Centre, a component of the Centre for Behavioural Sciences, has been functional at Ghaziabad. This 50-bedded centre attended to 54,140 patients in the OPD and admitted 1,151 patients for inpatient care.

The construction work of the Jai Prakash Narayan Apex Trauma Centre has been completed. The recruitment of faculty and staff for the centre is going on and the centre is expected to be functional soon.

The facility for telemedicine was formally inaugurated by the Honourable Union Health Minister of India on 10 May 2005. It provides for teleconsultancy, video conferencing and continuing medical education (CME) to various medical colleges and hospitals around the country. During this year 30 tele-medicine CMEs were conducted and 130 telemedicine consultations done.

The average length of stay of patients in AIIMS hospital is around 5.4 days; average bed occupancy is 82.4% and the net death rate is 3.0, which is comparable with the health standards in developed countries. Regular in-service training programs are being conducted by the Hospital Infection Control Committee (HICCOM) on Hospital Infection Control for all healthcare workers (doctors, nursing staff, technical staff and group 'D' employees).

AIIMS participates extensively in the national programs related to Health and Family Welfare. AIIMS faculty participated as consultants and planners of several of these programs and in several instances research conducted at AIIMS has actively influenced program management. Community-based programs have been an integral part of the Institute's clinical and research activities. The Rural Health Centre at Ballabgarh, being run under the supervision of the Centre for Community Medicine, is a unique experiment. Apart from providing comprehensive health services at the doorstep of people of 28 villages, it also has a secondary-level care hospital at Ballabgarh, which attracts patients from afar. The outreach programs of AIIMS continue to make an impact on the community. The morbidity and mortality indicators in the community under the care of Community Rural Health Services Project (CRHSP) at Ballabgarh speak for themselves regarding the care provided by this centre. The infant and maternal mortality rates recorded for the area, are well ahead of national targets. The centre also provides a high degree of secondary level hospital care with an OPD attendance over 80,000 and inpatient admissions of 5,430 in the 50-bedded hospital facility. It has been connected with AIIMS through telemedicine connectivity to provide superspecialty medical advice to patients from rural areas, including two primary health centres (PHCs), without any physical movement of patients.

The urban health centre caters to under privileged urban areas of Delhi. The Urban Health Program and Family Health Exercise Program cater to the urban slums of Delhi having a population of about 60,000. A Mobile Health Clinic of the community medicine department visits these slums 5 times a week and provides preventive, promotive and primary-level curative services. The Centre for Community Medicine also runs a Sex and Marriage Counselling Clinic (SMCC) at AIIMS hospital – a unique service of its kind. AIIMS has established an AIDS Education and Training Cell for the prevention of HIV/AIDS. Among its various activities, this cell operates an interactive telephone helpline called 'Shubchintak' to answer queries of the general public on HIV/AIDS. This helpline is quite popular and is supplemented by an internet-based helpline called 'e-shubchintak'.

In addition to these activities, the Departments of Obstetrics and Gynaecology, Rehabilitation and Physical Medicine, Paediatrics and Dr Rajendra Prasad Centre for Ophthalmic Sciences organize regular camps in the rural community. Programs for the community in Trilokpuri have been a great success. The outpatient facilities for patients with ophthalmic and dental problems are drawing more and more patients.

In the year under review 114 faculty positions were filled by direct recruitment and 74 faculty members were promoted under the assessment promotion scheme. For other staff positions 61 appointments were made by direct recruitment and 394 were promoted to higher grades. AIIMS has also been pursuing numerous activities relating to staff welfare in order to harmonize and improve the functioning of the institution. These processes include the upgrading of housing, workplace and public utilities.

Professor P. Venugopal

2. The Institute and its Committees

INSTITUTE BODY

1. **Hon'ble Dr Anbumani Ramadoss** President
Union Minister for Health and Family Welfare
Nirman Bhawan, New Delhi 110011
2. **Dr Akhilesh Das** Member
Member of Parliament (Rajya Sabha)
11, Lodhi Estate
New Delhi 110003
3. **Professor Vijay Kumar Malhotra** Member
Member of Parliament (Lok Sabha)
6, Dr Bishamber Dass Marg
New Delhi 110001
4. **Dr Karan Singh Yadav** Member
Member of Parliament (Lok Sabha)
C-6, MP Flats, Baba Khadak Singh Marg
New Delhi 110001
5. **Professor Deepak Nayyar** Member (Ex-officio)
Vice Chancellor (up to 15.5.2005)
University of Delhi, Delhi 110007
- Dr Deepak Pental** Member (Ex-officio)
Vice Chancellor (from 2.9.2005)
University of Delhi, Delhi 110007
6. **Shri P.K. Hota** Member (Ex-officio)
Secretary (Health)
Ministry of Health and Family Welfare
Nirman Bhawan, New Delhi 110011
7. **Dr S.P. Agarwal** Member (Ex-officio)
Director General of Health Services (up to 31.10.2005)
Nirman Bhawan, New Delhi 110011
- Dr R.K. Srivastava** Member (Ex-officio)
Director General of Health Services (from 1.11.2005)
Nirman Bhawan, New Delhi 110011

8. **Professor A. Rajasekaran** Member
President
National Board of Examinations
New Delhi

ARJUNA, 70
Ist Avenue, Indira Nagar
Chennai 600020, Tamil Nadu
9. **Dr S.S. Agarwal** Member
Central Drug Research Institute
Chattar Manzil Palace, Post Box No. 173
Lucknow 226001, Uttar Pradesh

Former Director, Sanjay Gandhi Postgraduate
Institute of Medical Sciences (SGPGI)
D-13, Vivekanandpuri
Lucknow 226007, Uttar Pradesh
10. **Professor B.P. Chatterjee** Member
Department of Biological Chemistry
Indian Association for the Cultivation of Science
Jadavpur, Kolkata 700032, West Bengal
11. **Shri B.S. Baswan** Member
Secretary
Ministry of Human Resource Development
New Delhi 110001

Shri Sudeep Banerjee Member
Secretary, Department of Secondary Education and
(from 6.1.2006)
Higher Education
Ministry of Human Resource Development
Shastri Bhawan (Gate No.6), New Delhi 110001
12. **Professor K.K. Talwar** Member
Director, Post Graduate Institute of Medical
Education and Research (PGIMER)
Chandigarh 160012
13. **Professor Kartar Singh** Member
Director, Sanjay Gandhi Postgraduate
Institute of Medical Sciences (SGPGI)
Lucknow, Uttar Pradesh

- | | |
|--|------------------|
| 14. Professor R. Surendran
Professor and Head
Department of Surgical Gastroenterology
Government Stanley Hospital
Chennai, Tamil Nadu | Member |
| 15. Professor (Mrs) Nilima Arun Kshirsagar
Dean, Professor and Head
Department of Clinical Pharmacology
Seth G.S. Medical College and K.E.M. Hospital
Mumbai, Maharashtra | Member |
| 16. Shri Sanjiv Misra
Additional Secretary and Financial Adviser
Ministry of Health and Family Welfare
Nirman Bhawan, New Delhi 110011 | Member |
| 17. Professor P. Venugopal
Director, AIIMS | Member-Secretary |
| 18. Smt. Bhavani Thyagarajan
Joint Secretary
Ministry of Health and Family Welfare
Nirman Bhawan, New Delhi 110011 | Special Invitee |
| 19. Dean (Academic)
AIIMS | Special Invitee |
| 20. Dr T.P. Singh
Professor and Head
Department of Biophysics
AIIMS, New Delhi | Special Invitee |

GOVERNING BODY

- | | |
|---------------------------------|--|
| 1. Hon'ble Dr Anbumani Ramadoss | Chairperson |
| 2. Dr Akhilesh Das | Member |
| 3. Dr Karan Singh Yadav | Member |
| 4. Shri P.K. Hota | Member |
| 5. Dr S.P. Agarwal | Member (Ex-officio) (up to 31.10.2005) |
| Dr R.K. Srivastava | Member (Ex-officio) (from 1.11.2005) |
| 6. Shri Sanjiv Misra | Member (Ex-officio) |
| 7. Professor A. Rajasekaran | Member |
| 8. Professor K.K. Talwar | Member |
| 9. Professor Kartar Singh | Member |
| 10. Professor R. Surendran | Member |

11. Professor P. Venugopal	Member-Secretary
12. Smt. Bhavani Thyagarajan	Special Invitee
13. Dean (Academic)	Special Invitee
14. Dr T.P. Singh	Special Invitee

STANDING FINANCE COMMITTEE

1. Shri P.K. Hota	Chairperson
2. Professor Vijay Kumar Malhotra	Member
3. Dr Akhilesh Das	Member
4. Dr S.P. Agarwal	Member (up to 31.10.2005)
5. Shri Sanjiv Misra	Member (Ex-officio)
6. Professor A. Rajasekaran	Member
7. Shri B.S. Baswan	Member (up to 18.8.2005)
8. Dr S.S. Agarwal	Member
9. Professor P. Venugopal	Member-Secretary
10. Dean (Academic)	Special Invitee
11. Smt. Bhavani Thyagarajan	Special Invitee

HOSPITAL AFFAIRS COMMITTEE

1. Dr S.S. Agarwal	Chairperson
2. Dr Akhilesh Das	Member
3. Dr Karan Singh Yadav	Member
4. Dr S.P. Agarwal	Member (up to 31.10.2005)
5. Shri P.K. Hota	Member
6. Shri Sanjiv Misra	Member (Ex-officio)
7. Professor Nilima Arun Kshirsagar	Member
8. Professor K.K. Talwar	Member
9. Professor P. Venugopal	Member-Secretary

ESTATE COMMITTEE

1. Professor Vijay Kumar Malhotra	Chairperson
2. Dr Karan Singh Yadav	Member
3. Dr S.P. Agarwal	Member (up to 31.10.2005)
4. Dr S.S. Agarwal	Member
5. Shri P.K. Hota	Member
6. Professor Deepak Nayyar	Member (up to 15.5.2005)
Professor Deepak Pentel	Member (from 12.1.2006)
7. Shri Sanjiv Misra	Member (Ex-officio)
8. Shri B.S. Baswan	Member (up to 18.8.2005)
9. Professor P. Venugopal	Member-Secretary

ACADEMIC COMMITTEE

1. Dr S.P. Agarwal	Chairperson (up to 31.10.2005)
2. Professor R. Surendran	Member
3. Professor Kartar Singh	Member
4. Professor K.K. Talwar	Member
5. Professor Nilima Arun Kshirsagar	Member
6. Professor A. Rajasekaran	Member
7. Professor B.P. Chatterjee	Member
8. Shri B.S. Baswan	Member (up to 18.8.2005)
9. Professor P. Venugopal	Member-Secretary

SELECTION COMMITTEE

1. Professor A. Rajasekaran	Chairperson
2. Dr S.P. Agarwal	Member (up to 31.10.2005)
3. Dr Akhilesh Das	Member
4. Professor K.K. Talwar	Member
5. Professor Kartar Singh	Member
6. Shri B.S. Baswan	Member (up to 18.8.2005)
Shri Sudeep Banerjee	Member (from 8.9.2005)
7. Professor Nilima Arun Kshirsagar	Member
8. Professor R. Surendran	Member
9. Professor P. Venugopal	Member-Secretary

3. Academic Section

Dean

Kusum Verma (till 30 September 2005), Nikhil Tandon (Acting Dean)

Sub-Dean

Nikhil Tandon

Registrar

V.P. Gupta

The Academic Section develops policy, plans and executes academic activities. It also administers intramural research projects. These activities encompass the undergraduate, postgraduate and doctoral programmes for medical, nursing and paramedical courses. These activities are conducted by the undergraduate, postgraduate and paramedical cells.

UNDERGRADUATE EDUCATION

The Section handles post-admission formalities for new students, develops and revises curricula and administers teaching programmes including internal assessment of undergraduate students. The courses include MB,BS, BSc (Hons) in paramedical courses such as Ophthalmic Techniques and Medical Technology in Radiography, and BSc Nursing (Post-certificate) and BSc (Hons) Nursing courses.

Bachelor of Medicine and Bachelor of Surgery (MB,BS)

The pattern of education at the undergraduate level was reviewed and implemented from July 2004 onwards. The duration of the MB,BS course continues to be 5½ years, including one year compulsory internship training. The training during this period is as follows:

One year:	Pre-clinical training
One-and-a-half years:	Paraclinical training
Two years:	Clinical training
One year:	Rotating internship (compulsory)

Every year 50 students are admitted to the MB,BS course. Out of 50 seats, 5 seats are reserved for foreign nationals and the screening and admissions for these 5 seats is done on the recommendation of the Ministry of External Affairs, Government of India. For the remaining 45 seats (7 for Scheduled Caste, 4 for Scheduled Tribe and 34 general category candidates), students are selected on the basis of their performance in an All-India Entrance Examination. Further, 3% seats are reserved for orthopaedic physically handicapped candidates on horizontal basis. During the year, there were 71,230 applicants, and 48,248 candidates appeared in the entrance examination for these 45 seats. The total number of undergraduate students as on 31 March 2006 was 256 including 49 interns.

Merit scholarships of Rs 750 per month and Rs 500 per month were awarded to 6 students who secured first and second position in the 1st, 2nd and final MB,BS examination.

Summer fellowships were awarded to 5 students for research in selected areas. These students were given a stipend of Rs 500 per month. They worked under the supervision of a member of the faculty.

Paramedical and Nursing Education

All activities pertaining to the admission and training of paramedical and nursing students are handled by this cell. A batch of 52 students was admitted for BSc (Hons) Nursing in August 2005. The current student strength for the nursing and paramedical courses is as follows:

<i>Nursing courses</i>	<i>Number of students</i>
BSc Nursing (Post-certificate)	34
BSc (Hons) Nursing	195
<i>Paramedical courses</i>	
BSc (Hons) Ophthalmic Techniques	34
BSc (Hons) Medical Technology in Radiography	21

POSTGRADUATE EDUCATION

The Academic Section looks after all activities pertaining to admission, selection and training of postgraduate students including junior and senior residents. It also deals with all service matters relating to senior residents. It handles all activities of the PhD, DM, MCh, MD, MS, MDS, MHA, MSc and MBiotech courses in different disciplines.

The admission to all postgraduate courses is done by an All-India entrance examination that is held twice a year. Foreign nationals are also admitted through an entrance examination. Postgraduate students from Nepal are admitted under a bilateral agreement between the Governments of India and Nepal.

A total of 346 students, including 20 state-sponsored and 11 foreign nationals, were admitted to the above-mentioned courses during the year under review. The total number of postgraduate and doctoral students on 31 March 2006 was 901. The discipline-wise distribution of postgraduate students is given below.

A total of 216 postgraduate students who completed degree courses in MD/MS/MDS/MHA/DM/MCh/PhD/MSc/MBiotech passed out during the year 2005–2006.

PhD	General	Sponsored
Anatomy	12	–
Biochemistry	40	–
Biophysics	15	–
Biostatistics	4	–
Biotechnology	12	–
Cardiology	2	–
Cardiac Biochemistry	2	–
Forensic Medicine	1	–
Gastroenterology	5	–
Haematology	6	–

Laboratory Medicine	8	–
Medical Oncology	3	–
Medical Physics	2	–
Medicine	4	–
Microbiology	40	–
Neurology	5	–
Nuclear Magnetic Resonance	3	–
Nuclear Medicine	3	–
Otorhinolaryngology (ENT)	2	–
Ophthalmology		–
Ocular Pharmacology	3	–
Ocular Microbiology	2	–
Community Ophthalmology	1	–
Paediatrics	8	1
Pathology	7	–
Centre for Community Medicine	1	–
Endocrinology	1	–
Paediatric Surgery	1	–
Neuro-Biochemistry	4	–
Pharmacology	11	–
Physiology	13	1
Psychiatry	4	–
Radiation Oncology	4	–
Reproductive Biology	3	–
Transplant Immunology and Immunogenetics	9	–
Total	243	2

DM	General	Sponsored
Cardiac Anaesthesiology	6	3
Cardiology	16	1
Clinical Haematology	5	2
Endocrinology	8	3
Gastroenterology	6	1
Haemato-Pathology	3	1
Medical Oncology	8	3
Neonatology	4	3
Nephrology	5	5
Neuro-Anaesthesiology	6	2
Neurology	13	1
Neuroradiology	3	–
Paediatric Neurology	3	1
Total	112	26

MCh		
Cardiothoracic and Vascular Surgery	15	–
Gastrointestinal Surgery	5	3
Neurosurgery	16	1
Paediatric Surgery	6	1
Urology	7	2
Total	56	7
<hr/>		
MD	General	Sponsored
Anaesthesiology	23	–
Anatomy	10	–
Biochemistry	7	–
Biophysics	6	–
Community Medicine	13	–
Dermatology and Venereology	9	1
Forensic Medicine	6	–
Hospital Administration	4	8
Laboratory Medicine	4	–
Medicine	36	3
Microbiology	8	–
Nuclear Medicine	6	–
Obstetrics and Gynaecology	17	–
Ophthalmology	69	–
Paediatrics	18	1
Pathology	11	–
Pharmacology	9	–
Physical Medicine and Rehabilitation	6	–
Physiology	11	–
Psychiatry	17	1
Radiodiagnosis	16	3
Radiotherapy	5	–
MS		
Orthopaedics	11	3
Otorhinolaryngology	8	–
Surgery	29	3
MCh		
Neurosurgery	10	–
Paediatric Surgery	3	–
MDS		
Conservative Dentistry and Endodontics	4	–
Orthodontics	6	1
Prosthodontics	6	–
Total	412	24
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MSc	General	Sponsored
Biochemistry	4	2
Biophysics	4	2
Perfusion Technology	3	–
Biotechnology	17	1
Nuclear Medicine Technology	7	1
Pharmacology	6	–
Physiology	2	1
Urology Technology	–	–
Nursing		
Oncological Nursing	4	–
Cardiological/CTVS Nursing	4	–
Nephrological Nursing	4	–
Neurosciences Nursing	4	–
Paediatric Nursing	4	–
Psychiatric Nursing	4	–
Critical Care Nursing	4	–
Total	78	7

Salaries: The present salary of residents, as recommended by the Fifth Pay Commission, is
Junior Residents Rs 9400–9725–10050 plus allowances as per rules.
Senior Residents Rs 10940–11295–11650 plus allowances as per rules.

SHORT- AND LONG-TERM TRAINING PROGRAMMES

The Section handles activities regarding training programmes of short- and long-term duration for both medical and paramedical personnel. During the year, the Institute had 460 short- and 18 long-term trainees. In addition, 16 short-term trainees under WHO fellowship programme and 51 foreign trainees and 7 fellows from WHO-In-Country Fellowship (2005–2006) were imparted training in various departments. The section also handles the elective posting of foreign undergraduate medical students. During the year, 64 foreign undergraduate medical students underwent elective training.

COMMITTEE MEETINGS

The Academic Section is responsible for arranging the meetings of the Academic Committee, Staff Council, Faculty Meetings and Dean's Committee. The details of the meetings held during the year are as under:

Academic Committee	1	17.06.2005
Staff Council	1	12.04.2005
Faculty Meetings	9	02.08.2005
		16.08.2005
		20.09.2005
		04.10.2005
		18.10.2005
		03.01.2006
		17.01.2006
		07.02.2006

RESEARCH

Intramural research funds are allocated to faculty members to promote interdepartmental research and for the development/acquisition of new techniques or skills not available at AIIMS. Projects are invited from faculty members on the following basis.

1. The research grant allocated to faculty members ranges from Rs 25,000 to Rs 50,000 per annum depending on the research project.
2. Project review by specialty review groups—15 March.
3. Final recommendations of the Research Committee—31 March.
4. Allocation of funds—15 April.

The details of intramural research conducted during the year are given below.

Intramural research grants for the year 2005–2006

S. No.	Name, Designation	Department	Title	Amount	Duration years
1	Kunzang Chosdol, Assistant Professor	Biochemistry	Determination of genetic polymorphism in North Indian population using RAPD-PCR DNA fingerprinting	50,000	2
2	M. Mahapatra, Assistant Professor	Haematology	Angiogenesis in myelodysplastic syndrome in bone marrow trephine biopsy and its correlation with thalidomide therapy	64,500	2
3	Alpana Sharma, Assistant Professor	Biochemistry	Assessment of beta-2 microglobulin, IL-6 and IL-2R as prognostic factors in Indian patients with multiple myeloma	71,000	3
4	Pratik Kumar, Assistant Professor	Medical Physics Unit, BRA IRCH	Quantitative imaging study of breast cancer and its correlation with oxidative stress	30,000	3
5	Ratna Sharma, Associate Professor	Physiology	The effect of stress-induced changes in theta and alpha bands during memory retrieval	40,000	2

S. No.	Name, Designation	Department	Title	Amount	Duration years
6	B.R. Mirdha, Additional Professor	Microbiology	Prevalence of intestinal coccidiosis and other parasitosis in 'at risk' individuals	35,000	3
7	P. Chattopadhyay, Associate Professor	Biochemistry	Effect of a common dominant negative mutant form of p53 protein on hypoxia inducible factor 1 alpha levels under hypoxia in a human glial tumour cell line	50,000	2
8	D.S. Arya, Associate Professor	Pharmacology	Pharmacological studies on thalidomide in experimentally induced myocardial infarction	40,000	1
9	N.C. Chandra, Assistant Professor	Biochemistry	Transcription and signalling of LDL receptor in cell culture model system (role of insulin, oestradiol and epidermal growth factor)	50,000	3
10	Suman Jain, Assistant Professor	Physiology	Effect of prolonged sucrose feeding on endorphin levels in the brain and orosensory reward	40,000	2
11	T.C. Nag, Assistant Professor	Anatomy	Localization of markers of oxidative phosphorylation in the ageing human photo-receptors: An immuno-histochemical study	50,000	2¼
12	S.B. Ray, Associate Professor	Anatomy	L- and N-type calcium channels in the spinal cord of rat tolerant to morphine: An immunohistochemical study	80,000	1
13	Sanjay Kumar Sood, Assistant Professor	Physiology	Prepulse modulation of startle reflex by music	40,000	1½
14	Manju Aron, Assistant Professor	Pathology	Diagnostic utility of Hep Parl, pCEA and CD3-4 in differentiating non-neoplastic, and metastatic liver lesions from primary hepatocellular carcinoma in fine needle aspiration samples	70,000	3

S. No.	Name, Designation	Department	Title	Amount	Duration years
15	Seema Sen, Associate Professor	R.P. Centre for Ophthalmic Sciences	Retinoblastoma protein (pRB) expression in human eyes and ocular tumours	50,000	1
16	Sandeep R. Mathur, Assistant Professor	Pathology	Utility of immuno- cytochemistry using antibodies to calretinin and Ber-EP4 in distinguishing reactive mesothelial cell proliferation from metastatic adenocarcinoma	51,100	2
17	M.C. Sharma, Associate Professor	Pathology	Role of rennin-angiotensin system in the pathogenesis of muscular dystrophy	75,000	1
18	Mihir Prakash Pandia, Assistant Professor	Neuroanaesthe- siology, C.N. Centre	Effect of transcutaneous electric nerve stimulation of preauricular acupuncture point on propofol requirement in total intravenous anaesthesia	25,000	2
19	Arvind Bagga, Additional Professor	Paediatrics	Randomized, double-blind, placebo-controlled trial to examine the effectiveness of zinc supplementation in reducing relapse rates in patients with steroid sensitive nephritic syndrome	70,000	2½
20	Praveen Vashist, Assistant Professor	R.P. Centre for Ophthalmic Sciences	Assessment of validity of vision screening of school children	50,000	1
21	R. Goswami, Associate Professor	Endocrinology and Metabolism	Polymorphism of the cytotoxic T lymphocyte antigen-4 (CTLA-4) gene and autoimmune regulator (AIRE) gene mutation: Association analysis in sporadic idiopathic hypoparathyroidism	1,47,000	1
22	Anant Mohan,	Medicine	Effect of feeding pectin on blood glucose level and antioxidant enzyme status in type 2 diabetes (NIDDM)	65,000	2

S. No.	Name, Designation	Department	Title	Amount	Duration years
23	Assistant Professor T. Velpandian, Assistant Professor	R.P. Centre for Ophthalmic Sciences	Evaluation of the role of retinal P-glycoprotein drug transporters in the ocular disposition of drugs	48,000	2
24	Raj Kumar Yadav, Assistant Professor	Physiology	Autonomic status and leptin levels in serum and peritoneal fluid of patients with pelvic endometriosis	45,000	1
25	V.K. Bansal, Assistant Professor	Surgery	Prospective case-control study to evaluate the role of glutathione S transferases (GSTT 1 and GSTM 1) gene deletion in breast carcinoma and its prognostic significance	50,000	2
26	Rakesh Lodha, Assistant Professor	Paediatrics	Troponin levels in children with septic shock	50,000	1
27	Rakesh Kumar, Associate Professor	Nuclear Medicine	To evaluate the response of radiosynovectomy in patients with inflammatory knee joint conditions refractory to conventional treatment modalities	50,000	2
28	J.P.K. Katyal, Assistant Professor	Pharmacology	Pharmacokinetics of thalidomide in patients with relapsed and refractory multiple myeloma	35,000	1
29	Rohit Saxena, Assistant Professor	R.P. Centre for Ophthalmic Sciences	Evaluation of various parameters for early detection of ethambutol- induced optic neuropathy and correlating them with plasma levels of ethambutol	46,150	2
30	M. Bajpai, Additional Professor	Paediatric Surgery	To study the activity of nuclear factor kappa B (NF- kB) in experimentally produced renal scarring and the role of AT1 receptor blockage in preventing the progression of renal disease	50,000	1

S. No.	Name, Designation	Department	Title	Amount	Duration years
31	Rajesh Khadgawat, Assistant Professor	Endocrinology and Metabolism	To study the prevalence of osteoporosis and vitamin D deficiency in patients with non-traumatic hip fracture	51,000	1
32	Anjan Trikha, Additional Professor	Anaesthesiology and Intensive Care	Percutaneous dilational tracheostomy: Griggs guidewire dilating forceps technique versus controlled rotating dilation technique—a prospective randomized study	41,000	1
33	Abhinit Kumar, Assistant Professor	ENT	Role of human papillomavirus subtype as prognostic factor in recurrent respiratory papillomatosis	35,000	3
34	Pankaj Hari, Associate Professor	Paediatrics	Serum cystatin C assay for the detection of early renal insufficiency in malnourished children with chronic kidney disease	70,000	2
35	Anushree Gupta, Assistant Professor	Biotechnology	Modulation of endothelin-1 in coronary artery bypass grafting patients imparted with pre-operative relaxation therapy	57,000	3
36	Sushma Bhatnagar, Associate Professor	Anaesthesiology, BRA IRCH	Oral granisetron versus ondansetron for the control of post-operative nausea and vomiting in patients undergoing breast surgery: A comparative randomized double-blind trial	30,000	1
37	Immaculata Xess, Associate Professor	Microbiology	Rapid detection technique in candidemia in critically ill patients and its therapeutic outcome	50,000	2
38	Vijay L. Kumar, Additional Professor and Head	Pharmacology	Studies on the effect of latex of calotropis procera against renal complications in diabetes	30,000	2

S. No.	Name, Designation	Department	Title	Amount	Duration years
39	Neena Malhotra, Associate Professor	Obstetrics and Gynaecology	Level of angiogenic cytokines (interleukin IL-8 and leptin) in peritoneal fluid of Indian women with endometriosis	40,000	2
40	Arundati Sharma, Assistant Professor	Anatomy (Division of Genetics)	Mutation analysis of the 5q31-linked autosomal dominant corneal dystrophies in the North Indian patients	75,000	2
41	Ruma Ray, Associate Professor	Pathology	Histopathological evaluation of aortic aneurysms and aortic dissections with special reference to collagen type IV	50,000	2
42	Seema Tyagi, Assistant Professor	Haematology	Molecular cytogenetics in myelodysplastic syndromes and acute myeloid leukemia: Diagnosis and prognostic significance	51,700	3
43	Savita Yadav, Assistant Professor	Biophysics	Structure analysis of prostate-specific antigen (PSA) with designed inhibitors	70,000 per year	2
44	V. Seenu, Assistant Professor	Surgery	Impact of vas irrigation with methylene blue and diltiazem following vasc-tomy in fertility of rats	45,000	1
45	Sheffali Gulati, Assistant Professor	Paediatrics(Child Neurology Division)	Effect of short-term phenytoin monotherapy on bone mineral density in ambulatory epileptic children	78,000	1
46	Sanjay Sharma, Associate Professor	Radiodiagnosis (R.P. Centre)	Evaluation of efficacy of radiofrequency ablation in early breast cancer	1,00,000	1
47	Anjana Talwar, Assistant Professor	Physiology	The effect of smoking on stress-induced changes in cognitive functions	40,000	2
48	Nutan Agarwal, Assistant Professor	Obstetrics and Gynaecology	Role of bile acids in diagnosis and therapeutic effect of ursodeoxycholic acid in intrahepatic cholestasis of pregnancy	46,000	2

S. No.	Name, Designation	Department	Title	Amount	Duration years
49	D.N. Sharma, Assistant Professor	Radiotherapy	A prospective randomized trial of amifostine (radioprotector) given subcutaneously during radiation therapy in head and neck cancer patients	97,850	3
50	Ashok Kumar Jaryal, Assistant Professor	Physiology	Correlation between cardiovascular autonomic functions and indicators of myocardial infarction	50,000 per year	2
51	Poonam Malhotra Kapoor, Associate Professor	Cardiac Anaesthesia (C.N. Centre)	Audit of early croal directed therapy in patients undergoing cardiac surgery	87,500	2
52	Kalpana Luthra, Associate Professor	Biochemistry	Expression of leukocyte function associated antigen-1 (LFA-1) in normal and pre-eclamptic human placenta	65,000	2
53	V.K. Iyer, Assistant Professor	Pathology	Post-chemotherapeutic expression of apoptotic proteins in hepatoblastoma	50,000	2
54	Sandeep Seth, Associate Professor	Cardiology	Screening for preclinical hypertrophic cardiomyopathy (HCM) by tissue Doppler imaging	30,000	3
55	A.K. Deorari, Professor	Paediatrics	Efficacy of intramuscular vitamin K1 versus intramuscular vitamin K3 in prevention of subclinical classic vitamin K deficiency: A randomized controlled trial	50,000	1
56	Ashutosh Halder, Assistant Professor	Reproductive Biology	An investigation on chromosome mosaicism and aneuploidy on preimplantation embryos	55,000	3
57	Sarman Singh, Additional Professor	Laboratory Medicine	To study the genetic heterogeneity amongst the <i>Leishmania donovani</i> isolated from eastern India	45,000	3

S. No.	Name, Designation	Department	Title	Amount	Duration years
58	G.K. Makharia, Assistant Professor	Gastroenterology and Human Nutrition	A study of role of anti-saccharomyces cerevisiae antibody (ASCA) and anti-neutrophilic cytoplasmic antibody (ANCA) in the differentiation of intestinal tuberculosis and inflammatory bowel disease	49,000	2
59	Vineet Ahuja, Assistant Professor	Gastroenterology	Standardization and validation of noninvasive tests for evaluation of intestinal permeability and intestinal inflammation	50,000	2
60	Madhu Vajpayee, Associate Professor	Microbiology	To determine the role of IL-7 in peripheral homeostasis and to evaluate its relationship with CD4+ T-cell level in HIV-infected Indian population	70,300	2
61	Renu Dhingra, Assistant Professor	Anatomy	Apoptosis in placental membranes in pre-eclampsia: An immuno-histochemical study	75,000	1
62	Pushpa Dhar, Associate Professor	Anatomy	Effect of arsenic exposure during early postnatal period on rat cerebellum	60,000	1
63	Sujay Khandpur, Assistant Professor	Dermatology and Venereology	Identification of pemphigus vulgaris antigens in Indian patients by immunoblot assay and evaluation of this technique as a diagnostic tool in this disorder	50,000	1
64	Rima Dada, Assistant Professor	Anatomy	Effect of lifestyle and environment on male reproductive health	50,000	2
65	Rajnish Juneja, Associate Professor	Cardiology	3D characterization of pulmonary venous and left atrial anatomy in patients with severe rheumatic mitral stenosis: Evaluating the role of haemodynamic factors and atrial fibrillation	4,400	1

S. No.	Name, Designation	Department	Title	Amount	Duration years
66	P.K. Chaturvedi, Assistant Professor	Reproductive Biology	Effects of cryo-freezing on human spermatozoa: Sperm functions and ultrastructure study	50,000	1
67	Amllesh Seth, Associate Professor	Urology	Her-2/neu over-expression and gene amplification in transitional cell carcinoma of urinary bladder	84,750	1

Total funds available: Rs 50,00,000

Total allocated: Rs 36,01,250

Balance: Rs 13,98,750

ORATIONS

The Academic Section organized the following Orations during 2005–2006.

S. No.	Name of Oration	Name of Orator	Date of Oration, Time and Venue
1	First Dr Lalit K. Bhutani Oration	Dr J.N. Pande, Former Professor and Head, Department of Medicine, AIIMS	Wednesday, 21 September 2005 at 4.00 pm in LT-I
2	First Dr N. Gopinath Oration	Dr P.N. Tandon, Former Professor and Head, Department of Neuro-Surgery, Chief of Neurosciences Centre and Emeritus Professor at AIIMS	Thursday, 22 September 2005 at 4.00 pm in LT-I
3	Seventeenth AIIMS Silver Jubilee Oration	Dr (Mrs) Nilima A. Kshirsagar, Dean (G&K), Professor and Head, Department of Clinical Pharmacology, Seth G.S. Medical College and K.E.M. Hospital, Parel, Mumbai	Friday, 23 September 2005 at 4.00 pm in LT-I
4	Second Dr N. Gopinath Oration	Professor Alain F. Carpentier, Director, Department De Chirurgie, Cardio-Vasculaire Et De Transplantation D' Organes, Hopital Europeen Georges Pompidou, France	Saturday, 11 February 2006 at 3.00 pm in Jawaharlal Auditorium
5	Sixteenth Sarveshwari Memorial Oration	Professor Roberto C. Heros, MD, Professor Co-Chairman and Programme Director, Department of Neurological Surgery, Leonard M. Miller, School of Medicine, University of Miami, Florida, USA	Friday, 17 February 2006 at 4.00 pm in LT-I
6	Dr Sujoy B. Roy Oration	Dr Rajendra Tandon, Former Professor and Head, Department of Cardiology, Chief of Cardiothoracic Centre and Emeritus Professor at AIIMS	Saturday, 18 February 2006 at 12.00 noon in Jawaharlal Auditorium

CONVOCATION

The Annual Convocation of the Institute was held on 25 September 2005. Conferment of Honorary fellowship of the Institute to Dr Manmohan Singh, Hon'ble Prime Minister of India by the Hon'ble President, AIIMS and Minister of Health and Family Welfare, New Delhi. The Chief Guest distributed Institute Medals/Awards to the outstanding students and addressed the gathering. The President AIIMS and Hon'ble Minister of Health and Family Welfare distributed the degrees.

4. Examination Section

Dean (Exams)

T.P. Singh

Professor-in-charge (Exams) and Sub-Dean (Exams)

K.K. Deepak

Assistant Controller of Exams

Rajesh Bharadwaj

Administrative Officer

K.M. Gupta

Accounts Officer

N.K. Bajaj

During the period under review (2005–2006), the Examination Section conducted the following Professional and Entrance Examinations.

POSTGRADUATE AND UNDERGRADUATE EXAMINATIONS

Details of various undergraduate and postgraduate professional examinations conducted by AIIMS from 1.4.2005 to 31.3.2006.

S. No.	Examination	Number of students			
		Appeared	Absent	Passed	Failed
	May 2005				
1.	Final Postgraduate/Post-doctoral	113	2	105	8
2.	MSc (Nursing), Phase-I	14	–	13	1
3.	Final Professional MB,BS (Supplementary)	4	–	2	2
4.	Second Professional MB,BS (Supplementary)	12	–	9	3
5.	BSc Nursing (Post-certificate), Phase I	17	1	16	1
6.	BSc Nursing (Post-certificate), Phase II (old scheme)	1	–	1	–
7.	BSc Nursing (Post-certificate), Phase II (new scheme)	16	1	16	–
8.	BSc (Hons) Nursing, Phase I	52	–	48	4
9.	BSc (Hons) Nursing, Phase II	48	–	48	–
10.	BSc (Hons) Nursing, Phase III	41	–	41	–
11.	BSc (Hons) Nursing, Phase IV	44	–	44	–
12.	BSc (Hons) Human Biology, Phase III	16	–	16	–

S. No.	Examination	Number of students			
		Appeared	Absent	Passed	Failed
July 2005					
13.	First Professional MB,BS	49	–	40	9
14.	BSc (Hons) Ophthalmic Techniques, Phase I	10	–	6	4
15.	BSc (Hons) Ophthalmic Techniques, Phase II	8	–	7	1
16.	BSc (Hons) Ophthalmic Techniques, Phase III	8	–	8	–
17.	BSc (Hons) Medical Technology in Radiography, Phase I	5	–	4	1
18.	BSc (Hons) Medical Technology in Radiography, Phase II	4	–	3	1
19.	BSc (Hons) Medical Technology in Radiography, Phase III	5	–	5	–
20.	BSc (Hons) Speech and Hearing, Phase II	1	–	1	–
21.	BSc (Hons) Speech and Hearing, Phase III	3	–	2	1
22.	Final Professional MB,BS (Compartmental)	1	–	–	1
August 2005					
23.	First Professional MB,BS (Supplementary)	9	–	4	5
November 2005					
24.	BSc (Hons) Ophthalmic Techniques, Phase I (Supplementary)	4	–	4	–
25.	BSc (Hons) Ophthalmic Techniques, Phase II (Supplementary)	1	–	1	–
26.	BSc (Hons) Medical Techniques in Radiography, Phase I (Supplementary)	1	–	1	–
December 2005					
27.	Final Postgraduate/Post-doctoral	98	3	87	11
28.	MSc (Nursing), Phase I (Supplementary)	1	–	1	–
29.	Final Professional MB,BS	52	–	45	7
30.	Second Professional MB,BS	51	2	45	6
31.	BSc Nursing (Post-certificate), Phase I (Supplementary)	2	–	2	–
32.	BSc Nursing (Post-certificate), Phase II (Supplementary)	1	–	0	1
33.	BSc (Hons) Nursing, Phase I (Supplementary)	4	–	3	1
34.	BSc (Hons) Nursing, Phase II (Supplementary)	3	–	3	–
35.	BSc (Hons) Nursing, Phase III (Supplementary)	5	–	2	3
36.	BSc (Hons) Nursing, Phase IV (Supplementary)	5	–	5	–
37.	BSc (Hons) Speech and Hearing, Phase III (Supplementary)	2	–	2	–
January 2006					
38.	First Professional MB,BS (Compartmental)	2	–	2	–
Total		713	9	642	71

Entrance Examinations for Undergraduate and Postgraduate courses

S.No.	Courses	Date of examination	Number of students	
			Applied	Appeared
1.	MD/MS/MDS (AIIMS) July Session 2005	8 May 2005	14,510	11,229
2.	DM/MCh/MHA July Session 2005	15 May 2005	1,330	921
3.	MB,BS (AIIMS) August Session 2005	1 June 2005	71,230	48,248
4.	BSc (Hons) Nursing 2005	19 June 2005	2,290	1,602
5.	BSc Nursing (Post-certificate) 2005	12 June 2005	47	28
6.	BSc (Hons) Paramedical Courses 2005	5 June 2005	654	502
7.	MSc and MBiotechnology 2005	10 July 2005	1,097	670
8.	MSc Nursing 2005	3 July 2005	244	177
9.	PhD July Session 2005	17 July 2005	560	310
10.	MD/MS/MCh (6 years)/MDS (AIIMS) January Session 2006	6 November 2005	21,655	20,112
11.	Senior Resident Entrance Examination, January Session 2006	20 November 2005	741	573
12.	DM/MCh/MHA January Session 2006	18 December 2005	1,302	898
13.	All-India PG Entrance Exam: MD/MS/Diploma/MDS	8 January 2006	45,838	41,965
14.	PhD January Session 2006	15 January 2006	404	222
Total			1,61,902	1,27,457

Number of entrance examinations conducted:	14
Number of applicants:	1,61,902
Number of candidates appeared:	1,27,457

SIGNIFICANT EVENTS

The Examination Section has introduced an entrance examination for recruitment to the post of Senior Residents/Senior Demonstrators for the tenure period as per the Government of India Residency Scheme at AIIMS from this year. This examination is held in the months of November and May, i.e. twice a year. The MSc Nursing course has started from the year 2005. The Examination Section has also conducted the BSc (Speech and Hearing) entrance examination of All India Institute of Speech and Hearing, Mysore since 2004. The examination for the year 2005 was held on 4 June 2005.

As a further step towards introduction of more checks and balances, so as to maintain complete confidentiality and integrity of the examination system, question papers for outstation centres are now kept in the safe custody of State Bank of India branches. In order to avoid any case of impersonation, all candidates are digitally photographed and thumb impressions obtained during the examination. The Examination Section is also providing technical expertise to various universities and institutions in India and abroad for conducting entrance examinations.

Important entrance examinations conducted

1. The All-India PG entrance examination for admission to the MD/MS/Diploma/MDS courses against 50% open merit seats quota was held in 94 centres (local 17, outstation 77) in 15 cities of India on 8 January 2006. The results were declared on 14 February 2006.

2. The AIIMS PG entrance examination for admission to the MD/MS/MDS courses for the session starting from July 2005 was conducted at 27 centres (12 in Delhi and 15 in three Metro cities in the country) on 8 May 2005 and for the MD/MS/MCh (6 years)/MDS courses for the session starting from January 2006 was conducted at 39 centres (12 in Delhi and 27 in three other cities of the country) on 6 November 2005. The results were declared on 19 May and 17 November 2005, respectively. Admissions were made on the basis of counselling. Counselling was held on 14 June 2005 and 24 June 2005 for July 2005 session and on 12 December 2005 and 20 December 2005 for January 2006 session, respectively, through open selection on the basis of ranks in the entrance examinations.
3. Selections for various Post-doctoral (superspecialty) courses, viz. DM/MCh and Masters in Hospital Administration for July 2005 and January 2006 sessions were made on a three-stage performance evaluation carried out from 15 May 2005 to 20 May 2005 and 18 December 2005 to 23 December 2005, respectively.
4. The Institute had also conducted the entrance examination for the post of Senior Residents/Senior Demonstrators on 20 November 2005. The selection was made on the basis of merit with a cut-off of 50% marks in the written examination and departmental assessment, which was held on 23 November 2005. The selection for the post of Senior Residents/Demonstrators is held twice every year in the month of May and November.
5. Selections of candidates for registration to the PhD programme for the sessions starting from July 2005 and January 2006 were held from 17 to 22 July 2005 and 15 to 21 January 2006. The results were declared on 23 July 2005 and 21 January 2006, respectively.
6. The entrance examination for admission to the MB,BS course of AIIMS for the August 2005 session was held in 142 centres (local 77, outstation 65) in 9 cities of India on 1 June 2005.
7. The entrance examination for admission to the BSc (Hons) Nursing course was held in Delhi and Thiruvananthapuram on 19 June 2005.
8. The entrance examination for admission to the MSc/MBiotechnology courses for the August 2005 session was held in Delhi on 10 July 2005.
9. The entrance examination for admission to the MSc Nursing course was introduced last year. This examination was held on 3 July 2005 in Delhi. Admission was made by allotment of the course on merit through counselling held on 20 July 2005 and 26 July 2005.
10. The entrance examination for admission to the BSc Nursing (Post-certificate) course was held in Delhi on 12 June 2005, followed by personal assessment of candidates on 15 June 2005.
11. The entrance examination for admission to the Paramedical courses—BSc (Hons) Ophthalmic Techniques and BSc (Hons) Medical Technology in Radiography for the August 2005 session was held in Delhi on 5 June 2005. Admissions to these two courses were made by allotment of seats on merit through counselling held on 15 July 2005 and 21 July 2005, respectively.
12. The Institute has also been assisting in conducting entrance examinations for admission to the BSc (Hons) Speech and Hearing held by the All India Institute of Speech and Hearing, Mysore, since 2004. This year the examination was conducted on 4 June 2005.

13. The Examination Section also conducted the Examination Skill Test for recruitment to the following posts at the Institute:
- (i) Personal Secretary.....held on 25.02.2006.
 - (ii) Stenographerheld on 25.02.2006.
 - (iii) Workshop Assistantheld on 29.01.2006.
14. Professor-in-charge (Exam) has been coordinating the evaluation of theses of postgraduate students from B.P. Koirala Institute of Health Sciences, Dharan, Nepal.

Participation in other events

15. The Examination Section actively participates in the counselling for admission to the AIIMS Postgraduate, BSc (Hons) Paramedical, MSc (Nursing) courses and interviews for the BSc (Nursing) Post-certificate course.

5. General Administration

Deputy Director (Administration)

Debasish Panda, IAS

Chief Administrative Officer

Attar Singh

Senior Administrative Officers

S.K. Chopra
(up to 18.3.2006)

R.D. Pande
(from 23.9.2005)

Prem Ballabh
(from 1.10.2005)

Administrative Officers

K.M. Gupta

B.S. Ahluwalia
(up to 12.1.2006)

K.C. Chhoker

Sanjay Kumar
(from 6.9.2005 to 13.1.2006)

Sanjay Kumar
(from 23.9.2005)

Sanjay Kumar
(from 4.10.2005)

Kundan Kumar
(from 1.12.2005)

E.L. Lakra
(from 16.1.2006)

Estate Manager

S.K. Vashisht

Deputy Chief Security Officer

Rajiv Lochan

Stores Officers

R.L. Prasad
(under suspension)

S.S. Bhaduria
Pradeep Gupta

K.D. Sharma

ENGINEERING SERVICES DEPARTMENT

Superintending Engineer

Rajesh Kumar

Executive Engineers

S. Bhasker
B.S. Anand (Airconditioning-I)

M. Rastogi (Civil-II) Sanjay Ram (Electrical)
L. Nagrani (Airconditioning-II)
(from 13.9.2005)

The General Administration, including personnel and establishment, security, estate, matters related to the Engineering Services Department, stores, vigilance and public relations activities of AIIMS are controlled and supervised by the Deputy Director (Administration). There are various branches looking after the above mentioned areas. Each branch is headed by a senior officer.

All matters relating to the Establishment Section and General Administration including appointment of staff, arranging meetings of statutory committees, management of estate and property, purchase of

equipment, materials and consumables, security arrangements and employees' welfare are looked after by the administration.

The total sanctioned staff of AIIMS is 8245, including the main hospital, all the centres and administration. These include the following:

S. No.	Category/group	Sanctioned strength	In position staff
1.	Faculty	543	490
2.	Group 'A'	281	182
3.	Group 'B'	673	578
4.	Group 'C'	4878	3953
5.	Group 'D'	1870	1584
	Total	8245	6787

The following major works were undertaken during the year.

Construction of Jai Prakash Narayan Apex Trauma Centre

An ultramodern trauma centre is being set-up at the Raj Nagar land. A revised estimate for Rs 138.53 crore was sanctioned in September 2004. The project is expected to be completed by November 2006.

Developing 57 additional private wards in Phase-II

A total of 57 deluxe suites have been added to the new Private Ward complex in the existing nurses hostel by using vacant rooms. These are being put to use in a phased manner.

Additional tower for the C.N. Centre

The building is planned to house 63 Private Wards and an Operation Theatre Complex consisting of 4 OTs. The original EFC was sanctioned on 11 April 2000 for an estimated cost of Rs 9.35 crore. Due to a change in the scope of work, the revised estimate for Rs 24.22 crore was approved on 21 December 2005 and the work has been entrusted to CPWD who have further awarded the work to M/s Unitech Ltd. The work was started in April 2005 and the date of completion was April 2006. The construction of the building is on the verge of completion.

Construction of the Centre for Dental Education and Research

The Ministry of Health and Family Welfare approved the original EFC for Rs 23.21 crore on 11 October 2001. It was felt that the proposed building should be a high-rise framed structure with central airconditioning, provision for computerization, furniture for dental laboratories and rooms, etc. As these provisions had not been taken in the original EFC estimate, a revised proposal was mooted. The revised EFC estimate amounting to Rs 40.42 crore was sanctioned in May 2003. The foundation stone of the building was laid on 3 May 2003. The building plans of the Dental Centre had been approved by the NDMC by order dated 30 April 2004 issued by the NDMC on 6 May 2004. The HSCC invited tenders for the work four times. The bid received in the fourth call was considered responsive and reasonable. Accordingly, the work was awarded to NBCC in the last week of March 2005 at the negotiated cost of Rs 23.98 crore. The stipulated date of start of the Engineering component of the project was 4 April 2005 and the stipulated date of completion was 3 April 2006. The finishing work is under progress and the building is expected to be completed by December 2006.

Covering of the *nallah* on the East side of Ansari Nagar

The total stretch of the drain between the Gautam Nagar Bridge and the Ring Road junction is 1.218 km. The Municipal Corporation of Delhi conveyed their approval in principle to allow AIIMS to cover the said drain and use the area so covered as a four-lane carriageway vide letter dated 6 December 2004. The inlet of the said road shall be from the service lane of the Ring Road and is proposed to be used as the main approach road for the superspecialty patient-care complex proposed in the Masjid Moth Campus. The CPWD took up the project management of the said work on a free-of-cost basis. The estimate for Rs 38.93 crore has been prepared and got approved from the Estate Committee of AIIMS. In phase-I, 600 metre of the *nallah* is to be covered at an estimated cost of Rs 22 crore. The estimate has been approved by SFC of the Ministry. The CPWD has awarded the work which is expected to be completed by March 2007. This would end the menace of mosquito breeding and unhygienic conditions in the Ansari Nagar Campus.

Construction of the Surgical Block at AIIMS

Initially there was a proposal to construct a block for Emergency and Operation Theatres. However, with the construction of the Trauma Centre, the creation of a duplicate facility was abandoned. Instead, a block for Surgery has been planned in an eight-storeyed building with self-contained facilities. An estimate for Rs 84.63 crore was prepared and got approved by the Estate Committee. Approval in principle has also been received from the planning commission. The CPWD has engaged a consultant for the work. The drawings and concept plans are being finalized. The construction work is expected to start by December 2006.

Installation of 9 additional lifts for the OPD and wards

The work is expected to cost Rs 3.20 crore and the proposal for the same was approved in the meeting of the Estate Committee held on 21 November 2005. The work has been entrusted to CPWD who have already approved an engineering consultant for the work. These lifts are planned to decongest the existing lifts and to facilitate smooth movement of supplies and faculty/staff members/patients.

Developing IVF facility at AIIMS

The facility is long needed for the treatment of patients with infertility, who need medically assisted reproduction. The facility is being planned in the AB-3 ward of the hospital in an area of 300 square metre at a cost of Rs 60.0 lakh (approximately). This state-of-the-art project consists of a seamless operation theatre with latest materials and technology of the laminar flow air-conditioning, scrub station, internal air purifier, etc.

Renovation of the Wards AB-3, AB-8, D-2, D-7, AB-4, AB-5 and C-7

These wards are to be renovated with marble flooring, tiled dado and change of ducting systems of the airconditioners. This renovation will ensure minimizing of the infection rate, better planned layout of the wards with patient-friendly toilets and amenities. The renovation work is scheduled to start by May 2006, and is likely to take 3 months for each ward.

MEDIA CENTRE

Faculty-in-Charge and Spokesperson Aarti Vij

The Media Centre has been engaged in the important role of promotion and projection of various activities of the Institute. It provides a vital link between the Institute, media and public. A number of press briefings, press releases and public education lectures were arranged on subjects of special public interest. The Media Centre organized press briefings and conferences to further enhance the

positive image of AIIMS and project the achievements of the faculty and staff of AIIMS in public. Regular interaction of the AIIMS faculty on various preventive, diagnostic and curative issues of diseases, including programmes on positive healthcare, were organized with most television channels including Aaj Tak, NDTV, Star TV, Zee TV, Sahara TV, BBC, Total TV and others. This department also releases advertisements and press statements. A number of activities received wide coverage in the print and electronic media during the year. The Officer-in-Charge, media centre is the official spokesperson for the AIIMS.

The Media Centre is entrusted with protocol functions relating to the visits of VIPs, official delegations as well as foreign delegations to the Institute.

Important visitors

A number of foreign delegations including high-level ministerial delegations from the USA, Bulgaria, China, Holland, Denmark, Germany, Sweden, Mozambique, Republic of Romania and other neighbouring countries visited the Institute during the year. A delegation each from the White House Fellows, Washington, USA; the Harvard University; the Max Planck Society, Germany; the Tufts University, USA; and the International Division Partners Health Care Systems, USA also visited the Institute. The Media Centre coordinated and facilitated these visits.

6. Hospital

Medical Superintendent

D.K. Sharma

Professor and Head

P.C. Chaubey (Department of Hospital Administration)

Associate Professors

Siddhartha Satpathy

I.B. Singh

Sanjay Arya

GENERAL INFORMATION

Total number of beds	1390
Main Hospital and private wards	1005
Bassinets	25
CNC	360

HOSPITAL PERFORMANCE INDICES

Item	Current year	Past year	Comments
Average length of stay (days)	5.4	5.2	Indicates effective utilization of beds
Average bed occupancy rate (%)	82.4	83.2	Indicates fair occupancy
Net death rate (%)	3.0	2.7	Indicates a low mortality rate despite the fact that a large number of critically ill patients are admitted to the hospital
Combined crude infection rate (%)	8.48	8.92	

Please *see* Appendices I and II for details

MEDICAL RECORDS

Education and Training

Shri N.K. Sharma, Chief Medical Records Officer and Sub-registrar, Births and Deaths, Shri R.S. Khara, Medical Records Officer, and Ms Pooja Pandey, LDC have attended the Basic Level Computer and Hospital Connectivity Training Programme—organized by NDMC for online registration in the office of the Registrar, Birth and Death, Mandir Marg, New Delhi.

Shri N.K. Sharma, Chief Medical Records Officer, and Shri Jai Prakash, LDC attended the training on Civil Registration System in Delhi, sponsored by the Registrar General India, Old Secretariat, Delhi.

Shri Kirti Ram Uniyal, Junior Medical Records Officer and Shri Shankar Prasad, Medical Records Technician (MRT), attended a one-day training of Medical Certification of Cause of Death, in the office of Chief Registrar, Birth and Death, Old Secretariat, Delhi.

Shri Ashok Kumar and Shri Ashish Kumar, MRTs were nominated for the training of MRO at Safdarjung Hospital for one year.

Shri Ashok Kumar, MRT, attended the orientation course for ICD-10 for non-medical personnel at the Regional Health Statistics Training Centre, Mohali.

During the year, a group of students of the Medical Records Degree and Diploma from Christian Medical College, Vellore and St. Stephens Hospital, New Delhi visited the Medical Records Department.

Meetings

Five Casualty Death Review Committee meetings were held in the year 2005–06.

Court attendance

A total of 1723 summons (average 6 summons per day) were attended to by the Medical Records Personnel in Delhi and outside Delhi.

Computerization of Medical Records

Computerization of medical records is in full swing. During the first phase, the Central Admission Office and Hospital Enquiry will be computerized and in the second phase, Medical Records Section (Hospital) will be computerized.

Inpatient Services

The hospital has maintained its tradition of services and quality of patient care, in spite of the ever increasing number of patients that come to this hospital from all over the country as well as from abroad. A total of 83,559 patients were admitted during the year in the various clinical units of the Main Hospital and CNC. The department-wise and region-wise admissions are given in Appendices III and IV. The number of surgical procedures performed during the year in different surgical disciplines is given in Appendix V.

Records are systematically classified and categorized for easy retrieval. All the in-patient records of the C.N. Centre are maintained by the Medical Records Section of the Main Hospital.

Central Admission Office and Hospital Enquiry

Medical records of patients admitted to the hospital are initiated from the Central Admission Office which also functions as an Enquiry counter. All types of information regarding patients, departments, doctors and centres are provided from this office.

This office functions round the clock, i.e. 365 days x 24 hours. Therefore, the staff works in shifts. This office is manned by the Junior Reception Officer, Receptionist, Medical Records Technicians and other ministerial and hospital staff.

Outpatient department and specialty clinics

A total of 16,30,479 patients attended the general outpatient department and specialty clinics of the main hospital. The details of the outpatient load profile are given in Appendix VI.

MEDICAL SOCIAL SERVICE UNIT

Medical Social Services were organized in various OPDs, wards, clinics and casualty by the present strength of 1 Chief Medical Social Service Officer (acting), 2 Supervising Medical Social Service Officers; 4 Medical Social Service Officers Grade-I; 3 Medical Social Service Officers Grade-II and 17 part-time Social Guides.

This unit provides central services in the form of guidance to patients, financial assistance from the Poor Fund, exemption of levy charges to poor and indigent patients, counselling, accommodation in the *dharamshala* for outstation patients, adoption of orphans, coordination of these activities in different departments and centres, help in obtaining railway concession to specific patients.

During peak hours, this unit provides guidance and counselling to patients and looks into minor grievances on the spot, which helps in the smooth running of the OPDs. On an average, about 2500 patients every day require guidance and counselling in all OPDs including Emergency. To achieve this, part-time social guides are deployed at important places such as the main enquiry counter, X-ray counter, Emergency, Blood Collection centre as well as all the OPD counters on five floors.

Counselling

Over 30,000 patients were given counselling and information about their diagnosis, prognosis and treatment after discussion with concerned doctors.

Over 5500 patients were given special counselling and case work services. Services were also offered to solve their social, emotional and psychosomatic problems which come in the way of achieving best results of treatment. Patients were also motivated and helped for regular follow-up whenever required. Over 15 home visits were also made.

Rehabilitation services

Over 600 destitute/unknown/unattended/road accident patients were rehabilitated in different rehabilitation centres under the Delhi Administration and other welfare institutions as well as their homes.

Twelve patients were rehabilitated by helping them to get jobs or find work avenues. Ten wheelchairs, 2 tricycles, 2 sewing machines, 40 crutches and 2 weighing machines were given to poor and needy patients. Sixteen unwed mothers were rehabilitated in other agencies till their delivery as their parents were unable to keep them at home.

Relatives of over 1950 patients were informed about unknown and unattended patients. About 5000 senior citizens were provided special help in OPDs and laboratories.

Financial assistance

A total of Rs 90,692 was given to 301 poor patients from the 'Fund for Poor Patients' provided by the hospital authorities. A large number were helped from other sources such as donations from philanthropic

organizations for very expensive drugs and appliances such as crutches, wheelchairs, hearing aids, etc. Help was also extended for food, travel and funeral services to a large number of cases.

Over 200 patients were given blankets and clothes. Over 15 patients were given chappals. A large number of patients were referred to the Ali Yaver Jung Institute for the Hearing Handicapped. Over 20 patients were given colostomy bags.

A total of 829 patients were provided expensive chemotherapy drugs costing Rs 3,09,481 with the help of the Cancer Patients Aid Association and over Rs 75,000 from other associations.

Medicines worth more than Rs 25,000 were distributed to patients suffering from tuberculosis of organs other than the chest, for a full course of antituberculosis medicines from a philanthropic organization—Sewa Prakalap Mahila Mandal Trust. Over 140 urograffin vials costing nearly Rs 22,500 were given to poor patients from donations received.

Over 320 patients were motivated and guided to obtain necessary financial help from the Prime Minister's and Health Minister's Discretionary Funds and various philanthropic organizations.

Food was provided to over 1000 poor patients.

Railway concession facilities

Over 14,500 patients suffering from cancer, tuberculosis, leprosy, etc. were helped to obtain railway concession facilities. A similar facility was also provided to deaf and dumb patients.

Accommodation

Nearly 2000 patients and their attendants who came from outside Delhi were helped in obtaining accommodation in different dharamshalas in the vicinity of the hospital at cheaper rates.

Exemption of levy charges

Over 2500 indigent and poor patients were exempted from payment of different types of investigations and admission charges.

Referral

About 1200 patients of pulmonary tuberculosis and other diseases were referred to different TB hospitals/clinics of respective areas for treatment and issuance of drugs. Over 23,000 patients from the Casualty were referred to other hospitals.

Health education

Activities were conducted in the children's surgical and gynaecological wards with the help of students of Social Work and National Service Scheme workers. These activities focused on maintenance of personal hygiene, balanced nutrition, health and family welfare, and preoperative and postoperative care.

Festivals such as Diwali, Rose Day and Christmas were celebrated in the wards and a puppet show was organized for the entertainment of patients in the children's ward. Toys were distributed in the children's surgical ward on Good Friday.

Special help

Over 600 poor indoor patients were provided life-saving drugs/medicines worth over couple of lakhs from the medical stores/local purchase after proper scrutiny and work-up by Medical Social Service Officers.

Special assignment

Mrs Paramjit Kukreja presented over 400 cases for special grants out of which 181 persons got grants amounting to Rs 52,59,670 from subcommittee and further 217 cases were sent to Central Committee for the grant of Rs 3,62,38,155 under National Illness Assistance Fund (NIAF) during the year.

Training and teaching

Orientation was given to visitors from various organizations. Besides this, about 30 National Services Scheme (NSS) volunteers from various schools and colleges were also given orientation in dealing with patients and hospital-related problems.

One postgraduate student of MSW from the Department of Social Work, Delhi and 2 undergraduate students from Aditi College, 2 undergraduate students from Ambedkar College, Delhi University, and 2 postgraduate students from Bundelkhand University were given on-the-job/field work training in Medical Social Services under close supervision during this period. A team of 2 students from Kuttikkanam, Kerala were given on-the-job training for 30 days.

WELFARE UNIT

Patients and employees welfare services were organized by the Welfare officer, Mrs Preeti Ahluwalia

Patients Welfare

Patient care: Rs 52,39,800 (approximately) raised as donation

Purpose	Donation	Donor
For treatment and surgery of poor and needy patients undergoing treatment in the Main Hospital and Centres	Rs 11,06,400	Shri Sai Bhakta Samaj (Regd.)
	Rs 6,04,000	Indo Global Social Service Society
	Rs 2,65,700	Anmol Sahara
	Rs 62,500	Sahu Jain Trust
	Rs 15,000	Jawahar Bhawan
	Rs 12,000	Vijay Gujral Fund
	Rs 15,000	Rajender Bhawan Trust
AIIMS Poor Fund Account	Rs 37,100	
Anti-cancer drugs provided free to cancer patients	Rs 30,27,900	Gopal Foundation
	Rs 94,200	Other Donors

In addition, an amount of over Rs 6,00,000 was arranged for the treatment of poor patients from the Prime Minister's National Relief Fund.

Patients living below the poverty line are being assisted to avail financial assistance for their treatment from the *Rashtriya Arogya Nidhi* (National Illness Assistance Fund).

Medicines were arranged for poor and needy patients from Hospital Poor Patient Fund. Patients were also assisted for admission, exemption of levy charges and investigation charges, etc.

A sewing machine was provided for the rehabilitation of Smt Bimla Devi. Food was arranged for poor patients and their attendants through Anmol Sahara.

On the occasion of Diwali, sweets and gifts were distributed by Anmol Sahara to patients admitted to the C.N. Centre and to children studying in the school being run by MIRWA in the community hall, Ansari Nagar campus.

Donation of funds for the National Eye Bank Project

A sum of Rs 48,000 was received as donation from Sahu Jain Trust towards 3 months' salary of grief counsellors who were deployed for motivating people for donation of eyes of their deceased relatives under a project of the National Eye Bank.

Employees' welfare

Appointment on compassionate grounds

Cases for appointment on compassionate grounds were dealt with. Counselling services and moral support was provided to family members so as to assist them to accept/overcome the great loss they had suffered and thereby enable them to shoulder the responsibilities that had fallen on them. Assistance for funeral expenses was also provided, if required, to the relatives of the deceased employees.

Counselling services

Counselling services were provided to employees, patients and their relatives so as to enable them to overcome/adjust to their physical, social, emotional, economic, familial and marital problems and thereby enhance their social functioning.

Redressal of grievances

Services are provided for redressal of grievances to staff members and patients.

Assistance for education

Assistance for education and vocational rehabilitation is being provided to the needy and deserving children of employees/patients through donors. In addition, 11 students were assisted for scholarships from Shri Sai Bhakta Samaj.

Free hearse van facility

Free hearse van facility is being organized through Shri Sai Bhakta Samaj (Regd.) to enable easy transportation of the dead body by the distressed relatives to their homes/crematorium in Delhi.

Dharamshalas

As a welfare activity, through the aegis of the AIIMS Hospital Social Welfare Society, the Rajgarhia Vishram Sadan, Surekha Vishram Sadan and Shri Sai Vishram Sadan have provided shelter to over 21,000 patients and their attendants.

Cancer Patients Aid Association also celebrated the festivals of Diwali and Holi with inmates of the Sadans.

APPENDIX I

Yearly Statistical Health Bulletin (2005–2006)

	Main Hospital	CNC	Total
1. Total patients admitted	64,760	18,799	83,559
a. Adults and children	62,437		
b. Newborn infants	2,323		
2. Total number of patients discharged	62,367	17,276	79,643
a. Adults and children	60,204	77,480	
b. Newborn infants	2,163	2,163	
3. Total days of care	3,20,815	1,09,437	4,30,252
a. Adult and children	3,09,168	4,18,605	
b. Newborn infants	11,647	11,647	
4. Average length of stay (ALS)	5.1	6.3	5.4
a. Adults and children	5.1	5.4	
b. Newborn infants	5.4	5.4	
5. Total number of patient care days in hospital (as per daily census)	3,01,238	1,16,843	4,18,081
a. Adults and children	2,94,884		
b. Newborn infants	6354		
6. Daily average number of patients	825	320	1,145
a. Adults and children	808	1128	
b. Newborn infants	17	17	
7. Average bed occupancy (%)	81.6	88.9	82.4
a. Adults and children	81.9	82.6	
b. Newborn infants	68.0	68.0	
8. Births in hospital	2,323		
a. Male babies	1,286	–	–
b. Female babies	1,036		
c. Intersex	1		
9. Total deaths (including newborns)	2,174	1,172	3,346
a. Death under 48 hours	695	269	964
b. Death over 48 hours	1,479	903	2,382
c. Gross death rate (%)	3.5	6.8	4.2
d. Net death rate (%)	2.4	5.3	3.0

APPENDIX II

S.No.	Department	Admissions	Discharges	Days of care	Average length of stay	Total deaths	Deaths under 48 hrs (Rate in %)	Deaths over 48 hrs (Rate in %)	Gross death	Net deaths
1.	Anaesthesiology	689	687	687	1.0	-	-	-	-	-
2.	Dental Surgery	212	213	1,597	7.5	1.0	-	1.0	0.5	0.5
3.	Dermatology	4,146	4,139	13,227	3.2	15	1	14	0.4	0.3
4.	Dr BR Ambedkar IRCH (Private ward)	466	463	4,590	9.9	81	39	42	-	9.9
5.	Endocrinology	454	436	7,590	17.4	17	4	13	3.9	3.0
6.	Gastroenterology	2,358	2,134	14,986	7.0	339	99	240	15.9	11.8
7.	Gastrointestinal Surgery	674	558	8,575	15.4	45	3	42	8.1	7.6
8.	Haematology	6,920	6,875	13,715	2.0	141	48	93	2.1	1.4
9.	Medicine	3,815	3,658	35,252	9.6	699	256	443	19.1	13.0
10.	Nephrology	3,621	3,472	13,356	3.8	183	53	130	5.3	3.8
11.	Newborn	2,323	2,163	11,647	5.4	52	19	33	2.4	1.5
12.	Nuclear Medicine	458	390	589	1.5	-	-	-	-	-
13.	Obstetrics and Gynaecology	9,455	9,185	42,507	4.6	31	9	22	0.3	0.2
14.	Orthopaedics	3,855	3,699	26,929	7.3	38	10	28	1.0	0.8
15.	Otorhinolaryngology (ENT)	4,215	4,158	16,193	3.9	15	6	9	0.4	0.2
16.	Paediatric Surgery	2,408	2,220	14,815	6.7	54	9	45	2.4	2.0
17.	Paediatrics	6,617	6,285	24,729	3.9	244	86	158	3.9	2.5
18.	Physical Medicine and Rehabilitation	35	34	1,027	30.2	-	-	-	-	-
19.	Psychiatry	435	431	9,513	22.1	2	1	1	0.5	0.2
20.	Radiotherapy	174	159	657	4.1	22	10	12	13.8	8.1
21.	Surgery	6,280	5,955	41,171	6.9	170	36	134	2.9	2.3
22.	Urology	5,150	5,053	17,463	3.5	25	6	19	0.5	0.4
	TOTAL	64,760	62,367	3,20,815	5.1	2,174	695	1,479	17.5	2.4
1	Cardiology	8,100	7,918	25,272	3.2	235	87	148	3.5	1.9
2	CTVS	3,289	3,028	27,749	9.2	231	25	206	3.0	6.9
3	Neurology	3,019	2,719	24,346	9	193	44	149	7.6	5.6
4	Neurosurgery	4,369	3,589	32,048	8.9	513	113	400	7.1	11.5
5	Neuro-anaesthesiology	22	22	22	1.0	-	-	-	14.3	-
	TOTAL	18,799	17,276	1,09,437	6.3	1,172	269	903	6.8	5.3
	GRAND TOTAL	83,559	79,643	430,252	5.4	3,346	964	2,382	4.2	3.0

APPENDIX III

Department-wise distribution of inpatients (2005–2006)

S.No.	Departments/Sections	Numbers
1.	Anaesthesiology	689
2.	Dental Surgery	212
3.	Dermatology	4,146
4.	Dr BR Ambedkar IRCH (Private wards)	466
5.	Endocrinology	454
6.	Gastroenterology	2,358
7.	Gastrointestinal Surgery	674
8.	Haematology	6,920
9.	Medicine	3,815
10.	Neonatal	2,323
11.	Nephrology	3,621
12.	Nuclear Medicine	458
13.	Obstetrics and Gynaecology	9,455
14.	Orthopaedics	3,855
15.	Otorhinolaryngology	4,215
16.	Paediatric Surgery	2,408
17.	Paediatrics	6,617
18.	Physical Medicine and Rehabilitation	35
19.	Psychiatry	435
20.	Radiotherapy	174
21.	Surgery	6,280
22.	Urology	5,150
Sub-total (MAIN)		64,760
23.	Cardiology	8,100
24.	Cardiothoracic and Vascular Surgery	3,289
25.	Neurology	3,019
26.	Neurosurgery	4,369
27.	Neuro-anaesthesia	22
Sub-total (CNC)		18,799
GRAND TOTAL		83,559

APPENDIX IV

Region-wise distribution of inpatients (2005–2006)

Region	Number of patients		
	Main Hospital	CNC	Total
Delhi	36,628	7,629	44,257
Uttar Pradesh	10,951	3,181	14,132
Haryana	7,269	2,168	9,437
Bihar	4,239	2,137	6,376
Rajasthan	843	602	1,445
Punjab	236	377	613
Other states	4,390	2,640	7,030
Other countries	204	65	269
Total	64,760	18,799	83,559

APPENDIX V

Surgical procedures (2005–2006)

S.No.	Department	Major	Minor	Total
1.	Casualty	4	9,053	9,057
2.	Dental Surgery	1,821	7,285	9,106
3.	Gastrointestinal Surgery	457	19	476
4.	Gynaecology	1,600	2,767	4,367
5.	Obstetrics	858	603	1,461
6.	Orthopaedics	2,197	1,387	3,584
7.	Otorhinolaryngology	1,962	23,657	25,619
8.	Paediatric Surgery	1,305	3,219	4,524
9.	Surgery	3,395	10,374	13,769
10.	Urology	1,570	8,589	10,159
Sub-total (MAIN)		15,169	66,953	82,122
11.	Cardiothoracic and Vascular Surgery	3,429	–	3,429
12.	Neurosurgery	3,014	490	3,504
Sub-total (CNC)		6,443	490	6,933
GRAND TOTAL		21,612	64,469	86,081

APPENDIX VI
Attendance in OPDs and Specialty Clinics (2005–2006)

Medical disciplines	New cases	Old cases	Total
DERMATOLOGY			
<i>General OPD</i>	32,833	29,454	62,287
<i>Specialty Clinics</i>			
Allergy	573	948	1,521
Dermatology Surgery	304	631	935
Leprosy	424	1,650	2,074
Pigmentation	525	1,478	2,003
Sexually transmitted diseases	1,005	1,835	2,840
ENDOCRINOLOGY	10,017	17,872	27,889
GASTROENTEROLOGY	18,311	29,577	47,888
HAEMATOLOGY	4,987	16,506	21,493
MEDICINE			
<i>General OPD</i>	69,970	68,875	138,845
<i>Specialty Clinics</i>			
Chest	1,885	4,101	5,986
Rheumatology	351	6,733	7,084
Geriatric	125	642	767
NEPHROLOGY	5,557	16,521	22,078
Renal Transplant	95	4,753	4,848
NUCLEAR MEDICINE	2,339	2,634	4,973
PAEDIATRICS			
<i>General OPD</i>	35,070	37,317	72,387
<i>Specialty Clinics</i>			
Chest	474	3,836	4,310
Follow-up TB	360	2,167	2,527
Genetic and birth defects	1,368	1,062	2,430
High-risk neonatal	478	889	1,367
Neurology	2,144	4,990	7,134
Renal	538	3,851	4,389
Well baby	506	17	523
PSYCHIATRY			
<i>General OPD</i>	1,470	–	1,470
<i>Specialty Clinics</i>			
Child guidance	484	290	774
Walk-in	14,126	24,367	38,493

Surgical disciplines	New cases	Old cases	Total
ANAESTHESIA			
Pain	1,686	3,977	5,663
Pre-anaesthesia	6,334	1,365	7,699
DENTAL SURGERY			
<i>General OPD</i>	29,508	26,758	56,266
<i>Specialty Clinics</i>			
Combined cleft palate	56	228	284
Oral prophylaxis	1,105	7,972	9,077
Orthodontics	1,508	5,965	7,473
Prosthodontics-cum-maxillofacial prosthesis	1,979	2,600	4,579
Restorative-cum-endodontic	5,360	3,743	9,103
Trigeminal neuralgia	173	904	1,077
GASTROINTESTINAL SURGERY			
	1,720	4,594	6,314
OBSTETRICS AND GYNAECOLOGY			
<i>General OPD</i>	29,542	39,310	68,852
<i>Specialty Clinics</i>			
Antenatal	627	4,775	5,402
Endocrine gynaecology	166	181	347
Family welfare	3,968	6,231	10,199
High-risk pregnancy	2,076	11,069	13,145
Postnatal	162	74	236
ORTHOPAEDICS			
<i>General OPD</i>	77,639	1,40,304	2,17,943
<i>Specialty Clinics</i>			
Club foot (CTEV)	219	1,575	1,794
Follow-up	–	6,813	6,813
Hand	759	847	1,606
Polio	57	40	97
Scoliosis	481	958	1,439
OTORHINOLARYNGOLOGY AND RUAS			
<i>General OPD</i>	48,195	37,107	85,302
<i>Specialty Clinics</i>			
Audiology	142	130	272
Hearing	841	1,122	1,963
Rhinology	103	91	194
Speech	1,089	1,084	2,173
Vertigo	114	107	221
Voice	496	567	1,063

Surgical disciplines	New cases	Old cases	Total
PAEDIATRIC SURGERY			
<i>General OPD</i>	7,054	11,032	18,086
<i>Specialty Clinics</i>			
Hydrocephalus	22	281	303
Intersex	27	34	61
Urology	367	2350	2717
PHYSICAL MEDICINE AND	14,365	9,599	23,964
REHABILITATION			
RADIOTHERAPY			
<i>General OPD</i>	2,039	62,735	64,774
<i>Specialty Clinics</i>			
Radiotherapy in gynaecology	713	24,514	25,227
Radiotherapy in surgery	1,258	17,439	18,697
SURGERY	38,046	26,700	64,746
UROLOGY	11,212	22,191	33,403
OTHERS			
Casualty	1,79,574	–	1,79,574
Employees Health Scheme	1,04,915	69,944	1,74,859
Marriage counselling	2,500	2,498	4,998
Nutrition	2,899	260	3,159
Total	7,87,415	8,43,064	16,30,479

6.1 Division of Emergency Medicine

Officer-in-charge

S. Bhan

Additional Professors

Praveen Aggarwal

L.R. Murmu

Associate Professors

Sanjeev Kumar Bhoi

Sanjay Kumar Verma

EDUCATION

Continuing Medical Education

The Faculty of the department participated in and delivered lectures in national and international workshops and conferences during the year. The following conferences/training programmes were organized by the department:

1. INDUS-EM 2005 in collaboration with University of South Florida, USA
2. Basic and Advanced Cardiac Life Support Training Programme.

Orations

1. Dr Kiran and Pallavi Patel Foundation for Global Understanding Oration at the Indo-US Emergency Summit held at Delhi in 2005.
2. American Association of Physicians of Indian Origin Oration at the Indo-US Emergency Summit held at Delhi in 2005.

PUBLICATIONS

Journals

1. Bhoi S, Verma S, Gupta V. Enalapril induced idiosyncratic angioneurotic edema in a patient of renal amyloidosis. *JACM* 2006;7:47–8.

Chapters in Books

1. Aggarwal P, Bhoi S, Goel A. Management of acute poisoning. In: Aggarwal AK (ed). *Emergency medicine*. New Delhi: Jaypee Brothers; 2005:389–98.
2. Aggarwal P, Sinha S. Common poisonings in North India. In: Aggarwal AK (ed). *Emergency medicine*. New Delhi: Jaypee Brothers; 2005:399–414.

The details of various activities of Emergency Services between June 2004-2005

Average no. of patients	12000/month	161,253/year
Minor operations	900/month	10,800/year
Number of medico-legal cases	800/month	9,600/year

6.2 Hospital Dietetics Services

Chief Dietician

Rekha Sharma

Dietician

Swapna Chaturvedi

Assistant Dieticians

R. Vasuki

Gurdeep Kaur

Richa Jaiswal

EDUCATION

1. Dietetic short-term training for MSc Nutrition student for 6 weeks
2. Dietetic short-term training for PG Diploma Dietetic students for 3 months
3. Dietetic short-term training for BSc Nursing and Post-certificate Nursing students imparting nutrition education through lectures to medical students by the Chief Dietician
4. The Department of Dietetics runs a clinic on nutrition counselling for outdoor patients

RESEARCH

Ongoing

1. Efficacy of soya phytoestrogens on osteoporosis and cardiovascular profile of postmenopausal women. Sharma R, Reddy KS, Mittal S, Tendon N, Pandey R. Funded by DBT for 3 years (2003–2006). Funds: Rs 14 lakhs
2. Development of appropriate prevention and intervention strategies for non-communicable nutrition-related disorders among women in post-reproductive period. Funded by DST for 3 years (2004–2007).

PUBLICATIONS

1. Sharma R, Chatterjee A, Gupta D, *et al.* 'Nutritional status, cardiovascular profile and bone health of the postmenopausal women in Delhi and effect of soy phytoestrogens on it' Proceedings of 3rd International Academy on Nutrition and Ageing held at St. Louis USA, May 2005, *Journal of Nutrition, Health and Ageing* 2005;**9**.
2. Sharma R. Nutrition in the management of diabetic foot. Proceedings of the CME—Dietary interventions in surgery, held at Government Medical College, Chandigarh; November 2005.
3. Sharma R. 'Metabolic syndrome and diet'. Proceedings of the 38th Annual Conference of Indian Dietetic Association held at Indore; November 2005.

PATIENT CARE

Number of indoor patients served different diets

Total number of diets	5,89,409
Normal diets	3,25,943
Semisolid	24,496
Therapeutic diets (diabetes, renal, GI disorders, surgical and others)	1,41,998
Enteral feeds	44,006
Private ward diets	52,966

Nutrition clinic—outpatients

New patients	5,954
Old patients	1,286

6.3 Blood Bank (Hospital)

Medical Superintendent and Head

D.K. Sharma

Assistant Professor (Transfusion Medicine)

Kabita Chatterjee

Assistant Blood Transfusion Officer

Poonam Coshic

ACTIVITIES

Blood collection in donor room

1.	Total relative donors	16,978
2.	Total voluntary donors	12,315
	From donation camps	8,400
	From AIIMS Blood Bank	3,915
	From Mobile Donation	Nil
3.	Collected from CNC	1,737
	IRCS	188
	Others	1,283
	Total collection	32,501

Camps organized 121

Routine Laboratory

1.	Total patients	43,053
2.	Total ABO grouping	1,01,420
3.	Total Rh	68,919
4.	Total OPD grouping and Rh	3,917
5.	Total cross-match (Emergency and Routine)	53,465
6.	Total donor grouping	65,002
7.	Total ICT	752
	ICT positive	137
8.	Total titre	99
9.	Total A/B	39,047
10.	Total DCT	263
	DCT positive	17
11.	Total blood issued (units)	31,882
12.	Total received back (units)	648
13.	Total small units	569
14.	Total blood discarded (units)	679
15.	Blood issued but not transfused	Nil
16.	Total blood issued to private wards (units)	1,232
17.	Total component issued to private wards	973

18.	Total blood issued to outside hospital (units)	927
19.	Total component issued to outside hospital	521
20.	Total cross-match but not transfused	10,655
21.	Blood issued to IRCH	3,120
	IRCS	20
	CNC	111
Total		4,22,428

Special Procedure Laboratory

1.	Minor grouping	1,272
2.	Platelet antibody	123
3.	Reagent cell thawing	760
4.	Cell freezing	243
5.	DAT	32
6.	Cross-matching discrepancy	194
7.	Group discrepancy	08
8.	AB screening	35
9.	Blood thawing	12
Total		2,679

Quality control		5,400
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Component Laboratory

1.	Platelet-rich concentrate	20,954
2.	Fresh-frozen plasma	14,648
3.	Liquid plasma	13,243
4.	Cryoprecipitate	864
5.	Red blood cells	27,891
6.	Platelet pheresis	94

Total components prepared		77,694
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7.	Platelet pheresis in IRCH	660
8.	Stem cell (IRCH)	117
9.	Stem cell in blood bank	04

Infection Laboratory

1.	HIV test	49,403
2.	HBV test	39,320
3.	Anti-HBc test	38,127
4.	HCV test	38,592
5.	VDRL	33,973
Total		1,99,415

Other Activities

1. Training of 15 medical and paramedical personnel.
2. Conducted a 3-day WHO-sponsored CME programme by the Special Procedure Laboratory and Component Laboratory on leukodepleted component preparation and antigen panel.
3. Conducted a 1-day CME programme in collaboration with the Department of Haematology on Cytopheresis.
4. Six members of the technical staff attended ISBTI 2005 Annual Conference at Udaipur.
5. The Infection Marker Testing Laboratory set up a new hepatitis B marker testing (anti-HBe).
6. The Component Laboratory started preparation of leuko-depleted components and buffy coat.

7. College of Nursing

Principal

Manju Vatsa

Lecturers

Meena Agarwal
Ashia Qureshi
Kamlesh Sharma
(from October 2005)

Sandhya Gupta
Deepika C. Khakha
(from September 2005)

Rachel Andrews

Senior Nursing Tutor

Geeta Razdan

Nursing Tutors

M. Sharma
Gayatri Batra

H.C. Rawat
Poonam Joshi

Kiran Singh Simak
Sucheta

EDUCATION

Undergraduate

Fifty students graduated from the four-year BSc (Hons) Nursing course, while 19 students graduated from the two-year BSc Nursing (Post-certificate) course.

Postgraduate

MSc Nursing programme was launched in 2004. Thirteen students are continuing in the second year MSc Nursing course and 15 students have joined the programme this year (14 Indian and 1 from Nepal) in the following seven specialties:

1. Paediatric Nursing
2. Psychiatric Nursing
3. Cardiology/CTVS Nursing
4. Neurosciences Nursing
5. Oncology Nursing
6. Critical Care Nursing
7. Nephrology Nursing

Continuing Nursing Education (CNE)

1. The College of Nursing organized the following short-term courses/symposiums/ workshops.
 - A ten-day workshop on ‘Quality Assurance in Nursing’ was held for nursing personnel from the northern region of India, sponsored by the Ministry of Health and Family Welfare. A total of 37 participants registered for the workshop. Coordinator: Sandhya Gupta.
 - Two courses on ‘Specialty Nursing Training in Oncology’, sponsored by WHO, of three months’ duration each were held, in which 15 nursing personnel, representing 8 states of India, participated. Coordinators: Rachel Andrews and Mala Goswami.
 - Ten training workshops on ‘Counselling for HIV/AIDS’ were held for 100 nursing personnel from AIIMS as part of the ‘Pilot delivery of model HIV Prevention and Health Promotion Programme in India by nurses’ as a sub-project of the UCLA–AIIMS collaboration project.
 - A two-day workshop on ‘Substance Use Disorder Nursing’ was held for 22 nurses from NDDTC, AIIMS. Coordinator: Sandhya Gupta.
 - ‘Cardiology Nursing Update’ was held from 7–8 November 2005. A total of 28 nurses from AIIMS attended the update. Coordinator: Rachel Andrews.
 - ‘Oncology Nursing Update’ was held from 5–6 December 2005. A total of 21 nurses from AIIMS attended the update. Coordinator: Mala Goswami.
 - ‘Nephrology Nursing Update’ was held from 24–25 February 2006. A total of 20 nurses from AIIMS attended the update. Coordinator: H.C. Rawat.
 - ‘Neonatal Nursing Update’ was held from 28–29 March 2006. A total of 9 nurses from CRHSP, Ballabgarh attended the update. Coordinator: Ashia Qureshi.
 - ‘Mental Health Nursing Update’ was held on 21 April 2006. A total of 37 nurses from AIIMS attended the update. Coordinator: Sandhya Gupta.
 - ‘Neurological Nursing Update’ was held from 26–27 April 2006. A total of 20 nurses from AIIMS attended the update. Coordinator: Meena Agarwal.
 - A three-month ‘Clinical Training Programme’ was organized for eight nursing personnel from the Indira Gandhi Institute of Child Health, Kabul, Afghanistan from 2 March 2005 to 31 May 2005.
2. The College of Nursing also conducted orientation/ briefing sessions for:
 - Four students of MSc Nursing, College of Nursing, SNTD, Mumbai and two students of National Institute of Nursing and Education, PGI, Chandigarh.
 - Two groups of visitors from abroad and 10 groups of visitors from various educational institutions of India visited the department.
3. Faculty members of the College attended 15 workshops/conferences and delivered 45 lectures for 20 CNE programmes held during the year.

RESEARCH PROJECTS

Ongoing

1. Pilot delivery of model HIV Prevention and Health Promotion Programme in India by nurses. Sub-project of ICOHRTA for AIDS/TB, UCLA. Manju Vatsa, AIIMS and Adey Nyamathi, School of Nursing, UCLA, USA.

CLINICAL AND COMMUNITY SERVICES

The faculty and students participated in outdoor and indoor patient-care activities of all the departments of the Institute. They organized and conducted Pulse Polio programme at 45 centres of South Delhi, organized by the Government of NCT of Delhi. A. Qureshi and Kiran Singh coordinated and supervised the programme.

- Fifty health education sessions in rural areas and 100 in urban slums, and OPDs on various health issues such as hygiene, HIV/AIDS, prevention and treatment of URI, diarrhoeal diseases, tuberculosis, family welfare, etc.
- Street plays (10) and exhibitions on various health-related topics for urban slums.
- Health talks and exhibition on AIDS on the occasion of the International AIDS Day in the urban community.
- 'Prevention of substance abuse', a community awareness and educational camp was held in Kalyan Puri.

PUBLICATIONS

1. Vatsa M. Current status of neonatal nursing in India. *J Neonatology* 2005;**19**:198–203.
2. Gupta S. Comparative study of status of depression among elderly males and females in Delhi. In: *Proceedings of the National Conference on Geriatric Nursing Perspectives*. Indian Society of Psychiatry Nursing; February 2006:49–53.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

1. Dr Manju Vatsa is continuing as a Member of the Faculty of Nursing at the Baba Farid University of Health Sciences, Faridkot, Punjab; Member of the Indian Nursing Council and its Executive, Education and Equivalence Committees; National Advisory Board Member for 'Prism's Nursing Practice', *Journal of Clinical Nursing, Education, Training and Career Development*. She has also been nominated as a Chairperson for the 'International Neonatal Nursing Conference' to be held in New Delhi in 2007.
2. Dr Manju Vatsa and Ms Sandhya Gupta continue to be on the Review panel of the *Indian Journal of Midwifery and Nursing*.
3. Ms Sandhya Gupta has been nominated as a Member of the Board of Studies, Punjab University, Chandigarh and as an Advisor for 'National Conference of Indian Society of Psychiatric Nurses' held in Mangalore in February 2006.

4. M. Vatsa participated as a core group member for ‘Development of PhD Consortium in India’, coordinated by the Indian Nursing Council; as an expert member for establishing the ‘National Institute for advancement of standards in Nursing’; as an expert for revision of MSc Nursing curriculum and ANM curriculum of the Indian Nursing Council; as an expert member for development of ‘Strategic framework for Nursing in India’ by Sir Edward Dunlop Hospitals, coordinated by Indian Nursing Council.
5. Manju Vatsa and S.Gupta participated as experts for a two-day training programme for trainers for psychosocial counselling of Tsunami survivors in Chennai organized by the Indian Nursing Council; development of training manual for nurse educators and conducted training programme for disaster preparedness and psychosocial counselling of Tsunami survivors in Chennai organized by the Indian Nursing Council; revision of syllabus for two courses in Geriatric care conducted at the National Institute of Social Defence, Ministry of Empowerment and Social Justice, Government of India.
6. Faculty members of the College participated in the conduct of inspections and examinations in various colleges of nursing and universities in India.
7. Deepika Khakha contributed to the development of a ‘Booklet on HIV/AIDS’ for patient education as part of the Golden Jubilee Celebration of AIIMS Public Lecture series, January 2006.
8. Kamlesh Sharma participated in the revision of ANM curriculum, as a coopted member of the Education Committee of the Indian Nursing Council.
9. M. Vatsa and other faculty members participated as Resource Persons/Committee Members for the following organizations:
 - Various committees at AIIMS
 - Indian Nursing Council: General Body, Executive Committee, Education and Equivalence Committees
 - Baba Farid University of Health Sciences: Faculty of Nursing
 - Ministry of Health and Family Welfare, Government of India
 - R.A.K. College of Nursing, University of Delhi
 - CMET-AIIMS adjunct faculty
 - National Medical Library: Book Selection Committee
 - Punjab University, Chandigarh: Board of Studies in Nursing
 - National Institute of Nursing, PGI, Chandigarh
 - BPKIHS, Dharan, Nepal: Selection Committee, NEIGRIHMS, Shillong
 - DAV Management Committee: Selection Committee, NIMHANS: Selection Committee
 - Indira Gandhi National Open University: Core/expert group member
 - Trained Nurses’ Association of India
 - *Indian Journal of Nursing and Midwifery*: Review Committee
 - G.G.S. Indraprastha University: Institutional Assessment Committee
 - Dharamshila Cancer Hospital
 - VIMHANS
 - National Institute of Social Defence
 - Indian Academy of Hospital Administration

8. Research Section

As per the mandate given to the All India Institute of Medical Sciences, research forms an important component. AIIMS has been at the forefront of conducting high quality research, both in the fields of basic and applied sciences. During the year under review, the faculty of the AIIMS drew extramural grants for various research projects from national and international agencies amounting to nearly Rs 34 crore. At present, 388 extramurally funded projects are being conducted in the Institute.

This section deals with the administration of all the extramural research conducted at the AIIMS. The Research Committee constituted by the Director is as follows:

1. Professor Kusum Verma
Dean (Academic) (up to 30.09.2005) Chairperson
2. Dr P.P. Kotwal
Professor of Orthopaedics and
Professor-in-Charge (Research Section) Vice-Chairperson
3. Dr Nikhil Tandon
Sub-Dean (Academic) Member
4. Dr K.K. Deepak
Sub-Dean (Examination Section) Member
5. Deputy Director (Administration) Member
6. Dr R. Guleria
Professor of Medicine Member
7. Dr G.K. Rath
Professor and Head of Radiotherapy Member
8. Dr K.R. Sundaram
Professor and Head of Biostatistics Member
9. Dr Shobha Broor
Professor of Microbiology Member
10. Dr Chitra Sarkar
Professor of Pathology Member
11. Dr Subrata Sinha
Professor and Head of Biochemistry Member

12.	Dr N.R. Jagannathan Professor and Head of Nuclear Magnetic Resonance	Member
13.	Dr K.S. Reddy Professor and Head of Cardiology	Member
14.	Dr A. Malhotra Professor and Head of Nuclear Medicine	Member
15.	Dr N.K. Arora Professor of Paediatrics	Member
16.	Dr R.B. Vajpayee Professor of Ophthalmology	Member
17.	A Representative of the Indian Council of Medical Research (ICMR) nominated by Director General, ICMR	Member
18.	Shri V.P. Gupta Registrar	Member
19.	Financial Adviser	Member
20.	Shri S.P. Mahla Finance and Chief Accounts Officer (Research Section)	Member
21.	Smt Nirmala Gupta Assistant Administrative Officer (Research Section) (up to 31.1.2006)	Member
22.	Shri K.C. Chhoker Administrative Officer (Research Section) (from January 2006)	Member
23.	A Representative of the Society of Young Scientists	Member

Ongoing research projects funded by Indian agencies

Investigator	Project	Funding agency	Funds (Rs)
Anatomy			
Kiran Kucheria	Genomics of male infertility	ICMR	3,79,440
Kiran Kucheria	Sexual and reproductive health for rural and urban women with application of molecular genetics	DBT	5,55,398
Kiran Kucheria	Genomic diversity in five ethnic groups of Rajasthani population	DBT	4,03,828
Kiran Kucheria	Diagnosis and counselling of genetic disorders using cytogenetics and molecular methods	DBT	26,73,000
Kiran Kucheria	Aneuploidies leading to mental retardation and foetal loss	DBT	48,61,640
Rani Kumar	Role of cell cycle regulatory genes in breast cancer patients on hormonal therapy	DBT	7,56,227
S.B. Ray	Effect of alterations in intracellular calcium concentration on ORL1 (opioid receptor-like 1) opioid receptors in the rat central nervous system during morphine tolerance	ICMR	2,53,640
Shashi Wadhwa	Effect of prenatal auditory stimulation on chick hippocampus	DBT	5,12,038
Biochemistry			
D.N. Rao	Developing new generation peptide-based vaccine using F1 and V antigens of <i>Yersinia pestis</i> (plague)	DST	11,46,635
D.N. Rao	Developing epitope immunogen using different stages of <i>P. vivax</i> using in-built immunoadjuvant and delivery in microspheres	ICMR	1,78,782
D.N. Rao	To assess the correlation between sperm maturation and epididymal function in men with obstructive infertility after vasoepididymostomy (VEA)	Ministry of Health and Family Welfare	1,43,351
D.N. Rao	Stability studies of the proposed EGF cream on a trial batch manufactured by Glenmark Laboratories, Mumbai	Glenmark Laboratories	2,281
D.N. Rao	Technological feasibility and immunological potential of multivalent single-injection microsphere vaccine incorporating diphtheria, pertussis, tetanus and hepatitis B antigen	DBT	8,69,989
Jyotsna Verma/ Nibhriti Das	Role of cytokines, anti-dsDNA antibodies and complement regulatory proteins in systemic lupus erythematosus	DST	-11,903
Kalpna Luthra	Frequency distribution of three HIV-I resistance conferring polymorphisms SDF 3 alpha CCR-2-641 and CCR-5 delta 32 in Asian Indians	DST	5,25,666
Kunzang Chosdol/ Subrata Sinha	Characterization of novel genetic alterations preferentially involved in low grade human astrocytic tumours	DST	31,655
M.R. Rajeswari	Studies on expression of HMGA and their interaction with DNA	DST	3,10,867

M.R. Rajeswari	Proteomic analysis of outer membrane of <i>Acinetobacter baumannii</i> and its resistant strains	DBT	12,27,942
N.C Chandra	Studies on the possible development of hyper-lipomia by oral contraceptives: An in vitro model	Ministry of Health and Family Welfare	2,75,520
Neeru Khanna/ Neeta Singh	Elucidation of apoptosis signalling by S29 ribosomal protein	DST	4,004
Neeta Singh	Functional analysis of S29 ribosomal protein in apoptosis	DST	3,10,130
Neeta Singh	A study of the expression and targeting of inhibitors of apoptosis in vitro and in vivo	ICMR	94,531
Neeta Singh	Identification of differentially expressed genes in lung cancer using cDNA library subtraction	DBT	5,79,224
Neeta Singh	Gene expression profiling in practitioners of sudarshan kriya	Ministry of Health and Family Welfare	83,495
Neeta Singh	Development of HPV vaccine prototype	DBT	24,51,190
Neeta Singh	Development of human papillomavirus vaccine prototype/s: Molecular epidemiology of HPV types prevalent in India and identification of HPV-16 L1 and E6 variants	DBT	6,76,090
Nibhriti Das	Elucidation of the molecular mechanism of hypertension: Role of genetic variants of nitric oxide synthase, free radical homeostasis and cell adhesion molecules and their interplay in disease	ICMR	4,280
Ranju Ralhan	Relationship between genetic polymorphism in drug metabolizing enzymes, Cyp1a1 and Gstm1, and risk of developing oral precancer and cancer among consumers of tobacco and chewing products	ICMR	41,20,455
Ranju Ralhan	Role of genomic instability due to alterations of recombination factors p53 and Brcal in the pathogenesis of breast cancer	ICMR	1,99,587
Ranju Ralhan	Gene expression profile analysis of human oesophageal cancer using cDNA micro arrays	ICMR	4,85,355
Ranju Ralhan	Functional analysis and clinical significance of novel molecular targets in cytoskeleton reorganization and locoregional spread of oral cancer using proteomics	DBT	18,73,314
Ranju Ralhan	Designing of methylation target arrays for breast cancer	DBT	22,16,000
S.S. Chauhan	Identification and characterization of human cathepsin L alternate promoter	CSIR	2,14,456
S.S. Chauhan	Regulation of human cathepsin L expression by 5' untranslated regions of its RNA species	DST	78,995
Subrata Sinha	Expression of recombinant antibody in <i>E. coli</i> : Processes for improving binding characteristics of antibodies to hepatitis B surface antigen (HBsAg)	DBT	8,27,129

Subrata Sinha	Ligand-based selection from combinatorial libraries for generating recombinant antibodies to the placental (oncofoetal) isozyme of alkaline phosphatase: Characterization and validation in clinical cancers	DBT	11,37,810
Biophysics			
Nagendra Singh/ T.P. Singh	Posterior urethral valves: A study on the prognostic significance of ACE ID gene polymorphism in PUV and the role of molecular markers in monitoring therapy with disease-modifying agents	DST	4,99,500
Punit Kaur	Three-dimensional structure determination of disintegrin from venom of Indian saw scale by X-ray diffraction method and structure and functional relationship with its complex with integrin	CSIR	1,87,500
Savita Yadav	Purification crystallization and structure determination of disintegrin and integrin–disintegrin complex	DST	1,29,555
Sujata Sharma	Search of a magic drug: Isolation, purification, crystallization and three-dimensional structure determination of the functional c-lobe and antimicrobial peptides of lactoferrin and their applications in antimicrobial drug discovery	DST	3,10,792
T.P. Singh	Funds for Improvement of S and T Infrastructure in Universities and Higher Educational Institutions (FIST)	DST	7,89,712
T.P. Singh	Structural studies of signalling proteins expressed during involution/breast cancer and ligand design	DST	19,00,000
T.P. Singh	Infrastructural support for clinical proteomics	DBT	4,01,97,760
Biostatistics			
R.M. Pandey	Development of appropriate prevention and intervention strategies for non-communicable nutrition related disorders among women in post-reproductive period	DST	9,70,000
Biotechnology			
H.K. Prasad	Molecular basis of dysregulation of interferon generation and function in tuberculosis patients	ICMR	11,78,873
J.S. Tyagi	Isolation identification and characterization of peptides that interact with two component system proteins DEVR and RC 2027c of <i>Mycobacterium tuberculosis</i>	CSIR	4,29,262
J.S. Tyagi	Real-time PCR facility for infectious diseases	DBT	-2,469
J.S. Tyagi	Evaluation of devR mutant of <i>Mycobacterium tuberculosis</i> in animal model of tuberculosis and in cultured bacilli: Virulence and gene expression analysis	DBT	24,96,479
Satya N. Das	Evaluation of antiproliferative, apoptotic and immunomodulatory activity of some Indian systems and homeopathic anticancer drugs	Ministry of Health and Family Welfare	6,10,174
Y.D. Sharma	Malaria vaccine-related field studies in Jabalpur, India	ICMR	22,35,000

Centre for Community Medicine			
C.S. Pandav	Health systems reforms and ethics: Private practitioners in poor neighbourhoods in urban India, Indonesia and Thailand: A multidisciplinary comparative study	DANIDA Research Council	4,87,485
Puneet Mishra	Development of appropriate prevention and intervention strategies for non-communicable nutrition related disorders among women in post-reproductive period	DST	4,50,000
Dietetics			
Rekha Sharma	Efficacy of soy phytoestrogens on osteoporosis and cardiovascular profile of postmenopausal women	DBT	3,87,938
Dermatology and Venereology			
K.K. Verma	Azathioprine versus corticosteroids for controlled clinical trial on <i>Parthenium</i> -induced contact dermatitis	ICMR	3,83,280
Neena Khanna	Evaluation of algorithms proposed by NACO for syndromic management of urethral and vaginal discharge in a tertiary care centre in northern india	ICMR	4,04,818
Neena Khanna	Evaluation of ovarian function in female patients with multibacillary leprosy	ICMR	8,02,437
Neena Khanna	Role of <i>Parthenium hysterophorus</i> in pathogenesis and exacerbations of atopic dermatitis	DBT	4,47,577
Neena Khanna	A randomized, investigator blinded, active-controlled, parallel-group study to compare the efficacy and safety of 6-week treatment with terbiafine a new paediatric formulation, versus 6-week treatment with griseofulvin paediatric suspension in children	Novartis India	2,15,917
Endocrinology and Metabolism			
A.C. Ammini	Assessment of the prevalence of osteoporosis in adult population of India	ICMR	18,66,440
A.C. Ammini	Postmenopausal evaluation and risk-reduction with lasofoxifene (Pearl)	Pfizer	24,47,825
A.C. Ammini	Effects of arzoxifene on vertebral fracture incidence and on invasive breast cancer incidence in postmenopausal women with osteoporosis or with low bone density	Quintiles Spectral India	17,90,901
Nikhil Tandon	Hyperglycaemia and its effect after acute myocardial infarction on cardiovascular outcomes in patients with type 2 diabetes (HEART2D)	Ranbaxy /Eli Lilly	2,21,881
R. Goswami	Diabetes mellitus and vulvovaginal candidiasis: Prevalence of infection and its rational management	ICMR	3,09,297
R. Goswami	Vitamin D status of subjects residing in rural North India	V. Ramalinga-swami Foundation	1,59,928
R. Goswami	Encapsulation of potentially immunotherapeutic peptides in novel biocompatible nano-sized carriers for targeted delivery in IDDM	DBT	3,38,530

Gastroenterology and Human Nutrition			
Pramod Garg	Role of genetic factors in tropical pancreatitis	ICMR	3,14,378
S.K. Acharya	Multicentric study of interferon-glycyrrhizin combination therapy and interferon-ribavirin combination therapy in the management of chronic hepatitis C (Coordinating Centre)	ICMR	2,05,153
S.K. Acharya	Multicentric study of interferon-glycyrrhizin combination therapy and interferon-ribavirin combination therapy in the management of chronic hepatitis C (Study Centre)	ICMR	4,86,509
S.K. Acharya	Advanced centre for liver diseases	ICMR	47,12,509
S.K. Acharya	Randomized controlled trial of pegylated interferon (PEG-IFN) monotherapy and combination of PEG-INF with lamivudine among patients with chronic hepatitis B	Fulford (India)	6,18,924
Umesh Kapil	Prevalence of obesity and associated diseases amongst well to do adolescent children in the National Capital Territory of Delhi	ICMR	7,60,532
Vineet Ahuja	Molecular epidemiology of <i>helicobacter pylori</i> : Its implications in failure of eradication, recurrence of infection after successful eradication and route of re-infection in patients of peptic ulcer disease	DST	93,801
Vineet Ahuja	Comparison of the diagnostic efficacy of immuno-histochemistry with histology (Warthin Starry Stain) and urea-based tests (rapid urea test, C-14 urea) before and after eradication therapy for <i>H. pylori</i> in peptic ulcer disease	ICMR	2,13,652
Vineet Ahuja	Open, randomized clinical trial comparing herbal compound amlant with ranitidine in non-ulcer dyspepsia patients	Maharishi Ayurveda	46,100
Vineet Ahuja	Curcumin for the treatment of ulcerative colitis	Himalaya Drug Company	2,53,488
Y.K. Joshi	Effects of glutamine supplementation on clinical outcome and nutritional status in patients with acute myeloid leukaemia (AML)	ICMR	38,393
Gastrointestinal Surgery			
Peush Sahni	Design and development of syringe pump and online peristaltic pump for drug delivery	Ministry of Information and Technology	6,01,923
Haematology			
Renu Saxena	A study to characterize the von Willebrand disease and its correlation with molecular defects	DST	9,36,097
Renu Saxena	Organization of proficiency testing programme for testing haemogram	DST	2,34,786
Renu Saxena	Haemostatic and molecular defects predisposing to acute non-embolic stroke in children and young Indians	ICMR	1,78,213
Renu Saxena	Characterization of mutations underlying haemophilia A and B	DBT	9,31,080
V.P. Choudhry	Thalassaemia awareness and screening programme for detection of thalassaemia triat	National Thalassaemia Welfare Society	1,12,529

Laboratory Medicine			
B.L. Jaikhani	Development of rapid diagnostic test for detection of auto antibodies in myasthenia gravis by plate and dot-blot ELISA	ICMR	4,09,301
M. Irshad	Prevalence and significance of transfusion transmitted virus (TTV) in various forms of liver diseases	ICMR	7,86,707
M. Irshad	Optimization of carbohydrate protein conjugates as vaccine for the prevention of enteric fever	DBT	17,37,325
Sarman Singh	Baseline database collection of documentation of good manufacturing and supply practices adopted by the manufacturers of Torch ELISA kits and quality control assesment at the user level of these kits	DST	94,886
Sarman Singh	Evaluation of toxicity and anti-leishmanial efficacy of liposomal amphotericin B (KALSOMETM) in mouse model	DST	32,06,875
Sarman Singh	Rapid and accurate diagnosis of tuberculosis using a novel set of primers directly from clinical samples	ICMR	6,14,907
Sarman Singh	Expression, purification and characterization of recombinant kinesin-like protein of VL and PKDL causing Indian strains of <i>Leishmania donovani</i> and developing ELISA and other rapid test methods	DBT	5,76,800
Sarman Singh	Screening of marine product for <i>In vitro</i> anti-mycobacterial activity	National Institute of Oceanography	-2,918
Sarman Singh	Comparative evaluation of various <i>in vitro</i> methods for diagnosing pulmonary and extra-pulmonary tuberculosis	Biomerieux India	1,31,682
Medicine			
A.B. Dey	Impact of multidisciplinary intervention on health-related quality of life (QOL) in ambulatory older subjects	ICMR	75,255
A.B. Dey	Determinants of the functional status of the older Indian	ICMR	9,69,081
A.B. Dey	Assessment of bone health in older Indian women	Helpage India	32,966
Anoop Mishra	Evaluation of efficacy and safety of Wosulin biphasic (human insulin biphasic, regular/NPH rDNA origin) for control of hyperglycaemia in subjects with type 2 diabetes mellitus: Phase IV study	Wockhardt, Mumbai	36,974
Ashok Kumar	Methotrexate in rheumatoid arthritis: Pharmacogenetics and clinico-immunological correlates	DBT	10,50,510
Naval K. Vikram	To investigate the relationship between growth hormone insulin-like growth factor axis and hypothalamo-pituitary-adrenal axis, body composition and insulin sensitivity	DST	3,41,938
R. Handa	Prevalence of osteoporosis in Indian patients with rheumatoid arthritis	Bone and Joint Decade India	1,00,000
Randeep Guleria	Assessment of the efficacy of hydroxychloroquine as an alternative to corticosteroids in the treatment of sacroidosis	DST	7,33,742
Randeep Guleria	Spectrum of pulmonary infection in HIV-positive patients: Indian scenario	National AIDS Control Organization	12,37,627

Randeep Guleria	Design and development of personal use respiratory device for patients with respiratory failure	Ministry of Information and Technology	9,64,753
Rohini Handa	Herbal-based preparations for degenerative disorders: Osteoarthritis (OA) and rheumatoid arthritis (RA)	CSIR	7,26,548
S.K. Sharma	A multicentre, double-blind, comparative, randomized study to evaluate the efficacy and safety and micafungin (FK 463) versus liposomal amphotericin B in the treatment of invasive candidiasis and candidaemia	Quintiles Spectral India	13,013
S.K. Sharma	Genomic and molecular studies on the immunopathogenesis of bronchial asthma	DBT	1,31,304
S.K. Sharma	Efficacy and safety of immunomodulator <i>Mycobacterium w, mw</i> as an adjunct therapy in pulmonary tuberculosis	DBT	26,71,281
Microbiology			
Arti Kapil	Study of Gyra mutations in <i>Salmonella typhi</i>	DST	1,73,532
B.K. Das	Study of <i>Haemophilis influenzae</i> isolates from invasive and non-invasive disease	DST	5,22,887
B.K. Das	Study of carbapenemase production amongst nosocomial isolates of Gram-negative bacteria in a tertiary care hospital	ICMR	5,59,074
B.K. Das	Pneumococcal surface adhesin A (Psa.A) DNA construct as a vaccine candidate against <i>Streptococcus pneumoniae</i> : An immune response study	DBT	8,79,000
B.R. Mirdha	DNA amplification study by polymerase chain reaction (PCR) to detect subclinical <i>Pneumocystis carinii</i> infection and colonization in at-risk patients with or without respiratory symptoms	DST	2,28,981
Benu Dhawan	Role of <i>Ureaplasma urealyticum</i> in prematurity and diseases in newborn	DST	5,31,880
Benu Dhawan	Mid-day meal programme: Innovations and interventions	DST	67,466
Benu Dhawan	Aerobic and anaerobic bacteriological profile of diabetic foot ulcers with special reference to methicillin-resistant <i>Staphylococcus aureus</i>	ICMR	2,69,973
Lalit Dar	Congenital CMV infection in offspring of immune mothers	ICMR	18,86,264
Madhu Vajpayee	Evaluation of cytokine profile and Th1/ Th2 shift in HIV-infected Indian patients	ICMR	7,39,075
Madhu Vajpayee	Health programme: Central plan scheme of a national HIV/AIDS reference centre	Ministry of Health and Family Welfare (NACO)	2,56,998
Madhu Vajpayee	External quality assessment programme	Ministry of Health and Family Welfare (NACO)	2,95,000
Madhu Vajpayee	Immunogenicity testing in <i>Macaca radiata</i> of HIV-I DNA vaccine expressing the envelope and capsid antigens of Indian clade C virus	DBT	4,41,565

Madhu Vajpayee	Evaluation of virus-specific immune response in HIV-1 subtype C infected individual in north India	DBT	16,519
Madhu Vajpayee	Production of GLP/GM grade vaccinogens, generation of pre-clinical data and human clinical trial (Phase I) with HIV-1 subtype	DBT	-9,575
Madhu Vajpayee	Voluntary counselling and testing facility (VCTC)	Delhi State AIDS Control Society	4,82,502
Pradeep Seth	Screening of western Himalayan plants for anti-HIV (human immunodeficiency virus) activity	Ministry of Health and Family Welfare	26,463
Rama Chaudhary	Development of multiplex PCR for detection of <i>Clostridium perfringens</i> and <i>Clostridium botulinum</i> in food samples	ICMR	98,501
Rama Chaudhary	Cloning and expression of <i>Mycoplasma pneumoniae</i> P1 gene and its fragments to study their role in cytoadherence	ICMR	8,48,610
Rama Chaudhary	Development of multiplex real-time quantitative PCR assay to detect <i>Chlamydia pneumoniae</i> , <i>Legionella pneumophila</i> and <i>Mycoplasma pneumoniae</i> in community-acquired pneumonia	DBT	16,02,440
Shobha Broor	A multicentric study on detection and characterization of human caliciviruses (HUCVs) from cases of acute gastroenteritis	ICMR	11,10,206
Shobha Broor	Multisite monitoring of human influenza viruses in India	ICMR	27,03,356
Shobha Broor	Genetic variability among 'g' protein of Indian RSV (respiratory syncytial virus) strains from India and studies of antibody responses to these 'g' proteins	DBT	1,53,887
Shobha Broor	Research programme on SARS virus detection systems, research on biology and mechanism of pathogenesis (development of PCR test for SARS virus)	DBT	9,05,203
Nephrology			
S.K. Agarwal	Impact of isolation of hepatitis C-positive patients on incidence of HCV-positivity in haemodialysis patients	ICMR	3,97,206
Nuclear Magnetic Resonance			
N.R. Jagannathan	Evaluation of the role of proton MR spectroscopy in non-invasive detection, assessment of treatment response and tumour metabolism in breast cancer	DST	6,55,866
N.R. Jagannathan	Upgradation of the existing animal MR scanner for biomedical research	DST	4,83,500
Nuclear Medicine			
G.S. Pant	Incidence of micronuclei in differentiated thyroid cancer patients treated with low dose of I-131 for remnant ablation	ICMR	89,697
G.S. Pant	Radiation dose to relations, attendants of patients treated with I-131 for hyperthyroidism or carcinoma thyroid	Atomic Energy Regulatory Board	65,282
G.S. Pant	Radiation-induced chromosome aberrations and their use in biodosimetry	Atomic Energy Regulatory Board	3,48,491

Obstetrics and Gynaecology			
Alka Kriplani	Efficacy and safety of administration of Evanova capsules in the management of menopausal symptoms	Charak Pharma	1,79,086
Deepika Deka	IV immunoglobulins for the treatment of recurrent abortions	Bharat Serums and Vaccines	2,00,000
Neerja Bhatla	A comparative study of VIA cytodiagnosis, HPV testing and colposcopy as tools for cancer screening	DBT	7,92,292
Neerja Bhatla	Development of HPV candidate vaccine/s preparation of clinical trial site/cohort for vaccine testing	DBT	32,38,000
Suneeta Mittal	Human reproduction research centre	ICMR	13,80,000
Suneeta Mittal	Clinical trial with <i>pippalyadi</i> yoga	Central Council for Research in Ayurveda and Sidha	14,64,098
Suneeta Mittal	Prevention of mother-to-child transmission of HIV	Delhi State AIDS Control Society	2,86,830
Orthopaedics			
A. Jayaswal	Role of free radical scavengers and the effects of antioxidants on their levels in patients with ankylosing spondylitis: To investigate the possible role of antioxidants as therapeutic agents in ankylosing spondylitis	ICMR	3,64,904
Kanchan Mittal	Determination of the therapeutic range of temperature for heat therapy for Indian patients: A preliminary study	ICMR	2,31,264
Rajesh Malhotra	Comparison of recovery and complications and recurrence rate after endoscopic versus open carpal tunnel release	ICMR	2,85,216
Otorhinolaryngology (ENT)			
R.C. Deka	Role of intratympanic dexamethasone therapy in sudden sensorineural hearing loss	ICMR	97,769
R.C. Deka	Amphotericin B nasal lavage and corticosteroid nasal spray combination therapy in allergic fungal sinusitis	ICMR	2,02,200
R.C. Deka	Development of educational and training material for rehabilitation of cochlear implantees	Ministry of Social Justice and Empowerment	90,920
Paediatric Surgery			
Minu Bajpai	ACE I/D gene polymorphisms in posterior urethral valves and its correlation with transforming growth factor α -1, tumour necrosis factor (TNF- α), soluble TNF receptor-I, interleukin-6 (IL-6), microalbuminuria, angiotensin II and plasma renin activity in the early diagnosis of renal damage	DST	5,97,347
Minu Bajpai	Study of angiotensin-converting enzyme insertion/deletion gene polymorphism in vesicoureteric reflux and its correlation with molecular markers of rennin angiotensin system activity in the early diagnosis of renal damage	DBT	13,07,560

Paediatrics			
A.K. Deorari	National neonatal prenatal database	ICMR	1,88,508
Arvind Bagga	An open-label long term study to evaluate the safety of eplerenone in the treatment of hypertension in children	Pfizer	7,88,429
Koninika Ray/ M.K. Bhan/V.K Paul	Dendritic cell dysfunction as a possible mechanism of zinc deficiency-induced imbalance in T lymphocytic response	DST	80,621
Madhulika Kabra	An integrated approach for mutation analysis and identification of new gene (S) for X-linked mental retardation	DBT	4,39,410
N.K. Arora	Alpha-1-antitrypsin deficiency in chronic liver diseases of childhood: Genetic and phenotypic characterization	DBT	-200
Pratima Ray	Cloning and expression of NSP4 enterotoxin of rotavirus in <i>E. coli</i> and evaluation of NSP4-specific immune responses during natural rotavirus infection in children	DST	4,49,986
Pratima Ray	Reactogenicity and immunogenicity of live, attenuated rotavirus vaccine candidate strains 116E and I321 in healthy adults	DBT	2,93,409
S.K. Kabra	Effectiveness of 3-day amoxicillin versus 5-day co-trimoxazole in the treatment of non-severe pneumonia in children aged 2–59 months of age: A multicentric, open-labelled trial	ICMR	3,55,957
Sampath Mukhopadhyay/ M.K. Bhan	Impact of zinc on iron and copper status in children	DST	5,48,961
Sheffali Gulati	National Polio Certification Committee for Polio Eradication	Ministry of Health and Family Welfare	8,84,708
Shinjini Bhatnagar	Aetiological significance of microscopic colitis in chronic diarrhoea in children and its pathogenesis	ICMR	9,64,750
Shinjini Bhatnagar	Zinc as an immunomodulator in the treatment of possible serious bacterial infections in infants more than 7 days and up to 2 months of age	DBT	57,18,620
Veena Kalra	Molecular, biological and serological detection of parameters of association of <i>Campylobacter jejuni</i> infection in children with Guillain–Barre syndrome	DBT	5,98,908
Pathology			
A.K. Dinda	Development of biodegradable hydrogel for controlled drug release for the treatment of osteomyelitis: Phase II. To evaluate immunotoxicity of implantable network polymers (IPNs) hydrogels for human use	Ministry of Defence (DRDO)	3,522
A.K. Dinda	Genomic and molecular studies on the immunopathogenesis of bronchial asthma	DBT	6,58,747
Chitra Sarkar	Myopathic disorders: A comparative clinicopathological and <i>in vitro</i> proton magnetic resonance spectroscopy study on muscle biopsies	ICMR	8,36,242
R. Dawar	Childhood Hodgkin disease: Role of Epstein–Barr virus (EBV), association of cellular proliferation and apoptosis parameters in relation to the treatment outcome	ICMR	5,29,652

S. Dutta Gupta	Multicentric study of interferon-glycyrrhizin combination therapy and interferon-ribavirin combination therapy in the management of chronic hepatitis C (Histopathology Centre)	ICMR	3,67,205
S.K. Panda	To study site of replication of hepatitis E virus (HEV) by localizing the viral replicase (RdRq) into the subcellular compartments by transfection studies using HepG2/Huh7 cells and a fusion reporter construct	DST	3,67,432
S.K. Panda	Development of non-radioactive antigen-specific reporter release cytotoxicity assay and analysis of cytotoxicity against HEV proteins	DBT	23,99,923
S.K. Panda	Development of small interfering RNAs (siRNAs) for inhibition of hepatitis E virus (HEV) replication and transcription	DBT	25,51,973
Pharmacology			
Ch.V. Rao/Kamal Kishore	Development of herbal formulation(s) used in treatment of neurodegenerative diseases like Alzheimer	DBT	3,70,179
D.S. Arya	Effects of endothelin receptor antagonism and blockade of endothelin-converting enzyme	CSIR	2,54,508
D.S. Arya	Pharmacological and molecular studies on cardioprotective potential of medical plants	CSIR	3,59,632
D.S. Arya	Pharmacological and molecular studies on cardioprotective potential of medicinal plants	Ministry of Health and Family Welfare	6,832
N.R. Biswas	Ocular kinetic study of newer fluoroquinolones measured by high performance liquid chromatography (HPLC)	DST	2,58,087
N.R. Biswas	Ophthalmic drug formulations using polymeric nanoparticles as carriers	ICMR	2,16,294
S.K. Maulik	Clinical trial of a standardized preparation of <i>Terminalia arjuna</i> in patients with left ventricular dysfunction	DBT	7,16,054
S.K. Maulik	Experimental study of anti-hyperlipidaemic and hypolipidaemic effects of a polyherbal preparation	Dabur Research Foundation	1,68,725
Sanjay Kumar Banerjee/S.K. Maulik	Evaluation of antioxidant potential of lycopene in ischaemic-reperfusion injury in rat heart	DST	1,39,399
Y.K. Gupta	Antiemetic study of ginger against cancer chemotherapy-induced emesis	Dabur Research Foundation	10,09,686
Physiology			
Debabrata Ghosh	Effect of (Ala 8,13,18)-magainin II amide on human trophoblast cells <i>in vitro</i>	ICMR	6,54,930
H.N. Mallick	Role of the warm receptors of the preoptic area in altering sleep	Ministry of Defence (DRDO)	63,891
K.K. Deepak	Development of digital ECG amplifier an essential hardware for the autonomic function tests (heart rate variability)	DST	5,64,940
K.K. Deepak	The development and clinical evaluation of artificial intelligence-based biomedical instruments	DST	5,22,545

K.K. Deepak	The efficacy of lifestyle changes based on the principles of yoga in the management of asthma	Central Council for Research in Yoga and Naturopathy	1,47,649
K.K. Deepak	Yogic relaxation in the management of ulcerative colitis	Central Council for Research in Yoga and Naturopathy	4,41,508
K.K. Deepak	A psychophilosophical study: Application of <i>astang</i> yoga as a tool in treatment of psychosomatic disorder	Indian Council of Philosophical Research	82,000
K.K. Deepak	Multicentric trial of integrated software for quantification of autonomic tone	Ministry of Information and Technology	15,11,260
Ratna Sharma	Randomized controlled trial on the efficacy of yogic intervention in premenstrual syndrome	ICMR	10,05,502
Radiodiagnosis			
Arun Kumar Gupta	Dose reduction in CT while maintaining diagnostic confidence	International Atomic Energy Agency	1,31,267
Reproductive Biology			
Anand Kumar	Double-blind randomized clinical trial of polyherbal formulation <i>Ashokarista</i> on post-menopausal status in females	Ministry of Health and Family Welfare	1,11,707
Surgery			
Sandeep Guleria	Evaluation of efficacy and tolerability of tacrolimus in patients undergoing renal transplantation	Panacea Biotech	2,28,603
Transfusion Medicine (Blood Bank)			
R.K. Sharma	Prevention of infection and strengthening the blood banking system in the country	Ministry of Health and Family Welfare	12,71,921
Transplant Immunology and Immunogenetics			
N.K. Mehra	Molecular analysis of cytokine gene polymorphism in leprosy	ICMR	3,20,959
N.K. Mehra	Monitoring T cell activation markers and cytokine production following allogenic renal transplantation	ICMR	4,43,123
N.K. Mehra	Human genome diversity: HLA studies	DBT	14,212
N.K. Mehra	Evaluation of virus-specific immune response in HIV-I subtype C infected individuals in north India	DBT	22,115
N.K. Mehra	Programme support for advanced programme in histocompatibility and transplant immunology (PS-APHTI)	DBT	1,22,76,000
Cardiothoracic Sciences Centre			
Cardiac Anaesthesiology			
Ujjwal K.R. Chawdhary	Emerging biochemical markers of myocardial injury following coronary artery bypass grafting (CABG) with or without cardiopulmonary bypass (CPB)	ICMR	1,40,753
Usha Kiran	Biochemical correlates of tension headache and its modulation by autogenic relaxation therapy	DST	5,21,632

Cardiac Biochemistry			
R. Lakshmy	Recovery and stability of routine chemistry analytes and enzymes from serum/whole blood spotted on filter paper	ICMR	2,24,633
R. Lakshmy	LDL particle heterogeneity and its association with other established risk factors for CHD in an industrial population: Role of <i>CETP</i> gene	ICMR	4,80,996
R. Lakshmy	Association between low birth weight and autoimmune markers of diabetes in a young Delhi cohort	ICMR	14,30,352
Cardiology			
G. Karthikeyan	Comparison of plasma homocysteine levels in patients with mitral stenosis with and without left atrial thrombus	ICMR	1,09,186
G. Karthikeyan	Role of homocysteine in coronary artery disease: Genetic and epigenetic studies	DBT	5,40,549
Centre for Behavioural Sciences (Psychiatry)			
Manju Mehta	Risk factors of substance use and abuse in offspring of substance abuse patients	ICMR	85,181
Centre for Dental Education and Research			
Naseem Shah	Pilot project on national oral health care programme	Ministry of Health and Family Welfare	9,80,953
Dr B.R. Ambedkar Institute Rotary Cancer Hospital			
Atul Sharma	A multicentre phase II clinical and pharmacological study of DRF-1042, a novel camptothecin analogue given orally in adult patients with refractory solid tumours	Dr Reddy's Laboratories	1,02,134
Lalit Kumar	Neoadjuvant chemotherapy followed by interval debulking surgery versus upfront surgery followed by chemotherapy in patients with stage IIIC and stage IV (with pleural effusion) epithelial ovarian carcinoma: A randomized study	Dabur Research Foundation	2,44,995
Lalit Kumar	An evaluation of safety and efficacy of IPL-PO2 (interferon alfa 2b) in the treatment of chronic myeloid leukemia: A prospective, non-comparative, open label, multicentric study	INTAS Pharmaceuticals	1,39,334
Madhabananda Kar/ N.K. Shukla	<i>In vivo</i> magnetic resonance spectroscopic evaluation with pathological and radiological correlation of metabolic imaging of soft tissue tumours	DST	43,688
P.K. Julka	A phase III trial of ALIMTA versus docetaxel in patients with locally advanced or metastatic non-small cell lung cancer	Ranbaxy/Eli Lilly	3,34,444
P.K. Julka	A centrally randomized, open multi-centre study evaluating the efficacy and safety of combination therapy with intermix-alpha and vinblastine versus vinblastine monotherapy in patients with advanced renal cell carcinoma	Sterling Synergy System	1,79,722
P.K. Julka	A randomized, double-blind, placebo-controlled, phase II study of oral recombinant human lactoferrin (RHLF) in combination with carboplatin and paclitaxel (C/P) in patients with locally advanced and/or metastatic non-small cell lung cancer (NSCLC)	Reliance Clinical Research Services	1,46,785

Rajive Kumar	Characterization of testis-specific sperm-associated antigen 9 (SPAG9) gene expression and humoral immune response in various human cancers	DBT	1,21,250
V. Raina	A randomized open-label comparative multicentric study of voriconazole versus conventional amphotericin B followed by fluconazole in the treatment of candidemia in the non-neutropenic patient	Pfizer	75,796
Vinod Kochupillai	Evaluation of the thermal camera lesions or cancers in early stages and to study the effect of <i>pranayam</i> and <i>sudarshan kriya</i> (breathing processes) in reversing pre-cancerous lesions	DST	8,63,142

Neurosciences Centre

Neurobiochemistry

S. Vivekanandhan	Impact of nutritional strategies and multiple antioxidant therapy of progression and management of Parkinson disease	ICMR	27,122
S. Vivekanandhan	Molecular study on mitochondrial dysfunction in Parkinson disease	ICMR	5,64,646

Neurology

M.V. Padma	Open-label randomized trial to evaluate the efficiency of Ayush-56 as an add-on drug in intractable partial epilepsy	Ministry of Health and Family Welfare	1,07,482
Madhuri Behari	A longitudinal study to estimate proportion of patients with dementia and cognitive decline in Parkinson disease, its clinical correlates with special reference to apolipoprotein E alleles	ICMR	5,84,175
Madhuri Behari	High throughput single nucleotide polymorphism (SNP) genotyping patients suffering from schizophrenia and Parkinson disease	DBT	1,81,922
Madhuri Behari	Open-label, multicentre, randomized trial to evaluate the development of components of polycystic ovary syndrome (PCOS) in female subjects with newly diagnosed epilepsy. Initiating anti-epileptic drug treatment on either lamotrigine or valproate monotherapy	Quintiles Spectral India	2,81,763
Madhuri Behari	Phase III, double-blind, placebo-controlled study to determine the efficacy and safety of a low (50–100 mg/day) and high (150–200 mg/day) dose range of safinamide, as add-on therapy, in patients with early idiopathic Parkinson disease treated with a stable dose of a single dopamine agonist	Quintiles Spectral India	10,61,174

Neurosurgery

V.S. Mehta	Non-invasive optical fibre probe based near infrared spectroscopy (NIRS) for assessing brain activity	DST	15,51,810
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Dr R.P. Centre for Ophthalmic Sciences

Gita Satpathy	Novel molecular diagnostics for eye diseases and low vision enhancement devices	CSIR	9,22,226
Nazima Nisar/ N.R. Biswas	Diagnostic approaches for the rapid and specific diagnosis of <i>Mycoplasma pneumoniae</i> infection in asthmatics	DST	6,12,417

Niranjan Nayak	Phebitypic and molecular characterization of ocular isolates of coagulase-negative staphylococci: Implications in colonization and virulence	ICMR	-97
Niranjan Nayak	Standardization of antifungal susceptibility testing for filamentous fungi and characterization of drug-sensitive and drug-resistant fungal isolates in mycotic keratitis	ICMR	3,70,338
Radhika Tandon	Amniotic membrane transplantation in acute ocular burns: A randomized controlled clinical trial	ICMR	1,74,127
Rohit Saxena	Study on the prevalence, therapeutic option and outcome measures of amblyopia	DST	9,70,000

Ongoing research projects funded by World Health Organization

Investigator	Project	Funds (Rs)
Biotechnology		
J.S. Tyagi	Multicentric evaluation of a sensitive smear microscopy technique for detection of acid-fast bacilli in sputum	27,28,019
Centre for Community Medicine		
C.S. Pandav	Establishment of sentinel surveillance system of CVD in Indian industrial population	5,22,115
K. Anand	Community-based intervention for NCD risk factors control in urban Faridabad	2,04,326
K. Anand	Sentinel health monitoring centres in India: Risk factors surveillance for non-communicable disease	4,38,800
Medicine		
G.C. Khilnani	To assess human health risks associated with environmental exposure	2,78,840
S.K. Sharma	To establish a model training and demonstration DOTS centre in AIIMS	3,10,176
Obstetrics and Gynaecology		
Neerja Bhatla	Evaluation of the comparative efficacy of single- and double-freeze technique of cryotherapy in controlling CIN lesion: A multicentre, randomized clinical trial	1,31,620
Suneeta Mittal	Pretreatment with misoprostol before vacuum aspiration of first trimester-induced abortion: A multicentre double-blind randomized controlled trial	5,43,613
Suneeta Mittal	Comparison of two mifepristone doses and two intervals of misoprostol administration for termination of early pregnancy: A multinational randomized controlled trial	2,43,816
Otorhinolaryngology (ENT)		
R.C. Deka	Assessment of aetiological factors for conductive hearing impairment in rural population	1,58,895
Paediatrics		
A.K. Deorari	Multicentric study of clinical signs of predicting severe illness in young infants	9,23,447
Arvind Bagga	Impact of zinc supplementation on mortality and hospitalization in children aged 2 months to 23 months	37,48,957
Centre for Behavioural Sciences (Psychiatry)		
Rajesh Sagar	Epidemiology of mental disorders: A longitudinal study	2,34,890

Neurosciences Centre		
Neurology		
Manjari Tripathi	A prospective study in Indian women: How pregnancy and epilepsy interact to produce psychological and mental health morbidity	1,33,071

Ongoing research projects funded by international agencies

Investigator	Project	Funding agency	Funds (Rs)
Biostatistics			
R.M. Pandey	Clinical Epidemiology Unit	INCLEN	1,33,019
Biotechnology			
H.K. Prasad	Immune reactivity of specific secreted antigens of <i>M. tuberculosis</i> in tuberculosis patients and their contacts	Indo-US	4,371
Centre for Community Medicine			
K. Anand	Evaluation of safe water systems intervention project in urban slums of Dehradun and Haridwar	IndiaCLEN-USAID	19,50,471
K. Anand	Strengthening health services in rural areas using information technology: Development of a replicable model for India	Media Lab Asia	11,39,978
K. Anand	Effect of consumption of iron and Vitamin A fortified lozenges on the iron status of children aged 3-6 years in rural Haryana, north India	The Micronutrient Initiative, Asia	9,55,505
Endocrinology and Metabolism			
Nikhil Tandon	Glimepiride versus metformin as monotherapy in paediatric subjects with type 2 diabetes mellitus: A single-blind comparison study	Aventis Pharmaceuticals, USA	22,982
Haematology			
Renu Saxena	Molecular characterization and treatment of acute lymphoblastic leukaemia on protocol MCP-943	INCTR, USA	11,27,066
Renu Saxena	Evaluation of genotypic characterization of Indian patients with Glanzman thrombasthenia	Indo-US	-28,131
Medicine			
Anoop Mishra	A population-based study of type 2 diabetes and metabolic correlates of cardiovascular risk factors among Asian Indians	Texas A & M Research Foundation (TAMRF), USA	4,53,359
Naveet Wig	Phase I planning grant to the international clinical, operational and health services research training for AIDS/TB programmes	National Institutes of Health, USA	65,42,743
S.K. Sharma	Evaluation of management strategy for pulmonary embolism	International Atomic Energy Agency	43,396
Microbiology			
Rama Chaudhary	Prevention of infection in Indian neonates	University of Maryland, USA	9,97,481
Shobha Broor	Metapneumovirus infection of children in India	University of Alabama, Bringam, USA	32,49,956

Nuclear Medicine			
Chetan D. Patel	Role of cerebral perfusion SPECT in the differential diagnosis of dementia	International Atomic Energy Agency	6,21,274
Rakesh Kumar	Role of radionuclide technique in the management of neonatal hydronephrosis	International Atomic Energy Agency	2,07,853
Obstetrics and Gynaecology			
Vatsla Dadhwal	Screening for bacterial vaginosis and pregnancy outcome	INCLN	NIL
Paediatrics			
A.K. Deorari	Capacity building in newborn nursing in India: Developing a training programme in essential newborn nursing for district, sub-district and first-level health care facilities	Saving Newborn Lives, USA	3,77,793
A.K. Deorari	Promoting kangaroo mother care in India	Saving Newborn Lives, USA	2,19,211
Arvind Bagga	Impact of zinc supplementation in low-birth weight infants on severe morbidity and zinc status: A randomized controlled trial	KLPP, USA	29,35,044
Madhulika Kabra	Gene mapping of non-syndromic hearing impairment: A multicentric study	National Institute of Health, USA	7,34,614
N.K. Arora	IndiaCLEN programme for health intervention development and evaluation (IPHIDE)	INCLN	NIL
Pratima Ray	The Indo-US collaboration to develop rotavirus vaccine	National Institutes of Health, USA	2,40,58,190
S.K. Kabra	Randomized, blind, placebo-controlled trial of amoxicillin in the treatment of non-severe pneumonia with wheeze in children aged 2-59 months of age: A multi-centric double-blind trial	USAID-IndiaCLEN	3,26,114
Shinjini Bhatnagar	Institutional capacity and competence building in research and education for promotion of child health and nutrition in South Asia	University of Bergen, Norway NUFU	12,77,158
Shinjini Bhatnagar	Extended studies on safety and efficacy of zinc ORS compared to ORS alone in hospitalized children with severe and complicated acute diarrhea	NORAD, Norway	29,84,148
Shinjini Bhatnagar	Specific targeted research or innovation project	University of Bergen, Norway	48,71,289
Radiodiagnosis			
Arun Kumar Gupta	Dose reduction in CT while maintaining diagnostic confidence	International Atomic Energy Agency	1,31,267
D.N. Srivastava	Management of liver cancer using radionuclide methods with special emphasis on early diagnosis, intra-arterial locoregional therapy	International Atomic Energy Agency	5,62,103
Seema Mukhopadhyay	Avoiding unnecessary doses to patient during interventional radiological procedures	International Atomic Energy Agency	2,41,607

Dr B.R. Ambedkar Institute Rotary Cancer Hospital			
Atul Sharma	To assess the efficacy and adverse effects of thalidomide prednisone in hormone refractory prostate cancer	Terry Fox Foundation	97,000
P.K. Julka	Adjuvant tamoxifen: Longer against shorter (ATLAS) for breast cancer patients	Oxford University, UK	69,902
P.K. Julka	Multicentre phase III randomized trial comparing doxorubicin and cyclophosphamide followed by docetaxel (ACT) with docetaxel, carboplatin and trastuzumab (TCH) in the adjuvant treatment of node-positive and high risk node-negative patients with operable breast cancer	Aventis Pharmaceutica ls, USA	-2,754
S.V.S. Deo	Detection of bone marrow micrometastases in breast cancer patients using monoclonal antibodies against cytokerain—incidence and clinical correlation	Terry Fox Foundation	65,905
Suman Bhasker	Aspects of radiobiology applicable to clinical radiotherapy (modification of the number of fractions per week)	International Atomic Energy Agency	3,18,985
Tulika Seth	Training in low cost cancer screening methods for medical health workers: A pilot study	Terry Fox Foundation	1,17,775
V. Raina	Adjuvant endocrine therapy and chemotherapy in women with early breast cancer: The adjuvant breast cancer trial (ABC trial)	Institute of Cancer Research, UK Co-ordination Committee	8,13,115
V. Raina	Adjuvant Tamoxifen: Long Against Short (ATLAS) trial	University of Oxford, UK	11,75,598
Vinod Kochupillai	Role of antioxidant vitamins in human lung cancer: A randomized study	Terry Fox Foundation, Canadian High Commission	5,97,026

Neurosciences Centre

Neurosurgery

A.K. Mahapatra	A multinational, multicentre, open-label, active-controlled, randomized parallel group dose finding study to evaluate the efficacy and safety of two doses of AP 12009 in adult patients with recurrent high grade glioma administered intratumorally as contin	Siro Clin Pharma	11,79,809
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Central facilities

Computer Facility

R.S. Tyagi	Mainstreaming HIV/AIDS concerns in ongoing drug demand reduction programmes in South Asia Control Programme	UN International Drug and Crime	10,39,420
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New research projects funded by Indian agencies

Investigator	Project	Funding agency	Funds (Rs)
Anaesthesiology			
T.S. Jayalakshmi	Linezolid versus, vancomycin/oxacillin/	Pfizer	2,10,042

	diclaxacillin in the treatment of catheter-related Gram-positive bloodstream infection		
Biochemistry			
D.N. Rao	To evaluate the correlation between levels of cytokines (IL-6,IL-8,IL-10) in seminal plasma in different groups of infertile men and correlation with sperm morphology functions and bacterial infection in semen	ICMR	4,18,880
Kalpana Luthra	Differential cell response of goat granulose cell to LH or hCG stress in cell culture system: To analyse the signal transduction pathway in the two	ICMR	6,42,699
Kalpana Luthra	Genetic polymorphism of cholesterol ester transfer protein in hyperlipidaemic patients: A case-control study	ICMR	3,55,223
Neeta Singh	Mitochondria in apoptosis and human cancer	ICMR	2,59,150
Nibhriti Das	Expression and modulation of complement receptors: Significance in the pathophysiology and prognosis of autoimmune disorders	CSIR	3,93,667
P. Chattopadhyay	Effect of tumour-specific Hsp 90 inhibitor, geldanamycin, on CpG island methylation and survival of hypoxic glial tumour cell lines	CSIR	5,00,000
Parthaprasad Chattopadhyay	Hypoxia and CpG island methylation of selected loci in tumour cell genome: Modulation of methylation and subsequent effects on cell proliferation and chemotherapeutic response	ICMR	8,53,848
Ranju Ralhan	Characterization and functional analysis of differentially expressed genes in oesophageal cancer	DST	10,00,000
S.S. Chauhan	Characterization of the positive regulatory region of the first exon of human cathepsin L gene	DST	9,00,000
Subrata Sinha	Interaction of DNA repair genes and p53 in determining the cellular response to genotoxic agents in glial tumour cell-lines.	DST	3,90,000
Subrata Sinha	Funds for Improvement of S and T infrastructure (FIST) in universities and higher education institutions	DST	1,03,50,000
Subrata Sinha	Generation and characterization of phage displayed recombinant antibodies to biochemically and immunologically relevant epitopes of the oncodevelopmental antigen heat stable alkaline phosphatase	ICMR	1,61,990
Biophysics			
A. Srinivasan	Proteomics of human body fluids: Structural characterization of proteins and target identifications for diagnosis and drug discovery	DBT	20,50,000
Krishna Dalal	Randomized clinical trial (RCT) of reflexology therapy and usual drug treatment in the management of intractable epilepsy.	Central Council for Research in Yoga and Naturopathy	10,50,192
Sharmistha Dey	Structure-based rational drug design:development of specific anti-inflammatory agents using	CSIR	1,50,000

	phosphorlipase A2 and cyclooxygenase-2 as target enzymes		
Sharmistha Dey	Design synthesis and evaluation of inhibitors of lipooxygenase-a anti-inflammatory agents	DST	9,00,000
T.P. Singh	Cloning expression and structural investigation on human endothelin receptors A and B	DST	5,25,000
T.P. Singh	Determination of amino acid sequences and three-dimensional structure of phospholipase A2 from Indian red scorpions	DST	3,75,000
T.P. Singh	Isolation and three-dimensional structure determination of the novel signalling protein SPX-40 from memory gland secretion during involution	DST	NIL
T.P. Singh	Structural studies of toxins from scorpions' venom and design of selective drugs and insecticides	DST	NIL
Biostatistics			
S.N. Dwivedi	Multilevel epidemiological analysis to assess the role of community level effects on public health/family welfare	ICMR	1,29,896
Biotechnology			
H.K. Prasad	Study of transmission of livestock-derived pathogenic mycobacteria and its prevalence among humans (zoonotic tuberculosis)	DBT	13,84,000
J.S. Tyagi	High throughput PCR assays for diagnosing tuberculosis caused by <i>Mycobacterium tuberculosis</i> and <i>Mycobacterium bovis</i> using molecular beacons	DBT	32,86,000
Y.D. Sharma	Establishment of flowcytometry facility	DBT	85,00,000
Endocrinology and Metabolism			
A.C. Ammini	Comparison of efficacy of metformin and spironolactone in the management of polycystic ovarian syndrome	ICMR	55,168
Nikhil Tandon	A multicentre, randomized, double-blind, active controlled study to compare the effect of 24 weeks treatment with combination therapy of LAF 237 and pioglitazone to LAF 237 monotherapy or pioglitazone monotherapy in drug naive patients with type 2 diabetes	Novartis India	47,280
Gastroenterology and Human Nutrition			
Anoop Saraya	Role of enteral nutrition in preventing complications in severe acute pancreatitis: A randomized control trial	ICMR	1,86,970
Govind K. Makharia	Double-blind randomized placebo-controlled study of a probiotic preparation VSL 3 for the treatment of mild to moderate active ulcerative colitis	CD Pharma India	2,53,530
Rakesh Aggarwal	Epidemiological studies on hepatitis E	DBT	NIL
S.K. Acharya	FIST infrastructure in universities and higher educational institute	DST	55,00,000
Umesh Kapil	Epidemiology of gallbladder cancer with special reference to nutritional risk factor	ICMR	3,22,656

Umesh Kapil	Food safety and quality control of drugs	National Institute of Nutrition	5,95,000
Umesh Kapil	Assessment of zinc deficiency amongst children in 6 months of age in different regions of India	DBT	18,92,470
Vineet Ahuja	A phase III, randomized, multicentre, double-blind, parallel group, active comparator study to compare the efficacy and safety of SPD476 (measalazine) 2.4 g/day once daily (QD) with Asacol 1.6 g/day twice daily (BID) in the maintenance of remission in patients with ulcerative colities	PPD Pharmaceutical Development India	1,44,900
Vineet Ahuja	A randomized, double-blind, controlled trial of the probiotic preparation VSL 3 for assessing clinical and histological response in patients with ulcerative colitis	CD Pharma India	1,47,129
Y.K. Joshi	Effect of glutamine of intestinal structure and function in patients with inflammatory bowel diseases	ICMR	3,98,467
Haematology			
Renu Saxena	Fund for Improvement of S and T Infrastructure in University and Higher Educational Institution (FIST)	DST	55,00,000
Renu Saxena	Elucidation of molecular genetics of acute leukemia in India	ICMR	3,78,994
Renu Saxena	Organization of ISHTM–AIIMS external quality assurance programme	ISHTM	2,00,000
Medicine			
Anoop Mishra	Double-blind randomized placebo-controlled trial of our herbal compound MA-471 for diabetes mellitus	Maharishi Ayurveda	50,000
G.C. Khilnani	Effect of outdoor and indoor air pollution in children's health in Delhi: A controlled study	Ministry of Environment and Forest	2,27,898
Naval K.Vikram	Double-blind randomized placebo-controlled trial of herbal compound MA-579 in patients of non-alcoholic fatty liver	Maharishi Ayurveda	1,06,000
Randeep Guleria	Double-blind randomized placebo-controlled trial of herbal compound MA-364 in patients with mild to moderate bronchial asthma	Maharishi Ayurveda	2,00,000
S.K. Sharma	Antiretroviral treatment	Ministry of Health and Family Welfare	5,32,874
S.K. Sharma	Treatment outcome and drug resistance among category II pulmonary tuberculosis under RNTCP	Delhi Tapedik Unmulan Samiti	2,50,640
Sanjeev Sinha	Study of early versus delayed initiation of anti-retroviral therapy for HIV-infected patients with tuberculosis on antituberculosis chemotherapy in Indian subjects	Ministry of Health and Welfare (NACO)	26,07,160

Microbiology			
B.K. Das	Optimization of laboratory diagnosis of pertussis	DBT	11,25,000
Benu Dhawan	Phenotypic and genotypic characterization of methicillin and mupirocin resistant staphylococci	DBT	19,66,000
Nephrology			
S.K. Agarwal	An open-labelled prospective, multicentric trial to evaluate the efficacy and safety of lanthanum carbonate in patients of hyperphosphataemia of chronic kidney disease	Panacea Biotech	81,300
S.K. Agarwal	Linezolid versus vancomycin in the treatment of haemodialysis patients with catheter-related Gram-positive blood stream infections	Pfizer	2,43,383
Obstetrics and Gynaecology			
Alka Kriplani	Diagnosis of genital tuberculosis in infertile women and the effect of antitubercular therapy	ICMR	2,39,732
Neerja Bhatla	Association of chlamydia infection with cervical intraepithelial neoplasia and cervical cancer	ICMR	4,55,424
Nutan Aggarwal	Weekly 70 mg oral alendronate therapy in postmenopausal osteopenic women	Troikaa Pharmaceutical	94,390
Nutan Aggarwal	Clinical effects of human placental extract (placentrex) in pelvic inflammatory disease	Khandelwal Laboratories	50,000
Orthopaedics			
Surya Bhan	A new hip hemiarthroplasty option based on femoral stem design suitable for the morphology of proximal femur of elderly Indian population	CSIR	6,20,000
Otorhinolaryngology (ENT)			
Sudhir Bahadur	Phase II/III randomized placebo-controlled clinical trial of curcumin in squamous head and neck cancer	DBT	21,88,000
Paediatric Surgery			
D.K. Gupta	N-myc gene amplification by polymerase chain reaction in neuroblastoma tumour surveillance by detecting tyrosine hydroxylase protein using RT-PCR	DBT	11,39,750
Paediatrics			
Arvind Bagga	A double-blind, randomized, multicentre study followed by 12 months open-label treatment to evaluate the dose response and safety of valsartan in paediatric hypertensive patients 1–5 years of age	Novartis India	3,79,090
Arvind Bagga	Dose ranging study to evaluate the safety and efficacy of olmesartan medoxomil in children and adolescents with hypertension	Quintiles Spectral India	NIL
Pratima Ray	Characterization of rotavirus strains from a multi-centric rotavirus surveillance study at AIIMS	DBT	8,62,000
S.K. Kabra	High dose and low dose azithromycin in cystic fibrosis: An intervention study of evaluate effect on disease parameters	ICMR	2,73,980
S.K. Kabra	Capacity building for sweat chloride estimation test by indigenously developed method	Solvey Pharma	1,23,764

Veena Kalra	Lead pollution and health in Delhi: A follow up study	Ministry of Environment and Forest	2,06,520
Pharmacology			
Y.K. Gupta	Evaluation of herbal compounds in a rat model of sporadic dementia of Alzheimer's type	DST	3,25,000
S.K. Maulik	Modulatory effect of phytoadaptogens on cardiovascular and neurological changes induced by experimental stress in rats	DST	8,50,000
Physiology			
Rashmi Mathur	Motor responses to noxious/non-noxious stimuli in spinalized humans and rats: Role of electromagnetic stimulation in recovery	DST	11,57,900
Cardiothoracic Sciences			
Cardiac Biochemistry			
R. Lakshmy	Relation of candidate gene variants regulating triglyceride metabolism to serial changes in childhood body mass index and coronary artery disease risk factors in young adulthood	ICMR	15,30,701
Cardiology			
Balram Bhargava	A twelve-week, randomized, double-blind, parallel-group, multicentric, dose escalation study to evaluate the efficacy and safety of aliskiren administered alone and in combination with atenolol in patients with essential hypertension	Novartis India	1,09,161
Cardiothoracic and Vascular Surgery			
Balram Airan	Surgical treatment for ischaemic heart (STICH) failure trial	CLINIRx Research	1,12,212
Centre for Behavioural Sciences			
Psychiatry			
Manju Mehta	Road rage—a study of aggressive behaviour and intervention strategies	Ministry of Health and Family Welfare	5,14,000
Rajesh Sagar	A multicentre, double-blind, randomized, placebo-controlled, parallel group flexible dose titration, add-on study of mecamy lamine 2.5 to 7.5 mg, in the treatment of major depressive disorder with subjects who are partial responders or non-responders to cital	Synergy Network India	1,83,000
Rajesh Sagar	Phase III randomized placebo-controlled, double-blind trial evaluating the safety and efficacy of sublingual asenapine versus olanzapine and placebo in inpatients with an acute manic episode	Pfizer	5,82,896
National Drug Dependence Treatment Centre			
Rajat Ray	A post-marketing surveillance of Addnole-N	Russan Pharma, Mumbai	Nil
Rakesh Lal	Study to evaluate the safety and efficacy of ESD-27 for insomnia in patients with major depressive disorder	Himalaya Drug Company	66,999

Centre for Dental Education and Research			
Ritu Duggal	Detection of apoptosis in human periodontal ligament during orthodontic tooth movement	ICMR	1,44,812
Dr B.R. Ambedkar Institute Rotary Cancer Hospital			
Atul Sharma	A multicentric, open comparative, randomized, study to optimize dose, duration safety, efficacy, and cost of two treatment regimens with liposomal amphotericin (Fungisome) in the treatment of systemic fungal infections in India	DBT	18,00,000
Lalit Kumar	Expansion of adult human bone marrow and cord blood stem cells for reprogramming into hepatocytes	ICMR	1,97,796
Lalit Kumar	Grastim (G-CSF) mobilized peripheral blood progenitor cell (PBPC) transplantation (allogeneic or autologous): A multicentric study	Dr Reddy's Laboratories	2,25,000
P.K. Julka	A phase II randomized, double-blind, placebo-controlled, multicentre comparative study of ZD 1839 250 mg (Iressa TM) given either continuously or concomitantly with cisplatin plus radiotherapy for the treatment of patients with previously untreated unresect late stage III/IV non-metastatic head and neck squamous cell carcinoma	Quintiles Spectral India	10,37,250
P.K. Julka	(Study 3066A1-303-WW) A phase III randomized, double-blind study of oral CCI-779 administered in combination with letrozole versus letrozole alone as first-line hormonal therapy in postmenopausal women with locally advanced or metastatic breast cancer	Quintiles Spectral India	59,740
P.K. Julka	A randomized, double-blind, parallel-group, multicentre, phase III study comparing the efficacy and tolerability of fulvestrant (FASLODEX) 500 mg with fulvestrant (FASLODEX) 250 mg in postmenopausal women with oestrogen receptor positive advanced breast carcinoma	Quintiles Spectral India	47,195
Tulika Seth	Assessment of the effect of planned intervention on awareness, perception and attitude regarding common cancers in Delhi: A community-based longitudinal study	The Cancer Foundation	2,75,000
V. Raina	A multicentre study of cremophor free, polymeric, nanoparticle formulation of paclitaxel (DONDR/O2) in locally advanced and metastatic breast cancer	Dabur Research Foundation	3,68,450
Vinod Kochupillai	Antioxidants as adjunct to chemotherapy of lung cancer: <i>In vitro</i> study	Dr Reddy's Laboratories	2,00,000
Vinod Kochupillai	An <i>in vitro</i> study of antiproliferative and apoptotic effects of Gefitinib on lung cancer cell lines	NATCO Pharma India	1,10,725

Vinod Kochupillai	Comparative evaluation and standardization of optimum stem cell collection procedure using two different cell separator sources	Baxter India	NIL
Vinod Kochupillai	<i>In vitro</i> expansion and establishment of human foetal liver haematopoietic stem cell line	DBT	39,26,600
Neurosciences Centre			
Neurobiochemistry			
S. Vivekanandhan	Genetic polymorphism of drug metabolizing enzymes CYP2D6 CYP2C19 and CYP2C9 and GST genes in patients developing toxicity to specific antiepileptic drug—phenytoin	ICMR	1,11,998
Neurosurgery			
Rajinder Kumar	A randomized, double-blind, placebo-controlled, multicentre, dose-escalation study to evaluate the safety and preliminary efficiency of recombinant factor via (Novoseven/Nita stase) in subjects with brain concussions	Nova Nordisk India	2,60,312
Dr R.P. Centre for Ophthalmic Sciences			
T. Velpanidan	Development of topical ocular formulation of calcium dobesilate and evaluation of its formulation characteristics	Ozone Pharmaceuticals	1,24,595

New research projects funded by World Health Organization

Investigator	Project	Funds (Rs)
Haematology		
Renu Saxena	A multicentric study to test the efficacy and the feasibility of using the haemoglobin colour scale for haemoglobin estimation in Indian setting	1,92,800

New research projects funded by international agencies

Investigator	Project	Funding agency	Funds (Rs)
Biochemistry			
Kalpana Luthra	Characterization of HIV-1 subtypes from Indian subjects	National Institutes of Health, USA	18,90,000
Centre for Community Medicine			
K. Anand	Monitoring and evaluation of community based intervention for integrated prevention of non-communicable diseases in Ballabgarh, Haryana	KOBE, Japan	2,75,730
Dermatology and Venereology			
V.K. Sharma	A prospective, randomized, double-blind, placebo-controlled, parallel group, multicentre, 52 week trial to assess the efficacy and safety of adjunct mycophenolate mofetil (mmf) to achieve remission with reduced corticosteroids in subjects with active pemphigus vulgaris	Aspreva Pharmaceutical Corporation, Canada	58,729
V.K. Sharma	A randomized, double-blinded study to evaluate the safety and efficacy of intralesional administration of PCNA synthetic chimeric ribozyme (VIT 100)	Clinicyte, USA	2,50,000

	(Chelase) in the treatment of keloids and hypertrophic scars when administered concurrently with 5 FU and kenalog.		
Medicine			
S.K. Sharma	A double-blind, placebo-controlled, parallel, multicentre study on extended VTE prophylaxis in acutely ill medical patients with prolonged immobilization	Aventis Pharmaceuticals, USA	NIL
Paediatrics			
S.K. Kabra	Development of continuing medical education (CME) programmes to strengthen AIDS treatment in India	National Institutes of Health, USA	8,55,720
S.K. Kabra	A randomized, 2-period multicentre, double-blind, parallel-group study comparing the effect of 2 doses of montelukast graules in the treatment of respiratory symptoms associated with respiratory syncytial virus associated bronchiolitis in children aged 3–24	Siro Clin Pharma	2,65,092
Sheffali Gulati	Model infection centres (MICs): A programme to improve infection practices in the country	INCLen and USAID	69,68,210
V.K. Paul	Enhancing networking capacity for advancing newborn health in South East Asia	Saving Newborn Lives, USA	Nil
Centre for Behavioural Sciences			
National Drug Dependence Treatment Centre			
Anju Dhawan	To test the effectiveness of oral substitution with buprenorphine and to establish a protocol for oral substitution with buprenorphine	UN International Drug and Crime Control Programme	7,55,724
Dr B.R. Ambedkar Institute Rotary Cancer Hospital			
P.K. Julka	A phase III randomized, stratified, parallel-group, multicentre, comparative study of ZD 1839 (IRESSA) 250 mg and 500 mg versus methotrexate for previously treated patients with squamous cell carcinoma of the head and neck	Siro Clin Pharma	NIL

9.1 Anaesthesiology

Professor and Head

Chandralekha

Professors

T.S. Jayalakshmi

(superannuated on 30 September 2005)

R.K. Batra

S. Rajeswari

M.K. Arora

Ravi Saksena

A. Trikha

D.K. Pawar

G.P. Dureja

(Voluntary retirement Oct. 2005)

Additional Professors

Maya Dehran

L. Kashyap

(abroad)

D. Shende (RPC)

G. Prasad

Associate Professors

V.K. Mohan

V. Rewari

Assistant Professors

A.P. Bhalla

Anjolie Chhabra

Jyotsna Punj

Rashmi Ramachandran

Rani Sunder

Renu Sinha (RPC)

Babita (JPNATC)

V. Darlong

Chhavi Sawhney (JPNATC)

R. Pandey

EDUCATION

Undergraduate and Postgraduate

Academic activities of undergraduates, postgraduates and paramedical staff (BSc Nursing, MSc Nursing) are continuing as before.

Short- and long-term training

Training of doctors and technicians from India and abroad in various aspects of anaesthesia, intensive care management, pain medicine and emergency care is continuing.

- Short-term training in
 - Pain Clinic
 - ICU
 - Anaesthesia

Continuing Medical Education

Lectures delivered

Dr Chandralekha

- 'ARDS in ICU', Annual Meeting of Nepal Society of Anaesthesiology, Nepal; 4–5 May 2005.
- 'Management of bomb blast', XXVII Annual Conference of National Association of Critical Care Medicine, AIIMS; 16–17 December 2005.

- ‘Infection in ICU’, Critical Care update 2005, Aligarh Muslim University; 19–20 November 2005.
- ‘Eclampsia—with special emphasis in ICU management’, 27th Annual Conference of the UP chapter of ISA, KGMC, Lucknow; 1–2 October 2005.

Professor M.K. Arora

- ‘Anaesthesia for liver transplant’, South Asian Conference CME on Synergy in Health Care, Bhutan; 15–19 November 2005.

Professor D.K. Pawar

- ‘Stress and anaesthetist’, Anaesthesia CME–2005, ‘Safe anaesthesia’, Department of Anaesthesiology and Critical Care, Army Hospital, Delhi Cantt; October 2005.
- ‘Fluid therapy in children’ and ‘Pain management’, Paediatric Anaesthesia Update, Department of Anaesthesiology, JLN Hospital and Research Centre, Bilai; February 2006.
- ‘Current issues in paediatric ambulatory anaesthesia’, an update on Anaesthesia for Ambulatory Surgery, Department of Anaesthesiology, Sir Ganga Ram Hospital; March 2006.
- ‘Is anaesthesia for neonates different from paediatric anaesthesia?’, CME programme, Department of Anaesthesia, Ramachandra Medical College (RACE), Chennai; March 2006.

National and International Conferences

Lectures delivered

Professor M.K. Arora

- ‘Postoperative pain relief in children’, ISA North Zone Conference, Srinagar; 3–4 September 2005.
- ‘Brachial plexus block’, Jaipur West Zone ISACON; 1–2 October 2005.
- ‘Practical approach in caudal/epidural analgesia in pediatric patients’, ISACON Kolkata; 27–30 December 2005.
- ‘Paediatric cancer pain’, Paediatric Malignancy Symposium, AIIMS, New Delhi; 31 December 2005.

Professor D.K. Pawar

- ‘Pain Management in developing countries’, All Africa Anaesthesia Congress at Tunisia; May 2005.
- ‘Pain in children’, 4th Asian Society of Paediatric Anaesthesiologists, Singapore; September 2005.
- ‘Recent advances in trauma care’, South Asian Conference on ‘Synergy in health care, Bhutan; November 2005.
- ‘Ventilatory support in premature babies’, (ISACON–2005) 53rd Annual National Conference of Indian Society of Anaesthesiologists, ISA, West Bengal State Branch at Kolkata; December 2005.
- Moderated a symposium on ‘Paediatric Pain Management’, 21st Annual Conference of Indian Society for Study of Pain, International Association for Study of Pain (Indian Chapter), B.J. Medical College and Civil Hospital, Ahmedabad; February 2006.
- ‘Fluid therapy in children’, ‘Pain management in children’ and ‘Anaesthesia for neonatal emergencies’, Annual Conference of Assam Branch of the Indian Society of Anaesthesiologists, Tezpur, Assam; February 2006.

Professor S. Rajeswari

- ‘Anaesthesia for vitreoretinal surgery’, ISACON 2005, Kolkata; 27–30 December 2005.
- ‘Blood substitutes and transfusion’, Postgraduate assembly; October 2005
- ‘Pre-operative optimization of high risk surgical patients’, ASICON (Delhi Chapter); March 2006.

Dr Vimi Rewari

- ‘Physiological consequences of pneumoperitoneum and anaesthetic considerations in laparoscopic surgery’, International Conference-cum-live workshop of Association of Minimal Access Surgeons of India, AIIMS, New Delhi; 18–20 March 2005.
- ‘Continuous spinal anaesthesia’, 27th Annual Conference of the UP chapter of ISA, KGMC, Lucknow; 1–2 October 2005.

RESEARCH

Departmental Projects

Completed

1. Comparison of bupivacaine with fentanyl and bupivacaine with butorphenol in labour analgesia with patient controlled epidural analgesia
2. Evaluation of depth of sedation using BIS and other clinical parameters
3. Comparison of halothane, isoflurane and sevoflurane using low flow anaesthesia in children
4. Effect of addition of low-dose ketamine to fentanyl and bupivacaine mixture for patient controlled epidural analgesia (PCEA) for postoperative pain relief for upper abdominal surgery

Ongoing

1. Evaluation of patient comfort and acceptance of awake tracheal intubation
2. To study the effect of dexamethasone on postoperative pain in daycare laparoscopic operative gynaecological surgery. A dose response study
3. Comparison of the efficacy and safety of patient controlled analgesia using a combination of morphine, fentanyl or sufentanil with bupivacaine in thoracic or upper abdominal surgery
4. Management of upper limb complex regional pain syndrome (CRPS) type I: Evaluation of continuous infraclavicular brachial plexus block versus continuous stellate ganglion block with bupivacaine
5. To evaluate the effect of bispectral index monitoring in patients undergoing thoracic surgery
6. Advancement of epidural catheter upto thoracic space in children—comparison of two gauges of catheter
7. Comparison of continuous epidural infusion of morphine, fentanyl and combination of morphine and fentanyl for postoperative pain relief in children
8. Comparison of two methods of percutaneous dilatational tracheostomy
9. Paravertebral block for perioperative analgesia in patients with laparoscopic cholecystectomy
10. Combined spinal–epidural technique in labour analgesia—comparison of 0.0625% bupivacaine with fentanyl and 0.0625% bupivacaine with sufentanil

Collaborative Projects

Completed

1. Evaluation of opioid sparing effect of parecoxib in laparoscopic cholecystectomy (with General Surgery)
2. Evaluation of single stage adjustable strabismus surgery (SSASS) under topical anaesthesia with intravenous midazolam and fentanyl (with Ophthalmology)
3. Ambulatory laparoscopic hernia repair and its feasibility as day care procedure (with General Surgery)
4. To compare the efficacy of butorphenol and parecoxib as adjuvants to lidocaine in intravenous regional anaesthesia (IVRA) (with Orthopaedics)
5. Comparison between combined spinal–epidural technique and epidural analgesia for day care knee arthroscopic surgery (with Orthopaedics)
6. Minimally invasive (endoscopic) thyroidectomy as day procedure (with Surgery)

Ongoing

1. Intravenous regional anaesthesia—magnesium, ketamine and ketorolac as adjuvants to lignocaine (with Orthopaedics)
2. Evaluation of electro-acupuncture in idiopathic infantile nystagmus (with Ophthalmology)
3. Evaluation of CT-guided caeliac plexus block with a neurolytic agent in the management of chronic pancreatitis (with General Surgery)

PUBLICATIONS

Journals

1. Arora MK, Karamchandani K, Trikha A. Use of a gum elastic bougie to facilitate blind nasotracheal intubation in children: A series of three cases. *Anaesthesia* 2006;**61**:291–4.
2. Chhabra A, Mishra S, Kumar A, Titiyal JS. Atropine induced lens extrusion in an open eye surgery. *Pediatric Anesthesia* 2006;**16**:59–62.
3. Chhabra A, Pandey R, Khandelwal M, Subramaniam R, Gupta S. Anesthetic techniques and postoperative emesis in pediatric strabismus surgery. *Reg Anesth Pain Med* 2005;**30**:43–7.
4. Khandelwal M, Chhabra A, Krishnan S. Pituitary apoplexy following bilateral total knee arthroplasty. *J Postgrad Med* 2005;**51**:155–6.
5. Madan R, Bhatia A, Chakithandy S, Subramaniam R, Rammohan G, Deshpande S, *et al.* Prophylactic dexamethasone for postoperative nausea and vomiting in pediatric strabismus surgery: A dose ranging and safety evaluation study. *Anesth Analg* 2005;**100**:1622–6.
6. Rewari V, Trikha A. Intraoperative detection of tracheobronchial placement of a nasogastric tube: A new observational method. *Anesth Analg* 2005;**101**:612–13.
7. Sunder RA, Joshi C. A technique to improve the safety of laryngeal mask airway when used in lacrimal duct surgery. *Pediatric Anesthesia* 2006;**16**:130–3.
8. Trikha A, Venkataraju AJ, Sadara GS. Anaesthesia for a patient with congenital methaemoglobinaemia and temporomandibular joint ankylosis. *Anaesth Intensive Care* 2006;**34**:83–7.

PATIENT CARE

The following facilities are available in the department:

1. Pre-anaesthesia clinic (PAC), 3 days in a week (Monday/Wednesday/Friday), 2–5 pm.
2. Pain clinic, 3 days in a week (Monday/Wednesday/Friday), 2–5 pm.
3. Interventional pain management procedures in the operation theatre on Thursdays.

Number of operations/procedures done

1. Main Operation Theatre

General surgery	2,744
Gastrointestinal surgery	342
Urology	1,385
Otorhinolaryngology	983
Gynaecology	1,084
Paediatric surgery	1,387
Dental surgery	162

2. Peripheral Operation Theatres

Maternity OT	1,589
Orthopaedics	1,900
Dr R.P. Centre for Ophthalmic Sciences	5,736
Casualty OT	3

3. Interventional pain management procedures	448
4. Procedures done under GA in peripheral areas	
Modified ECTs (Psychiatry OPD)	537
CECT/MRI	953
Paediatric USG (RPC)	154
AB8/ICU	
Total number of patients admitted	301
Number of patients discharged	230
Death	77
AB8 emergency duty	
Emergency operations done	2,901
Emergency calls attended (from wards, peripheral ICUs, casualty)	2,773
Total number of patients who attended the OPD	
Pre-anaesthesia clinic	8,374
Pain clinic	5,741

Voluntary community service

Professor M.K. Arora was invited as a Visiting Consultant Anaesthesiologist by Director, Operation Rainbow, Canada–Philippines Mission from 9–23 February 2006 and provided voluntary anaesthesia services for children undergoing cleft lip and palate surgery.

Dr Maya Dehran provided voluntary medical community services at the Bhatti Centre in Radha Soami Satsang, New Delhi for 17 days. She also provided first-aid services, resuscitation and critical care till the patients were shifted to a major hospital.

She also provided medical service at the OPD of the dispensary at Bhatti Centre on all Sundays of the year except on emergency duty at AIIMS.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor M.K. Arora was appointed Member, Editorial Board, *Journal of Anaesthesiology and Clinical Pharmacology*.

Professor D.K. Pawar was invited to be a member of the Advisory Committee of the ‘World Children’s Anaesthesia Foundation’, an International body for improvement of education and patient care in Paediatric Anaesthesia around the world with emphasis on developing countries.

The Hope Course (Hospital Preparedness for Emergency) was carried out in India for the first time. Professor R. Saxena was the co-coordinator for the course. Dr S. Rajeswari, Dr Maya Dehran and Dr V. Mohan completed the course successfully. They also completed the Hope Training for Instructor (H-TFI) course successfully. The courses were held at the Indian Institute of Public Administration, New Delhi; February 2006.

9.2. Anatomy

Professor and Head

Kiran Kucheria

Professors

U. Sabharwal

(superannuated on 30.11.2005)

Rani Kumar

Raj D. Mehra

Shashi Wadhwa

T.S. Roy

Additional Professors

A. Shariff

Pushpa Dhar

S.B. Ray

Associate Professors

T.K. Das

(Electron Microscopy)

Rima Dada

Arundhati Sharma

(Genetics)

Assistant Professors

T.C. Nag

(Electron Microscopy)

Renu Dhingra

Ritu Sehgal

EDUCATION

Undergraduate

One student of MB,BS, AIIMS carried out research on her *Kishore Vagyanik Puruskar Yojna* (KVPY) project in genetics. One student from BTech Biotechnology, Israna Engineering College received training in DNA isolation from various tissues.

Postgraduate

Besides giving training to the departmental MD and PhD students, a Neuroanatomy course was organized for MSc Neuroscience Nursing students of AIIMS.

Short-term training

One MSc (Neuroscience) student of Jiwaji University, one PhD student of Aligarh Muslim University and one from DIPAS, Delhi, received short-term training in Neurohistological and Immunohistochemical techniques. One MSc student of Jiwaji University, received training in Cytogenetics.

Continuing Medical Education

The department organized four workshops on 'Diagnosis of genetic disorders' for various categories of technicians, scientists and clinicians in October, November, December 2005 and February 2006.

The faculty members of the department delivered a series of lectures for the students of MSc Neuroscience and MSc Human Genetics, Jiwaji University, Gwalior and National Brain Research Centre, Gurgaon.

National and International Conferences

Lectures delivered

Professor Rani Kumar

- Guest lecture on 'Apoptosis in placenta', National Workshop on 'Biological and clinical relevance of placenta', New Delhi; February 2006.

Professor S. Wadhwa

- Chaired a session at the symposium on 'Emerging trends in Neuroscience', conducted various meetings of Indian Academy of Neurosciences, 23rd Annual Conference, Bangalore; 2005.
- Delivered a public lecture on 'Sound, music and brain', Anna Sciences Centre, Tiruchirapalli; November 2005.

Dr T.S. Roy

- Delivered four invited lectures for the students of MSc Neurosciences, Department of Neuroscience, School of Life Sciences, Jiwaji University, Gwalior; April 2005.
- Delivered an invited lecture at the Annual Meeting of Indian Academy of Neurosciences and Symposium on 'Emergency trends in Neurosciences', Bangalore; December 2005.
- Delivered lecture on 'Pancreatology in India', Symposium organized by Asia Oceanic Pancreatic Association (AOPA) Tokyo; July 2006.

Dr P. Dhar

- Delivered a lecture at the National conference of the Anatomical Society of India, Nagpur; January 2006
- Delivered a lecture at the 6th Conference of the Indian Congress of Forensic Medicine and Toxicology, Chandigarh; November 2005.

Dr S.B. Ray

- Delivered a lecture on 'Nimopidine, a lipid soluble calcium channel antagonist potentiates the acute analgesic effect of intrathecal morphine in rodents', 21st Conference of the Indian Society of Pain, Ahmedabad; February 2006

Dr Rima Dada

- Delivered invited lectures to postgraduate students of Molecular and Human Genetics, Centre for Molecular and Human Genetics, School of Studies in Zoology, Jiwaji University, Gwalior; 2005.
- Chaired a session at the National Conference on 'Environmental technology and biological perspective—issues and challenges', University of Mumbai; February 2006.
- Delivered a lecture on 'Genetic screening of couples opting for ART/ICSI', National Conference of ISPAT, New Delhi; February 2006.

Dr Arundhati Sharma

- Delivered invited lectures to postgraduates of Molecular and Human Genetics, Centre for Molecular and Human Genetics, School of Studies in Zoology, Jiwaji University, Gwalior; 2005.

RESEARCH

Funded Projects

Completed

1. L- and N-type calcium channels in the spinal cord of morphine tolerant rat: An immunohistochemical study. Funded by AIIMS for one year (2005–06). Funds: Rs 80,000.

Ongoing

1. Role of cell cycle regulatory genes in breast cancer patients on hormonal therapy. Funded by DBT (2004–2007). Funds: Rs 21 lakh.
2. Effect of prenatal sound stimulation on chick hippocampus. Funded by DBT, BT/PR348/BRB/1-/276/2002, (2003–2006). Funds: Rs 17.85 lakh.
3. Studies on immunoexpression of antiapoptotic and transcription marker molecules in ovariectomized rat hippocampus. Funded by ICMR (2004–2007). Funds: Rs 3.65 lakh.
4. Mutational analysis of corneal dystrophies in north Indian patient population. Funded by DBT (2006–2009). Funds: Rs 36 lakh.
5. Apoptosis in placental membranes in pre-eclampsia: An immunohistochemical study. Funded by AIIMS (2005–2007). Funds: Rs 75,000.
6. The effect of arsenic exposure during early postnatal period on rat cerebellum. Funded by AIIMS (2002–2006). Funds: Rs 1,25,000.
7. Multicentric project on genomic analysis in male infertility, in collaboration with National Institute of Immunology. Funded by ICMR (2003–2006). Funds: Rs 19 lakh.
8. Genomic diversity in five ethnic tribes of Rajasthan. Funded by DBT (2004–2007). Funds: Rs 25 lakh.
9. Effect of lifestyle and environment on male reproductive health. Funded by AIIMS (2004–2006). Funds: Rs 1 lakh.
10. Effect of alterations in intracellular calcium ion concentration on ORL1 opioid receptors in the rat nervous system during morphine tolerance. Funded by ICMR (2003–2006). Funds: Rs 6.51 lakh.

Departmental Projects

Completed

1. Development of the human cochlear nerve during prenatal period
2. Incidence AZF microdeletions in men with varicocele; 2005

Ongoing

1. Apoptosis in placental membranes in pre-eclampsia: An immunohistochemical study
2. Estrogen hormone interactions in rat hippocampal formation
3. Prospective case–control study to evaluate the role of GST gene deletion in breast cancer patients.
4. Mutation analysis of 5q31–linked autosomal dominant corneal dystrophy in north Indian patients.

5. Effects of arsenic exposure during early postnatal period on the rat hippocampus
6. Development of the human auditory system
7. Age changes in the human oculomotor nerve
8. Age changes in the human cochlear nerve
9. Mitochondrial mutations and Y chromosome analysis in male infertility, 2006

PUBLICATIONS

Journals

1. Alladi PA, Roy T, Singh N, Wadhwa S. Prenatal auditory enrichment with species-specific calls and sitar music modulates expression of Bcl-2 and Bax to alter programmed cell death in developing chick auditory nuclei. *Int J Dev Neurosci* 2005;**23**:363–73.
2. Arora L, Dhingra R. Absence of musculocutaneous nerve and accessory head of biceps brachii: A case report. *Indian J Plast Surg* 2005;**38**:144–6.
3. Atomi Y, Sugiyama M, Go VL, Matsuno S, Apte MV, Leung PS, Roy TS, *et al.* Asian-Oceanic Pancreatic Association: Conception to actuality. *Pancreas* 2005;**31**:405–12.
4. Dada R, Gupta NP, Kucheria K. Cytogenetic and molecular analysis of male infertility: Y chromosome deletion during nonobstructive azoospermia and severe oligozoospermia. *Cell Biochem Biophys* 2006;**44**:171–7.
5. Dada R, Gupta NP, Kucheria K. KRS and its association with haematological malignancy. *Indian J Pract Doctor* 2006;**11**:39–41.
6. Dada R, Rakesh K, Kucheria K. Necessity of genetic analysis prior to ART. *Nature News* 2005;**12**:7–8.
7. Dixit S, Sharma K, Mehra RD. Alteration in expression of presynaptic protein synaptophysin in female rat hippocampus following 17-B estradiol administration. *Ann Neurosci* 2005;**13**:31–2.
8. Dhar P, Kumud L. Main and accessory renal arteries: A morphological study. *Int J Anat Embryo* 2005;**110**:101–10.
9. Dhar P. Left vertebral artery arising from the aortic arch: A case report. *Int Med J* 2005;**12**:139–42.
10. Dhingra R, Talwar KK, Chopra P, Kumar R. An experimental design for induction of non-specific aortoarteritis. *Indian Heart J* 2005;**57**:143–50.
11. Kumar R, Gautam G, Gupta NP, Aron M, Dada R, Kucheria K, *et al.* Role of testicular fine-needle aspiration cytology in infertile men with clinically obstructive azoospermia. *Natl Med J India* 2006;**19**:18–20.
12. Mehra RD, Sharma K, Nyakas C, Vij U. Estrogen receptor α and β immunoreactive neurons in normal adult and aged female rat hippocampus. A qualitative and quantitative study. *Brain Res* 2005;**1056**:22–35.

13. Mitra A, Dada R, Kumar R, Gupta NP, Kucheria K, Gupta SK. Y chromosome microdeletions in azoospermic patients with Klinefelter's syndrome. *Asian J Androl* 2006;**8**:81–8.
14. Ray B, Roy TS, Wadhwa S, Roy KK. Response to sanchez del rey, and sanchez fernandez. *Hear Res* 2006;**212**:252–3.
15. Ray B, Singh LK, Das CJ, Roy TS. Ectopic supernumerary tooth on inferior nasal concha. *Clin Anat* 2006;**19**:68–74.
16. Ray B, Roy TS, Wadhwa S, Roy KK. Development of the human fetal cochlear nerve: A morphometric study. **Hear Res** 2005;**202**:74–86.
17. Ray SB, Verma D, Wadhwa S. Acute analgesic effect of loperamide as compared to morphine after intrathecal administration in rat. *Indian J Exp Biol* 2005;**43**:425–9.
18. Ray SB. Loperamide: A potential topical analgesic for burn pain. *J Burn Care Res* 2006;**27**:121–2.
19. Sehgal R, Kaul JM. Aberrant attachment of orbicularis oculi: Case report. *Indian J Ophthalmol* 2005;**53**:198–200.
20. Verma D, Ray SB, Patro I, Wadhwa S. Enhanced analgesic effect of morphine–nimodipine combination after intraspinal administration as compared to systemic administration in mice. **J Biosci** 2005;**30**:491–7.

Abstract

21. Dada R, Kumar R, Rajeev K, Gupta NP, Kucheria K. Genetic screening of infertile males opting for ART. *Int J Hum Genet* 2006; (Suppl 11):48.
22. Dada R, Talwar R, Kucheria K. Cytogenetic and molecular analysis in hypogonadism. *Int J Hum Genet* 2006; (Suppl 11):77.
23. Dhar P, Mehra RD. Effects of arsenic exposure during rapid brain growth (RBG) period on rat cerebellum [Abstract]. *FASEB J* 2006;**20**:A879.
24. Kumar R., Dada R, Kumar R., Gupta NP, Kucheria K. Chromosomal aberrations and its association with reproductive failure. *Int J Hum Genet* 2006; Suppl 11:79.

PATIENT CARE

I. Chromosomal analysis	300
Semen analysis	115
Amniotic fluid/CVS/cord blood	65
DNA/PCR	100
II. Embalming	440

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor Rani Kumar was nominated as Member of Publication Advisory Committee of National Academy of Medical Sciences and Member of the Editorial Board of the *Journal of the Anatomical Society of India*.

Professor Shashi Wadhwa delivered the Presidential address at the 23rd Annual meeting of Indian Academy of Neuroscience, Bangalore, December 2005; External Subject Expert, Assessment Committee of the National Brain Research Centre, Gurgaon, November 2005; Member, Sectional Committee for Medicine of Indian Academy of Sciences, Tiruchirappalli, November 2005; Member, Curriculum Advisory Committee, Neuroscience Centre, Jiwaji University, Gwalior; Travels Awards Committee of CSIR; Editorial Boards of *Journal of Biosciences*, *Journal of the Anatomical Society of India* and *Annals of Neurosciences*; invited to review the new edition of *Wheater's Functional Histology*.

Dr T.S. Roy was nominated as the Associate Editor of the journal *Pancreas*.

Dr Pushpa Dhar was awarded 'Neta Ji Subhash Chandra Bose National Award' for Excellence (UNICEF recognized)

Dr Rima Dada was nominated as a Life Member of the Indian Society for Prenatal Diagnostics and Techniques (ISPAT) and of the Delhi Society for Prenatal Diagnostics and Techniques (DESPAT).

Dr Arundhati Sharma was nominated as a Life Member of the Indian Society for Prenatal Diagnostics and Techniques (ISPAT) and of the Delhi Society for Prenatal Diagnostics and Techniques (DESPAT); Organizing committee member of the ISPAT conference held in Delhi, February 2006.

Dr Renu Dhingra was awarded 'Dharam Narayan Gold Medal' for the best paper in Clinical Anatomy presented at the National Conference of the Anatomical Society of India, Nagpur, January 2006.

Ms Sraboni Chaudhary, a PhD student, won the S.S. Parmar Prize for the best poster at the Annual Conference of the Indian Academy of Neurosciences, Bangalore, December 2005.

9.3 Biochemistry

Professor and Head

Subrata Sinha

Professors

Neeta Singh
Ranju

D.N. Rao
Ralhan

Nibhriti Das
S.S. Chauhan

Additional Professor

M.R. Rajeswari

Associate Professors

P.P. Chattopadhyay

Kalpana Luthra

Assistant Professors

Alpana Sharma

Kunzang Chosdol

N.C. Chandra

EDUCATION

Undergraduate

The department continues with its undergraduate teaching programmes which include MB,BS (two semesters), Nursing (one semester) and BSc (Hons) Nursing (one semester).

For the MB,BS students, an innovative blend of problem-based/case-oriented small group discussions, interactive lectures and lab-based exercises is streamlined to facilitate self directed reason-based learning of biochemical concepts, their applications in clinical problem solving and to enable the students understand the concept of molecular medicine.

Postgraduate

These include six MSc (Ist year and IInd year) students and seven MD students. The department also has 34 PhD students.

Short-term training

Summer training in research was provided to ten MB,BS students from AIIMS. Eight MB,BS students conducted projects for the KVPY Scheme of the DST and two were awarded fellowships. Ten students from India received short-term training. The Department also imparted short-term training (one month) to two MSc students from BPKIHS, Dharan, Nepal.

Continuing Medical Education

The department conducted a symposium on 'Molecular aspects of atherosclerosis and related metabolic disorders' on 24 October 2005.

Dr Neeta Singh organized a Symposium on 'Molecular genetics and therapeutic targets in cancer' on 28 November 2005 at AIIMS.

Dr Ranju Ralhan coordinated a Workshop on ‘Molecular techniques in oral cancer research’, 19–22 February 2006, Kuala Lumpur, Malaysia. She was also Organizing Secretary, International Symposium on ‘Translational research: Apoptosis and cancer’, 18–21 December 2005, Thiruvananthapuram, India.

National and International Conferences

Lectures delivered

Dr Subrata Sinha

- ‘Recombinant antibodies against Hepatitis B surface antigen: From mouse to chimera’, 32nd Annual Conference of Indian Immunology Society, Department of Immunopathology, PGIMER, Chandigarh; 24–27 November 2005
- ‘Molecular genetics of gliomas’, symposium on Molecular genetics and therapeutic targets in cancer, AIIMS; 28 November 2005.

Dr Neeta Singh

- ‘Apoptosis in health and disease’, National Refresher Course, Staff College, JNU, New Delhi; 23 September 2005.
- A public lecture on ‘Cancer—causes and prevention’; Aurobindo Ashram, New Delhi; 2 April 2005.
- ‘Molecular genetics of head and neck, and lung cancer and therapeutic implications of chemopreventive agents’, the symposium on ‘Molecular genetics and therapeutic targets in cancer’, AIIMS; 28 November 2005.
- ‘Molecular profiling of human lung squamous-cell carcinoma and chemoadjuvant action of curcumin’, 25th Annual Convention of Indian Association for Cancer Research (IACR) and Silver Jubilee Symposium on ‘Molecular profiling and cancer management’, ACTREC, Navi Mumbai; 15–18 February 2006.
- ‘Apoptosis and disease’, National symposium on ‘Recent trends in molecular biology’, Gwalior; 27–28 February 2006.

Dr D.N. Rao

- ‘Plague vaccine design’, 32 Annual Conference of Indian Immunology Society.
- ‘T cell anergy in leprosy’, Golden Jubilee celebrations, M.S. University, Baroda

Dr Nibhriti Das

- ‘Complement-cytokine nexus in autoimmune disorders’, IIS Chandigarh; November 2005.
- ‘Low levels of NO, HDL and high oxidant stress with or without genetic predisposition emerge as major risk factors for coronary artery disease in northern Indians’, International Society of Atherosclerosis Research Conference (ISARCON), New Delhi; November 2005.

Dr Ranju Ralhan

- ‘Use of microarray for genetic diagnosis of diseases’, WET Workshop on ‘Recent advances in diagnosis of genetic disorders’, AIIMS; March 2006.
- ‘Gene expression profiling of oesophageal squamous-cell carcinoma’, An International symposium on ‘Human genomics and public health’, XXXI Annual Conference of Indian Society of Human Genetics, New Delhi; February 2006.

- ‘The role of molecular epidemiology to the clinicians, scientists and public health personnel. Application of molecular biology techniques in oral cancer research: Are there any limits?’ Molecular research techniques #1—Laboratory techniques, telomerase research in oral mucosal lesions at workshop on Oral Cancer Update in the Asia Pacific. A regional update and networking in Kuala Lumpur, Malaysia; February 2006.
- ‘Advanced techniques in placental research. Biological and clinical relevance of placenta’, Department of Anatomy, Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi; February 2006.
- ‘Biochemical substances in areca nut, betel inflorescence and betel quid’, Second International Conference on ‘Areca nut and betel quid use with/without tobacco and oral cancer’, Kaohsiung, Taiwan; July 2005.
- ‘Pursuit of molecular markers for oral precancer and cancer: The road ahead’; 5th Congress of the International College for Maxillo–Facial surgery, Gunma University, Gunma, Japan; June 2005.
- ‘Novel molecular targets for tobacco associated oral carcinogenesis: The untold story’. 1st Annual M.D. Anderson Cancer Center Sister Institutions Meeting, Houston, USA; May 2005.
- ‘Genomics and proteomics as risk markers for oral potentially malignant lesions: State of the science and art’, Workshop on ‘Potentially malignant oral mucosal lesions and conditions: Terminology; classification; diagnosis and prognosis’, The Royal Society of Medicine, London, UK; May 2005.
- ‘From proteins to pathways: The new avenues of proteins in GI diseases’, Department of Gastroenterology, AIIMS; April 2005.
- ‘Molecular and endocrinological aspects of placenta, biological and clinical relevance of placenta’, Department of Anatomy, Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi; February 2006.

Dr S.S. Chauhan

- ‘Restoration of blood supply to ischaemic area by VEGF gene therapy in rat hind limb Ischaemia model’, Symposium on ‘Molecular aspects of atherosclerosis and related metabolic disorders’, AIIMS; 24 October 2005.
- ‘Therapeutic angiogenesis by VEGF gene therapy in rat hind limb ischaemia model’, XVIIIth Annual Conference of Indian Society for Atherosclerosis Research and International symposia/CME on ‘Atherosclerosis’, Lady Harding Medical College, New Delhi; 25–27 November 2005.
- ‘Regulation of expression of human cathepsin L, a protease implicated in implantation’, Symposium on ‘Biological and clinical relevance of placenta organized’, Department of Anatomy, Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi; 15 February 2006.

Dr M.R. Rajeswari

- Invited lecture at the International Conference on the ‘Instrumentation and applications of circular dichroic spectroscopy’, Hyatt Regency, New Delhi; September 2005.

Dr N.C. Chandra

- Delivered lecture on ‘Estradiol dominates over insulin in their joint action on LDL receptor expression—an *in vitro* study in HepG2 cell culture system’, Department of Biochemistry, AIIMS; November 2005.

- Atherogenicity of oral (steroid) contraceptives at the perspective of LDL receptor expression and its functionality', XVIII Annual Conference, ISARCON; November 2005.

RESEARCH

Funded Projects

Completed

1. A study of expression and targeting of inhibitor(s) of apoptosis— *in vitro* and *in vivo* study. Neeta Singh. Funded by ICMR (2002–2005). Funds: Rs 8.82 lakh.
2. Elucidation of the molecular mechanism of hypertension: Role of genetic variants of nitric oxide synthase, free radical homeostasis and cell adhesion molecules and their interplay in the disease. Nibhriti Das. Funded by ICMR for 3 years (2002–2005). Funds: Rs 20.46 lakh.
3. Gene expression profile analysis of human oesophageal cancer using cDNA microarrays. Ranju Ralhan. Funded by ICMR (2002–2006). Funds: Rs 34 lakh.
4. Regulation of human cathepsin L expressed by 5'untranslated regions of its mRNA species. S.S. Chauhan. Funded by DST (2001–2005). Funds: Rs 18.75 lakh.
5. Trophoblast biology: Intracellular signalling mechanism. N.C. Chandra. Funded by ICMR (2002–2005). Funds: Rs 10 lakh.

Ongoing

1. Improvement of S and T infrastructure in universities and higher educational institutions (FIST). Subrata Sinha. Funded by DST for 5 years (2005–2010). Funds: Rs 113.50 lakh.
2. Generation and characterization of phage displayed recombinant antibodies to biochemically and immunologically relevant epitopes of the oncodevelopmental antigen heat stable alkaline phosphatase. Subrata Sinha. Funded by ICMR for 3 years (2006–2009). Funds: Rs 13.45 lakh.
3. Ligand based selection from combinatorial libraries for generating recombinant antibodies to the placental (oncofetal) isozyme of alkaline phosphatase; characterization and validation in clinical cancer. Subrata Sinha. Funded by ICMR for 3 years (2005–2008). Funds: Rs 18.00 lakh.
4. Expression of recombinant antibody in *E. coli*: Processes for improving binding characteristics of antibodies to hepatitis B surface antigen (HbsAg). Subrata Sinha. Funded by DBT for 4 years (2002–2006). Funds: Rs 39.00 lakh.
5. Interaction of DNA repair genes and p53 in determining the cellular response to genotoxic agents in glial tumour cell-lines. Subrata Sinha, Tapasya Srivastava (SERC-Fast Track Young Scientist Fellowship). Funded by DST for 3 years (2005–2008). Funds: Rs 10.00 lakh.
6. Response of glioblastoma cells lines to chemotherapeutic agents with respect to molecular indicators of genomic instability in normoxic and hypoxic conditions. Funded by ICMR for 3 years (2003–2006). Funds: Rs 4.9 lakh.
7. A study of the expression of IL-13 and IL-4 receptors in primary meningeal tumours. Funded by ICMR for 3 years (2005–2008). Funds: Rs 4.9 lakh.

8. Identification of differentially expressed genes in lung cancer using library subtraction. Neeta Singh. Funded by DBT for 3 years (2003-2005). Funds: Rs 28.22 lakh.
9. Functional analysis of S29 ribosomal protein apoptosis. Neeta Singh. Funded by DST for 3 years (2003–2006). Funds: Rs 18.24 lakh.
10. Gene expression profiling in the practitioners of *sudershan kriya*. Neeta Singh. Funded by Ministry of Health and Family Welfare for 3 years (2003-2006). Funds: Rs 22 lakh.
11. Development of a human papillomavirus vaccine prototype. Neeta Singh. Funded by DBT for 2 years (2005–2007). Funds: Rs 36.49 lakh.
12. Molecular epidemiology of HPV types prevalent in India and identification of HPV-16 L1 and E6 variants in cervical cancer. Neeta Singh. Funded by DBT for 2 years (2005–2007). Funds: Rs 13.94 lakh.
13. Mitochondria in apoptosis and human cancer. Neeta Singh. Funded by ICMR for 3 years (2005–2008). Funds: Rs 9.43 lakh.
14. Developing new generation peptide-based vaccine using F1 and V antigen of *Y. pestis* (Plague). D.N. Rao. Funded by DST for 2 years (2005–2007). Funds: Rs 24 lakh.
15. Technological feasibility and immunological potential of a single-injection, acellular pertussis vaccine incorporating pertussis toxoid and filamentous hemagglutinin in microspheres. D.N. Rao. Funded by DBT for 2 years (2005–2007). Funds: Rs 30 lakh.
16. To evaluate the correlation between levels of cytokines (IL-6, IL-8, IL-10) in seminal plasma in different groups of infertile men and correlation with sperm morphology, functions and bacterial infection in semen. D.N. Rao. Funded by ICMR for 2 years (2005–2007). Funds: Rs 12 lakh.
17. Expression and modulation of complement receptors: Significance in the pathophysiology and prognosis of autoimmune disorders. Nibhriti Das. Funded by CSIR for 3 years (2005–2008). Funds: Rs 11.96 lakh.
18. Functional analysis and clinical significance of novel molecular targets in cytoskeletal reorganization and locoregional spread of oral cancer using proteomics. Ranju Ralhan. Funded by DBT for 3 years (2005–2008). Funds: Rs 38 lakh.
19. Designing of methylation target arrays for breast cancer. Ranju Ralhan. Funded by DBT for 1 year (2005–2006). Funds: Rs 22.16 lakh.
20. Characterization and functional analysis of differentially expressed genes in oesophageal cancer. Ranju Ralhan. Funded by DST for 3 years (2005–2008). Funds: Rs 20 lakh.
21. Relationship between polymorphisms in drug metabolizing enzymes, CYP1A1 and GSTM1 and the risk of developing oral precancer and cancer among consumers of tobacco and chewing products. Ranju Ralhan. Funded by ICMR for 5 year (2002–2007). Funds: Rs 155 lakh.
22. Role of genomic instability due to alterations of recombination factors p53 and BRCA1 in the pathogenesis of breast cancer. Ranju Ralhan. Funded by ICMR for 4 years (2002–2006). Funds: Rs 33 lakh.

23. Characterization of the positive regulatory region of the first exon of human cathepsin L gene. S.S. Chauhan. Funded by DST for 3 years (2005–2008). Funds: Rs 22.30 lakh.
24. Identification and characterization of human cathepsin L alternate promoter. S.S. Chauhan. Funded by CSIR for 3 years (2005–2008). Funds: Rs 6.90 lakh.
25. Studies on expression of HMGA proteins in tumour growth and their interaction with DNA. M.R. Rajeshwari. Funded by DST for 3 years (2003–2006). Funds: Rs 18.06 lakh.
26. Proteomic analysis of outer membrane of *acinetobacter baumannii* and its resistant strains. M.R. Rajeshwari. Funded by DBT for 3 years (2005–2008). Funds: Rs 17.39 lakh.
27. Effect of tumour specific Hsp90 inhibitor geldanamycin, on CpG island methylation and survival of hypoxic glial tumour cell lines. P.P. Chattopadhyay. Funded by CSIR for 3 years (2005–2008). Funds: Rs 9 lakh.
28. Hypoxia and CpG island methylation of selected loci in tumour cell genome: Modulation of methylation and subsequent effect on cell proliferation and chemotherapeutic response. P.P. Chattopadhyay. Funded by ICMR for 3 years (2005–2008). Funds: Rs 16.75 lakhs.
29. Characterization of HIV-1 subtypes in Indian subjects, a nested part of RO1 project. ‘Design and use of HIV V3 mimetic immunogens’. Kalpana Luthra. Funded by NIH, USA for 5 years (2005–2010). Funds: Rs 39.00 lakh.
30. CETP polymorphism in hyperlipidaemia. Kalpana Luthra. Funded by ICMR for 3 years (2006–2009). Funds: Rs 13.13 lakh.
31. Signalling pathways in ovarian granulosa cells. Kalpana Luthra. Funded by ICMR for 3 years (2005–2008). Funds: Rs 11.49 lakh.
32. Frequency distribution of three HIV-1 resistance conferring polymorphisms SDF-3’A, CCR2-64 I, and CCR5-delta 32 in Asian Indians. Kalpana Luthra. Funded by DST for 3 years (2003–2006). Funds: Rs 19.5 lakh. Submitted to DST for extension.
33. Expression of leukocyte function associated antigen-1 (LFA-1) in normal and pre-eclamptic human placenta. Kalpana Luthra. Funded by AIIMS for 2 years (2004–2006). Funds: Rs 1.30 lakh.
34. Assessment of beta-2 microglobulin, IL-6 and IL-2R as prognostic factors in Indian patients of multiple myeloma. Alpana Sharma. Funded by Institute’s Research Grants, AIIMS, for 1 year (2005–2006). Funds: Rs 0.71 lakh.
35. Characterization of novel genetic alterations preferentially involved in low grade human astrocytic tumours. Kunjung Chosdol. Funded by DST for 3 years (2003–2006). Funds: Rs 11.70 lakh.
36. Studies on the possible development of hyperlipemia by oral contraceptives: An *in vitro* model. N.C. Chandra. Funded by the Ministry of Health and Family Welfare for 3 years (2003–2006). Funds: Rs 10.27 lakh.

Departmental Projects

Completed and ongoing

1. A study of the expression and targeting of inhibitor(s) of apoptosis proteins (IAPs) *in vitro*, and an analysis of their expression in head and neck cancer
2. Study of the function of mitochondria in apoptosis and human disease
3. Analysis of apoptotic signalling mechanism induced by benzamide riboside and ATP analogs
4. Evaluation of molecular markers and anticancer agents in lung cancer
5. HPV and the genetics of cervical cancer
6. Molecular detection and genotyping of HPV in uterine cervix—a population based study
7. Molecular insights into the pathogenesis of cervical cancer—an *in vitro* study
8. Molecular and biological factors in the pathogenesis of ovarian cancer
9. Effect of curcumin on advanced cervical cancer
10. Development of HPV-16 candidate vaccine prototype
11. Role of eNOS gene polymorphisms in coronary artery disease in the Indian subjects
12. Expression of leukocyte complement receptor 1, its modulation and significance in the pathophysiology of systemic lupus erythematosus (SLE)
13. Paraoxanase and its gene polymorphism in relation to CAD
14. Elucidation of the expression of complement regulatory proteins in relation to the pathophysiology and severity of SLE
15. Role of complement receptors in cell signalling and microbicidal properties of macrophages in relation to mycobacterium tuberculosis
16. Complement receptor 1 and its gene polymorphism in relation to the pathophysiology and susceptibility to severe malaria

Collaborative Projects

Completed

1. Effect of breathing techniques and meditation on normal individuals and those with cancer in remission (with CCRYN and Medical Oncology).

Ongoing

1. Prevalence of alteration at microsatellite loci on 1p and 19q in primary human gliomas (with Pathology, Neurosurgery)
2. Fine mapping of alterations in chromosome 17 in gliomas and its implications for the tumour phenotype (with Pathology, Neurosurgery)
3. Use of DNA fingerprinting technology to identify altered genetic regions in gliomas (with Pathology, Neurosurgery)

4. MRI studies on murine liver and skin tumours (with NMR)
5. Histopathological investigations on murine skin and liver tumours (with Histopathology)
6. Isolation and analysis of the outer membrane proteins of *Acinetobacter Baumannii* (with Microbiology)
7. Structural investigations on the native and mutated outer membrane protein from *Acinetobacter Baumannii* (with Bioinformatics, JNU)
8. A comparative evaluation of levels of interleukin-1-² in GCF during canine distraction and canine refraction (with Dental Surgery)
9. Neurological disorders Freidreich's ataxia and spiniocerebellar ataxia associated with DNA trinucleotide repeats: Identification and development of protein biomarkers and circulating DNA for clinical diagnosis (with Neurology)
10. Utility of antigen detection from the epidermis of Indian patients in pemphigus vulgaris. (with Dermatology and Venereology)
11. A prospective study of oxidative stress markers and antioxidant levels in patients with pre-eclampsia (with Obstetrics and Gynaecology)
12. T-cell response in parthenium induced contact dermatitis (with Dermatology and Venereology)

PUBLICATIONS

Journals

1. Biswas S, Tomar D, Rao DN. Investigation of the kinetics of histidine-rich protein 2 and of the antibody responses to this antigen, in a group of malaria patients from India. *Ann Trop Med Parasitol* 2005;**99**:553–562.
2. Bose B, Khanna N, Acharya SK, Sinha S. High affinity mouse–human chimeric Fab against hepatitis B surface antigen. *World J Gastroenterol* 2005;**11**:7569–78.
3. Bose B, Khanna N, Acharya SK, Sinha S. Generation and characterization of a high-affinity chimaeric antibody against hepatitis B surface antigen. *Biotechnol Appl Biochem* 2006;**43**:93–101.
4. Bose B, Sinha S. Problems in using statistical analysis of replacement and silent mutations in antibody genes for determining antigen-driven affinity selection. *Immunology* 2005;**116**:172–83.
5. Chhabra S, Narang R, Lakshmy R, Das N. APOA1-75 G to A substitution associated with severe forms of CAD, lower levels of HDL and apoA-I among northern Indians. *Dis Markers* 2005;**21**:169–74.
6. Das S, Ray R, Snehlata, Das N, Srivastava LM. Effect of ascorbic acid on prevention of hypercholesterolemia induced atherosclerosis. *Mol Cell Biochem* 2006;**1573**–4919. (Online)
7. Gopalakrishnan R, Chandra NC. Estradiol regulates insulin dependent stimulation of LDL-receptor expression in HepG2 cells. *Indian J Clin Biochem Biophys* 2006;**21**:8–14.
8. Jain A, Akanchha S, Rajeswari MR. Stabilization of purine motif DNA triplex by a tetrapeptide from the binding domain of HMGB1 protein. *Biochimie* 2005;**87**:781–790.

9. Madhavan M, Pandey RM, Misra A, Vikram NK, Dhingra V, Luthra K, *et al.* Centile values for serum lipids and blood pressure for Asian Indian adolescents. *Lipids Health Dis* 2005;**4**:20.
10. Manocha M, Pal PC, Chitralkha M, Thomas BE, Tripathi V, Gupta SD, *et al.* Enhanced mucosal and systemic immune response with intranasal immunization of mice with HIV peptides entrapped in PLGA microparticles in combination with Ulex Europaeus-I lectin as M cell target. *Vaccine* 2005;**23**:5599–617.
11. Medha R, Sharma A. Biomarkers of cardiac injury: An update. *Angiology* 2005;**56**:677–91.
12. Mittal S, Chauhan SS. Stem cells in medicine. *Trop Gastroenterol* 2005;**26**:21–8.
13. Pal PC, Rajalakshmi M, Manocha M, Sharma RS, Mittal S, Rao DN. Semen quality and sperm functional parameters in fertile Indian men. *Andrologia* 2006;**38**:21–5.
14. Poosarla A, Veerendra Kumar B, Prasanna Kumar S, Sreedevi K, Rao DN, Rao RR. Induction of Anti-inflammatory and altered T-cell proliferative responses by the ethanol root extract of plumbago zeylanica in adjuvant-induced arthritic rats. *Pharmbiol* 2005;**43**:784–89.
15. Puri S, Joshi BH, Sarkar C, Mahapatra AK, Hussain E, Sinha S. Expression and structure of interleukin 4 receptors in primary meningeal tumors. *Cancer* 2005;**103**:2132–42.
16. Ralhan R, Kaur J, Rohtagi N, Matta A, Sawhney M, Srivastava A. Functional oncogenomics: Novel molecular targets for smokeless tobacco associated oral precancer and cancer. *Oral Oncology Supplement* 2005;**1**:94.
17. Ralhan R, Chakravarti N, Kaur J, Sharma C, Kumar A, Mathur M, *et al.* Clinical significance of altered expression of retinoid receptors in oral precancerous and cancerous lesions: Relationship with cell cycle regulators. *Int J Cancer* 2006;**118**:1077–89.
18. Ralhan R, Chakravarti N, Kaur J, Soni S, Kumar A, Mathur M, *et al.* Candidate molecular markers for oral precancer and cancer. *J Clin Oncol* 2005;**23**:165.
19. Saini D, Kala M, Jain V, Sinha S. Targeting the active site of the placental isozyme of alkaline phosphatase by phage-displayed scFv antibodies selected by a specific uncompetitive inhibitor. *BMC Biotechnol* 2005;**5**:33. (doi 10.1186/1472-6750-5-33)
20. Sarkar C, Karak AK, Nath N, Sharma MC, Mahapatra AK, Chattopadhyay P, *et al.* Apoptosis and proliferation: Correlation with p53 in astrocytic tumours. *J Neurooncol* 2005;**73**:93–100.
21. Sen S, Ateeq B, Sharma H, Datta P, Bal S, Kumar A, *et al.* Differential gene expression in human lung squamous cell carcinoma in Asian Indians may help to identify genetic predisposition. *Eur J Cancer* 2006;**4**:46.
22. Sen S, Sharma H, Singh N. Curcumin enhances vinorelbine mediated apoptosis in NSCLC cells by the mitochondrial pathway. *Biochem Biophys Res Commun* 2005;**331**:1245–52.
23. Sharma H, Sen S, Lo Muzio L, Mariggiò A, Singh N. Antisense-mediated downregulation of anti-apoptotic proteins induces apoptosis and sensitizes head and neck squamous cell carcinoma cells to chemotherapy. *Cancer Biol Ther* 2005;**4**:720–7.

24. Sharma H, Sen S, Singh N. Molecular pathways in the chemosensitization of cisplatin by quercetin in human head and neck cancer. *Cancer Biol Ther* 2005;**4**:949–55.
25. Sharma H, Singh A, Sharma C, Jain SK, Singh N. Mutation in the mitochondrial DNA D-loop region are frequent in cervical cancer. *Cancer Cell Intl* 2005;**5**:34.
26. Sharma R, Sud N, Chattopadhyay TK, Ralhan R. TC21/R-Ras2 upregulation in esophageal tumorigenesis: Potential diagnostic implications. *Oncology* 2005;**69**:10–18.
27. Sinha S, Rathi M, Misra A, Kumar V, Kumar M, Jagannathan NR, *et al.* Subclinical inflammation and soleus muscle intramyocellular lipids in healthy Asian Indian males. *Clin Endocrinol (Oxf)* 2005;**63**:350–5.
28. Srivastava K, Biswas UK, Narang R, Varghese JJ, Das N. Prevalence of eNOS Glu298Asp polymorphism in healthy volunteers from a region of Northern India. *Community Genet* 2005;**8**:180–3.
29. Srivastava T, Seth A, Datta K, Chosdol K, Chattopadhyay P, Sinha S. Inter-*alu* PCR detects high frequency of genetic alterations in glioma cells exposed to sub-lethal cisplatin. *Int J Cancer* 2005;**117**:683–9.
30. Verma A, Shukla NK, Deo SV, Gupta SD, Ralhan R. MEMD/ALCAM: A potential marker for tumor invasion and nodal metastasis in esophageal squamous cell carcinoma. *Oncology* 2005;**68**:462–70.

Abstracts

31. Arora S, Chauhan SS. Post-transcriptional regulation of human cathepsin L expression by 5' untranslated region of its mRNA species. *Indian J Med Res* 2005; **121** (supplement):155.
32. Arora V, Dutta R, Marwah V, Kuma A, Das N. IFN-Increase leukocyte CR1 transcript in SLE: A case control study. *Tissue Antigens* 2005;**66**:352.
33. Das N, Arora V, Gandhi M, Verma J, Marwah V, Tiwari SC, *et al.* Complement receptor 1 and its genetic polymorphisms in the pathophysiology and prognosis of systemic lupus erythematosus (SLE) and glomerulonephritis (GN). *Tissue Antigens* 2005;**66**:389.
34. Sharma H, Singh N. Antisense-mediated downregulation of anti-apoptotic proteins induces apoptosis and sensitizes head and neck squamous cell carcinoma cells to chemotherapy. *Eur J Cancer* 2006;**4**:61.
35. Sharma LK, Chauhan SS. Role of AAAT repeats in human cathepsin L expression. *Indian J Med Res* 2005;**121** (Suppl):53.
36. Singh N, Sen S, Sharma H, Ateeq B, Datta P, Bal S, *et al.* Molecular profiling of human lung squamous cell carcinoma and chemoadjuvant action chemopreventive curcumin (Abst.) *J Cancer Res Ther* 2006;**2**:515.

Chapters in Books

1. Luthra K. Fat metabolism and its regulation. Srivastava L.M. (ed). *Concepts of Biochemistry*. 1st ed. New Delhi: CBS publishers; 2004:189–248.

PATIENT CARE

Marker tests for pregnancy and prostate cancer:

PSA : 400 samples

β-HCG : 350 samples

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr Subrata Sinha has been elected Fellow of the National Academy of Sciences, India; appointed Member of the following committees: Project Review Committee, for Cancer and Cell and Molecular Biology, ICMR; Special Technical Committee, ICMR; Special Committee, Centre for Molecular Medicine, JNU; Special Committee, Centre for Biotechnology, JNU; Selection Committee, Delhi University (for Biochemistry, Medical faculty); Selection Committee for senior scientific posts, ICMR; Member of the Institutional Biosafety Committee and Ethical Committee of the National Institute of Immunology (2000 till date); Institutional Ethics Committee of the Jawaharlal Nehru University (2001 till date); Project Review Committee, Biotechnology Products and Project Development, DBT; and Project review Committee, Chronic Diseases, DBT.

Dr Neeta Singh was appointed as a Member of the Research Advisory Committee and Programme Advisory Committee of the ICMR; Expert/member, Assessment Committee of ITRC, Lucknow; Member, National Advisory Committee for World Conference on ‘Expanding paradigms: Science, consciousness and spirituality’. She continued to be the Secretary of IACR (Delhi Local Chapter) and Member, National Academy of Medical Sciences, American Association for Cancer Research (AACR); Member, International Union Against Cancer (UICC); Member, Indian Society of Cell Biologists; Member, Indian Women Scientists Association; Member, Indian Society of Lung Cancer; and Member, Indian Society for Free Radicals Research in India.

Dr D.N. Rao was appointed Chairman of the Technical Advisory Committee of ICMR; Treasurer, Indian Immunology Society; and Editor-in-Chief, *Indian Journal of Clinical Biochemistry*.

Dr Nibhriti Das has been a nominated member of the International Complement Society; Member, Library Committee, NML; and Editor, *IIS Newsletter*; Reviewer of the following indexed journals: *Lupus, Nephrology, Disease Markers, Journal of Human Hypertension, BMJ Online, NMJI, IJCB, J. Biosciences (India)*; Reviewer of ICMR projects; Member, Selection Committee for ESIC (The Central Government); Member, Research Doctoral Committee, Meerut Medical College; Member, AIIMS Staff Council; Member, Phase-I Curriculum Committee; UG Teaching Incharge; and K.L. Wig CMET Adjunct Faculty.

Dr Ranju Ralhan has been a Fellow of the National Academy of Medical Sciences; Founding Fellow of the International Academy of Oral Oncologists; and Editor, newsletter of the Indian Association for Cancer Research; Member of the Scientific Advisory Group for the Preamble for Monographs on the evaluation of carcinogenic risks to humans, 2005, International Agency for Research in Cancer (IARC, WHO); Member, Project Advisory Committee, Ophthalmology, ICMR; Member, Project Advisory Committee and Expert Group of ICMR (NCD-Environment); and Joint Secretary, Indian Association for Cancer Research.

Dr S.S. Chauhan was appointed as a Member of the Institutional Human Ethics Committee of the Institute of Genomics and Integrative Biology, Mall Road, Delhi.

Dr M.R. Rajeswari was appointed as a Member of the Project Review Committee, ICMR; Member of the Review Committee for the *Indian Journal of Biochemical Biophysics*; Member of the Research Advisory Committee, NMR Research Committee, AIIMS; and invited as an External Examiner for 3 PhD and one MPhil theses.

Dr Kalpana Luthra was awarded the Shakuntala Amir Chand Prize by ICMR for the year 2003; appointed as a Member of the Project Advisory Committee of ICMR for Nephrology, 2006; and Judge of the Fine Arts event at Pulse 2005.

Dr Alpana Sharma was appointed as a Member of the Review Committee of *Clinica Chimica Acta*, and Biomedical Research Journals, 2005 and 2006.

Dr N.C. Chandra was appointed as a Member of the Review Committee of the *Journal of Neuroendocrinology*; and Organizing Secretary of the symposium on 'Molecular aspects of atherosclerosis and related metabolic disorders', conducted by the department.

Dr P.S. Murthy received the best paper award at the 30th Annual Conference of the Association of Clinical Biochemists of India, 2004. Also a recipient of CMCL-FAIMER Fellowship in January 2006.

9.4 Biomedical Engineering

Professor and Head

Harpal Singh

Professors

Dinesh Mohan

Sneh Anand

A.R. Ray

Associate Professor

Veena Koul

Principal Scientific Officer-I

Nivedita K. Gohil

Senior Design Engineer

S.M.K. Rahman

Scientist

J.C. Bharadwaj

EDUCATION

The department participates in the PhD programme

Continuing Medical Education

Conferences

1. Two-day National Seminar organized by the Centre for Biomedical Engineering, IIT Delhi and AIIMS on 'Scientific validation and technical evaluation of ancient medical systems', IIT Delhi; 10–11 February 2006.
2. SBAOI Conference on 'Biomaterials, tissue engineering and medical diagnostics', IIT Delhi; 24–26 February 2006.

Lectures delivered

Professor Harpal Singh

- 'Polymeric biomaterials—recent advances', Delhi College of Engineering, Delhi; March 2005.
- 'Development of oral insulin delivery system', INMAS; November 2005.
- 'Polymers and healthcare', Punjab University, Chandigarh; February 2006.
- 'Polymers for biomedical applications—recent trends', Sena Bhawan, New Delhi; May 2006.

National and International Conferences

Dr Veena Koul

- Invited talk on 'Biodegradable hydrogels', International Conference on 'Polymer blends, composites and gels macro to nano scale', Kottayam, Kerala; 2005.

Dr Alok R. Ray

- ‘New and emerging opportunities in the medical devices and biomaterials sector in India’, DBT workshop on ‘Tissue engineering’, Trivandrum; May 2005.
- ‘Three-dimensional chitosan scaffold-based MCF-7 cell culture for the evaluation of the cytotoxicity of drugs’, DBT workshop on ‘Tissue engineering’, Trivandrum; May 2005.
- ‘New and emerging opportunities in biomedical polymers sector in India’, National Seminar on ‘Recent development in biomedical polymers and their applications’, Bangalore; May 2005.
- ‘Emerging opportunities in the medical devices and biomaterials sector in India’, DBT workshop on ‘Biomaterials and devices’, IIT Bombay; 2005.
- ‘Biomedical wastes disposal managements’, Expert Group Meeting on ‘Technology initiative for waste recycling and management with specific focus on hazardous waste, plastic waste, electronic waste and biomedical waste’, Nagpur; April 2005.
- ‘Role of polymeric biomaterials in pharmaceuticals’, Conference on ‘Bioprocessing and biotechnology—Trends and opportunities’, Mesra, Ranchi; March 2005.
- ‘Medical device industries development in Orissa’, National Workshop on ‘Biotechnology potentials for development in Orissa’, Bhubaneswar; February 2005.
- ‘Current status of bioengineering research and teaching in India’, Seminar on ‘Future directions of bioengineering education and research’, Jaipur, Rajasthan; February 2005.
- ‘New opportunities in the medical devices and biomaterials sector in India’, Biotech India, New Delhi; February 2005.

RESEARCH

Funded Project

1. Development of biocompatible adhesive (RPO1734). Alok Ranjan Ray. Funded by DST up to 3 May 2007. Funds: Rs 18,82,500.
2. Development of blood compatible polymeric biomaterials for medical devices (RPO1621). Alok Ranjan Ray. Funded by the Ministry of Human Resource Development up to 31 August 2007. Funds: Rs 12 lakh.
3. Development of artificial bone material (RPO1721). Alok Ranjan Ray. Funded by ICMR up to 29 February 2008. Funds: Rs 8,74,314.
4. Sustainable urban transport in less motorized countries: Research and training (RPO1507). Dinesh Mohan. Funded by The Volvo Research Foundations up to 28 February 2008. Funds: Rs 6,40,56,509.
5. Iodine release from polymeric carriers for disinfection of drinking water (RPO1610). Harpal Singh. Funded by DST up to 03 February 2006. Funds: Rs 4,98,000.
6. Development of polymer matrices from renewable resources for enzyme-linked immunosorbent assay (RPO1653). Harpal Singh. Funded by DST up to 30 March 2007. Funds: Rs 26 lakh.

7. Failed implant testing and research engineering laboratory (FITREL) (RPO1653). Prashant Mishra. Funded by WHO up to 30 June 2006. Funds: 11,34,000.
8. Analysis and optimization of physiotherapeutic regimen employed in the management of osteoarthritis (RPO1546). Prashant Mishra. Ministry of Human Resource Development up to 29 September 2006. Funds: Rs 10 lakh.
9. Development of adaptive neuro-fuzzy controller for anaesthesia (RPO1449). Sneh Anand. Funded by DST up to 30 September 2005. Funds: Rs 16,15,006.
10. Pathophysiological biomechanical and metallurgical study of orthopaedic implants (RPO1604). Sneh Anand. Funded by ICMR up to 31 December 2006. Funds: Rs 13,65,345.
11. Smart macromolecular therapeutics: Design synthesis and evaluation of tailor-made anti-cancer drug conjugates and local hyperthermia for selective lysis of cancer cell (RPO1713). Veena Koul. Funded by Life Science Research Board, GoI, DRDO, up to 08 December 2007. Funds: Rs 17,62,200.

Departmental Projects

1. Studies on haeme protein mimetic materials
2. Synergistic approach to deliver drugs using a combination of chemical and electrical parameters
3. Non-invasive diagnosis of knee osteoarthritis
4. Bio-electro magnetics and its biological correlates
5. Synthesis of bone substituted materials
6. Synthesis and characterization of pH-sensitive polymer for biomedical applications
7. Polymeric hydrogel-based insulin delivery system
8. Effect of cyclic mechanical stresses on morphological and biochemical properties of knee joint articular cartilage chondrocytes in alginate culture
9. Sol-gel based sensor
10. Development of biodegradable polymer matrices from renewable polymer matrices for ELISA
11. Development and pharmaceutical evaluation of polymer-based transdermal preparation for local vasodilator action
12. Studies on three-dimensional animal cell culture on polymeric scaffolds
13. Development of synthetic extracellular matrices for tissue engineering
14. Intranasal vaccine delivery
15. Development of iodine-containing antimicrobial polymers for water disinfection and biomedical applications
16. Integrated complimentary medicine system using bioelectric parameters
17. Synthesis and development of biodegradable polymers for biomedical applications
18. Development of biomaterials for biomedical application
19. Iron profiles in haematological disorders
20. Electrical and chemical enhancement for transdermal permeation of bioactive agents
21. Development of an immunoassay for the simultaneous detection of thyroid hormones
22. Development of immunoassay for the simultaneous detection of insulin and 17 α -OH progesterone
23. Development of nucleic acid biosensors based on conducting polymers
24. Development of polymers for biomedical application
25. Biomedical instrumentation
26. Biomedical monitoring
27. Bio-receptive materials for tissue engineering

Collaborative Projects

1. Polymeric hydrogel-based insulin drug delivery system (with INMASS)
2. Iron profile in haematological disorders (with AIIMS)
3. Development of RNA and DNA biosensor (with NPL)
4. Development of simultaneous immunoassay for thyroid hormones (with NIHFWS)
5. Estimation of acetylcholine esterase inhibition by development of testing systems (with NIHFWS)

PUBLICATIONS

Journals

1. Changez M, Koul V, Dinda AK. Efficacy of antibiotics-loaded interpenetrating network (IPNs) hydrogels based on poly(acrylic acid) and gelatin for the treatment of experimental osteomyelitis. *In vivo* study. *Biomaterials* 2005;**26**:2095–104.
2. Dey RK, Ray AR. Synthesis, characterization and blood compatibility of copolymers derived from polyamidoamines and vinyl acetate. *J Macromolecular Sci Part-A* 2005;**42**:351–64.
3. Dhiman HK, Ray AR, Panda AK. Three-dimensional chitosan scaffold-based MCF-7 cell culture for the determination of the cytotoxicity of tamoxifen. *Biomaterials* 2005;**26**:979–86.
4. Kumar A, Lahiri SS, Singh H. Development of poly (PEGDMA-MAA) microparticles for oral insulin delivery. *Int J Pharmaceutics* 2006;**323**:117–24.
5. Prasad R, Koul V, Anand S, Khar RK. Transdermal iontophoretic delivery of methotrexate: Physicochemical considerations. *Trends Biomater Artif Organs* 2005;**18**:187–90.
6. Punyani S, Narayana P, Singh H, Vasudevan P. Iodine-based water disinfection: A review. *J Scientific Industrial Res* 2006;**65**:116–20.

AWARD AND HONOURS

Professor A.R. Ray was a Member of the Editorial Board of Biomedical Materials, Applied Bionics and Biomechanics; Trends in Biomaterials and Artificial Organs; International Journal of Teaching and Research in Chemistry; and Environment and Quality; also a Member of MHRD's Grants-in-aid Committee for Education in Human Values; DST's PAC on Biomedical Engineering; ICMR's PAC on Non-communicable Diseases; TIFAC's Review Committee on Home-grown Technology; Board of Research Studies, Faculty of Sciences, Jamia Hamdard; Council of Academic Affairs Sciences (Life Sciences), M.D. University; and Research Advisory Committee of Shriram Institute for Industrial Research.

Professor Harpal Singh was a Member of Surgical Dressings, Bureau of Indian Standards, New Delhi and Standing Committee to Review the Life-saving Drugs.

Professor Dinesh Mohan was a Member of the Consultative Group on urban infrastructure; Committee of Academics to review the implications of the Private Universities Bill, 1995; Levy of Goods Tax-Constitution Committee; Programme Advisory Committee for Research and Development in Automotive Sector; Joint Programme Advisory Committee for Doordarshan Kendra; Research Council of National Environmental Engineering Research Institute; Traffic Engineering (H2) Committee of the Indian Road

Congress; Working Group for formulating Action Plan for Capacity Building in Operationalization of Clean Development Mechanism in India; and National Rural Road Development Agency, Ministry of Rural Development, Government of India.

VISITING SCIENTISTS

1. Professor Jons Hilborn, Univeristy of Uppsala, Sweden, delivered a lecture on ‘Biomaterials, tissue engineering and medical diagnostics’; 23 February 2006.
2. Professor Kenneth Calman, Vice Chancellor, Durham University, UK, delivered a lecture on ‘Tribology of modern artificial joints’; 17 February 2006.
3. Dr Amit Asthana, Rai Foundation College, Faridabad, delivered a lecture on ‘Microfabrication and testing of microfluidic devices’; 28 February 2006.

9.5 Biophysics

Professor and Head

Tej P. Singh

Emeritus Professor

R.K. Mishra

Professor

Gita Subba Rao

Associate Professors

Krishna Dalal

A. Srinivasan

Punit Kaur

Assistant Professors

Savita Yadav

Sujata Sharma

Scientists

Sharmistha Dey

S. Bhaskar Singh

Asha Bhushan

EDUCATION

The faculty of the department participated in and delivered 33 lectures in continuing medical education programmes, symposia, and national and international conferences during the year.

RESEARCH

Funded Projects

Completed

1. Structural and protein engineering studies on lactoferrins from different species. T.P. Singh. Funded by DBT for 3 years (2002–2005). Funds: Rs 34 lakh.
2. Structural studies of signalling proteins expressed during involution/breast cancer and ligand design. T.P. Singh. Funded by DBT for 3 years (2002–2005). Funds: Rs 43 lakh.
3. Domain swapping in human endothelin receptors A and B and its pharmacological implications. A. Srinivasan. Funded by AIIMS for 1 year (2004–2005). Funds: Rs 25,000.
4. Isolation and purification of a metalloproteinase from venom of Indian cobra, its crystallization and three-dimensional structure determination. S. Sharma. Funded by DST for 2 years (2004–2006). Funds: Rs 10 lakh.
5. Randomised clinical trial on reflexology therapy and usual drug treatment in the management of mastalgia and nodularity of the female breast. Charulata Jindal. Funded by ICMR for 2 years (2003–2005). Funds: Rs 2.6 lakh.

Ongoing

1. Protein structure determination and structure-based new drug discovery. T.P. Singh. Funded by DST–FIST programme for 5 years (2002–2007). Funds: Rs 135 lakh.
2. Structure-based rational drug design: Structure determination of signalling proteins involved in the progression of breast cancer and design of specific inhibitors. T.P. Singh. Funded by DST for 3 years (2005–2008). Funds: Rs 38.5 lakh.
3. AIIMS infrastructure support on clinical proteomics. T.P. Singh. Funded by DBT for 5 years (2004–2009). Funds: Rs 450 lakh.
4. Proteomics of human body fluids—structural characterization of proteins and target identification for diagnosis and drug discovery. A. Srinivasan, S. Dey. Funded by DBT for 3 years (2005–2008). Funds: Rs 31 lakh.
5. Three-dimensional structure determination of disintegrin from venom of Indian saw scale by X-ray diffraction method and structure and function relationship with its complex with integrin. P. Kaur. Funded by CSIR for 3 years (2005–2008). Funds: Rs 4.5 lakh.
6. Search of a magic drug: Isolation, purification, crystallization and three-dimensional structure determination of the functional C-lobe and antimicrobial peptides of lactoferrin and their applications in antimicrobial drug discovery. S. Sharma. Funded by DST for 3 years (2003–2006). Funds: Rs 8.5 lakh.
7. Structural studies on disintegrin from snake venom and its complexes with integrins. S. Yadav. Funded by DST for 3 years (2004–2007). Funds: Rs 8 lakh.
8. Structure-based rational drug design: Development of specific anti-inflammatory agents using phospholipase A₂ and cyclooxygenase-2 as target enzyme. Sharmistha Dey. Funded by CSIR for 3 years (2005–2008). Funds: Rs 8.7 lakh.
9. Design, synthesis and evaluation of inhibitors of lipooxygenase as anti-inflammatory agents. Sharmistha Dey. Funded by DST for 3 years (2005–2008). Funds: Rs 20 lakh.
10. Structure-based rational drug design against inflammation, arthritis and rheumatism using phospholipase A₂, cyclooxygenase-2 and lipoxygenase as target molecules. N. Singh. Funded by DST for 3 years (2005–2008). Funds: Rs 12 lakh.
11. Cloning, expression and structural investigations on human endothelin receptors A and B. J. Nautiyal. Funded by DST for 3 years (2005–2008). Funds: Rs 10.5 lakh.
12. Isolation, purification, crystallization and three-dimensional structure determination of the novel signalling protein SPX-40 from mammary gland secretion during involution. M. Sinha funded by DST for 3 years (2006–2009). Funds: Rs 16 lakh.
13. Amino acid sequence and three-dimensional structure of scorpion phospholipase A₂. Hari Prasad. Funded by DST for 2 years (2006–2008). Funds: Rs 7.7 lakh.
14. Randomised clinical trial on reflexology therapy and usual drug treatment in the management of intractable epilepsy. Krishna Dalal. Funded by CCRYN, Ministry of Health and Family Welfare for 3 years (2005–2008). Funds: Rs 31.04 lakh.

Departmental Projects

1. Structural and stability studies on antimicrobial lactoperoxidase
2. Purification, crystallization and structure determination of prostate-specific antigen from human seminal plasma
3. Structure-based design of inhibitors of protein tyrosine phosphatase 1B, a new target for obesity and type 2 diabetes
4. Three-dimensional structure determination of cobra venom factor and its three independent subunits from the venom of Indian cobra by X-ray diffraction method and its structural and functional relationship with complement protein C3
5. Structure–function relationship of Alzheimer-related proteins

Collaborative Projects

1. Functional analysis and clinical significance of novel molecular targets in cytoskeleton reorganization and locoregional spread of oral cancer using proteomics (with Biochemistry).
2. Identifying proteomic mass fingerprints predictive of disease flares in systemic lupus erythematosus (with Medicine).
3. Proteomics of hepatitis virus infections (with Gastroenterology and Pathology).
4. Proteomics of human body fluids and tissues: Structural characterization of proteins and target identification for new drug discovery (with Neurology, Medicine, Orthopaedics and Laboratory Medicine).
5. Proteomic mass fingerprinting of patients with gallstone disease and gallbladder cancer: Putative pathogenic links (with Gastroenterology).
6. Proteomics in muscular dystrophies (with Neurology).
7. Role of reflexology in the management of patients suffering from diabetic neuropathy (with Medicine, Neurology, Clinical Psychology and Neurobiochemistry).

PUBLICATIONS

Journals

1. Balasubramanya R, Chandra V, Kaur P, Singh TP. Crystal structure of the complex of the secretory phospholipase A₂ from *Daboia russelli pulchella* with an endogenic indole derivative, 2-carbamoylmethyl-5-propyl-octahydro-indol-7-yl-acetic acid at 1.8 Å resolution. *Biochim Biophys Acta: Proteins and Proteomics* 2005;**1752**:177–85.
2. Bilgrami S, Yadav S, Kaur P, Sharma S, Perbandt M, Betzel C, *et al.* Crystal structure of the disintegrin heterodimer from saw-scaled viper (*Echis carinatus*) at 1.9 Å resolution. *Biochemistry* 2005;**44**:11058–66.
3. Goel VK, Somvanshi RK, Dey S, Singh TP. Effects of branched beta-carbon dehydro-residues on peptide conformations: Syntheses, crystal structures and molecular conformations of two

tetrapeptides: (a) N-(benzyloxycarbonyl)- Δ Val-Leu- Δ Phe-Leu-OCH₃ and (b) N-(benzyloxycarbonyl)- Δ Ile-Ala- Δ Phe-Ala-OCH₃. *J Pept Res* 2005;**66**:68–74.

4. Goel VK, Somvanshi RK, Dey S, Singh TP. Design of peptides with α , β -dehydro-residues: Synthesis and crystal structures of (i) N-tertiarybutyloxycarbonyl- L-Ala-DPhe-L-Ala-OCH₃ and (ii) N-tertiarybutyloxycarbonyl-L-Leu-DPhe-L-Leu-OCH₃. *Struc Chem* 2005;**16**:385–9.
5. Goel VK, Somvanshi RK, Dey S, Singh TP. Design of the 3_{10} -dehydro-helical conformation in peptides with residue: Synthesis, crystal structures and molecular conformation of two tetra peptides (a) Cbz- Δ Ile-L-Leu- Δ Phe-L-Leu-OCH₃ and (b) Cbz- Δ Val-L-Leu- Δ Phe-L-Leu-OCH₃. *J Peptide Research* 2005;**66**:68–74.
6. Goel VK, Somvanshi RK, Sheikh AI, Saxena M, Dey S, Singh TP. Effects of branched beta-carbon dehydro residues on peptide conformation. *Eur Biophys J* 2005;**34**:787.
7. Jabeen T, Singh N, Singh RK, Jasti J, Sharma S, Kaur P, *et al.* Crystal structure of a heterodimer of phospholipase A2 from *Naja naja sagittifera* at 2.3 Å resolution reveals the presence of a new PLA₂-like protein with a novel cys 32-cys 49 disulphide bridge with a bound sugar at the substrate-binding site. *Proteins: Struc Funct Bioinformatics* 2006;**62**:329–37.
8. Jabeen T, Sharma S, Singh N, Bhushan A, Singh TP. Structure of the zinc-saturated C-terminal lobe of bovine lactoferrin at 2.0 Å resolution. *Acta Crystallogr* 2005;**D61**:1107–15.
9. Jabeen T, Singh N, Singh RK, Sharma S, Somvanshi RK, Dey S, *et al.* Non-steroidal anti-inflammatory drugs as potent inhibitors of phospholipase A₂: Structure of the complex of phospholipase A₂ with niflumic acid at 2.5 Å resolution. *Acta Crystallogr* 2005;**D61**:1579–86.
10. Jabeen T, Singh RK, Sharma S, Singh TP. Structural studies of cobra venom factor (CVF), a complement activating protein: A new protocol for purification and crystallization of CVF. *Indian J Phys* 2005;**6**:67–76.
11. Jabeen T, Singh N, Singh RK, Ethayathullah AS, Sharma S, Srinivasan A, *et al.* Crystal structure of a novel phospholipase A2 from *Naja naja sagittifera* with a strong anticoagulant activity. *Toxicon* 2005;**46**:865–75.
12. Jain R, Kumar S, Singh N, Sharma S, Singh TP. Characterization of proteins from human pleural fluid. *Eur Biophys J* 2005;**34**:825.
13. Rajnikant, Dinesh, Shawl AS, Singh TP, Goel V, Sharma B. Crystallographic analysis of 9-(3-methylbutyl-2-eyloxyfurano) [3, 2-g] benzopyran-2-one. *J Chem Crystallogr* 2005;**35**:913–16.
14. Sharma M, Kumar S, Karthikeyan S, Paramsivam M, Sharma S, Yadav S, *et al.* Crystal structure of an acidic and highly potent neurotoxin from red scorpion (*Buthus tamulus*) at 2.2 Å resolution. *J Struct Biol* 2006;**153**:246–57.
15. Singh G, Gourinath S, Sarvanan K, Sharma S, Bhanumathi S, Betzel Ch, *et al.* Crystal structure of a carbohydrate induced homodimer of phospholipase A₂ from *Bungarus caeruleus* at 2.1 Å resolution. *J Struct Biol* 2005;**149**:264–72.
16. Singh G, Jasti J, Saravanan K, Sharma S, Kaur P, Srinivasan A, *et al.* Crystal structure of the complex formed between a group I phospholipase A₂ and a naturally occurring fatty acid at 2.7 Å resolution. *Protein Sci* 2005;**14**:395–400.

17. Singh N, Jabeen T, Sharma S, Roy I, Gupta MN, Bilgrami S, *et al.* Detection of native peptides as potent inhibitors of enzymes. Crystal structure of the complex formed between treated bovine alpha-chymotrypsin and an autocatalytically produced fragment, Ile-Val-Asn-Gly-Glu-Glu-Ala-Val-Pro-Gly-Ser-Trp-Pro-Trp, at 2.2 Å resolution. *FEBS J* 2005;**272**:562–72.
18. Singh N, Jabeen T, Pal A, Sharma S, Perbandt M, Betzel C, *et al.* Crystal structures of the complexes of a group IIA phospholipase A2 with two natural anti-inflammatory agents, anisic acid, and atropine reveal a similar mode of binding. *Proteins: Struct Funct Bioinformatics* 2006;**64**:89–100.
19. Singh N, Jabeen T, Sharma S, Somvanshi RK, Dey S, Srinivasan A, *et al.* Specific binding of non-steroidal anti-inflammatory drugs (NSAIDs) to phospholipase A₂: Structure of the complex formed between phospholipase A₂ and diclofenac at 2.7 Å resolution. *Acta Crystallogr D Biol Crystallogr* 2006;**D62**:410–16.
20. Singh N, Sarvanan K, Paramsivam M, Sharma S, Singh TP, Srinivasan A. Purification and partial characterization of neurotoxins from red scorpion venom and cloning of toxin cDNAs. *Indian J Phys* 2005;**6**:77–86.
21. Singh RK, Ethayatullah AS, Jabeen T, Sharma S, Dey S, Kaur P, *et al.* Aspirin induces its anti-inflammatory effects through its specific binding to phospholipase A₂: Crystal structure of the complex formed between phospholipase A₂ and aspirin at 1.9 Å resolution. *J Drug Target* 2005;**13**:113–19.
22. Singh RK, Singh N, Jabeen T, Sharma S, Dey S, Singh TP. Crystal structure of the complex of group I PLA₂ with a group II-specific peptide Leu-Ala-Ile-Tyr-Ser (LAIYS) at 2.6 Å resolution. *J Drug Target* 2005;**13**:367–74.
23. Somvanshi RK, Goel VK, Saxena M, Dey S, Singh TP. Design of peptides with consecutive dehydro phenylalanine residues. *Eur Biophys J* 2005;**34**:829.
24. Somvanshi RK, Goel VK, Dey S, Singh TP. Design of peptides with α, β-dehydro-residues: Synthesis, crystal structure and molecular conformation of a peptide N-Boc-Phe-ΔPhe-Ile-OCH₃. *Struc Chem* 2005;**16**:445–52.
25. Somvanshi RK, Goel VK, Dey S, Singh TP. Design of peptides with α, β-dehydro residue: Crystal structure and molecular conformation of Boc-L-Ala-ΔPhe-ΔPhe-L-Phe-OCH₃. *J Chem Crystallography* 2005;**35**:761–8.
26. Srivastava DB, Kumar J, Srivastava P, Mandal A, Jain R, Jabeen T, *et al.* Clinical proteomics: Characterization and structural studies of new proteins from human body fluids and tissues. *Eur Biophys J* 2005;**34**:773.
27. Subba Rao G, Ramachandran MV, Bajaj JS. In silico structure-based design of a potent and selective small peptide inhibitor of protein tyrosine phosphatase 1B, a novel therapeutic target for obesity and type 2 diabetes mellitus: A computer modelling approach. *J Biomol Struct Dyn* 2006;**23**:377–84.
28. Sundara BN, Acharya KR, Singh TP, Krishnaswamy S. High-resolution diffraction from crystals of a membrane-protein complex: Bacterial outer membrane protein OmpC complexed with the antibacterial eukaryotic protein lactoferrin. *Acta Crystallogr* 2005;**F61**:773–5.

29. Vijayaraghavan R, Goel VK, Dey S, Singh TP. Design of peptides with α , β -dehydro-residues: Syntheses and crystal structures and molecular conformation of a peptide N-Boc-Phe- Δ Phe-Ile-OCH₃. *Struct Chem* 2005;**16**:264–73.

PATIENT CARE

The following services are provided by the department for patient care:

1. Characterization and analysis of kidney gallstones using X-ray diffraction techniques. More than 61 stones have been analysed by this technique in the current year
2. Protein N-terminal sequencing
3. Characterization of biomolecules using MALDI-TOF
4. Receptor–ligand binding studies—Biocore
5. Peptide synthesis
6. X-ray intensity data collection for small molecules
7. X-ray intensity data collection for macromolecules
8. Diagnosis of functional status of the organs and treatment of epilepsy; neuropathy with or without diabetes; migraine; postoperative nausea and vomiting; and pain and mastalgia.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr T.P. Singh has been awarded the J.C. Bose Memorial Award of the Indian Science Congress 2006 and Professor G.N. Ramachandran's 60th Birthday Commemoration INSA Medal 2006; delivered a Plenary talk at the 93rd Indian Science Congress 2006 and Dr C.M. Singh Memorial Lecture of the Indian Veterinary Society 2006; nominated Member, Governing Body, National Centre for Plant Genome Research, New Delhi and Bose Institute, Kolkata.

Dr G. Subba Rao has been awarded the Achanta Lakshmipathi Oration of the National Academy of Medical Sciences (India).

Dr Krishna Dalal has been awarded membership of the American Epilepsy Society.

The department is involved in the Clinical Proteomics Programme supported by DBT under its FIST programme. The department contributed the largest number of protein structure coordinate sets to the protein data bank (PDB) from Asia–Australia region.

VISITING SCIENTISTS

Dr S. Bhanumathi, USA; Dr D. Velmurugan, Chennai; Dr K.L. Khanduja, Chandigarh; Dr M. Vijayan, Bangalore; Dr J.K. Dattagupta, Kolkata; Dr S. Krishnawamy, Madurai; Dr R. Barthwal, Roorkee; Dr Anil Kumar, Bangalore; Dr C.M. Gupta, Lucknow; Dr H.S. Savitri, Bangalore; Dr P.R. Narayanan, Chennai; Dr K. Lal, New Delhi; Dr M.P. Yadav, Izatnagar; Dr S.E. Hasnain, Hyderabad; Dr Andrew Pilant, USA.

9.6 Biostatistics

Professor and Head

K.R. Sundaram
(superannuated on 31.10.2005)

R.M. Pandey*
(from 10.11.2005)
*Professor from 5.11.2005

Additional Professors

S.N. Dwivedi

R.M. Pandey
(up to 4.11.2005)

Assistant Professor

V. Sreenivas

Scientists

R.K. Ahuja
Guresh Kumar

Rajvir Singh
M. Kalaivani

Junior Statisticians

Ombir Singh

K.S. Kapoor

EDUCATION

The department was actively involved in teaching Biostatistics and essentials of Research Methods in the undergraduate, paramedical and postgraduate courses, viz. MB,BS, BSc (Hons) in Medical Technology in Radiology, Post-certificate course in Nursing, postgraduate students of Nursing, Biotechnology and Community Medicine.

Continuing Medical Education

The department organized a series of 16 evening lectures on 'Biostatistics and essentials of research methodology' for the Residents and Research Scholars during February–March 2006. Scientific and journal club presentations were held regularly throughout the year.

Dr R.M. Pandey was the Organizing Secretary of the Annual Conference of the Indian Clinical Epidemiology Network, Mumbai, September 2005; organized a satellite meeting of the 9th Global Forum Meeting at Mumbai; Organizing Secretary for the Workshop on 'Essentials of research methods and clinical epidemiology', AIIMS.

Lectures delivered

Professor R.M. Pandey

- Two lectures during the workshop on 'Advanced biostatistics', KGMC, Lucknow; 22–23 April 2005.
- 'Research methodology' during the workshop at NEIGHRIMS, Shillong, Meghalaya; 11–12 June 2005.
- 'Research methodology' during the workshop at Assam Medical College, Dibrugarh; 13 June 2005.
- A series of lectures during the workshop on 'Essentials of research methodology and biostatistics', BPKIHS, Dharan, Nepal; 22 January–4 February 2006.

Dr S.N. Dwivedi

- More than 25 lectures in workshops/symposia/training programmes.
- Three lectures in national and international conferences.

Dr V. Sreenivas

- Participated as a faculty in the NNF–ICMR Workshop on ‘Research methodology’, AIIMS; 6–8 May 2005.
- ‘Biostatistics’ in the workshop on ‘Research methodology’, Central Council for Research in Unani Medicine (CCRUM), Department of AYUSH, Ministry of Health and Family Welfare; 21–22 December 2005, New Delhi.

Dr Rajvir Singh

- ‘Introduction to statistical packages describing their salient features’, National Institute of Health and Family Welfare, Mehrauli, New Delhi.
- ‘Data management and statistical techniques using Epi-info 2002’, Workshop on ‘Essentials of research methodology and biostatistics’, CEU, AIIMS.
- ‘Epi-info statistical package for various statistical techniques and data management’, NNF–ICMR Workshop on ‘Research methodology’, National Neonatology Forum, CMET, AIIMS; 6–8 May 2005.

Ms M. Kalaivani

- Two lectures on ‘Epidemiology and measures of disease burden’ and ‘Sample size calculation’, Workshop on ‘Biomedical statistics’, Clinical Epidemiological Unit, MAMC, New Delhi; 22–24 February 2006.
- ‘Clinical trials design, conduct and analysis’, National Seminar on ‘Current trends and future perspective in drug discovery and development research’, IHC, New Delhi; 10 March 2006.

RESEARCH**Funded Projects*****Ongoing***

1. Development of appropriate prevention and intervention strategies for non-communicable nutritional-related health disorders. R.M. Pandey. Funded by DST for 2 years (2005–2007). Funds: Rs 19,39,520.
2. Task force project on ‘Multilevel epidemiological analysis to assess the role of community level effects on public health/family welfare’. S.N. Dwivedi. Funded by ICMR for one year and four months (2005–2006 and 2006–2007). Funds: SRF.
3. An analytical perspective of missing data analysis in clinical trial of thyroid cancer. S.N. Dwivedi. Funded by ICMR for 2 years (2004–2006). Funds: SRF.
4. Some epidemiological studies on unwanted pregnancy. S.N. Dwivedi. Funded by ICMR. Funds: SRF.

Departmental Projects***Ongoing***

1. Biostatistical aspects of randomized controlled clinical trial on remnant ablation in differentiated thyroid cancer (with Nuclear Medicine)

2. Biostatistical aspects in case control studies on unintended pregnancies (with Obstetrics and Gynaecology)
3. A biostatistical study on pattern of referral and timing of treatment of cancer patients with special reference to breast cancer (with IRCH)

Collaborative Projects

Faculty members and the scientists are involved in large numbers of ongoing projects in almost all the departments of the Institute.

PUBLICATIONS

Journals

1. Agarwal G, Kapil A, Kabra SK, Das BK, Dwivedi SN. Characterization of *Pseudomonas aeruginosa* isolated from chronically infected children with cystic fibrosis in India. *BMC Microbiol* 2005;**5**:43.
2. Agarwal G, Kapil A, Kabra SK, Das BK, Dwivedi SN. *In vitro* efficacy of ciprofloxacin and gentamicin against a biofilm of *Pseudomonas aeruginosa* and its free-living forms. *Natl Med J India* 2005;**18**:184–6.
3. Agarwal S, Ramam M, Sharma VK, Khandpur S, Pal H, Pandey RM. A randomized placebo-controlled double-blind study of levamisole in the treatment of limited and slowly spreading vitiligo. *Br J Dermatol* 2005;**153**:163–6.
4. Agarwal SK, Dash SC, Irshad M, Raju S, Singh R, Pandey RM. Prevalence of chronic renal failure in adults in Delhi, India. *Nephrol Dial Transplant* 2005;**20**:1638–42.
5. Bedi GS, Gupta N, Handa R, Pal H, Pandey RM. Quality of life in Indian patients with rheumatoid arthritis. *Qual Life Res* 2005;**14**:1953–8.
6. Chowdhury UK, Airan B, Kothari SS, Talwar S, Saxena A, Singh R, *et al.* Specific issues after extracardiac fontan operation: Ventricular function, growth potential, arrhythmia and thromboembolism. *Ann Thorac Surg* 2005;**80**:665–72.
7. Chowdhury UK, Kumar AS, Airan B, Mittal D, Subramaniam KG, Prakash R, *et al.* Mitral valve replacement with and without chordal preservation in a rheumatic population: Serial echocardiographic assessment of left ventricular size and function. *Ann Thorac Surg* 2005;**79**:1926–33.
8. Chowdhury UK, Pradeep KK, Patel CD, Singh R, Kumar AS, Airan B, *et al.* Noninvasive assessment of repaired tetralogy of Fallot by magnetic resonance imaging and dynamic radionuclide studies. *Ann Thorac Surg* 2006;**81**:1436–42.
9. Dada T, Gupta V, Deepak KK, Pandey RM. Narrowing of the anterior chamber angle during Valsalva maneuver: A possible mechanism for angle closure. *Eur J Ophthalmol* 2006;**16**:81–91.
10. Das SN, Khare P, Patil A, Pandey RM, Singh MK, Shukla NK. Association of DNA pattern of metastatic lymph node with disease free survival in patients with intraoral squamous cell carcinoma. *Indian J Med Res* 2005;**122**:216–23.
11. Dhar P, Jaitley M, Kalaivani M, Mehra RD. Preliminary morphological and histochemical changes in rat spinal cord neurons following arsenic ingestion. *Neurotoxicology* 2005;**26**:309–20.
12. Dubey K, Balani DK, Tripathi CB, Singh R, Bajaj R, Pillai KK. Adverse interactions of rofecoxib with lisinopril in spontaneously hypertensive rats. *Clin Toxicol (Phila)* 2005;**43**:361–73.
13. Dwivedi SN, Saxena NC, Singh KK, Pandey A. A stochastic model for the study of interior closed birth interval and its application. *Prog Maths* 2005;**36**:199–208.
14. Dwivedi SN. Data analysis tools for DNA microarrays [Book Review]. *ISCB Bulletin* 2005;**39**:6–7.

15. Goswami A, Reddaiah VP, Kapoor SK, Singh B, Dey AB, Dwivedi SN, *et al.* Health problems and health seeking behavior of rural aged. *Indian J Gerontol* 2005;**19**:163–80.
16. Goswami A, Reddaiah VP, Kapoor SK, Singh B, Dwivedi SN, Kumar G. Tobacco and alcohol use in rural elderly Indian population. *Indian J Psychiatry* 2005;**47**:192–7.
17. Goswami A, Reddaiah VP, Kapoor SK, Singh B, Singh U, Dey AB, *et al.* Prevalence and determinants of disability in rural elderly population in northern India. *IJPMR* 2005;**16**:39–44.
18. Gupta V, Srinivasan G, Mei SS, Gazzard G, Sihota R, Kapoor KS. Utility value among glaucoma patients: An impact on the quality of life. *Br J Ophthalmol* 2005;**89**:1233.
19. Jha A, Sharma SK, Tandon N, Lakshmy R, Kadiravan T, Handa KK, *et al.* Thyroxine replacement therapy reverses sleep-disordered breathing in patients with primary hypothyroidism. *Sleep Med* 2006;**7**:55–61.
20. Kapil U, Sharma TD, Singh P, Dwivedi SN, Kaur S. Thirty years of a ban on the sale of noniodized salt: Impact on iodine nutrition in children in Himachal Pradesh, India. *Food Nutr Bull* 2005;**26**:255–8.
21. Kapil U, Singh P, Bahadur S, Dwivedi SN, Singh R, Shukla N. Assessment of risk factors in laryngeal cancer in India: A case–control study. *Asian Pac J Cancer Prev* 2005;**6**:202–7.
22. Kapil U, Singh P, Bahadur S, Dwivedi SN, Singh R, Shukla N. Assessment of risk factors in laryngeal cancer in India: A case-control study. *Asian Pac J Cancer Prev* 2005;**6**:202–7.
23. Kapil U, Singh P, Dwivedi SN. Status of iodine deficiency amongst school children in twenty-four districts in southern India. *Indian J Physiol Pharmacol* 2005;**49**:369–72.
24. Kaushal M, Agarwal R, Aggarwal R, Singal A, Upadhyay M, Srinivas V, *et al.* Cling wrap, an innovative intervention for temperature maintenance and reduction of insensible water loss in very low-birthweight babies nursed under radiant warmers: A randomized, controlled trial. *Ann Trop Paediatr* 2005;**25**:111–18.
25. Kulshreshtha B, Khadgawat R, Kumar G, Amini AC. Profile of Graves’ disease in a tertiary hospital in northern India and treatment with medical therapy. *Thyroid Res Pract* 2006;**2**:6–13.
26. Kumar AS, Talwar S, Mohapatra R, Saxena A, Singh R. Aortic valve replacement with the pulmonary autograft: Mid-term results. *Ann Thorac Surg* 2005;**80**:494.
27. Kumar S, Aggarwal P, Vajpayee M, Pandey RM, Seth P. Development of a candidate DNA/MVA HIV-1 subtype C vaccine for India. *Vaccine* 2006;**24**:2585–93.
28. Madhavan M, Pandey RM, Misra A, Vikram NK, Dhingra V, Luthra K, *et al.* Centile values for serum lipids and blood pressure for Asian Indian adolescents. *Lipids Health Dis* 2005;**4**:20.
29. Mahajan S, Mukhiya GK, Singh R, Tiwari SC, Kalra V, Bhowmik DM, *et al.* Assessing glomerular filtration rate in healthy Indian adults: A comparison of various prediction equations. *J Nephrol* 2005;**18**:257–61.
30. Mahajan S, Mukhiya GK, Singh R, Tiwari SC, Kalra V, Guleria S, *et al.* Assessing suitability for renal donation: Can equations predicting glomerular filtration rate substitute for a reference method in the Indian Population. *Nephron Clin Pract* 2005;**101**:128–133.
31. Maria A, Gupta A, Aggarwal R, Sreenivas V, Paul VK, Deorari AK. Incidence of periventricular leucomalacia among a cohort of very low birth weight neonates (<1500 g). *Indian Pediatr* 2006;**43**:210–16.
32. Marwaha RK, Tandon N, Reddy DR, Aggarwal R, Singh R, Sawhney RC, *et al.* Vitamin D and bone mineral density status of healthy schoolchildren in northern India. *Am J Clin Nutr* 2005;**82**:477–82.
33. Mishra A, Singhal A, Chauhan DS, Katoch VM, Srivastava K, Thakral SS, *et al.* Direct detection and identification of *Mycobacterium tuberculosis* and *Mycobacterium bovis* in bovine samples by

- a novel nested PCR assay: Correlation with conventional techniques. *J Clin Microbiol* 2005;**43**:5670–8.
34. Misra A, Vikram NK, Gupta R, Pandey RM, Wasir JS, Gupta VP. Waist circumference cutoff points and action levels for Asian Indians for identification of abdominal obesity. *Int J Obes (Lond)* 2006;**30**:106–11.
 35. Mittal CM, Wig N, Mishra S, Arora P, Pandey RM. Cardiac dysfunction in human immunodeficiency virus (HIV) infected patients in India. *Int J Cardiol* 2006;**107**:136–7.
 36. Puliyl JM, Sreenivas V. Meta-analysis can be statistically misleading [Letter]. *Evidence Based Medicine (BMJ)* 2005;**10**:130.
 37. Sarkar C, Sharma MC, Deb P, Singh R, Santosh V, Shankar SK. Primary central nervous system lymphoma—a hospital based study of incidence and clinicopathological features from India (1980–2003). *J Neurooncol* 2005;**71**:199–204.
 38. Sawhney A, Kumar N, Sreenivas V, Gupta S, Tyagi V, Puliyl J. Prone versus supine position in mechanically ventilated children: A pilot study. *Med Sci Monit* 2005;**11**:235–40.
 39. Shalimar, Handa R, Deepak KK, Bhatia M, Aggarwal P, Pandey RM. Autonomic dysfunction in systemic lupus erythematosus. *Rheumatol Int* 2005;**20**:1–4.
 40. Sharma P, Mukherjee R, Talwar GP, Sarathchandra KG, Walia R, Parida SK, *et al.* Immunoprophylactic effects of the anti-leprosy Mw vaccine in household contacts of leprosy patients: Clinical field trials with a follow up of 8–10 years. *Lepr Rev* 2005;**76**:127–43.
 41. Shyam C, Sreenivas V. Chronic kidney disease: A missing component of integrated control of NCD. *Indian J Med Res* 2005;**122**:451–3.
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Chapters in Books

1. Pandey RM, Kalaivani M. Statistical issues in clinical trials. In: *Contemporary perspectives on clinical pharmacotherapeutics*. 1st ed. New Delhi: Elsevier, a division of Reed Elsevier India; 2006:841–8.
2. Dwivedi SN, Chandra P. Issues related to multi-centric randomized controlled clinical trials. In: Pandey M (ed). *Statistical advances in biosciences and bioinformatics*. New Delhi: Allied Publishers; 2006:140–55.
3. Chandra P, Dwivedi SN, Bal CS, Kumar A, Pandey A, Sundaram KR, *et al.* On the use of CONSORT statement in clinical trial on remnant ablation of differentiated thyroid cancer. In: Pandey A (ed). *Biostatistical aspects of health and population*. New Delhi: Hindustan Publishing Corporation; 2006:41–5.
4. Singh R, Dwivedi SN, Chandra P. Use of bootstrap technique for validation of the cox proportional hazard model. In: Pandey A (ed). *Biostatistical aspects of health and population*. New Delhi: Hindustan Publishing Corporation; 2006:52–9.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr R.M. Pandey was awarded Fellowship during the 23rd Annual Conference of the Indian Society for Medical Statistics (ISMS), held at Belgaum; nominated Editor of the *ISMS Bulletin*, for a five-year term; continues to be member of the Governing Body and the Institutional Review Board (IRB) of the Indian Clinical Epidemiology Network (IndiaCLEN); Coordinator of the Regional Statistical Support Group (RSSG) of the WHO for the STEPS based NCD risk factor surveillance studies in SEAR member countries, visited Maldives and Bhutan in the capacity of a Temporary Advisor; nominated as Member of the Research Committee of BPKIHS, Dharan, Nepal; continues to be a Reviewer for *Indian Journal*

of Medical Research, Indian Pediatrics and National Medical Journal of India; continues to be Director, Clinical Epidemiology Unit, AIIMS; Member, Data Safety Monitoring Board (DSMB) of DBT funded multicentric trial of Mw vaccine in tuberculosis patients.

Dr S.N. Dwivedi continued as an elected Member of the International Union for Scientific Study of Population (IUSSP), France; Member, International Society for Clinical Biostatistics, Geneva; elected Member, International Statistical Institute, Netherlands; Member, International Epidemiological Association, USA; Member, Training Programme Committee, Indian Society for Medical Statistics; Executive Council Member, International Biometric Society (Indian Region), 2005–2006; Correspondent, Indian region, *Biometric Bulletin* of the International Biometric Society; Member, Review Group on Endosulphan for Ministry of Agriculture, Government of India; Member, Project Advisory Committee of the Division of NDTMIS, DST; Member, Local Advisory Committee of DST funded research project ‘Baseline database collection and documentation of good manufacturing and supply practices adopted by the manufacturer of TORCH/ ELISA kits and quality control assessment at the user level of these kits’; Chairman/Member of the Screening/Selection Committee, National Institute of Medical Statistics, New Delhi and Indian Council of Medical Research, New Delhi; nominated as a Member of the Scientific Advisory Committee of National Institute of Medical Statistics, ICMR, New Delhi; appointed as an External Expert Member on the Board of Studies on Health Statistics, Institute of Medical Sciences, BHU, Varanasi; He was included as: (i) Member, Editorial Advisory Committee, *Biometrics*, (ii) Member, Editorial Advisory Board, *Demography India*, (iii) Statistical Consultant, *Indian Journal of Psychiatry* (IJP), and (iv) Reviewer of the journal being published from Guwahati University. involved in the finalization of the sampling design of an ensuing study for ‘Non-communicable diseases under integrated diseases surveillance programme’ by Ministry of Health and Family Welfare at the National Institute of Medical Statistics, ICMR, New Delhi; included as a Member of the Award Committee of the Indian Society for Medical Statistics for three years, from January 2005; involved as a Member of the Task Force Group constituted by the ICMR to look into the current status of activities and provide directions to future research needs regarding toxic gas exposed people at Bhopal; continues to be Member, Editorial Board, *Indian Journal of Chest Diseases and Allied Sciences*; and Reviewer for the *Indian Journal of Medical Research, International Society for Clinical Biostatistics, Assam Statistical Review, Demography India* and *Contribution to Applied and Mathematical Statistics*.

Dr V. Sreenivas was awarded WHO Fellowship on Epidemiology and Biostatistics, held at the Faculty of Medicine, Khon Kaen University, Thailand; continued to be a Member of the International Epidemiological Association (IEA), Indian Clinical Epidemiology Network (IndiaCLEN), and Indian Society for Medical Statistics; involved with ICMR as: Statistical analysis of the multicentre (9 centres) trial on ribavirin vs glycerrhizin in the treatment of Hepatitis C, Chairman/Member of the Screening/ Selection Committees; Member of Expert groups and a Reviewer of the *Indian Journal of Medical Research*; Member of the Research Protocols Committee of Central Council for Research in Unani Medicine (CCRUM); Reviewer for the scientific journals *Indian Journal of Pediatrics* and *Indian Journal of Medical Research*.

Dr Rajvir Singh continues as a Statistical Consultant for the *Journal of Medical and Pediatric Oncology* and *Indian Journal of Thoracic and Cardiovascular Surgery*, AIIMS.

Dr Guresh Kumar was awarded PhD degree from the University of Rajasthan, Jaipur.

9.7 Biotechnology

Professor and Head

Y.D. Sharma

Professors

J.S. Tyagi

H.K. Prasad

Additional Professor

S.N. Das

Assistant Professor

Anushree Gupta

EDUCATION

A series of seminars was organized during 13–31 March 2006. Eminent scientists were invited to deliver lectures on frontline topics related to biotechnology, such as intellectual property rights, genetics, immunology, animal and human ethics, nuclear medicine, functional genomics, proteomics, discovering anti-tuberculosis drugs, etc.

A new course in Bioinformatics for MBiotech students (2003–2005 batch) was introduced for the first time. Institutional visits were organized within Delhi for MBiotech students as part of an initiative to start the Bioinformatics course in the department. Experts were invited from institutes such as JNU and IGIB.

Short-term Training

The Faculty of the department provided training to MD students from the Departments of Laboratory Medicine and Haematology of AIIMS; MB,BS students of AIIMS; students of MSc Biotechnology from the University of Rajasthan, Banasthali Vidyapith, and Bundelkhand University underwent training in the department. Students under the KVPY programme from ICMR, Science Talent of DBT programme and MSc Biotechnology from various universities visited the department.

Long-term Training

Lt Col M. Kumaris undergoing 2 years' training in the Tuberculosis Molecular Biology Laboratory. Dr Rajesh K. Gupta, Department of Chemistry, University of Allahabad is undergoing 2 years' training in the department.

National and International Conferences

Lectures delivered

Dr Y.D. Sharma

- 'Drug-resistant *P. falciparum* malaria in India', CDC, Atlanta, USA; September 2005.
- 'Molecular markers for evaluation of drug-resistant malaria', KEM Medical College, Mumbai; September 2005.

- ‘Molecular epidemiology of drug-resistant malaria’, Staff College, JNU, New Delhi; September 2005.
- ‘Molecular epidemiology of drug-resistant malaria’, International Conference on Malaria, New Delhi; November 2005.
- ‘Molecular epidemiology of drug-resistant malaria’, Workshop on ‘Genomics to biocomputing’, Jiwaji University, Gwalior; March 2006.

Dr J.S. Tyagi

- ‘Improved laboratory diagnosis of tuberculosis: Problem-solving approach’, 93rd Indian Science Congress, Hyderabad; January 2006.
- ‘DevR-DevS two component signalling system of *Mycobacterium tuberculosis*’, Symposium on ‘Systems biology’, JNU, New Delhi; 12–13 March 2006.

Dr H.K. Prasad

- ‘Modulation of interferon gamma R-1 by *Mycobacterium tuberculosis*: An immune evasive mechanism’, FIMSA/IIS Workshop on ‘Clinical immunology’, Indian Immunology Society, AIIMS; 1–4 March 2006.
- ‘Potential mechanisms of inhibition of the biological function of interferon-gamma in tuberculosis patients’, Molecular Immunology Forum 2006, Regional Medical Research Centre, Bhubaneswar, Orissa; 27–30 January 2006.
- ‘*hupB* [*Rv 2986c*] gene, a molecular diagnostic target for tubercular endometritis’, BIOTECH 2005, 3rd National Conference Biotechnology Society of India, Centre for Biotechnology, JNU, New Delhi; 22–24 December 2005.
- ‘*In vitro* modulation of cytokine and non-cytokine receptors following exposure to *Mycobacterium tuberculosis*’, 24th Biennial Conference of the Indian Association of Leprologists, Agra; 12–13 November 2005.
- ‘Characterization of Rv1994c of *Mycobacterium tuberculosis*—a nickel and zinc sensing SmtB/ArsR regulator’, 43rd Annual Meeting of the Infectious Disease Society of America (IDSA), San Francisco, USA; 6–9 October 2005.
- ‘Modulation of cytokine receptors associated with TH1 immune response by *Mycobacterium tuberculosis*’, 43rd Annual Meeting of the Infectious Disease Society of America (IDSA), San Francisco, USA; 6–9 October 2005.

Dr S.N. Das

- ‘Nanotoxicology’, International Conference on ‘Toxicology, environmental and occupational health’, Lucknow; 14–17 November 2005.
- ‘Flowcytometry and nuclear ³¹P magnetic resonance spectroscopy in the diagnosis of abnormal testicular function’, International Symposium on ‘Recent advances in reproductive biology’, New Delhi; 21 February 2006.

RESEARCH

Funded Projects

1. Malaria vaccine-related field studies in Jabalpur. Y.D. Sharma. Funded by ICMR for the first year. Funds: Rs 22.35 lakh.
2. Postgraduate training programme in Biotechnology with special application to biomedicine. Y.D. Sharma. Funded by DBT for 9 years (1998–2007). Funds: Rs 8 lakh per year.
3. Post MD/MS long-term training programme in Medical Biotechnology for in-service candidates. Y.D. Sharma. Funded by DBT for 9 years (1998–2007). Funds: Rs 4 lakh per year.
4. Biotechnology Informatics System. Y.D. Sharma. Funded by DBT for 9 years (1998–2007). Funds: Rs 4 lakh per year.
5. Evaluation of *devR* mutant of *Mycobacterium tuberculosis* in animal model of tuberculosis and in cultured bacilli: Virulence and gene expression analysis. J.S. Tyagi. Funded by DBT for 3 years (2005–2008). Funds: Rs 50.37 lakh.
6. Isolation, identification and characterization of peptides that interact with two-component system proteins DevR, DevS and Rv2027c of *Mycobacterium tuberculosis*. J.S. Tyagi. Funded by CSIR for 3 years (2004–2007). Funds: Rs 17.96 lakh.
7. Multicentric evaluation of a smear microscopy technique for the detection of acid-fast bacilli in sputum specimens. J.S. Tyagi. Funded by WHO for 1 year (2005–2006). Funds: US\$ 64,418.
8. Molecular basis of dysregulation of interferon- γ generation and function in tuberculosis patients. H.K. Prasad. Funded by ICMR for 3 years (2003–2006). Funds: Rs 40 lakh.
9. Study of transmission of livestock-derived pathogenic mycobacteria and its prevalence among humans (Zoonotic tuberculosis). H.K. Prasad. Funded by DBT for 3 years (2005–2008). Funds: Rs 33.192 lakh.
10. Antiproliferative, antiapoptotic and immunomodulatory activity of some Indian system and homoeopathic anticancer drugs. Satya N. Das. Funded by Ministry of Health and Family Welfare, Department of ISM and H, Government of India for 3 years (till September 2006). Funds: Rs 22 lakh.
11. Modulation of endothelin-1 in coronary artery bypass grafting patients imparted with pre-operative relaxation therapy. Anushree Gupta. Funded by AIIMS for the year 2005–2006. Funds: Rs 0.57 lakh.

Departmental Projects

1. Innate immunity to *Mycobacterium tuberculosis*
2. Humans' immune response to *Mycobacterium tuberculosis*
3. Further characterization of the HLP protein of mycobacteria
4. PCR-based diagnosis of tuberculosis in humans and cattle

Collaborative Projects

1. 'High throughput PCR-assays for diagnosing tuberculosis caused by *Mycobacterium tuberculosis*

and *Mycobacterium bovis* using molecular beacons' (with Public Health Research Institute, Newark, New Jersey, USA).

2. *CTLA4* gene polymorphism in type 1 diabetic patients (with Endocrinology).
3. *NFkB* signalling and *TNFR1* and *RII* gene polymorphism in oral cancer (with ENT).
4. BRCA1 and BRCA2 gene mutation in breast cancer patients (with Dr B.R. Ambedkar IRCH).

PUBLICATIONS

1. Alam MT, Das MK, Ansari MA, Sharma YD. Molecular identification of *Anopheles (Cellia) sundaicus* from the Andaman and Nicobar islands of India. *Acta Trop* 2006;**97**:10–18.
2. Bagchi G, Chauhan S, Sharma D, Tyagi JS. Transcription and autoregulation of the *Rv3134c-devR-devS* operon of *Mycobacterium tuberculosis*. *Microbiology* 2005;**151**:4045–53.
3. Chakravorty S, Dudeja M, Hanif M, Tyagi JS. Utility of universal sample processing methodology, combining smear microscopy, culture, and PCR, for diagnosis of pulmonary tuberculosis. *J Clin Microbiol* 2005;**43**:2703–8.
4. Chakravorty S, Pathak D, Dudeja M, Haldar S, Hanif M, Tyagi JS. PCR amplification of shorter fragments from the *devR (Rv3133c)* gene significantly increases the sensitivity of tuberculosis diagnosis. *FEMS Microbiol Lett* 2006;**257**:306–11.
5. Chakravorty S, Sen MK, Tyagi JS. Diagnosis of extrapulmonary tuberculosis by smear, culture and PCR using universal sample processing technology. *J Clin Microbiol* 2005;**43**:4357–62.
6. Chakravorty S, Tyagi JS. Novel multipurpose methodology for detection of mycobacteria in pulmonary and extrapulmonary specimens by smear microscopy, culture, and PCR. *J Clin Microbiol* 2005;**43**:2697–702.
7. Das SN, Khare P, Patil A, Pandey RM, Singh MK, Shukla NK. Association of DNA pattern of metastatic lymphnode with disease-free survival in patients with intraoral squamous cell carcinoma. *Indian J Med Res* 2005;**122**:216–23.
8. Haldar S, De Majumdar S, Chakravorty S, Tyagi JS, Bhalla M, Sen MK. Detection of acid-fast bacilli in postlysis debris of clinical specimens improves the reliability of PCR. *J Clin Microbiol* 2005;**43**:3580–1.
9. Jalah R, Sarin R, Sud N, Alam MT, Parikh N, Das TK, *et al.* Identification, expression, localization and serological characterization of a tryptophan-rich antigen from the human malaria parasite *Plasmodium vivax*. *Mol Biochem Parasitol* 2005;**142**:158–69.
10. Kochupillai V, Kumar P, Singh D, Aggarwal D, Bhardwaj M, Bhutani M, *et al.* Effect of rhythmic breathing (*Sudarshan kriya* and *pranayam*) on immune functions and tobacco addiction. *Ann N Y Acad Sci* 2005;**1056**:242–52.
11. Mishra A, Singhal A, Chauhan DS, Katoch VM, Srivastava K, Thakral SS, *et al.* Direct detection and identification of *Mycobacterium tuberculosis* and *Mycobacterium bovis* in bovine samples by a novel nested PCR assay: Correlation with conventional techniques. *J Clin Microbiol* 2005;**43**:5670–8.

12. Mittra P, Vinayak S, Chandawat H, Das MK, Singh N, Biswas S, *et al.* Progressive increase in point mutations associated with chloroquine resistance in *Plasmodium falciparum* isolates from India. *J Infect Dis* 2006;**193**:1304–12.
13. Prasad HK, Singhal A, Mishra A, Shah NP, Katoch VM, Thakral SS, *et al.* Bovine tuberculosis in India: Potential basis for zoonosis. *Tuberculosis* (Edinb) 2005;**85**:421–8.
14. Rathore S, Singhal A, Prasad HK. Trends in tuberculosis research. *Natl Med J India* 2005;**18**:3–6.
15. Saini DK, Tyagi JS. High-throughput microplate phosphorylation assays based on DevR-DevS/Rv2027c 2-component signal transduction pathway to screen for novel antitubercular compounds. *J Biomol Screen* 2005;**10**:215–24.
16. Sen MK, Chakravorty S, Tyagi JS. Polymerase chain reaction to identify *Mycobacterium tuberculosis* in patients with tuberculous lymphadenopathy. *Natl Med J India* 2005;**18**:302–3.
17. Srinivas M, Kilmartin B, Das SN, Puri P. Prepubertal unilateral spermatic vessel ligation decreases haploid cell population of ipsilateral testis postpubertally in rats. *Pediatr Surg Int* 2005;**21**:360–3.
18. Vinayak S, Mittra P, Sharma YD. Wide variation in microsatellite sequences within each Pfcrt mutant haplotype. *Mol Biochem Parasitol* 2006;**147**:101–8.

PATIENT CARE

PCR-based detection of malaria parasite species was performed on the samples received from AIIMS Hospital and Malaria Centre field stations.

Diagnostic services for TB were provided to over 100 patients using a multipurpose test developed in Dr Tyagi's laboratory. The test is based on the use of conventional techniques that include smear microscopy and culture together with molecular technique for PCR.

Patents

1. Tyagi JS and Chakravorty S. International PCT patent application entitled 'A method for diagnosis of tuberculosis by smear microscopy, culture and polymerase chain reaction using processed clinical samples and kit thereof', now in national phase filing in Europe, USA, China, ARIPO and India.
2. International Application # PCT/N03/00302 dated 9 September 2003 on 'The characterization of *hupB* gene encoding histone like protein of *Mycobacterium Tuberculosis*' has been filed in the name of DBT and AIIMS.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor Y.D. Sharma has been elected as a Fellow of the Indian National Science Academy (FNA); continued to be Member, Rajasthan Government State Biotechnology Advisory Board; Member, DBT Task Force Committee on Human Resources Development and of the Selection Committee for DBT overseas associateship; Task Force Member, DBT International Project Advisory Committee (IPAC); Member, JRF examination, DBT; Member, Research Advisory Committee, Parasite Biology, Malaria Research Centre, Delhi; Member, Board of Research Studies, NICD-IP University; Member, Research Advisory Panel of DIPAS (DRDO); Member, Academic Committee, Guru Nanak Dev University,

Amritsar; Member, Board of Studies in Biotechnology, Jawaharlal Nehru University; Expert Member, Board of PG Studies in Biotechnology, Kurukshetra University; Expert Member, Teaching Advisory Committee of Devi Ahilya University, Indore; Member, Editorial Board, *Indian Journal of Malariology*; Member, International reviewers' panel, *Medical Science Monitor*; Member, Editorial Board, *Biotechnology*; Member, NML Book Selection Committee; Member, Research Committee, AIIMS; Member, Recombinant DNA Biosafety Committee, AIIMS; Member, Selection Committee for Scientists, ICMR; Member, Indian Veterinary Research Institute, Bareilly; and Chief Guest for 'Genomics and Biocomputing' at Jiwaji University, Gwalior.

Dr J.S. Tyagi is a Member, Special Committee, School of Life Sciences and Special Centre for Molecular Medicine, Jawaharlal Nehru University, New Delhi; Member, Scientific Advisory Committee, Tuberculosis Research Centre, Chennai.

Dr H.K. Prasad was a special invitee at the first PRC Meeting of the project entitled 'Development of inactivated vaccine using native isolate of MAP against Johnne's disease in goats and sheep' of the Central Institute for Research on Goats (ICAR), Makhdoom, P.O. Forah, Mathura (UP) and a Member, Expert Group of the Technical Committee meeting at the Central JALMA Institute for Leprosy and Other Mycobacterial Diseases, Taj Ganj, Agra; Member, National Research Development Corporation, New Delhi; Member, Department of Biotechnology, Ministry of Science and Technology, New Delhi; Member, Fellowship Screening Committee of ICMR, DBT and ICGEB; Member, Sub-Committee on tuberculosis vaccines under the National Jai Vigyan Science and Technology Mission on the 'Development of new generation vaccines', DBT, Ministry of Science and Technology, New Delhi; Member, Patent Facilitation Committee, AIIMS; Member, Scientific Advisory Committee, National Institute of Biologicals (NIB-SAC), Ministry of Health and Family Welfare, Government of India, Noida.

Dr S.N. Das continues as Joint Secretary of the Indian Immunology Society.

VISITING SCIENTISTS

1. Professor Nirbhay Kumar, Johns Hopkins University, Maryland, USA; 12 April 2005.
2. Professor Barry Bloom, Dean of Harvard School of Public Health, Harvard University, USA; May 2005.
3. Dr Indu Sharma, National Institutes of Health (NIH), USA; September 2005.

OTHER ACTIVITIES

Bioinformatics Centre

The department has a Bioinformatics Centre which provides database services, bibliographical search facility, DNA and protein sequence search and retrieval, e-mail, internet services, training and assistance to students in graphics, statistics and data presentation. This facility is being widely used by students and faculty of this as well as neighbouring institutes. A 512 kbps leased line for internet taken from VSNL is also functional in the department.

The department's liquid nitrogen plant supplies liquid nitrogen to users at AIIMS on request.

9.8 Centre for Community Medicine

Professor and Head

V.P. Reddaiah
(Superannuated 30.6.2005)

C.S. Pandav

Professors

B. Singh
(on lien till 17 Sep. 2005)

S. Kant
(on lien till 22 Sep. 2005)

Sanjeev K. Gupta
(from 23 Sep. 2005)

Additional Professor

K. Goswami

Associate Professor

K. Anand

Assistant Professors

S. Rai

P. Misra
(on leave from 5 January 2006)

B. Nongkynrih

Kusuma Kumari
(joined on 15 October 2005)

EDUCATION

The education programmes for undergraduates, postgraduates, nursing and BSc Human Biology students remained unchanged.

Undergraduate

In rural areas, the programme remained the same. Undergraduates undergo a residential posting for five weeks in Semester VII.

Urban Area

Fourth and fifth semester students are posted in urban slum areas for five weeks as part of their teaching programme.

- Eight Health Talks on 'Meningitis' were organized in different areas of Dr Ambedkar Nagar. Participants: 360 (approx.).
- A role-play was organized by Vth semester students under Family Health Advisory Service at Dr Ambedkar Nagar. Participants: 250
- 64 Health Talks on different topics were organized and supervised at the community level.
- 50 families were identified and allotted to undergraduates for clinical psycho social case review and supervised for various intervention purposes and follow-up.
- Four research projects were undertaken by UGs during their field posting.

Internship

The programme remained unchanged. Interns are posted for six weeks in either Dayalpur or Chhainsa primary health centre. It is a residential posting. Activities in both the areas were the same.

Postgraduate

Postgraduates in Community Medicine were posted in rural areas for 18 months. This gives them adequate time to gain the necessary experience both at referral hospital and at primary health centres. They are encouraged to take active part in decision-making. With the help of the computer facility, postgraduate students are encouraged to use computers for data analysis. Besides this, they conduct different field-based exercises during the posting. The regular teaching exercises include seminars, family and case presentations, etc.

Continuing Medical Education

The Centre for Community Medicine started a series of Guest Lectures beginning from 21 July 2005. The following Guest Lectures were held:

- ‘My journey into public health’, Professor L.M. Nath; 21 July 2005.
- ‘Evidence-based public health practice’, Dr Gopal Sankaran; 28 July 2005.
- ‘Community needs assessment and prioritizing issues for intervention’, Dr Gopal Sankaran; 2 August 2005.
- ‘Evaluation of health programmes’, Dr Gopal Sankaran; 2 August 2005.
- ‘Addressing public health issues during sanction and conflict—experiences from Iraq’, Dr Sanjiv Kumar; 4 August 2005.
- ‘The challenge of improving child growth in North India: Recent evidence from Punjab and Bihar’; 12 August 2005.
- ‘Politics of rural health in India’, Dr Debabar Banerji; 1 September 2005.
- ‘Impoverishing the poor—drug pricing and policy in India’, Dr Anurag Bhargava; 7 September 2005.
- ‘1974: Containment of second explosion—the story of eradication of smallpox’, Dr Mahendra Dutta; 8 September 2005.
- ‘Bringing the public back into public health’, Dr Ravi Narayan; 7 October 2005.
- ‘*Jan swasthya abhiyan*—People’s Health Movement’, Dr Abhay Shukla; 10 January 2006.

Short term training

Eight undergraduate students from the USA, UK, Germany and New Zealand came to the department for short-term training in Community Medicine. Two BSW students from Dr Bhim Rao Ambedkar College, University of Delhi, were supervised for their fieldwork placement.

Lectures delivered

Dr Bir Singh

- ‘PPTCT of HIV/AIDS’, symposium organized by the Indian Academy of Paediatrics at LHMC, New Delhi; 10 December 2005.
- ‘HIV/AIDS’, Golden Jubilee Celebrations, AIIMS; 13 January 2006.
- ‘HIV/AIDS: Sex and sexuality for students’, Mothers’ International School, New Delhi; 31 January 2006.

- ‘Drug regimen for PPTCT programme’, National Symposium on HIV/AIDS and TB, AIIMS; 14 January 2006.

Dr Sanjeev Gupta

- ‘Ocular trauma—Indian scenario’, Annual Conference of the Delhi Ophthalmological Society, New Delhi; 2–3 April 2005.
- ‘Lions manpower and management development workshops’, Dr R.P. Centre; 4–9 April 2005 and 8–13 August 2005.
- ‘Magnitude of refractive errors’, 10th Dr R.K. Seth Memorial Symposium, Venu Eye Institute and Research Centre, New Delhi; 30 September 2005.
- ‘Refractive Error Workshop’ conducted by Dr R.P. Centre; 23–24 March 2006.

Dr K. Anand

- ‘Epidemiology of spinal tuberculosis’, Spine Summer Seminar; 5 May 2005.
- ‘Designing and execution of studies in rural India’, National Seminar on Epidemiology of NCDs, MDRF–Chennai; 10–12 March 2006.
- ‘Cost effectiveness studies in refractory error’, Refractive Error Workshop, Dr R.P. Centre; 23–24 March 2006.
- ‘Confounding and bias’, Pre-conference CME of Indian Academy of Paediatrics, New Delhi; 5 January 2006.
- ‘Economic considerations in health policy, planning, management and evaluation of health care services’, Workshop on Health Economics, organized by NIHF, New Delhi.

Dr Anil Goswami

- ‘Counselling and fostering community participation’, First LCIF-supported Manpower and Management Development Workshop, Community Ophthalmology Department, Dr R.P. Centre; 6 April 2005.
- ‘Social work in communities’, orientation programme, Dr Bhim Rao Ambedkar College, University of Delhi; 18 July 2005.

RESEARCH

Funded Projects

Completed

1. Demonstration project on community-based intervention for NCD. K. Anand. WHO funded project till June 2005. Funds: Rs 7.5 lakh.

Ongoing

1. NCD surveillance STEP-3. K. Anand. WHO/ICMR funded project till May 2006. Funds: Rs 5.3 lakh.
2. Strengthening rural services using IT, media laboratory. K. Anand. Asia, MIT funded project till December 2006. Funds: Rs 24.6 lakh.
3. Effectiveness of iron and vitamin A fortified candies in decreasing anaemia. K. Anand. The Micronutrient Initiative (MI) funded project till September 2005. Funds: Rs 13.5 lakh.
4. Evaluation of safe water systems intervention project in slums of Uttaranchal. K. Anand. India CLEN/USAID funded project till June 2007. Funds: Rs 46.6 lakh.
5. Monitoring and evaluation of integrated community-based intervention for the prevention of NCDs in Ballabgarh. K. Anand. Funded by WHO Kobe Centre till November 2006. Funds: Rs 10.31 lakh.

Collaborative Projects

Completed

1. Epidemiological study on ocular trauma in an urban slum population of Delhi
2. Determination of quality of life and awareness of retinopathy among diabetic retinopathy patients

Ongoing

1. Effectiveness of 3-day amoxicillin versus 5-day co-trimoxazole in the treatment of non-severe pneumonia in children 2–59 months of age. Funded by ICMR (with Paediatrics).
2. Epidemiological study on pterygium in a rural population (with Dr R.P. Centre).
3. Rapid assessment of trachoma in a previous hyperendemic area (with Dr R.P. Centre).
4. ICMR Task Force Project ‘Determinants of the functional status of the older Indian’ (with Medicine).

PUBLICATIONS

Journals

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11. Murthy GV, Gupta SK, Bachani D, Sanga L, John N, Tewari HK. Status of speciality training in ophthalmology in India. *Indian J Ophthalmol* 2005;**53**:135–42.
12. Murthy GV, Gupta SK, Thulasiraj RD, Viswanath K, Donoghue EM, Fletcher AE. The development of the Indian Vision Function Questionnaire: Questionnaire content. *Br J Ophthalmol* 2005;**89**:498–503.
13. Pandav CS, Rai SK, Lal V, Anand K, Yadav K. National Rural Health Mission—from idea to action [Editorial]. *Indian J Public Health* 2005;**44**:111–12.
14. Patro BK, Kant S, Baridalyne N, Goswami AK. Contraceptive practices among married women in a resettlement colony of Delhi. *Health and Population Perspectives and Issues* 2005;**28**:9–16.
15. Sankar R, Pandav CS. Ban on sale of non-iodized salt for human consumption: A step in the right direction. *Natl Med J India* 2005;**18**:169–71.
16. Vashist P, Gupta SK, Murthy GVS. A model for eye care service delivery to urban underprivileged populations in New Delhi. *Community Eye Health* 2005;**18**:S65–S67.

Chapters in books

1. Gupta SK, Murthy GVS. Blindness and visual impairment in the elderly. In: *MME-2005 Clinical Geriatrics. Musculoskeletal and Special Senses Disorders 6*. Delhi: School of Health Sciences, Indira Gandhi National Open University.
2. Nongkynrih B, Varghese C. Services, equipment and drugs required at different levels of health care for non-communicable diseases. NCMH background papers. *Burden of disease in India*. New Delhi: National Commission on Macroeconomics and Health, Ministry of Health and Family Welfare, Government of India; 2005.
3. Sanjay R. *Health policies and programmes in India*. In: Taneja DK (ed). 5th ed. Delhi: Doctor Publication; 2005.
4. Singh B. *HIV, Health and community (Indian adaptation)*. New Delhi: Voluntary Health Association of India; 2005:246.

PATIENT CARE

This has been divided into five broad categories.

1. Comprehensive Rural Health Services (CRHS) Project, Ballabgarh
2. Urban Health Programme
3. National Service Scheme Unit, AIIMS
4. Sex and Marriage Counselling Clinic
5. AIDS Education and Training Cell

CRHS Project, Ballabgarh

This has two components: (i) Referral Hospital, Ballabgarh; and (ii) Community Health Services.

Referral Hospital, Ballabgarh

Outpatients

The following outpatient departments are run:

- General OPD for adults
- Child Welfare Centre for children
- Ophthalmology (daily)
- ENT (twice a week)
- Dental (daily)
- Obstetrics and Gynaecology (daily)
- Rehabilitation (two days a week)
- Psychiatry (once a week)
- ANC Clinic (thrice a week)
- Paediatric Surgery OPD-cum-surgery (once a week)
- NCD Clinic (once a week)

OPD Load

New patients	71,717
ANC registration	4,771
Immunization	6,674

Inpatients

The number of beds has remained unchanged at 50.

• Total number of admissions including hospital births	5,430
• Number of hospital births	1,366
• Bed occupancy rate (including newborns)	62.8%
(excluding newborns)	49.3%
• Average duration of stay	2.2 days
• Admissions	
—via emergency	3,252
—via OPD	812
—newborn	1,366

Distribution of inpatients by specialty

Specialty	Number	Percentage
Medicine	996	18.4
Surgery	274	5.0
Obstetrics and Gynaecology	1936	35.6
Paediatrics	857	15.8
Ophthalmology	1	0.01
Newborn	1366	25.2
Total	5430	100.0

Casualty

- Number of patients registered 15,463
- Number of medicolegal cases 2,775

Diagnostic tests performed

- Lab investigations (including malaria slides) 73,489
- X-ray (total) 10,398
- Malaria slides 3,065
 - Malaria cases 60
 - P. vivax* 56
 - P. falciparum* 4

Total number of surgical procedures performed (by specialty)

Procedure	Number of cases	Percentage
General Surgery	916	61.3
Obstetrics and Gynaecology	572	38.2
Ophthalmology	7	0.5
Total	1495	100.0

Total number of surgical procedures (sex-wise)

Gender	Adults		Children		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Male	401	31.9	156	65.0	557	37.3
Female	854	68.1	84	35.0	938	62.7
Total	1255	100.0	240	100.0	1495	100.0

Revised National Tuberculosis Control Programme (RNTCP)

Ballabgarh hospital is a treatment unit under the RNTCP and has 4 microscopy centres under it. The total number of cases treated at Ballabgarh Treatment Unit was 1,110 in 2005. Of these, 390 were diagnosed at the microscopy centre of Ballabgarh.

Break-up of cases treated at the Ballabgarh Microscopy Centre

Category I	158
Category II	72
Category III	160
Total	390
Sputum examination of new cases	2,201

Community health services

Intensive field practice area (IFPA)

This comprises the two primary health centres—Dayalpur and Chhainsa. Outpatient, domiciliary and referral services are being provided.

1. Indices

- Population 81,980
- Birth rate per 1000 population 23.90

• Death rate per 1000 population	6.9
• Neonatal mortality rate per 1000 live-births	17.9
• Infant mortality rate per 1000 live-births	49.0
• Maternal mortality rate per 100,000 live-births	100

2. Load of OPD patients at various centres in IFPA

PHC	New cases	Repeat visits	Total
Dayalpur	13,378	12,720	26,098
Chhainsa	15,026	13,575	28,601

Family Welfare and Maternal Child Health

The Project area is dependent on the District Family Welfare and Immunization Offices for the supply of vaccines and other items.

• Total antenatal cases (new registration)	2236
• Total antenatal cases carried over last year	760
• Pregnant women receiving AN care	100%
• Complete TT coverage of registered cases	90%
• Deliveries conducted by staff or hospital	652
• Eligible couple protection rate	59.4%
• Total number of persons who accepted family planning methods in the year 2004	1940
— Tubectomy	404
— Vasectomy	2
— CC users	969
— IUD	265
— Oral pills	278

Expanded Programme on Immunization

Coverage of 12–23 month of age

BCG	98.5%
OPV (3 doses)	97.8%
DPT (3 doses)	97.8%
Measles	97.5%
Complete primary immunization	97.4%

Beside this, oral polio vaccine was also given under the Intensified Pulse Polio Programme on 09.01.05, 20.02.05, 10.04.05, 15.05.05, 26.06.05, 07.08.05, 25.09.05 and 27.11.05. The coverage was 99.9%. Each polio programme lasted for 8 days.

National Programmes

1. Malaria

Collection of blood slides is done by active and passive surveillance in the IFPA.

Total number of slides collected	8,857
Total number of positive cases	1

Indices

• Annual blood examination rate	10.8%
• Annual parasite incidence rate	0.01/1000 population
• Slide positivity rate	0.01%

2. Tuberculosis

The RNTCP is carried out in the IFPA on the national pattern. Dayalpur PHC has been designated as a microscopy centre and caters to all villages under the IFPA. The break-up of patients treated in the total field practice area is as follows:

Category 1	78
Category 2	33
Category 3	28
Total	139

Urban Health Programme

Total number of patients seen at Ambedkar Nagar	16,869
Total number of referrals	632

Immunizations	Doses given
0 dose OPV	111
BCG	372
DPT I	431
DPT II	434
DPT III	422
DPT B	380
OPV I	431
OPV II	434
OPV III	422
OPV B	380
DT I + OPV	35
DT II + OPV	5
DT (Booster) + OPV	170
Measles	519
MMR	488
TT I (Antenatal)	163
TT II (Antenatal)	75
TT (Booster)	57
TT (Others)—above 6 years	76
Hepatitis B I dose	490
II dose	493
III dose	451
Typhoid (January to March 2005)	634
Supplements	
Vitamin A (I dose—II dose)	621
Iron and folic acid (Adult)	1440 x 30 tablets
Iron and folic acid (Paediatric)	408 x 30 tablets

Family planning acceptors

Nirodh	4740
Oral contraceptive pills	70 cycles

Laboratory Services

Blood smear for malarial parasite	306
Haemoglobin	417
Sputum for AFB	22
Urine routine/ microscopic examination	211
Urine pregnancy test	57

SPECIAL ACTIVITIES

Health education activities

Organizing events/exhibitions

- Organized an exhibition on 'Meningitis', at Dr Ambedkar Nagar; 12 May 2005. Participants: 90.
- Organized an exhibition on 'World Disabled Day'; 23 June 2005.
- Celebrated 'World Population Day' by delivering a lecture at Dr Ambedkar Nagar; 14 July 2005. Participants: 70
- Displayed 6 posters on tobacco use at CCM, AIIMS; 14 October 2005.
- Organized an exhibition on 'Iodine deficiency disorders', at Dr Ambedkar Nagar; 10 November 2005. Participants: 130.
- Organized an exhibition on 'HIV/AIDS', at Dr Ambedkar Nagar; 1 December 2005. Participants: 110.
- Organized an exhibition on 'HIV/AIDS', at B.B. Dixit Library, AIIMS; 2 December 2005.
- Organized an exhibition on 'HIV/AIDS', at Raj Kumari Amrit Kaur OPD, AIIMS; 3–18 December 2005.

IEC materials development

- Six posters on the World Health Day theme 'Make every mother and child count'
- Five posters on 'Meningitis'
- Three posters on 'Iodine deficiency disorders'
- Translation/correction work of IDD booklet
- Two posters on 'Bird flu' (one each in Hindi and English)
- Six posters redesigned for the Department of Gynaecology
- Five posters designed as teaching aids for faculty members
- One brochure designed on HIV/AIDS
- 12 posters designed on activities of CCM, AIIMS

Social services

Patients identified for social services	1970
Financial help arranged	
Medicine	80
Education	2
Occupation	6
Marriage	2
Charges exempted	40
Counselling	
Individual	1500
Family	150
Group	110

Referral services to various social welfare organization	38
Rehabilitation services	
Jobs04	
Cancer patients	2
Handicapped	18
School dropout	8
Widow/deserted women	3
Nutrition supplements	7
Coordination with other social welfare organizations	12

National Services Scheme Unit, AIIMS

The NSS Unit of AIIMS is located at Centre for Community Medicine. Dr Bir Singh continued to be its Programme Coordinator and Dr Kiran Goswami, Dr Anil Goswami and Mrs Kiran Singh continued to be the Programme Officers of this unit. Despite receiving no grants from the government, the unit continued to be active in the year under review. The following are the highlights of its achievements in the year under review:

- Organized an exhibition on the World Health Day theme 'Make every mother and child count', at Dr Ambedkar Nagar.
- Organized an exhibition on World No Tobacco Day, at Dr Ambedkar Nagar.
- Organized a blood donation camp in collaboration with College of Nursing, AIIMS (118 units of blood collection).
- Organized a Well baby show and an exhibition on 'Personal hygiene, breast feeding and weaning', at Dr Ambedkar Nagar. Organized World TB Day at Dr Ambedkar Nagar.

Sex and Marriage Counselling Clinic

The clinic deals with sexual disorders and marriage-related problems. This clinic operates from Room no. 38, AIIMS Hospital, Ground Floor in the OPD Block on Monday, Wednesday and Saturday. Faculty Incharge: Professor Bir Singh

New patients	2500
Old patients	2498
Total	4998

Investigations

Semen analysis	940
Urine examination	132
Blood chemistry	319
Hormones tests	581
Haemoglobin	24
Urine and semen C/S, VDRL, HIV	286
FNAC	65
X-ray, US Doppler	55

AIDS Education and Training Cell

Professor C.S. Pandav is the Chairperson and Professor Bir Singh is the coordinator of this Cell. The following activities were organized by the cell in 2005–06.

1. The telephone helpline on HIV/AIDS and contraception ‘Shubhchintak’ continued to be operated with usual popularity, attracting good number of calls.
2. The Internet-based helpline (e_shubhchintak) on HIV/AIDS and contraception continued to be operated with usual popularity. It received 3–5 requisitions/day for IEC materials apart from queries on HIV/AIDS, sexual problems, STDs, contraception, etc.
3. The Cell produced and disseminated educational material on HIV/AIDS to general public in 2005–2006 also.
4. About seventy new patients were given counselling personally apart from repeat patients.
5. HIV/AIDS Orientation Training Programme for Programme Officers of NSS under University Talk AIDS (UTA) was conducted in Jamia Millia Islamia, New Delhi.
6. A health talk cum exhibition on ‘HIV/AIDS Awareness’ was organized in the Community on World AIDS Day; 1 December 2005.
7. The third edition of the book entitled *All You Wanted to Know About HIV/AIDS*, and the second edition of the book *A Handy Guide for Good Sex and Family Life*, written by Professor Bir Singh and Professor V.P. Reddaiah was published.
8. Produced a brochure on ‘Helplines’ and distributed in urban settlement colonies of UHP and AIIMS Hospital.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor C.S. Pandav was conferred Dr A.L. Saha Oration during the Joint National Conference of Indian Association of Preventive and Social Medicine and Indian Public Health Association from 21 to 24 January 2006 at Tirupati. He also delivered 32nd Kamla Puri Sabharwal Memorial Lecture on ‘Partnerships for public health: Linking knowledge to action’ by Lady Irwin College on 25 November 2005; Guest of Honour during the inauguration ceremony of Wagad Hospital at Bhachau, Kutch, on 17 September 2005; appointed Chairman, Specialty Board in Community Medicine; was nominated as a Member of Expert Group for the following three Task Force under the National Rural Health Mission (NRHM).

- Task Force for preparing guidelines of Indian Public Health Standards (IPHS) for community health centres, primary health centres (PHCs) and sub-centres.
- Task Force for advising NRHM on Strategies for Urban Health Care,
- Task Force on Medical Education.

Professor C.S. Pandav continues to be Secretary, Thyroid Association (India); Secretary, Indian Coalition for Control of Iodine Deficiency Disorders (ICCIDD); President, Cine-Club, AIIMS; Regional Council Member, Federation of Film Societies of India; Member, Foundation for Prevention of Head Injury, Bangalore; Member, National Advisory Committee, The Micronutrient Initiative, South Asia Regional Office, New Delhi; Technical Adviser and Member, Governing Body of Nutrition Syndicate; Executive Committee Member and Regional Coordinator, South East Asia and Pacific Region, International

Council for Control of Iodine Deficiency Disorder; Member of SEA-IDDEA Group Steering Committee (Joint participation of WHO/ UNICEF/ MI/ ICCIDD).

Dr Bir Singh was on lien to UNICEF India till September 2005 as Programme Manager for HIV/AIDS Programme of UNICEF; nominated Member, National Technical Committee on ART by National AIDS Control Organization; Member, Technical Advisory Committee on Science and Technology Communication for Water Resources and Eco-systems Management, Department of Science and Technology, Government of India; Consultant to UNICEF on 'PPTCT of HIV/AIDS' (January 2006); elected Member, Governing Council, Indian Association of PSM for the year 2006–07; attended the meeting of National Health Management Consortium at NIHFW, New Delhi (17–18 October 2006); and conducted an evaluation of Community Care Centre for HIV/ AIDS, New Delhi for Delhi AIDS State Control Society; Anchored one programme and participated as an expert in two programmes on health on Doordarshan and Channel Seven and conducted/ participated in 18 programmes on health on All India Radio.

Dr Sanjeev Gupta was Reviewer for *The National Medical Journal of India*; Member, Research Committee, AIIMS; Member, Working Group for the evaluation of training under the Integrated Diseases Surveillance Project, Ministry of Health and Family Welfare, Government of India.

Dr Kiran Goswami was a member of the Central Coordinating Team of the IndiaCLEN—Model Injection Centres and Faculty Incharge for zone-2.

Dr K. Anand was a Temporary Advisor to WHO for the following workshops/meetings—Orientation Workshop on NCD info base WHO/SEARO, New Delhi; WHO Workshop on 'Developing guidelines for monitoring community-based interventions', Jakarta, Indonesia; Meeting on NCD Prevention and Control, Bandos, Maldives; Intercountry Workshop on 'Development of capacity strengthening modules', Colombo, Sri Lanka; STEPs Survey Planning Workshop Thimpu, Bhutan; Member, Project Review Committee of ICMR for cardiovascular diseases and Urban Mental Health Programme, Media Lab Asia projects on IT in health; Reviewed the chapter on burden of diseases due to NCDs in the NCMH background papers, 'Burden of Disease in India', published by National Commission on Macroeconomics and Health, Ministry of Health and Family Welfare, Government of India, September 2005; the Ministry of Health working group on Development of NCD Surveillance protocol under IDSP[?]; Working group on National Workshop on 'Developing protocols for morbidity field surveys' organized by Institute for Research in Medical Statistics. Reviewer for *Indian Pediatrics*, *National Medical Journal of India*, *Indian Journal of Community Medicine*, *Journal of Epidemiology and Community Health*; Jury Member, Third Nation Wide Essay Contest on 'Urban health' jointly organized by IAPSM and UHRC.

Dr Baridalyne participated in the WHO expert committee meeting on 'Strategies for developing cervical cancer control strategies in India' PGIMER, Chandigarh.

9.9 Dermatology and Venereology

	Professor and Head Vinod K. Sharma	
Neena Khanna	Professors	K.K. Verma (Venereology)
	Additional Professor M. Ramam	
	Associate Professor Binod K. Khaitan	
Sujay Khandpur	Assistant Professors G. Sethuraman	Somesh Gupta (Since November 2005)

EDUCATION

The department is training postgraduates and undergraduates in Dermatology and Venereology including HIV/AIDS; two postgraduates completed MD training.

Short- and long-term training

The department has provided short-term training to 4 doctors and 6 months' training to 1 doctor. Another dermatologist underwent IADV L training fellowship in Contact Dermatitis.

CME/ National/ International Conferences

The faculty of the department delivered 26 lectures at international and national conferences and symposia.

RESEARCH

Funded Projects

1. A prospective randomized, double-blind, placebo-controlled, parallel group, multi-centre, 52-week trial to assess the efficacy and safety of adjunct mycophenolate mofetil (MMF) to achieve remission with reduced corticosteroids in subjects with active pemphigus vulgaris. V.K. Sharma. Funded by Aspreva Pharmaceuticals, USA for 2 years. Funds: Rs 1.38 lakh.
2. A randomized double-blinded study to evaluate the safety and efficacy of intralesional administration of PCNA synthetic chimeric ribozyme (VIT 100) (Chelase) in the treatment of keloids and hypertrophic scars when administered concurrently with 5 FU and kenalog. V.K. Sharma. Funded by Clincyte, USA for 1 year. Funds: Rs 2.5 lakh.
3. Evaluation of algorithms proposed by NACO for syndromic management of urethral and vaginal discharge in a tertiary care centre in northern India. Neena Khanna. Funded by ICMR for 3 years. Funds: Rs 13,63,966.

4. A randomized investigator-blinded, active-controlled, parallel-group study to compare the efficacy and safety of 6-week treatment with terbinafine new paediatric formulation versus 6-week treatment with griseofulvin paediatric suspension in children with tinea capitis. Neena Khanna. Funded by Novartis for 15 months. Funds: Rs 3,62,004.
5. Evaluation of ovarian function in female patients with multibacillary leprosy. Neena Khanna. Funded by ICMR for 3 years. Funds: Rs.16,83,370.
6. Role of *Parthenium hysterophorus* in pathogenesis and exacerbations of atopic dermatitis. Neena Khanna. Funded by DBT for 3 years. Funds: Rs 14,34,330.
7. Azathioprine versus corticosteroids for the treatment of *Parthenium* dermatitis. K.K. Verma. Funded by ICMR for 3 years. Funds: Rs 11,25 lakh.
8. Utility of antigen detection from the epidermis of Indian patients in pemphigus vulgaris. Sujay Khandpur. Funded by AIIMS for 1 year. Funds: Rs 1 lakh.

Departmental projects

Ongoing

1. Evaluation of cyclophosphamide pulse in treatment of pemphigus
2. Desmoglein 1 and 3 antibodies in pemphigus
3. Sepsis in dermatology ward
4. Clinical profile of Reiter's disease
5. Aetiology and survival in severe drug induced hypersensitivity reactions
6. Segmental vitiligo: Response to tacrolimus
7. Treatment of paresthesia in leprosy—a comparative trial of amitriptyline, gabapentin and a multivitamin preparation
8. Perimenstrual eruptions in females
9. Use of methotrexate in controlling pemphigus group of disorders
10. Detection and characterization of ureaplasma urealyticum and mycoplasma hominis by conventional and molecular methods in patients with genitourinary tract infection
11. Comparison of clinical efficacy and cost-effectiveness of PUVASol and PUVA in treatment of chronic plaque psoriasis in a developing economy
12. Evaluation of mucocutaneous disorders in HIV infected patients and their correlation with CD4 lymphocytes
13. Effectiveness of CO₂ laser in benign vascular lesions
14. CO₂ laser as a therapeutic modality for the treatment of epidermal and sebaceous naevi
15. Evaluation of CO₂ laserabrasion as a therapeutic modality in extensive facial angiofibromas in tuberous sclerosis
16. Azathioprine as a corticosteroid-sparing agent in the treatment of airborne contact dermatitis
17. Effectiveness of CO₂ laser for the treatment of keloids
18. Long-term safety and toxicity of azathioprine in patients of airborne contact dermatitis.
19. Evaluation of patients with multiple drug hypersensitivity
20. Characterization of the diagnostic clinical features of segmental vitiligo
21. Randomized clinical trial of tacrolimus and fluticasone in the treatment of segmental vitiligo.
22. A study of the psychosocial effects of vitiligo
23. A descriptive study of tuberculids
24. Dexamethasone–cyclophosphamide pulse therapy in pemphigus
25. A descriptive study to define the specific clinical features of segmental vitiligo as compared to non-segmental vitiligo

26. A study of clinicopathological features of photosensitive lichenoid eruption
27. A randomized study to evaluate efficacy and safety of 0.1% tacrolimus ointment vs 0.05% fluticasone propionate cream in patients with segmental vitiligo.
28. Role of sclerotherapy in vascular malformations
29. Clinical profile of portwine stains and other vascular malformations
30. Comparison of cyclophosphamide-dexamethasone pulse versus cyclophosphamide pulse alone in pemphigus vulgaris

Completed

1. Methotrexate in the treatment of *Parthenium* dermatitis
2. Effects of epilation by waxing on the skin
3. Randomized clinical trial of azathioprine weekly pulse versus daily azathioprine for the treatment of *Parthenium* dermatitis
4. To evaluate the role of immunosuppressive drugs for the treatment of chronic urticaria
5. A comparative randomized study of the efficacy and side-effects of betamethasone oral mini-pulse therapy vs topical triamcinolone acetonide (0.1%) oral paste in patients with oral lichen planus
6. Evaluation of itraconazole pulse therapy in eruptive lichen planus
7. Comparison of punch versus split skin grafting in chronic stable vitiligo
8. Role of photopatch testing in photocontact dermatitis

Collaborative Projects

1. Dermatological complications in renal transplant recipient patients—a follow up study (with Nephrology).
2. Role of electron beam radiation therapy for the treatment of mycosis fungoides (with Radiation Oncology).
3. Evaluation of topical cyclosporine in ocular involvement in Stevens–Johnson syndrome (with Ophthalmology, Dr R.P. Centre) (Funded by ICMR).
4. A cross-sectional study of infectious disease prevalence among prison inmates in the Tihar jail complex, Delhi (with Medicine and Microbiology).

PUBLICATIONS

Journals

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2. Bakshi S, Sethuraman G, Singh M, Arya S. Atypical pyoderma gangrenosum as a presenting manifestation of childhood acute lymphoblastic leukemia. *Pediatr Dermatol* 2005;**22**:543–5.
3. Bhat R, Sharma VK, Ramam M, Kumar A. Cyclophosphamide pulses with oral prednisolone in the treatment of pemphigus: A pilot study. *Dermatol Online J* 2005;**11**:4.
4. Chan I, Sethuraman G, Bruning E, Hamada T, Sharma VK, McGrath JA. Molecular basis of lipid proteinosis in two Indian sibs. *J Dermatol* 2004;**31**:764–6.
5. Dhawan B, Gupta V, Khanna N, Singh M, Chaudhry R. Evaluation of the diagnostic efficacy of PCR for ureaplasma urealyticum infection in Indian adults. *Jpn J Infec Dis* 2006;**59**:57–8.
6. Jain R, Bali H, Sharma VK, Kumar B. Cardiovascular effects of corticosteroid pulse therapy: A prospective controlled study on pemphigus patients. *Int J Dermatol* 2005;**44**:285–8.
7. Kaur J, Khandpur S, Seith A, Khanna N. Dapsone-induced eosinophilic pneumonitis in a leprosy patient. *Indian J Leprol* 2005;**77**:267–71.

8. Kaur J, Puri T, Julka PK, Gunabhushanam G, Iyer VK, Singh MK, *et al.* Adenocarcinoma of the gall bladder presenting with a cutaneous metastasis. *Indian J Dermatol Venereol Leprol* 2006;**72**:64–6.
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12. Khandpur S, Sugandhan S. Extensive lichen sclerosus et atrophicus. *Indian Pediatr* 2005;**42**:1150–1.
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16. Manchanda Y, Sethuraman G, Pakhi PS, Singh M. *Molluscum contagiosum* presenting as penile horn in a HIV-positive patient. *Sex Trans Infect* 2005;**81**:183–4.
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19. Ramam M. Wheat induced urticaria? *Ind J Dermatol Venereol Leprol* 2005;**71**:211–12.
20. Rathi SK, Pandhi RK, Chopra P, Khanna N. Lesional T-cell subset in post-kala-azar dermal leishmaniasis. *Int J Dermatol* 2005;**44**:12–13.
21. Sethuraman G, Fassihi H, Ashton Gh, Bansal A, Kabra M, Sharma VK, *et al.* An Indian child with Kindler syndrome resulting from a new homozygous nonsense mutation (c468) in the KIND1 gene. *Clin Exp Dermatol* 2005;**30**:286–8.
22. Sethuraman G, Kaur J, Nag HL, Khaitan BK, Sharma VK, Singh MK. Symmetrical scrolofoderma with lupus vulgaris. *Clin Exp Dermatol* 2006;**31**:475–7.
23. Sethuraman G, Khaitan BK, Yashpal M, Das S, Sirka CS, Singh M, *et al.* Verrucous epidermal nevus with unusual features. *Pediatr Dermatol* 2006;**23**:98–9.
24. Sethuraman G, Malhotra A, Khaitan BK, Singh M, Sharma VK, Das AK, *et al.* Osteoma cutis in pseudohypoparathyroidism. *Clin Exp dermatol* 2006;**31**:225–7.
25. Sethuraman G, Malhotra A, Khaitan BK, Verma KK, Sharma VK, Das AK, *et al.* Pubertal giant sebaceous hyperplasia. *Clin Exp Dermatol* 2005;**30**:585–6.
26. Sethuraman G, Malhotra AK, Khaitan BK, Sharma VK. Effectiveness of isotretinoin in papillon lefevre syndrome. *Paediatr Dermatol* 2005;**22**:378–9.
27. Sharma VK, Khandpur S. Changing pattern of sexually transmitted infections in India. *Natl Med J India* 2004;**17**:310–19.
28. Sharma VK, Sethuraman G, Bhat R. Evolution of clinical pattern of parthenium dermatitis: A study of 74 cases. *Contact Dermatitis* 2005;**53**:84–8.
29. Sharma VK, Sethuraman G, Garg T, Verma KK, Ramam M. Patch testing with Indian standard series in New Delhi. *Contact Dermatitis* 2004;**51**:319–21.
30. Tejasvi T, Sharma VK, Sethuraman G, Singh MK, Xess I. Invasive dermatophytosis with lymph node involvement in an immunocompetent patient. *Clin Exp Dermatol* 2005;**30**:506–8.

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32. Verma KK, Prasad HRY. Common hair loss disorders. *Physician's Digest* 2005;**14**:49–57.
33. Verma KK, Tejasvi T, Verma K, Sethuraman G, Bansal A. Severe mucocutaneous Behcet's disease treated with dexamethasone pulse. *J Assoc Physicians India* 2005;**53**:998–9.

Books

1. Khanna N. *Illustrated synopsis of dermatology and sexually transmitted diseases*-. 2nd ed. New Delhi: Peepee Publishers, revised reprint; 2006.
2. Pasricha JS, Khaitan BK. *Clinical methods in dermatology and venereology*. Delhi: Mehta Publishers; 2005.
3. Pasricha JS, Khaitan BK, Misra RS, Ramesh V, Ramam M, Verma KK, et al. *Current literature dermatology 2003–2004*. IADVL (Delhi State Branch); 2005.

Chapters in Books

1. Gupta S, Dipankar DC, Kanwar AJ. Management of ingrowing toe nail. In: Shegal VN (ed). *Dermatologic surgery made easy*. New Delhi: Jaypee Brothers; 2006:229–40.
2. Gupta S. Partial nail avulsion with nail matrix phenolization. In: Shegal VN (ed). *Dermatologic surgery made easy*. New Delhi: Jaypee Brothers; 2006:241–6.
3. Khaitan BK, Dattagupta S, D'Souza P. Fungal Infections. In: Singh MK (ed.) *Diagnostic dermatopathology: A manual*. New Delhi: National Academy of Medical Sciences; 2005:30–44.
4. Khandpur S. Intralesional therapy in dermatology. In: Sehgal VN (eds). *Dermatologic surgery made easy*. New Delhi: Jaypee Brothers; 2006:269–78.
5. Verma KK, Tejasvi T. CO₂ laser in dermatology and aesthetic surgery. In: Sehgal VN (ed). *Dermatologic surgery made easy*. New Delhi: Jaypee Brothers; 2006:253–68.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor V.K. Sharma was awarded Dr R.V. Rajam Oration Award by National Academy of Medical Sciences, New Delhi for work on STD and contact dermatitis in agriculture workers and delivered the oration at 45th National Academy of Medical Sciences Conference at Ahmedabad; 17–19 December 2005; Member, Editorial Board, *American Journal of Contact Dermatitis*; elected President, Contact and Occupational Dermatoses Forum of India (CODFI) and Chairman Therapeutic Guidelines Committee, Indian Association of Dermatologists, Venereologists and Leprologists, for 2005.

Dr K.K. Verma was a Visiting Professor to the University of Ulm, Germany.

Dr M. Ramam became a Member of the Editorial Board, *Indian Journal of Dermatology, Venereology and Leprology* and IADVL Textbook of Dermatology, Venereology and Leprosy. He was a Visiting faculty to the University of California, San Francisco, USA.

Dr Binod Khaitan elected Member, National Academy of Medical Sciences, India.

Dr Sujay Khandpur elected Member, Therapeutic Guidelines Committee of IADVL.

Dr G. Sethuraman elected Member, National Academy of Medical Sciences, India. He received two International Merit Scholarship Awards from American Academy of Dermatology Scholarship Award and Young Dermatologist Travel Award. He is the Associate Editor of the *Indian Journal of Paediatric Dermatology*.

9.10 Endocrinology and Metabolism

Professor and Head

A.C. Ammini

Professor

N. Tandon

Additional Professor

N. Gupta

Associate Professor

R. Goswami

Assistant Professors

V.P. Jyotsna

R. Khadgawat

EDUCATION

Undergraduate, postgraduate and paramedical training

The department was actively involved in regular training of undergraduate and nursing students while postgraduate students from MD Internal Medicine came for one month posting in the Department of Endocrinology and Metabolism.

Long- and short-term training

- Two candidates completed their DM and two new candidates joined the department for DM course.
- One student joined PhD (Endocrinology).
- Three students joined the department for long-term training (two-year, non-DM).
- Three students joined the department for short-term training of three months.

Continuing Medical Education

Conferences

- The department co-hosted the Annual Conference of the Endocrine Society of India; November 2005.
- The department co-hosted the Annual Conference of the Indian Society of Bone and Mineral Research; November 2005.

Lectures delivered

The faculty and residents of the department participated in and delivered lectures/ presented papers in the CME programmes, workshops, seminars, several national and international meetings on endocrinology and diabetes mellitus.

Dr Nikhil Tandon

- 'Osteoporosis and DEXA', API Ghaziabad Chapter, Ghaziabad, UP; 23 May 2005.

- ‘Stem cell research—are we ready?’ in the programme ‘Desert Storm’, organized by the Bangalore Diabetes Club, Indian Institute of Science, Bangalore; 28 May 2005.
- ‘Obesity and diabetes mellitus’, Session on ‘Consumer right to safety and informed choice— involving consumer organizations’, Delhi; 31 July 2005.
- ‘Dilemma of a thyroid nodule’, Endocrinology Update 2005, Research and Referral Hospital, New Delhi; 4 September 2005.
- ‘Newer insulin and delivery systems’, CME on ‘Paediatric endocrine problems—practical solutions’, New Delhi; 4 September 2005.
- ‘Assessment and management of childhood and adolescent obesity’, CME on ‘Emerging epidemic of obesity and related cardiovascular problem in India’, National Academy of Medical Sciences, PGIMER, Chandigarh; 20 November 2005.
- ‘Stem cell based therapy for pancreatic disorders’, meeting on ‘Stem cell therapy’, at AIIMS; 26 November 2005.
- ‘Newer insulins’ CME 2005 of the East Delhi Physicians’ Association; 27 November 2005.
- ‘Type-1 diabetes mellitus’, organized by Ranbaxy Science Foundation at AIIMS; 28 November 2005.
- ‘Hypothyroidism’ in the multi-specialty CME programme in Northern Railway Central Hospital, New Delhi; 28 January 2006.
- ‘Laboratory tests—what, when and how’, South Delhi Doctor’s Forum, New Delhi; 5 March 2006.

National and International Conferences

Conferences

Dr Nikhil Tandon

- Secretary, Scientific Committee of the 1st Annual Conference of the Research Society for the Study of Diabetes in India (RSSDI), Delhi Chapter; December 2005.
- Joint Organizing Secretary of the International Symposium on ‘Cardiovascular diseases, diabetes and stroke’, AIIMS; 17–18 February 2006.

Lectures delivered

Dr Nikhil Tandon

- ‘Stem cell and diabetes’, 1st Annual Conference of Research Society for the Study of Diabetes in India (RSSDI), New Delhi; 11 December 2005.
- ‘Glycemic control in acute stroke: How fast and how tight?’, Indo-US Symposium on ‘Cerebrovascular disorders’, Indo-US Science and Technology Forum, AIIMS; 14 December 2005.
- ‘Technological breakthrough in diabetes mellitus’, Medicine Update 2005, MAMC, New Delhi; 16 December 2005.
- ‘Burden of childhood obesity: North Indian scenario’ and ‘Meeting the challenge of pre-diabetes in public health and clinical settings’, International Symposium on ‘Cardiovascular diseases, diabetes and stroke’, AIIMS; 17–18 February 2006.
- ‘Lifestyle and degenerative diseases’, 3rd Indo-Australian Conference on ‘Biotechnology vaccines for cancer, infectious diseases, lifestyle and degenerative disease’, Hyderabad; 8 March 2006.
- ‘Pre-diabetes’, International Symposium on ‘Cardiovascular diseases, diabetes and stroke’, AIIMS; 17–18 February 2006.
- ‘Technological advances in management of diabetes’, 1st Karolinska Symposium on ‘Current problems in diabetes—2006’, Bhubaneshwar; January 2006.

- ‘Diabetes, iodine deficiency and osteoporosis’, National Nutrition Guidelines Seminar; April 2005.
- ‘Glycemic control initiatives’, Advance Regional Meeting at Sabah, Malaysia; 4 June 2005.
- ‘To treat or not to treat—IFG, IGT’, 1st Karolinska Symposium on ‘Current problems in diabetes—2006 (CPID)’, Bhubaneswar, Orissa; 10–11 January 2006.
- ‘Vitamin D-PTH axes in bone health and Bone densitometry’, Training programme, Indian Society of Bone and Mineral Research, Cochin; 25–27 March, 2006.
- ‘Bone densitometry’, Training programme, Indian Society of Bone and Mineral Research, Cochin; 25–27 March, 2006.

RESEARCH

Funded Projects

Completed

1. Assessment of familial aggregation and immunogenetic associations of autoimmune thyroiditis in first-degree relatives of patients with juvenile autoimmune thyroid disease. Nikhil Tandon. Funded by INMAS, DRDO, Ministry of Defence, Government of India (GoI), for 2 years (2003–2005). Funds: Rs 5 lakh.
2. Vitamin D status and bone mineral density in North Indian school children. Nikhil Tandon. Funded by INMAS, DRDO, Ministry of Defence (GoI), for 2 years (2003–2005). Funds: Rs 5 lakh.
3. Dual energy X-ray absorptiometry (DEXA) assessment of BMD in healthy adolescent Delhi school children. Funded by INMAS, DRDO, Ministry of Defence (GoI), for 2 years (2004–2006). Funds: Rs 5 lakh.
4. Impact of nutrition on bone mineral health of adolescent schoolgirls of Delhi. Nikhil Tandon. Funded by INMAS, DRDO, Ministry of Defence (GoI), for 2 years. Funds: Rs 9.5 lakh.
5. Evaluation and treatment of childhood obesity and its associated co-morbid conditions. Nikhil Tandon. INMAS, DRDO, Ministry of Defence (GoI), for 2 years (2004–2006). Funds: Rs 9.5 lakh.
6. Association between low birth weight and autoimmune markers of diabetes in a young Delhi cohort. Nikhil Tandon. Funded by ICMR for 2 years (2004–2006). Funds: Rs 15 lakh.

Ongoing

1. Assessment of prevalence of osteoporosis in adult population in India. A.C. Ammini. Funded by ICMR as a Task Force Project.
2. Postmenopausal evaluation and risk reduction and lasofoxifene: A multicentric trial. A.C. Ammini. Funded by Pfizer India.
3. ADVANCE. Nikhil Tandon. Funded by the Institute of International Health, Sydney, Australia (now renamed The George Institute) Funds: Rs 40 lakh.
4. Immunogenetic and humoral profile of diabetes mellitus in Asian Indians. Nikhil Tandon. Funded by INSERM-ICMR programme of the ICMR for 3 years (2004–2007). Funds: Rs 29,25,200.
5. Efficacy of soya phytoestrogens on osteoporosis and cardiovascular profiles of post-menopausal women. Nikhil Tandon. Funded by DBT (GoI), for 3 years (2003–2006). Funds: Rs 14 lakh.
6. Hyperglycaemia and its effect after acute myocardial infarction on cardiovascular outcomes in patients with type-2 diabetes (HEART2D). Nikhil Tandon. Funded by Eli Lilly for 3 years (2004–2007). Funds: Rs 10 lakh.
7. A multicentre, randomized, double-blind, active controlled study to compare the effect of 24 weeks’ treatment with combination therapy of LAF237 and pioglitazone to LAF237 monotherapy or pioglitazone monotherapy in drug naïve patients with type 2 diabetes. Nikhil Tandon. Funded by Novartis Pharma for 1 year (2005–2006). Funds: Rs 5 lakh.

8. Reduction in the occurrence of center threatening diabetic macular oedema (B7A-MC-MBDL). Ruboxistaurin, is a protein kinase C inhibitor which has showed efficacy in diabetic retinopathy. Nikhil Tandon. Funded by Eli Lilly for 3 years (2005–2008). Funds: Rs 5 lakh.
9. Foetal and childhood growth and the effect of lifestyle interventions on CHD risk factors in young Indian adults. Nikhil Tandon. Funded by the British Heart Foundation for 3 years (2005–2008). Funds: £180,000.
10. Diabetes mellitus and vulvo-vaginal candidiasis: Prevalence of infection and its treatment. R. Goswami. Funded by ICMR for 2 years (2004–2006). Funds: Rs 5.57 lakh.
11. To assess the prevalence of vitamin D deficiency in patients with non-traumatic fracture of hip. R. Khadgawat. Intramural funding by AIIMS. Funds: Rs 55,000.
12. To study the prevalence of vitamin D deficiency and osteoporosis in patients taking antiepileptic drug sodium valproate as monotherapy for more than 1 year on OPD basis. R. Khadgawat. Intramural funding by AIIMS. Funds: Rs 50,000.

PUBLICATIONS

Journals

1. Biswas K, Goyal R, Ammini AC, Karak AK, Sarkar C, Mishra NK, *et al.* Recurrent lymphocytic hypophysitis in a woman 27 years after subtotal adrenalectomy for hypercortisolism possibly of autoimmune origin. *J Assoc Physicians India* 2005; **53**:1066–9.
2. Dandona L, Tandon N, Sahni P. Academic medicine and health improvements in India. *Natl Med J India* 2005;**18**:53–8.
3. Goswami D, Goswami R, Banerjee U, Dhadwal V, Miglani S, Lattif AA, *et al.* Pattern of Candida species isolated from patients with diabetes mellitus and vulvovaginal candidiasis and their response to single dose oral fluconazole therapy. *J Infect* 2006;**52**:111–17.
4. Goswami R, Gupta N, Ray D, Rani R, Tomar N, Sarin R, *et al.* Polymorphisms at +49A/G and CT60 sites in the 3' UTR of the CTLA-4 gene and APECED related AIRE gene mutations analysis in sporadic idiopathic hypoparathyroidism. *Int J Immunogenet* 2005;**32**:390–400.
5. Guglani B, Das CJ, Seith A, Tandon N, Loway BA. A deformed skull with enlarging hand and feet in a young female. *Br J Radiol* 2006;**79**:84–6.
6. Jha A, Sharma SK, Tandon N, Lakshmy R, Kadiravan T, Handa KK, *et al.* Thyroxine replacement therapy reverses sleep-disordered breathing in patients with primary hypothyroidism. *Sleep Med* 2006;**7**:55–61.
7. Mahajan SD, Aalinkeel R, Singh S, Shah P, Gupta N, Kochupillai N. Thyroid hormone dysregulation in intrauterine growth retardation associated with maternal malnutrition and/or anemia. *Horm Metab Res* 2005;**37**:633–40.
8. Marwaha RK, Tandon N, Reddy DR, Aggarwal R, Singh R, Sawhney RC, *et al.* Vitamin D and bone mineral density status of healthy schoolchildren in northern India. *Am J Clin Nutr* 2005;**82**:477–82.
9. Mathur RP, Dash SC, Gupta N, Prakash S, Saxena S, Bhowmik D. Effects of correction of metabolic acidosis on blood urea and bone metabolism in patients with mild to moderate chronic kidney disease: A prospective randomized single blind controlled trial. *Ren Fail* 2006;**28**:1–5.
10. Pathak P, Kapil U, Kapoor SK, Saxena R, Kumar A, Gupta N, *et al.* Prevalence of multiple micronutrient deficiencies amongst pregnant women in a rural area of Haryana. *Indian J Pediatr* 2005;**71**:1007–14.
11. Priya G, Bhagat H, Pandia MP, Chaturvedi A, Seth A, Goswami R. Can propofol precipitate pancreatitis in patients with Cushing's syndrome? *Acta Anaesthesiol Scand* 2005;**49**:1381–3.

12. Sharma A, Chavali S, Mahajan A, Tabassum R, Banerjee V, Tandon N, *et al.* Genetic association, post-translational modification, and protein-protein interactions in type 2 diabetes mellitus. *Mol Cell Proteomics*. 2005;**4**:1029–37.
13. Sharma SK, Tandan SM, Saha PK, Gupta N, Kochupillai N, Misra NK. Reversal of subclinical adrenal insufficiency through antituberculosis treatment in TB patients: A longitudinal follow up. *Indian J Med Res* 2005;**122**:127–31.
14. Singh BM, Ammini AC, Kriplani A. Ovarian cyst in juvenile hypothyroidism. *Arch Gynecol Obstet* 2005;**271**:262–3.
15. Turton JP, Mehta A, Raza J, Woods KS, Tiulpakov A, Cassar J, *et al.* Mutations within the transcription factor PROP1 are rare in a cohort of patients with sporadic combined pituitary hormone deficiency (CPHD). *Clin Endocrinol (Oxf)* 2005;**63**:10–8.
16. Vikram NK, Tandon N, Misra A, Srivastava MC, Pandey RM, Mithal A, *et al.* Correlates of type 2 diabetes mellitus in children, adolescents and young adults in north India: A multisite collaborative case-control study. *Diabet Med* 2006;**23**:293–8.
17. Viswanathan V, Thomas N, Tandon N, Asirvatham A, Rajasekar S, Ramachandran A, *et al.* Profile of diabetic foot complications and its associated complications—a multicentric study from India. *J Assoc Physicians India* 2005;**53**:933–6.
18. Vupputuri MR, Goswami R, Gupta N, Ray D, Tandon N, Kumar N. Prevalence and functional significance of 25-hydroxyvitamin D deficiency and vitamin D receptor gene polymorphisms in Asian Indians. *Am J Clin Nutr* 2006;**83**:1411–19.

Abstracts

19. Ammini AC, Karak AC, Kulshreshtha B, Khadgawat R, Eunice M, Kriplani A. CAH children with complete masculinization of external genitalia undervirilize and feminize at puberty. *Horm Res* 2005;**64**:S-313
20. Bhadada S, Bhansali A, Khadgawat R, Unnikrishnan A, Singh SK, Suryanarayanan K, *et al.* Paget's disease: Clinical profile of 19 patients from India. *Bone* 2005;**36**:S452
21. Eunice M, Kulshreshtha B, Kriplani A, Kucheria K, Goswami R, Kumar S, *et al.* A familial form of 46XY gonadal dysgenesis presenting at adolescence as primary amenorrhea. *Horm Res* 2005;**64**:S-323.
22. Ganie A, Khurana ML, Ammini AC. Exaggerated thelarche—an uncommon presentation. *Horm Res* 2005;**64**:S-216.
23. Khadgawat R, Desai A, Kulshreshtha B, Eunice M, Ammini AC. How and when treatment should be started in simple virilizing congenital adrenal hyperplasia (SVCAH). *Horm Res* 2005;**64**:S-313.
24. Khadgawat R, Srivastav T, Tandon N, Gupta N, Bihari M, Ammini AC. Effect of long term administration of antiepileptic drugs on bone health parameters in outpatients population: High prevalence of osteopenia and vitamin D deficiency. *Bone* 2005;**36**:S380.
25. Kulshreshtha B, Eunice M, Ammini AC. Fertility in females with congenital adrenal hyperplasia. *Horm Res* 2005;**64**:S-324.

PATIENT CARE

OPD activity

The department has OPD on all six working days with two specialty clinics, Paediatric and Adolescent Endocrinology clinic (every Monday, 2–5 pm), and Diabetes of Young clinic (every Saturday, 9–1 pm). The total number of new cases seen from 1 April 2005 to 31 March 2006 was 9711.

Total number of DXA scan done 1550

Laboratory Investigations

The total number of endocrine investigations done during this period was 23,802, while Metabolic laboratory of the department carried out 20,228. The break-up of these investigations is given below.

Hormone	Number of samples assayed
1. T4	5890
2. TSH	7760
3. TPO	578
4. LH	1269
5. FSH	1393
6. PRL	1234
7. Testosterone	905
8. Cortisol	2021
9. 17-OH progesterone	277
10. DHEAS	174
11. ACTH	514
12. 25-OH vitamin D	661
13. PTH	640
14. Insulin	165
15. C-peptide	85
16. GAD antibody	133
17. Growth hormone	103
Total	23,802

Investigations done in the metabolic laboratory for patient care

Investigation	Number of samples
Blood sugar	11,444
Glycated haemoglobin	3,966
Urinary creatinine	1,415
Urinary albumin	1,415
Urine pH	200
Osmolality	330
Calcium	486
Phosphorus	486
Alkaline phosphatase	486

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr Nikhil Tandon was awarded the B.C. Roy Award in the Eminent Medical Teacher category 2005. He was elected as a Member of the Task Force on 'Stem cell biology', DBT, New Delhi; nominated as an Inspector for accreditation in the Department of Endocrinology of the CMC and Hospital, Vellore on 10 June 2005; participated as a representative of the Indian Society for Bone Mineral Research (ISBMR) in the IOF Worldwide Conference of Osteoporosis Patient Societies, 27–30 September 2005, Bangkok, Thailand; visited the Canadian Institute of Health Research (CIHR), Ottawa, Canada, as a Member of the ICMR delegation, 10–16 October 2005.

Dr Rajesh Khadgawat was appointed as Joint Secretary, Indian Society of Bone and Mineral Research (ISBMR). He was also given the ‘Young Investigator Travel Award’ by ISBMR for attending International Bone and Mineral Society (IBMS)–International Osteoporosis Federation (IOF) joint meeting, Geneva, Switzerland; June 2005.

Two senior residents from the department won ‘The Best Paper Award’ at the Annual meeting of Endocrine Society of India (ESICON), New Delhi; 11–13 November 2006.

The department has started a new specialty clinic ‘Paediatric and Adolescent Endocrinology Clinic (PAEC)’.

The state-of-the-art ‘Chemmi-Luminescence Immuno-Assay (CLIA)’ technique was started in the department in the year 2005–2006. This advanced and latest technique is used for estimation of various hormones in the blood.

9.11 Forensic Medicine

Professor and Head

T.D. Dogra

Additional Professors

O.P. Murty

D.N. Bhardwaj

R.K. Sharma
(on long leave)

Associate Professor

S.K. Gupta

Assistant Professors

Sanjeev Lalwani
(JPNATC)

Adarsh Kumar

Millo Tabin
(JPNATC)

Scientist-II

Anupama Raina

EDUCATION

The department is actively engaged in undergraduate and postgraduate teaching with six postgraduate (MD) students and one PhD student. The department is also imparting training in DNA fingerprinting and Toxicology to BSc/MSc students from other Indian universities.

Continuing Medical Education

Conferences

Sixth National Conference of ICFMT was organized at PGI, Chandigarh in which the department was an active participant.

Lectures

The departmental faculty/staff participated in training programmes organized by the Academy of CBI, NICFS, New Delhi, Academy of IAS trainees, Uttaranchal Judicial and Legal Academy, Nainital. Lectures and demonstrations were held for CBI officials, police officers, judicial officers, medical officers and forensic science experts from all over country. Professor Dogra delivered guest lecture on 'Medical Ethics' in the IVth Annual Conference of Punjab Academy of Forensic Medicine held in Patiala.

RESEARCH

Departmental Projects

Completed

1. Effect of storage on isolation of DNA from seminal stains on different kinds of fabrics

Ongoing

1. Auditing of medicolegal work
2. Comprehensive study of unnatural deaths among the elderly in South Delhi

3. Comprehensive study of fire-arm related deaths
4. A comprehensive autopsy study of sudden natural deaths in South Delhi
5. Inferring genetic diversity and molecular relatedness among the Indian Saraswat community at various STR loci.

PUBLICATIONS

Journals

1. Bashir S, Sharma Y, Irshad M, Gupta SD, Dogra TD. Arsenic induced cell death in liver and brain of experimental rats. *Basic Clin Pharmacol Toxicol* 2006;**98**:38–43.
2. Bashir S, Sharma Y, Irshad M, Nag TC, Tiwari M, Kabra M, *et al.* Arsenic induced apoptosis in rat liver following repeated 60 days exposure. *Toxicology* 2006; **217**:63–70.
3. Bhardwaj DN, Sharma RK. Apex Court rules: Doctors's error of judgement not criminal. *Indian Pract* 2005;**58**:225–6.
4. Bhardwaj DN, Sharma SK. Epidemiological study of un-natural deaths in Teenagers in South Delhi during 1994–2003. *Indian Med Gaz* 2005;**139**:111–13.
5. Bhardwaj DN, Singh B, Dogra TD. Safe pesticides management: Need for education. *Indian Med J* 2005;**99**:167–8.
6. Bhardwaj DN. Clinical Forensic Nursing: The need for specialization. *Indian Med J* 2005;**99**:54.
7. Bhardwaj DN. Designer babies. *Indian Med Gaz* 2004;**138**:483.
8. Bhardwaj DN. Genetic doping vis-à-vis Sports medicine. *Indian Med J* 2005;**99**:99.
9. Bhardwaj DN. Retrospective analysis of suicides in teenage brides in South Delhi. *Indian Med Gaz* 2005;**139**:27–8.
10. Bhardwaj DN. Role of toxicology laboratory vis-a-vis management of poisoning cases. *Indian Med Gaz* 2004;**138**:179–80.
11. Bhardwaj DN. Small aircraft disasters: Need to learn lessons. *Indian J Clin Pract* 2005;**15**:44–5.
12. Chaudhary BL, Singh D, Tirupde BH, Sharma RK. Profile of road traffic accidents in Kasturba Hospital of MGIMS, Wardha (Maharashtra) *Medico-legal Update* 2005;**5**:127–134.
13. Gupta S. Autopsy in alleged medical negligence death. *Indian Pract* 2003;**56**:693–704.
14. Gupta S. Medical documentation in hospital practice. *Ann Natl Acad Med Sci (India)* 2004;**40**:1–14.
15. Kumar A, Singh VP, Vij K. Situs Inversus vis-a-vis Sudden Death. *J Indian Acad Foren Med* 2005;**27**:122–26.
16. Lalwani S, Dogra TD, Bhardwaj DN, Sharma RK, Murty OP. Efficacy of filter plant in removal of arsenic from water of Yamuna river. *IJCM* 2005;**30**:140–1.
17. Lalwani S, Dogra TD, Bhardwaj DN, Sharma RK, Murty OP. Study on arsenic level in public water supply of Delhi using hydride generator accessory coupled with atomic absorption spectrophotometer. *IJCB* 2006;**21**:70–6.
18. Raina A, Pramanik P, Dogra TD. Effect of storage conditions of seminal stains on different textures of clothes in relation to DNA yield. *Indian Internet J Foren Med Toxicol* 2005;**3**:2 www.icfnt.org/index2.htm
19. Rautji R, Lalwani S, Dogra TD. Fatal occupational injuries in the South Delhi construction industry: A retrospective study. *Med Sci Law* 2005; **45**:169–73.
20. Sarkar SC, Lalwani S, Rautji R, Bhardwaj DN, Dogra TD. A study on victims of sexual offences in South Delhi. *Indian J Family Welfare* 2005;**51**:60–6.
21. Sharma RK. Current status of medical negligence in India in view of supreme court judgment. *Medico-legal Update* 2005;**5**:71–87.

22. Sharma Y, Bashir S, Irshad M, Nag TC, Dogra TD. Dimethoate induced effects on antioxidant status of liver and brain of rats following subchronic exposure. *Toxicology* 2005;**21**:173–81.

Books/Chapter in books

1. Sharma RK. *Concise Textbook of Forensic Medicine and Toxicology*. 1st ed. New Delhi: Elsevier; 2005:1–322.
2. Lalwani S, Dogra TD. Legal aspects of drug abuse in India. In: Lal R (ed). *Substance use disorder—manual for physician*. 2005 NDDTC, AIIMS, New Delhi; 181–9.

PATIENT CARE

Casualty Services

The department continued to provide round-the-clock coverage to the casualty in medicolegal cases, e.g. injury, sexual offences, poisoning and other complicated medicolegal cases. The department is also attending all the calls pertaining to medical examination in police and judicial custody.

Medicolegal postmortems performed 1717

The department provided consultation services to the CBI, crime branch and other central and state investigating agencies in complicated medicolegal postmortem cases conducted at other centres of the country and also participated in board postmortem cases.

Court attendance by members of the department 1850

Doctors of the department also attended court on behalf of the Medical Superintendent, other doctors who have left AIIMS as directed by the court. About 950 such summons were attended to by the department.

Clinical forensic medicine

The department examined cases of age estimation, medical examination, marriage disputes, potency, DNA fingerprinting, etc. referred by the court, CBI and other investigating agencies. Forty-three such cases were dealt in 2005–2006.

DNA fingerprinting

The department is providing training in DNA fingerprinting to the candidates sponsored by various universities. It is performing DNA fingerprinting test in selected medicolegal cases. 12 such cases were entertained in 2005–2006.

Medical toxicology

Tests for various poisons, e.g. heavy metals opiates, benzodiazepines and alcohol were done in the toxicology laboratory.

Community service

The department participated in training programmes organized by the Academy of CBI and NICFS. Lectures and demonstrations were held for CBI officials, police officers, judicial officers, medical officers, forensic science experts, public prosecutors, etc. from all over country.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor T.D. Dogra delivered the G.C. Medhi Oration at the 27th Annual Conference of the Indian Academy of Forensic Medicine held at Siliguri, West Bengal. He was nominated as an Executive Member of the Indian Academy of Forensic Medicine (Governing Council 2006–2008).

Dr Adarsh Kumar, Assistant Professor (JPNATC) was nominated as the Joint Secretary, North Zone, Indian Academy of Forensic Medicine (Governing Council 2006–2008).

9.12 Gastroenterology

Professor and Head

S.K. Acharya

Professors

Y.K. Joshi

Rakesh Aggarwal

Umesh Kapil

Anoop Saraya

Associate Professors

Pramod Garg

Vineet Ahuja

Assistant Professor

Govind K. Makharia

EDUCATION

Undergraduate, postgraduate, PhD and paramedical training programme remained the same.

Short- and long-term training

Four candidates underwent training during 2005–2006; they were trained for a period of 3 months to one year. Eight DM candidates and 4 PhD candidates underwent long-term training.

Continuing Medical Education

The department organized 'International Therapeutic Endoscopy Workshop' from 3 to 4 September 2005 under the auspices of the Society of Gastrointestinal Endoscopy of India. The workshop was attended by more than 350 delegates.

Human Nutrition unit organized a CME programme entitled 'National workshop on development of guidelines for effective home-based care and treatment of children suffering from severe under nutrition' from 11 to 13 November 2005 in which 150 participants from all over the country participated.

Lectures delivered

The department faculty delivered 14 lectures during CME programmes conducted throughout the country.

National and International Conferences

The department faculty delivered 27 guest lectures in national and international conferences.

RESEARCH

Funded Projects

Completed

1. Multicentric randomized double-blind trial of interferon + ribavirin versus interferon + glycyrrhizin for 6 months among naïve patients with CH-C. S.K. Acharya. Funded by ICMR for 5 years. Funds: Rs 45 lakh.

2. Effect of glutamine supplementation on the clinical outcome and nutritional status in patients of acute myeloid leukaemia (AML). Y.K. Joshi. Funded by ICMR for 3 years. Funds: Rs 12 lakh.
3. Effect of feeding mustard oil on biochemical parameter and health profile of normal healthy individuals. Y.K. Joshi. Funded by MPRC for 4 years. Funds: Rs 11.75 lakh.
4. A cluster comparison of inflammatory gene expression profile in gastric mucosa with and without *Helicobacter pylori* infection using microarray analysis. Vineet Ahuja. Funded by DBT Overseas Associateship for 3 months. Funds: Rs 3.31 lakh.
5. A study of the role of anti-*Saccharomyces cerevisiae* antibody (ASCA) and anti-neutrophilic cytoplasmic antibody (ANCA) in differentiation of intestinal tuberculosis and inflammatory bowel disease. Govind K Makharia. Funded by AIIMS for 2 years (2004–2006). Funds: Rs 98,000.

Ongoing

1. Randomized trial of pegylated interferon vs lamivudine followed by PEG-1 for 1 year among patients with CH-B. S.K. Acharya. Funded by Fulford, India for 4 years. Funds: Rs 24 lakh.
2. Double-blind placebo-controlled randomized trial of L-ornithine-L aspartate among patients with acute liver failure. S.K. Acharya. Funded by Intas Pharmaceutical for 3 years.
3. Advanced Centre for Liver Disease (Institute and different projects in liver diseases). S.K. Acharya. Funded by ICMR. Funds: Rs 12 crore.
4. Epidemiological studies on hepatitis E. Rakesh Aggarwal. Funded by DBT for 3 years. Funds: Rs 9 lakh.
5. Prevalence of obesity and associated diseases amongst children in 5–18 years of age in the National Capital Territory of Delhi. Umesh Kapil. Funded by ICMR for 2 years. Funds: Rs 12 lakh.
6. Resolution of Bitot's spots after administration of mega-dose of vitamin A in a cohort of children in 1–5 years of age with Bitot's spot. Umesh Kapil. Funded by ICMR for 2 years. Funds: Rs 10 lakh.
7. Epidemiology of gallbladder cancer with special reference to nutritional risk factors. Umesh Kapil. Funded by ICMR for 3 years. Funds: Rs 10,66,264.
8. Assessment of magnitude of zinc deficiency among children in 6 months to 60 months of age in different regions of India. Umesh Kapil. Funded by DBT for 2 years. Funds: Rs 36,72,618.
9. Capacity-building project for food safety. Umesh Kapil. Funded by NIN for 1 year. Funds: Rs 10 lakh.
10. Effect of antioxidant supplementation on pain, antioxidant profile and oxidative stress in chronic pancreatitis. Anoop Saraya. Funded by ICMR for 3 years. Funds: Rs 4 lakh.
11. Role of enteral nutrition in preventing complications in severe acute pancreatitis. Anoop Saraya. Funded by ICMR for 3 years. Funds: Rs 8 lakh.
12. Role of total serum bile acids in diagnosis of intrahepatic cholestasis of pregnancy and effect of ursodeoxycholic acid in clinical and biochemical parameters of intrahepatic cholestasis of pregnancy. Anoop Saraya. Funded by AIIMS for 1 year. Funds: Rs 50,000.
13. Role of genetic mutations in chronic pancreatitis. Pramod Garg. Funded by ICMR for 3 years. Funds: Rs 12 lakh.
14. Role of leptin in tropical pancreatitis. Pramod Garg. Funded by AIIMS for 1 year. Funds: Rs 27,500.
15. Prevalence, aetiological factors and treatment of malnutrition by dietary intervention in patients with chronic pancreatitis. Y.K. Joshi. Funded by ICMR for 3 years. Funds: Rs 10.80 lakh.
16. Double-blind randomized placebo-controlled study of a probiotic preparation VSL#3 for the treatment of mild to moderate ulcerative colitis. Govind K. Makharia. Funded by CD Pharma India Ltd for 1 year (2005–2006). Funds: Rs 634,348.

Departmental Projects

Completed

1. Nutritional assessment in patients with malabsorption syndrome
2. Changing bacteriological profile in acute pancreatitis
3. Microlithiasis is not a significant cause of idiopathic recurrent acute pancreatitis
4. Cytochrome CYP2C19 polymorphisms in patients on proton pump inhibitors
5. A new salvage therapy for eradication of *H. pylori* in peptic ulcer disease
6. Family history of IBD in index cases of ulcerative colitis
7. Incidence and spectrum of bacterial, viral, fungal and protozoal infection in inflammatory bowel disease
8. Prevalence of gastroesophageal disease in adult urban community in north India
9. Prevalence of secondary bacterial infection in untreated amoebic liver abscess

Ongoing

1. Non-alcoholic fatty liver disease is not severe in India
2. Vitamin E based therapy ameliorates transaminitis in NAFLD
3. Randomized trial of i.v. somatostatin and nitroglycerine versus i.v. somatostatin among cirrhotic patients with acute variceal bleeding
4. Coagulation abnormality and results of angioplasty among patients with HVOTO
5. Randomized controlled trial of molecular absorbent recycling system (MARS) in patients with acute liver failure
6. Ammonia kinetics in acute liver failure
7. Dynamics of sepsis in acute liver failure
8. Seizures in acute liver failure
9. Randomized controlled trial of radiofrequency ablation and percutaneous acetic acid in patients with primary hepatocellular cancer
10. Coagulation profile in acute pancreatitis
11. Oxidative stress and role of antioxidants in acute pancreatitis
12. Role of oxidative stress and cytokines in acute liver failure
13. Effect of transdermal glyceryl trinitrate or pericoxib (valdecoxib) in the prevention of post ERCP pancreatitis
14. Role of antioxidants for pain relief in patients with chronic pancreatitis
15. Prevalence of bactobilia in patients with malignant biliary obstruction and its influence on endoscopic biliary drainage
16. Is chronic pancreatitis a risk factor for cancer of the pancreas?
17. Risk factor for cancer of the gallbladder

18. Study of the characteristics and outcome of 'early severe acute pancreatitis'
19. A study of assessment of dietary fibre intake in patients with irritable bowel syndrome and healthy individuals
20. Malabsorption in patients with inflammatory bowel disease and intestinal tuberculosis
21. Oesophageal manometry in patients with motor dysphagia and non-cardiac chest pain
22. Malabsorption syndrome in India
23. Variations of presentation of coeliac disease in adults
24. Nutritional and biochemical assessment of patients with inflammatory bowel disease

Collaborative Projects

Completed

1. Incidence and prevalence of primary liver cell cancer among patients with cirrhosis of liver (with Radiology).
2. Development of an IgM anti-hepatitis E virus ELISA kit (with Pathology).
3. Occult hepatitis B virus infection in India (with Pathology).
4. Randomized trial of endoscopic drainage versus percutaneous drainage in obstructive jaundice due to cancer of the gallbladder (with GI Surgery).
5. Evaluation of computerized tomography enteroclysis in identification of cause of obscure gastrointestinal bleeding (with Radiodiagnosis).
6. A study of emerging parasitic agents (intestinal coccidia and microsporidia) in aetiology of malabsorption syndrome (with Microbiology).

Ongoing

1. Non-alcoholic fatty liver disease in India (with Pathology).
2. Viral kinetics in chronic HBV infection (with Pathology).
3. HBeAg-negative chronic hepatitis B: Magnitude, natural course and therapeutic response (with Pathology).
4. Study on hepatitis markers, transactivating proteins, proliferation markers, oncogenes in patients with primary liver cell cancers (with Pathology).
5. Assessment of nutritional risk factors associated with oesophageal cancer—a case control study (with Laboratory Medicine).
6. Significance and relation of lipoprotein(a) with apoprotein A and B in liver disease (with Laboratory Medicine).
7. Prevalence of hepatitis B virus and hepatitis C virus infection in close family contact of dually infected patients with HBV and HCV (with Laboratory Medicine).
8. Effect of glutamine on intestinal structure and function in patients with inflammatory bowel diseases.

9. Role of EUS in obscure lower end of bile duct obstruction (with GI Surgery, Radiology).
10. Role of endotherapy and ESWL in the treatment of chronic pancreatitis (with Urology).
11. Randomized trial of endoscopic stenting versus cholecystojejunostomy in patients with peri-ampullary cancer with obstructive jaundice (with GI Surgery).
12. Magnetic resonance spectroscopy in differentiation of intestinal tuberculosis from inflammatory bowel disease (received the Best Paper Award in the Plenary Session of ISG, 2005) (with Nuclear Magnetic Resonance).
13. Differentiation of intestinal tuberculosis from Crohn's disease (with Pathology).
14. A study of Mycobacterium paratuberculosis in patients with Crohn's disease (with Microbiology and Biotechnology).
15. Prevalence of osteoporosis and osteopenia in patients with inflammatory bowel disease (with Endocrinology and Metabolism).
16. A study of spectrum of microscopic colitis in India (with Pathology).
17. Structure and functions of lungs in patients with achalasia cardia (with Medicine and Radiodiagnosis).
18. Functional magnetic resonance imaging and magnetic resonance imaging in patients with achalasia cardia (with Nuclear Magnetic Resonance).
19. Short- and long-term outcome after cardiomyotomy in patients with achalasia cardia.
20. Screening of patients with functional bowel disease, short stature, metabolic bone disease, amenorrhea and infertility for coeliac disease (with Endocrinology, Obstetrics and Gynaecology, and Neurology).
21. Clinical features, endoscopic features, and histological features of intestinal lymphangiectasia (with Pathology).
22. Effect of glutamine on structure and function of intestine in patients with inflammatory bowel disease.
23. Autonomic and immune functions in inflammatory bowel disease: Effect of yogic intervention (with Physiology).
24. Reintroduction of antitubercular drugs in ATT induced hepatitis: A randomized controlled trial (with Medicine).

PUBLICATIONS

Journals

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2. Ahuja V, Bhatia V, Dattagupta S, Raizada A, Sharma MP. Efficacy and tolerability of rifampicin-based rescue therapy for Helicobacter pylori eradication failure in peptic ulcer disease. *Dig Dis Sci* 2005;**50**:630–3.

3. Ahuja V, Dieckgraefe BK, Anant S. Molecular biology of the small intestine. *Curr Opin Gastroenterol* 2006;**22**:90–4.
4. Ahuja V. The case for *Helicobacter pylori* eradication in India: Sensationalism, skepticism and scientific salesmanship. *Indian J Gastroenterol* 2006;**25**:20–4.
5. Bhatia V, Singh R, Acharya SK. Predictive value of arterial ammonia for complications and outcome in acute liver failure. *Gut* 2006;**55**:98–104.
6. Bose B, Khanna N, Acharya SK, Sinha S. Generation and characterization of a high-affinity chimeric antibody against hepatitis B surface antigen. *Biotechnol Appl Biochem* 2006;**43**:93–101.
7. Bose B, Khanna N, Acharya SK, Sinha S. High affinity mouse-human chimeric Fab against hepatitis B surface antigen. *World J Gastroenterol* 2005;**11**:7569–78.
8. Dutta U, Nagi B, Garg PK, Sinha SK, Singh K, Tandon RK. Patients with gallstones develop gallbladder cancer at an earlier age. *Eur J Cancer Prev* 2005;**14**:381–5.
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13. Kapil U, Goindi G, Singh V, Kaur S, Singh P. Consumption of tobacco, alcohol and betel leaf amongst school children in Delhi. *Indian J Pediatr* 2005; **72**:993.
14. Kapil U, Kaur S, Singh C, Suri S. The impact of a package of single mega dose of vitamin A and daily supplementation of iron, folic acid and vitamin C in improving hemoglobin levels. *J Trop Pediatr* 2005;**51**:257–8. Epub 2005 Jun 15.
15. Kapil U, Sharma TD, Singh P, Dwivedi SN, Kaur S. Thirty years of a ban on the sale of noniodized salt: Impact on iodine nutrition in children in Himachal Pradesh, India. *Food Nutr Bull* 2005; **26**:255–8.
16. Kapil U, Singh P, Bahadur S, Dwivedi SN, Singh R, Shukla N. Assessment of risk factors in laryngeal cancer in India: A case-control study. *Asian Pac J Cancer Prev* 2005; **6**:202–7.
17. Kapil U, Singh P, Dwivedi SN. Status of iodine deficiency among schoolchildren in twenty-four districts in southern India. *Indian J Physiol Pharmacol* 2005; **49**:369–72.
18. Kapil U, Singh P. Serum copper levels among a tribal population in Jharkhand State, India: A pilot survey. *Food Nutr Bull* 2005; **26**:309–11.
19. Kapil U. National Rural Health Mission: Training of health functionaries. *Indian J Pediatr* 2006;**73**:248.
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Abstracts

28. Bala K, Makharia GK, Kumar Sandeep, Sharma U, Ahuja V, Jagannathan NR. Use of ¹H nuclear magnetic resonance spectroscopy in inflammatory bowel disease: Distinguishing ulcerative colitis Crohn’s disease and intestinal tuberculosis. *Indian J Gastroenterol* 2005;**24** (Suppl 1):A1.
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30. Bhutani S, Attlee S, Singh N, Makharia GK. Nutritional status in patients with malabsorption syndrome. *Indian J Gastroenterol* 2005;**24** (Suppl1): A100.
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32. Kumar A, Khadgawat R, Makharia GK. Patients with inflammatory bone disease have low mineral density. *Indian J Gastroenterol* 2005;**24** (Suppl 1): A100.
33. Makharia GK, Sachdeva V, Baba CS, Rajiva G. Anti-*sachharomyces cerevisiae* antibody does not differentiate intestinal tuberculosis from Crohn’s disease. *Indian J Gastroenterol* 2005;**24** (Suppl 1): A52–A53.
34. Sharma P, Makharia GK, Deepak KK. Cardiac autonomic functions in patients with achalasia cardia. *Indian J Gastroenterol* 2005;**24** (Suppl 1): A20.
35. Sharma P, Makharia GK, Deepak KK. Patients with inflammatory bowel disease have low vagal tone. *Indian J Gastroenterol* 2005;**24** (Suppl 1): A49–A50.
36. Sharma P, Patil U, Mane V, Makharia G, Deepak KK. Heart rate variability in response to water intake: Correlation with gastric myoelectrical activity in patients with inflammatory bowel disease. *Indian J Physiol Pharmacol* 2005;**49** (Suppl):79.

Chapters in Books

1. Acharya SK, Madan K, Dattagupta S, Panda SK. Viral hepatitis in India. In: Raghunath D, Nayak R (eds). *Trends and research in viral hepatitis*. New Delhi: Tata McGraw-Hill Publishing; 2006: 101–59.

PATIENT CARE

- Molecular absorbent recycling system MARS: Liver dialysis for acute liver failure is being performed regularly.
- Diagnostic tests: In collaboration with the Department of Pathology, all molecular diagnostic services such as genotyping and viral quantitation of HBV, HCV and HEV are provided to patients in livers clinic.
- A specialized ICU with 6 beds for Gastroenterology was started.

Special clinics

Name of the clinic	New cases	Old cases
Liver	956	6474
Gallstone and pancreas	323	1440
Ulcer clinic	98	1200
IBD clinic	269	720

The department has introduced a new clinic 'GI Interventional Clinic'

Routine clinic

New cases	20,007
Old cases	29,577

Procedures

Endoscopy + EST and EUS	10,173
Colonoscopy	1,873
ERCP	588
Ultrasound	1,250
Sigmoidoscopy	990
GI manometry	120

The department has introduced a new procedure 'EUS guided procedures'.

Tests undertaken in the department

1. Serum ceruloplasmin	325
2. Serum copper	300
3. 24-hour urinary copper	340
4. 24-hour ceruloplasmin	190
5. Super oxide dismutase	150
6. Total antiox response	150
7. Total GSH	150
8. MDA	150
9. Vitamin E	150
10. Vitamin C	150
11. Vitamin A	150
12. IL-1 β	86
13. Il-6	86
14. TNF- α	86
15. Adeponectin	86
16. Leptin	86
17. Insulin	86
18. Dxylose	632
19. Faecal fat estimation	135
20. Faecal chymotrypsin	145
21. Hydrogen breath test	93

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr S.K. Acharya was confirmed as Editor of *Tropical Gastroenterology, Journal of Gastroenterology and Hepatology*; elected as President of the Indian Society of Gastroenterology.

Dr Umesh Kapil continued to be a Member of National Breastfeeding Committee, Department of Women and Child Development, Ministry of Human Resource Development, Government of India; continued to be a Member of Indian Council of Medical Taskforce on Micronutrients; continued to be a Member of Taskforce on Biotechnological Approaches to Foods Safety and Agriculture; Member, Steering Committee of National Nutrition Monitoring Bureau, ICMR, New Delhi; Member, Scientific Advisory Committee of NIN, ICMR, New Delhi.

Dr Pramod Garg was elected Governing Council Member of the Governing Body of the Indian Society of Gastroenterology for 2004–2007; nominated as a Member of the International Editorial Board of the *Journal of Gastroenterology and Hepatology*.

Dr Vineet Ahuja was awarded DBT Overseas Fellowship award for 3 months: Trained at the Department of Molecular Biology (Microbiology) and Gastroenterology at Washington University at St Louis, USA; awarded the Best Poster Award at the Annual Meeting of the Indian Society of Gastroenterology at Vishakhapatnam 2005. He was appointed Assistant Editor of *Tropical Gastroenterology*.

Dr Govind Makharia was a recipient of Win Medicare Best Paper Award at the Plenary Session of Annual Conference of Indian Society of Gastroenterology, Vishakhapatnam, 2005; a recipient of Best Paper Award, in the FALK SYMPOSIUM 151, in Sydney, March 2006; nominated as Coordinator, Indian Society of Gastroenterology Task Force on Inflammatory Bowel Disease; nominated as a Member, Indian Society of Gastroenterology Task Force on Irritable Bowel Syndrome; nominated as a Member, Asia Colorectal Polyp Study Group.

1. The department was designated as the main clinical coordinating centre for ICMR conducted nationwide multicentric therapeutic trial on CH-C.
2. The department was awarded ‘Advanced Centre for Liver Diseases’ by ICMR for 5 years.

VISITING SCIENTISTS

1. Dr David Adams, Professor in Medicine, Liver Unit, Queen Elizabeth Hospital, Edgbaston, Birmingham, UK, visited the department on 23 February 2006.
2. Professor Ivo Graziadei Professor of Gastroenterology and Hepatology, Universitat Sklinik, Innsbruck, visited the department on 27 February 2006 and delivered a lecture.
3. Dr Vivek Raj, Professor of Gastroenterology, University of Littlerock, Arakansas, USA, visited the department on 1 March 2006.

9.13 Gastrointestinal Surgery

Professor and Head

Tushar K. Chattopadhyay

Additional Professor

Peush Sahni

Assistant Professor

Sujoy Pal

Nihar Ranjan Dash

EDUCATION

Undergraduate and Postgraduate

The department faculty is involved in the didactic teaching programme for undergraduates, surgical postgraduates and postdoctoral trainees. The department offers a 3-year superspecialty training in gastrointestinal surgery leading to an award of MCh in Gastrointestinal Surgery.

Long-term training

One trainee sponsored by the State Medical Services of Orissa for 2 years has joined the department.

Continuing Medical Education

Conferences, Seminars and Workshops

The 18th Annual Conference of the Indian Association of Surgical Gastroenterology (IASGCON 2005) was organized by the Department of Surgical Gastroenterology, PGIMER, Chandigarh in September 2005. Professor T.K. Chattopadhyay was a member of the Organizing Committee.

Lectures

The faculty delivered 12 CME lectures at various regional medical fora of the country.

RESEARCH

Funded Projects

Ongoing

1. Design development and commercialization of an indigenous syringe pump. Peush Sahni. Funded by Department of Information Technology, Government of India for 30 months Funds: Rs 28 lakh.
2. Identification of novel oesophageal squamous cell carcinoma genes by using a combination of array-based CGH and gene expression microarrays. Murali Dharan Bashyam (CI), T.K. Chattopadhyay (Co-PI), Siddhartha Duttgupta and Sujoy Pal (CI). Funded by DBT, Ministry of Science and Technology, Government of India for 36 months. Funds: Rs 73.26 lakh.

Departmental Projects

Completed

1. Study of enteral erythromycin on gastric emptying after classical Whipple pancreatoduodenectomy
2. Randomized controlled trial of adjuvant chemoradiotherapy versus radiotherapy for periampullary and pancreatic cancer following a Whipple pancreatoduodenectomy

3. Quality of life after transhiatal oesophagectomy for carcinoma oesophagus: An early prospective and late retrospective study
4. CT cholangiography for evaluation of hilar biliary obstruction
5. The role of endoscopic ultrasound for evaluation of periampullary tumours
6. A prospective study of a new stapled technique of esophagogastric anastomosis following transhiatal oesophagectomy
7. The influence of perioperative famotidine on tumour infiltrating lymphocytes in colon carcinoma and gastric carcinoma
8. Thromboelastography to detect covert coagulation abnormalities in patients with portal hypertension
9. A prospective study of quality of life following PTBD/stenting in patients with malignant hilar blocks deemed unresectable
10. A prospective study to evaluate gastrograffin for treating postoperative adhesive intestinal obstruction

Ongoing

1. Prospective evaluation of choledochoscopy for various biliary tract disorders
2. Prospective evaluation of the role of intraoperative enteroscopy in the management of obscure gastrointestinal bleeding
3. A prospective randomized study to compare hand-sewn and stapled oesophagogastric anastomoses following transhiatal oesophagectomy
4. A prospective study of neoadjuvant chemoradiotherapy for patients with adenocarcinoma of the gastro-oesophageal junction
5. A prospective randomized study comparing substernal and posterior mediastinal routes of gastric transposition following oesophagectomy
6. A study on quality of life following lateral pancreatojejunostomy for patients with chronic pancreatitis
7. Study of gastric emptying following classical Whipple pancreatoduodenectomy and pylorus-preserving pancreatoduodenectomy using scintigraphic techniques
8. A prospective study of the quality of life following endoscopic oesophageal stenting for inoperable patients with oesophageal carcinoma
9. A prospective randomized trial comparing preoperative radiotherapy and THE vs THE alone for squamous cell cancer of the lower third of oesophagus

Collaborative Projects

1. A randomized controlled trial on proximal lienorenal shunt vs sequential EVL and endoscopic sclerotherapy for patients with extrahepatic portal venous obstruction (with Gastroenterology).
2. Role of neoadjuvant chemoradiotherapy in adenocarcinoma of GE junction (with Radiotherapy).
3. Prospective study on the effect of lienorenal shunt on the pericholedochal collaterals causing portal hypertensive biliopathy (with Gastroenterology).
4. The role of adjuvant radiotherapy and chemoradiotherapy in patients with carcinoma of the pancreas (with Radiotherapy, IRCH).
5. A randomized controlled clinical trial of preoperative cholecystojejunostomy vs endoscopic stenting in surgical obstructive jaundice due to periampullary carcinoma (with Gastroenterology).
6. The role of endoscopic ultrasound for evaluation of periampullary tumours (with Gastroenterology).

PUBLICATIONS

Journals

1. Chinnakotla S, Pande GK, Sahni P, Gupta SD, Maulik M, Kumari R, *et al.* Evaluation of pringle

- maneuver during liver resection in a rat model of surgical obstructive jaundice. *J Invest Surg* 2005;**18**:107–13.
2. Kapoor S, Das B, Pal S, Sahni P, Chattopadhyay TK. En bloc resection of right-sided colonic adenocarcinoma with adjacent organ invasion. *Int J Colorectal Dis* 2006;**21**:265–8.
 3. Kapoor S, Tevatia MS, Dattagupta S, Chattopadhyay TK. Primary hepatic nerve sheath tumor. *Liver Int* 2005;**25**:458–9.
 4. Pal S, Radhakrishna P, Sahni P, Pande GK, Nundy S, Chattopadhyay TK. Prophylactic surgery in non-cirrhotic portal fibrosis: Is it worthwhile? *Indian J Gastroenterol* 2005;**24**:239–42.
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 6. Pal S, Sahni P. Steroid-refractory severe ulcerative colitis: Time to rethink. *Trop Gastroenterol* 2005;**26**:107–10.
 7. Sharma R, Sud N, Chattopadhyay TK, Ralhan R. TC21/R-Ras2 upregulation in esophageal tumorigenesis: Potential diagnostic implications. *Oncology* 2005;**69**:10–18 (Epub).
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 9. Sud N, Sharma R, Ray R, Chattopadhyay TK, Ralhan R. Differential expression of G-protein coupled receptor 56 in human esophageal squamous cell carcinoma. *Cancer Lett* 2006;**233**:265–70.

Books

1. Chattopadhyay TK, Sahni P, Pal S (eds). *GI Surgery Annual*. New Delhi: Indian Association of Surgical Gastroenterology 2005;**12**:1–178.
2. Chattopadhyay TK, Sahni P, Pal S (eds). *Oesophagus: Supplement to GI Surgery Annual, Vol. 12*. New Delhi: Indian Association of Surgical Gastroenterology; 2005.

Chapters in Books

1. Chattopadhyay TK. Advances in gastrointestinal surgery. In: Chattopadhyay TK, Sahni P (eds). *GI Surgery Annual, Vol. 12*. New Delhi: Indian Association of Surgical Gastroenterology; 2005:125–78.
2. Pal S, Chattopadhyay TK. Short-segment anterior cardiomyotomy for achalasia cardia. In: Chattopadhyay TK, Sahni P, Pal S (eds). *Oesophagus; Supplement to GI Surgery Annual, Vol. 12*. New Delhi: Indian Association of Surgical Gastroenterology; 2005:11–13.
3. Singh L, Pal S, Sahni P, Chattopadhyay TK. Transhiatal oesophagectomy. In: Chattopadhyay TK, Sahni P, Pal S (eds). *Oesophagus; Supplement to GI Surgery Annual, Vol. 12* New Delhi: Indian Association of Surgical Gastroenterology; 2005:26–35.

PATIENT CARE

OPD and specialty clinics

Total number of new patients seen	1723
Total number of old patients seen	4522

Special laboratory facilities

- Anal manometry
- Oesophageal manometry
- 24-hour ambulatory oesophageal pH monitoring

Inpatients

Total number of inpatient admissions (January 2005–December 2005): 609

Surgical procedures

Total number of operations performed	495
Elective operations	370
Emergency operations	125

Number of operations performed (Special interest areas)

Surgical jaundice	145
Portal hypertension	43
Oesophageal cancer	77
Carcinoma gallbladder	31
Ulcerative colitis	21
Upper GI haemorrhage	17
Lower GI haemorrhage	11
Acute pancreatitis	12
Chronic pancreatitis	15
Liver resections	8
Orthotopic liver transplantation	2
Cadaveric liver retrievals	2

AWARDS AND HONOURS

Professor T.K. Chattopadhyay was President (till September 2004) and is presently Past President, Indian Association of Surgical Gastroenterology (IASG); delivered the Veerabhai J.R. Das Oration of the IASG; ‘Oesophageal surgery: Past, present and future’, 18th Annual Conference of the IASG; September 2005.

Dr Peush Sahni is Past President, World Association of Medical Editors. He is also the Editor of the *National Medical Journal of India*.

VISITING SCIENTISTS

1. Dr Sumit Mittal, Assistant Professor, Department of Surgery, Creighton University Medical Center, Omaha, Nebraska, USA.

9.14 Haematology

Professor and Head

V.P. Choudhry

Professors

R. Saxena

H.P. Pati

Rajat Kumar

Associate Professors

S. Tyagi

M. Mahapatra

Assistant Professors

Tulika Seth

P. Mishra

EDUCATION

Undergraduate and Postgraduate

The faculty is taking undergraduate classes in Haematology in the form of didactic lectures, case studies and ward rounds.

The department is running a DM course in Clinical Haematology and Haematopathology. Presently, nine residents are undergoing training in Clinical Haematology and five in Haematopathology. During this period two candidates each completed DM Clinical Hematology and DM Haematopathology. DM residents are being posted to HLA, Biotechnology, Genetic division, Transfusion Medicine department, etc. for their training. Currently, five students are registered for PhD and are working on molecular haematology and other aspects of Glanzmann's thrombo-asthenia, thrombosis in the young, molecular studies of acute myeloid leukaemia, molecular genetics of inherited coagulation factor deficiencies, haemoglobin E disease and von Willebrand disease.

In collaboration with the Departments of Radiology and Pathology, radiology and haematopathology conferences are being held once a week. Interdepartmental symposia are being organized regularly with the Department of Medical Oncology. The department is organizing weekly and monthly conferences/clinics for the postgraduates of the Departments of Pediatrics and Pathology. Faculties from other departments are being invited regularly to give lectures.

Short- and long-term training

The department has provided training in the field of Haematology to seven doctors from other institutions for periods of 1 to 6 months. Seventeen students undertook short-term training varying from 1 to 6 months during the year.

Continuing Medical Education

Conferences, seminars, workshops

- Wet workshop on 'Molecular haematology and thrombophilia', sponsored by DST, Government of India; 27–28 July 2005.

- First hands-on training programme for young science postgraduates/ undergraduates/technologists on ‘Diagnosis of genetic disorders using cytogenetics and molecular genetics methods’, sponsored by DBT, Government of India, organized by the Departments of Anatomy, Paediatrics and Haematology, AIIMS; 22 August–3 October 2005.
- CME in ‘Emergencies in haematology’, in collaboration with the Association of Physicians of India–Delhi State Chapter, AIIMS; 3 September 2005
- First hands-on training programme for scientists (medical/non-medical) on ‘Diagnosis of genetic disorders using cytogenetics and molecular genetics methods’, sponsored by DBT, organized by the Departments of Anatomy, Paediatrics and Haematology, AIIMS; 16–30 September 2005.
- Fifth workshop on ‘Prenatal and postnatal diagnosis of genetic disorders using molecular methods’, sponsored by DBT, organized by the Departments of Anatomy, Paediatrics and Haematology, AIIMS; 7–21 November 2005.
- Wet workshop on ‘Quality control’, AIIMS; 27 February 2006.
- Wet workshop on ‘Haemolytic anaemia’, AIIMS; 27 February 2006.
- Workshop on ‘Venous access devices in haematology’, AIIMS; 27 February 2006.
- National Haematology Update V, AIIMS; 25–26 February 2006.

Lectures delivered

Dr V.P. Choudhry

- ‘Neonatal anaemia’, XI National CME in Haematology, Bombay Hospital; April 2005.
- ‘Management of thalassaemia’, Thalassaemia Update in Chandarpur; December 2005.
- ‘Sickle cell anaemia—new concepts’, National Haemoglobinopathies Update, Nagpur; March 2005.
- ‘How to make sickle life easy’, Thalassaemia–Sickle Cell Update, Bhilai; February 2005.
- ‘Current management of sickle cell anaemia and future perspectives’, National Haematology Update, AIIMS; 25–26 February 2006.
- ‘Thalassaemia intermedia, International Thalassaemia Day, Maulana Azad Medical College, New Delhi; 8 May 2005.
- ‘Current management of thalassaemia’, Conference on ‘Thalassaemia’, North Eastern Thalassaemia Society, Dibrugarh; April 2005.

Dr R. Saxena

- ‘PCR and RT PCR applications in haematology’, Wet workshop on ‘Recent advances in diagnosis of genetic disorders’, Department of Anatomy, AIIMS; 20 February–6 March 2006.
- ‘Laboratory approach to haemolytic anaemia’, Wet workshop on ‘Haemolytic anaemia’, AIIMS; 27 February 2006.
- ‘Quality assessment of haemogram’, Wet workshop on ‘Quality control’, AIIMS; 27 February 2006.
- ‘Monitoring of anticoagulants therapy’, National Haematology Update V, AIIMS; 27 February 2006.
- ‘Anticoagulant therapy’, Medicine Update, MAMC, New Delhi; December 2005.
- ‘Carrier detection and prenatal diagnosis in haemophilia’, 5th workshop on ‘Prenatal and postnatal diagnosis of genetic disorders using molecular methods’, sponsored by DBT, organized by the Departments of Anatomy, Paediatrics and Hematology, AIIMS; 7–21 November 2005.
- ‘Quality assurance’, Workshop on ‘Nutrition research for capacity building of young scientists—especially for Northeast region’, ICMR, Guwahati; October 2005.
- ‘Nutritional anaemia affecting haematological parameters’, Workshop on ‘Nutrition research for capacity building of young scientist—especially for Northeast region’, ICMR, Guwahati; October 2005.

- ‘Thrombophilia: Indian Scenario’, Guest Lecture, AFMC, Pune; September 2005.
- ‘Carrier detection and prenatal diagnosis in haemophilia A’, 1st hands-on training programme for scientists (medical/non-medical) on ‘Diagnosis of genetic disorders using cytogenetics and molecular genetics methods’, sponsored by DBT organized by the Departments of Anatomy, Paediatrics and Haematology, AIIMS; 16–30 September 2005.
- ‘Carrier detection and pre-natal diagnosis in Haemophilia A’, Haemophilia Federation of India (HFI), LIONS Hospital, New Delhi; August 2005.
- ‘Role of molecular genetics in haematology’, Wet workshop on ‘Molecular haematology and thrombophilia’, sponsored by DST, Government of India; AIIMS; 27–28 July 2005.
- ‘Monitoring of anticoagulant therapy’, Wet workshop on ‘Molecular haematology and thrombophilia sponsored by DST, AIIMS; 27–28 July 2005.
- ‘Pathogenesis of thrombophilia’, Wet workshop on ‘Molecular haematology and thrombophilia’ sponsored by DST, AIIMS; 27–28 July 2005.
- ‘Haemophilia A: Carrier detection, prenatal diagnosis and counselling’, DISPAT, AIIMS; April 2005.
- ‘VWD Indian Scenario’, XIth National CME in ‘Haematology’, Bombay Hospital, Mumbai; 22–24 April 2005.
- ‘Platelet function defects’, XIth National CME in ‘Haematology’, Bombay Hospital, Mumbai; 22–24 April 2005.

Dr H.P. Pati

- ‘PNH: Pathogenesis and recent advances’, XI National CME in Haematology, Bombay Hospital, Mumbai; 22–24 April 2005.
- ‘Histiocytic disorders’, XI National CME in Haematology, Bombay Hospital, Mumbai; 22–24 April 2005.
- ‘Hb HPLC, an overview’, National Haematology Update V, AIIMS; 25–26 February 2006.
- ‘Peripheral blood smear’, Post Update Workshop, Department of Haematology, AIIMS; 27 February 2006.
- ‘Interpretation of Hb HPLC’, Post Update Workshop, Department of Haematology, AIIMS; 27 February 2006.

Dr Rajat Kumar

- ‘Cord blood transplants: Applications and drawbacks’, 8th update in Oncology, focus on ‘Current status and future directions in haemopoietic malignancies’, Sir Ganga Ram Hospital, New Delhi; 2–3 April 2005.
- ‘Splenomegaly in haematological practice: Diagnostic and therapeutic approach’ and ‘Setting up bone marrow transplant unit’, XI National CME in Haematology, Bombay Hospital, Mumbai; 22–24 April 2005.
- ‘Iron chelation’, Symposium on ‘Thalassaemia’, Maulana Azad Medical College, New Delhi; 8 May 2005.
- ‘Stem cell transplantation’, CME in Paediatric Haematology and Oncology’, Department of Paediatrics, Institute of Medical Sciences, BHU, Varanasi; 21 August 2005.
- ‘Febrile neutropaenia’, CME in Paediatric Haematology and Oncology’, Department of Paediatrics, Institute of Medical Sciences, BHU, Varanasi; 21 August 2005.
- ‘Stem cell source and its impact on SCT outcome: Role of bone marrow priming’, CME in Stem cell transplantation, Army Hospital (R&R), Delhi Cantt; 17–18 September 2005.
- ‘Management of acute myeloid leukaemia in elderly’, North-West Chapter of Indian Society of Haematology and Transfusion Medicine, PGIMER, Chandigarh; 25 September 2005.

- ‘Choice of anti-fungal therapy’, 16th Annual CME of API-Delhi State Chapter, Hotel Ashok, New Delhi; 22–23 October 2005.
- Moderated a CPC, 16th Annual CME of API-Delhi State Chapter, Hotel Ashok, New Delhi; 22–23 October 2005.
- ‘Blood products and transfusion—oncologists’ perspective’, Indo-Australian Haemato-oncology Update, Bangalore; 24 October 2005.
- ‘Fungal infections: Experience in AIIMS’, Rajiv Gandhi Cancer Institute, New Delhi; 21 January 2006.
- ‘Unexplained eosinophilia—what to do’, CME in Haematology–Oncology, SMS Medical College, Jaipur; 10–12 February 2006.
- ‘Aplastic anaemia’, CME in Medicine, RNT Medical College, Udaipur; 25 March 2006.
- ‘Bleeding diathesis’, CME in Medicine, RNT Medical College, Udaipur; 25 March 2006.
- ‘Antifungal therapy’, CME in Medicine, RNT Medical College, Udaipur; 25 March 2006.

Dr Seema Tyagi

- ‘External quality assessment in haematology’, 5th Wet workshop on ‘Quality control in haemogram’, National Health Update V, AIIMS; February 2006.

Dr M. Mahapatra

- ‘Learning through interesting cases’, National Haematology Update V, AIIMS; 26–27 February 2005.
- ‘Splenomegaly: A clinical approach’, XVI Annual CME of Association of Physicians of India, Delhi State Chapter, Hotel Ashok; 22–23 October 2005.
- ‘An approach to a bleeding patient’, CME in Haematology—‘Emergencies in Haematology’, AIIMS; 3 September 2005.

Dr Tulika Seth

- ‘Comprehensive cancer care’, Satellite Conference on ‘Cancer control and prevention’, Golden Jubilee International Conference on ‘Cardiovascular diseases, stroke and diabetes’, AIIMS; 18 February 2006.

National and International Conferences

Lectures delivered

Dr VP Choudhry

- ‘Current concepts in management of aplastic anaemia’, North Zone IAP Conference, Amritsar; March 2005.
- ‘Fungal infections’, 2nd Trends Medical Mycology Conference, Berlin; 23-26 October 2005.
- ‘Transfusion therapy in thalassaemia’, XII International Thalassaemia Conference, Dubai; January 2006.

Dr R. Saxena

- ‘Pre-natal diagnosis and carrier detection in bleeding disorders’, 8th National Conference, Indian Society for Prenatal Diagnosis and Therapy, India Habitat Centre, New Delhi; 17–19 February 2006.
- ‘BM in disorders of MPS’, Annual meet of IAPM, Indore; 28 October 2005.
- ‘Interpretation Automated Haematology counter parameters’, IAPM, Annual Meet, LHMC, New Delhi; April 2005.

Dr H.P. Pati

- ‘Myeodysplastic syndrome, recent advances in pathogenesis’, 46th Annual Conference of Indian Society of Haematology and Transfusion Medicine, Imphal; 14–16 January 2006

Dr Rajat Kumar

- ‘A study of aplastic anaemia with special reference to ATG therapy’, Haematology Habana, Haban, Cuba; 19 May 2005.
- ‘Stem cells—clinical application and future’, 46th Annual Conference of Indian Society of Haematology and Transfusion Medicine, Imphal; 14–16 January 2006.

RESEARCH

Funded Projects

Ongoing

1. Thalassaemia screening programme. V.P. Choudhry. Funded by NTWS for 6 years (from 2001 onwards). Funds: Rs 2.2 lakh per year.
2. Haemoglobin colour scale for Hb determination. R. Saxena. Funded by WHO for 6 months (February–July 2006). Funds: Rs 9 lakh.
3. Elucidation of molecular genetics of acute leukaemia. R. Saxena. Funded by ICMR for 2 years (2005–2006). Funds: Rs 5.5 lakh.
4. Sub-characterization of vWD in Indians. R. Saxena. Funded by DST Project for 3 years (2003–2006). Funds: Rs 17 lakh.
5. Characterization of mutations underlying haemophilia A and B. R. Saxena. Funded by DBT for 3 years (2004–2007). Funds: Rs 21.46 lakh.
6. Molecular characterization and treatment of acute lymphoid leukaemia on protocol modified MCP 841. International Network for Cancer Treatment and Research. R. Saxena. Funded by INCTR for 6 years (2001–2007). Funds: Rs 4.5 lakh per year.
7. Quality assessment in haemogram. R. Saxena. Funded by NABL, DST (2003–2005). Funds: Rs 1.5 lakh/year.
8. Role of TAFI in pathogenesis of young Indian stroke. R. Saxena. Funded by ICMR-INSERM (2004–2006). Funds: Rs 5 lakh.
9. Molecular cytogenetic study in acute leukaemia and myelodysplastic syndromes: Diagnosis and prognostic implications. Seema Tyagi. Funded by AIIMS for 3 years (2005–2008). Funds: Rs 51,700/year.
10. Angiogenesis in myelodysplastic syndrome and its correlation with thalidomide therapy. M. Mahapatra. Funded by AIIMS for 1 year (2005–2006). Funds: Rs 64,500.

Completed

1. Prevalence of alpha thalassaemia in patients with thalassaemia intermedia. Funded by AIIMS for 3 years (2002–2005). Funds: Rs 50,000.

Departmental Projects

1. Role of apoptosis in the pathogenesis of chronic lymphocytic leukaemia.
2. Prevalence of alpha thalassaemia in patients with thalassaemia Intermedia.
3. Role of molecular studies in pathogenesis of (MDS) in Indian patients.
4. Platelet aggregation in CML.
5. VEGF, microvessel density in patients with CML.
6. Study of HFE gene mutation in Indians and its role in iron studies of thalassaemia trait and intermedia state.
7. Role of RT-PCR in diagnosis and prognosis of AML.
8. Evaluation of hypercoagulable state in young Indians with acute stroke.
9. Ultrastructural studies in acute leukemia.
10. Glivec and cytosar in CML.
11. Clinicohaematological profile of Haemophilia.

Collaborative Projects

1. Efficacy of intramuscular vitamin K1 versus intramuscular vitamin K3 in prevention of subclinical classic Vitamin K deficiency (with Paediatrics).
2. To study subset of antiphospholipid syndrome defined by anti b2 GP1 antibody (with Medicine).
3. Haematological changes in HIV (with Medicine).
4. Development of new fluorescent biosensor for evaluation of iron profiles in haematological disorder (with Biomedical Engineering, IIT, Delhi)

PUBLICATIONS

JOURNALS

1. Ahmed R, Kannan M, Biswas A, Ranjan R, Choudhry VP, Saxena R. Use of Intron 1 and 22 inversions and linkage analysis in carrier detection of hemophilia A in Indians. *Clin Chim Acta* 2006;**365**:109–12.
2. Ahmed RP, Biswas A, Kannan M, Bhattacharya M, Geisen C, Seifried E, *et al.* First report of a FVII-deficient Indian patient carrying double heterozygous mutations in the FVII gene. *Thromb Res* 2005;**115**:535–6.
3. Bhattacharya M, Biswas A, Ahmed RP, Kannan M, Gupta M, Mahapatra M, *et al.* Clinico-hematologic profile of factor XIII-deficient patients. *Clin Appl Thromb Hemost* 2005;**11**:475–80.
4. Bhattacharya M, Biswas A, Kannan M, Mishra P, Kumar A, Choudhry VP, *et al.* Clinicohematologic spectrum in patients with lupus anticoagulant. *Clin Appl Thromb Hemost* 2005;**11**:191–5.
5. Bhattacharyya J, Dutta P, Mishra P, Dixit A, Srinivas U, Kannan M, *et al.* Congenital vitamin K-dependent coagulation factor deficiency: A case report. *Blood Coagul Fibrinolysis* 2005;**16**:525–7.
6. Bhattacharyya M, Kannan M, Biswas A, Kumar A, Saxena R. Beta 2 Glycoprotein in Indian Patients with SLE. *Clin Appl Thromb Hemost* 2005;**11**:223–6.
7. Chatterjee T, Mahapatra M, Dixit A, Naithani R, Tyagi S, Mishra P, *et al.* Primary myelodysplastic syndrome in children—clinical, hematological and histomorphological profile from a tertiary care centre in India. *Hematology*. 2005;**10**:495–9.
8. Choudhary DR, Mishra P, Kumar R, Mahapatra M, Choudhry VP. Pregnancy on imatinib: Fatal outcome with meningocele. *Ann Oncol* 2006;**17**:178–9.
9. Dixit A, Chatterjee T, Mishra P, Choudhary DR, Mahapatra M, Saxena R, *et al.* Cyclosporin A in myelodysplastic syndrome: A preliminary report. *Ann Hematol* 2005;**84**:565–8.

10. Dixit A, Chatterjee TC, Mishra P, Choudhary DR, Mahapatra M, Tyagi S, *et al.* Hydroxyurea in thalassemia intermedia—a promising therapy. *Ann Hematol* 2005;**84**:441–6.
11. Dixit A, Kannan M, Mahapatra M, Choudhry VP, Saxena R. Roles of protein C, protein S, and antithrombin III in acute leukemia. *Am J Hematol* 2006;**81**:171–4.
12. Dutta P, Chatterjee T, Tyagi S, Pati HP, Choudhry VP, Kanan M. Gel card in the diagnosis of autoimmune hemolytic anemia.. *Indian J Pathol Microbiol* 2005;**48**:322–4.
13. Gupta M, Bhattacharyya M, Choudhry VP, Saxena R. Spectrum of Inherited bleeding disorders in Indians. *Clin Appl Thromb Hemost* 2005;**11**:325–30.
14. Gupta PK, Adamtziki E, Budde U, Seu AH, Kannan M, Oyen F, *et al.* Gene conversions are a common cause of von Willebrand Disease. *Br J Haematol* 2005;**130**:752–8.
15. Gupta PK, Ahmed RPH, Sazawal Sudha, Choudhry VP, Saxena R. Relatively high frequency of VWD types 3 and 2 in a Cohort of Indian patients: The role of multimeric analysis. *J Thromb Haemost* 2005;**3**:1321–2.
16. Gupta PK, Gupta M, Chatterjee T, Saxena R. Comparative evaluation of whole blood D-dimer test to plasma D-dimer test for diagnosis of disseminated intravascular coagulation. *Indian J Exp Biol* 2005;**43**:382–4.
17. Kannan M, Ahmad S, Ahmad F, Kale S, Hoppensteadt DA, Fareed J, *et al.* Functional characterization of antibodies against heparin-PF4 complex in heparin-induced thrombocytopenia patients in Asian-Indians: Relevance to inflammatory markers *Blood Coagul Fibrinolysis* 2005;**16**:487–90.
18. Kashyap R, Sarangi JN, Choudhry VP. Autoimmune hemolytic anemia in an infant with giant cell hepatitis. *Am J Hematol* 2005;**60**:1–3.
19. Kashyap R, Sharma LM, Gupta S, Saxena R, Srivastava DN. Deep vein thrombosis in a patient with severe haemophilia A. *Haemophilia* 2006;**12**:87–9.
20. Mishra P, Mahapatra M, Kumar R, Dixit A, Chatterjee T, Tyagi S, *et al.* Philadelphia-chromosome positive thrombocythemia in a child. *Eur J Haematol* 2005;**75**:262–3.
21. Mishra P, Pati HP, Chatterjee T, Dixit A, Choudhary DR, Srinivas MU, *et al.* Hb SE disease: a clinico-hematological profile. *Ann Hematol* 2005;**84**:667–70.
22. Naithani R, Agrawal N, Mahapatra M, Pati H, Kumar R, Choudhry VP. Autoimmune hemolytic anemia in India: Clinico-hematological spectrum of 79 cases. *Hematology* 2006;**11**:73–6.
23. Naithani R, Mahapatra M, Kumar R, Rai S. Aplastic anemia and Crohn’s disease—coincidence or association? *Indian J Gastroenterol* 2005;**24**:183.
24. Panigrahi I, Ahmed RPH, Kannan M, Kabra M, Deka D, Saxena R. Cord blood analysis for prenatal diagnosis of thalassemia major Hemophilia A. *Indian Pediatrics* 2005;**42**:577–581.
25. Sazawal S, Hasan SK, Dutta P, Kumar B, Kumar R, Kumar L, *et al.* Over-representation of bcr3 subtype of PML/RAR alfa fusion gene in APL in Indian patients. *Ann Hematol* 2005;**84**:781–4.

Abstracts

26. Chatterjee T, Mahapatra M, Pati HP, Panigrahi I, Kumar R, Wadhwa S, *et al.* Use of transmission electron microscopy in diagnosis of acute leukemias. A prospective study of fifty cases. [abstr 4509] *Blood* 2005;**106**:206b.
27. Choudhary DR, Kumar R, Mishra P, Chatterjee T, Mahapatra M, Saxena R, *et al.* Response to Antithymocyte globulin therapy in severe aplstic anemia: a single center study from India. [abstr 264] *Turkish J Haematol* 2005;**22** (Suppl):130.
28. Choudhary DR, Kumar R, Mishra P, Mahapatra M, Pati HP, Choudhry VP. Treatment of chronic refractory idiopathic thrombocytopenic purpura with cyclosporin or dapsone as a single agent therapy. [abstr 606] *Turkish J Haematol* 2005;**22**(Suppl):254.

29. Dixit A, Kumar R, Mahapatra M, Chatterjee T, Mishra P, Choudhary DR, *et al.* Response to cyclosporin in myelodysplastic syndrome: A study of 49 cases from India. *Br J Haematol* 2005;**129** (Suppl 1):42.
30. Dutta P, Mahapatra M, Bhattacharya J, Dixit A, Mishra P, Choudhary DR, *et al.* Clinico-haematological profile of PNH: Indian experience. [abstr 128] *Turkish J Haematol* 2005;**22** (Suppl):73.
31. Kannan M, Ahmad F, Ahmad S, Kale S, Fareed J, Saxena R. FcgRIIa platelet polymorphism in Asian Indians: Its association with development of Heparin Induced thrombocytopenia. *J Thromb Haemost* 2005;**3** (Suppl):913.
32. Kumar R, Choudhary DR, Prem S, Mahapatra M, Chatterjee T, Mishra P, *et al.* A 4-year study of aplastic anemia from India: Epidemiology and response to treatment. *Br J Haematol* 2005;**129** (Suppl 1):47.
33. Kumar R, Mahapatra M, Pillai LS, Dixit A, Mishra P, Choudhary DR, *et al.* Clinical response to oral cyclosporin in Myelodysplastic syndrome: Study of 31 cases from India. [abstr 4923] *Blood* 2005;**106**:310b.
34. Mahapatra M, Kumar R, Mishra P, Saxena R, Pati HP, Choudhry VP. Role of Radiotherapy in Haemophilic Pseudotumor: An experience from India. [abstr 3221] *Blood* 2005;**106**:900a.
35. Mishra P, Kumar R, Dixit A, Chatterjee T, Choudhary DR, Mahapatra M, *et al.* Acute leukemia with tuberculosis. [abstr 489] *Turkish J Haematol* 2005;**22**(Suppl):210.

Chapters in Books

1. Chatterjee T, Pati HP, Tyagi S, Saxena R. Hodgkins disease, the pathologists point of view. In: Agarwal MB (ed). *Haematology Today 2006*. Mumbai: Ashirwad Hematology Center; 2005: 309–20.
2. Chatterjee T, Tyagi S, Mahapatra M, Pati HP, Kumar R, Choudhry VP, *et al.* Primary myelodysplastic syndrome in children: Clinical, haematological and histomorphological profile. In: Agarwal MB (ed). *Haematology Today 2006*. Mumbai: Ashirwad Hematology Center; 2005:193–204.
3. Choudhry DR, Choudhry VP. Future in thalassemia. In: Sachdeva A, Lokeshwar MR, Shah N, Agarwal BR, Khanna VK, Yadav SP, *et al.* (eds). *Hemoglobinopathies*. New Delhi: Jaypee; 2006:249–55.
4. Choudhry VP, Choudhary DR. Pathophysiology of sickle cell disease in hemoglobinopathies. In: Sahdeva A, Lokeshwar MR, Shah N, Agarwal BR, Khanna VK, Yadav SP, *et al.* (eds). *Hemoglobinopathies*. New Delhi: Jaypee; 2006:277–86.
5. Choudhry VP. Platelet and coagulation factor disorders. In: Parthasarthy A, Nair MDC, Menon PSN (eds). *IAP Textbook of Pediatrics*. New Delhi: Jaypee; 2006:648–56.
6. Katewa S, Choudhry VP. Historical perspective and introduction to thalassemia in hemoglobinopathies. In: Sachdeva A, Lokeshwar MR, Shah N, Agarwal BR, Khanna VK, Yadav SP, *et al.* (eds). *Hemoglobinopathies*. New Delhi: Jaypee; 2006:3–6.
7. Lokeshwar MR, Choudhry VP. Anemia in children. In: Parthasarthy A, Nair MKC, Menon PSN (eds). *IAP Textbook of Pediatrics*. New Delhi: Jaypee; 2006:602–04.
8. Panigrahi I, Saxena R. Alpha thalassemia in India: Clinical relevance and diagnosis. In: Agarwal MB (ed). *Haematology Today 2006*. Mumbai: Ashirwad Hematology Center; 2005:91–101.
9. Pati HP, Dutta P. Apoptosis in myelodysplastic syndrome and acute leukemia. In: Agarwal MB (ed). *Haematology Today 2006*. Mumbai: Ashirwad Hematology Center; 2005:205–20.
10. Pati HP, Upendra S. Newer concepts in the pathogenesis and management of PNH. In: Agarwal MB (ed). *Haematology Today 2006*. Mumbai: Ashirwad Hematology Center; 2005:75–90.
11. Sachdeva A, Choudhry VP. Disseminated intravascular coagulation. In: Parthasarthy A, Nair MKC, Menon PSN (eds). *IAP Textbook of Pediatrics*. New Delhi: Jaypee; 2006:657–68.

12. Sachdeva A, Nagar S, Choudhry VP. Transfusion of blood components in children. In: Sachdeva A (ed). *Reference Manual National Training Project. Practical Pediatric Hematology*. PHO Chapter IAP; 2006:174–88.
13. Saxena R, Kannan M. Molecular techniques in Haematology. In: Agarwal MB (ed). *Haematology Today 2006*. Mumbai: Ashirwad Hematology Center; 2005:9–24.

PATIENT CARE

Laboratory Investigations

Coagulation laboratory

Type of test	No performed
1. Screening coagulation test	3,930
2. Factor assays	460
3. Factor inhibitor screening	200
4. Factor inhibitor assay	5
5. INR	2,000
6. Lupus anticoagulant	1,660
7. Platelet function test	800
8. D-Dimer	459
9. Fibrinogen	150
10. Proglobal C	390
11. Protein C	138
12. Protein S	128
13. APCR	135
14. Beta 2 glycoprotein	95
15. Serum homocysteine	168
16. Carrier detection haemophilia	225 (45 Families)
17. Prenatal diagnosis	30 (6 Families)
18. Factor V Leidin	37
19. MTHFR	14
20. P20210	4
21. VWD	165
22. Molecular test for thalassaemia alpha and beta	25+ 76

Leukaemia laboratory

1. Cytochemistry	462
2. LAP	184
3. Iron stain	82
4. APAAP	23
5. RT-PCR leukaemia: CML AML ALL	488

Haemolytic anaemia laboratory

1. HPLC	1,132
2. Sickling	85
3. Hb electrophoresis	96
4. G6PD	372

5. Serum iron studies	1,183
6. Coombs by gel card	409
7. PNH gel card CD55/59	180
8. Ham's acid serum	136
9. Sucrose lysis test	136
10. Plasma Hb	113
11. Urine haemosiderin	146
12. OF/Inc. Of	440
13. Methaemoglobin	04
14. Heinz bodies	09
15. Cold agglutinin	05
16. Cryoglobulins	06
17. Autohaemolysis	02

Haemogram laboratory

1. Haemogram	40,761
2. Reticulocyte count	1,800
3. Bone marrow aspirate	2,409
4. Bone marrow biopsy	1,213

Census of Haematology OPD—April 2005 to March 2006

Category	Old cases	New cases
Total	17665	3709
Male	12605	2410
Female	5060	1299
Haematology	7560	—
Haemato-oncology	6005	—
Haematology coagulopathy	4100	—
Haemostasis/haemolytic anaemia	803	291/218
Haematology transplantation	138	23
Leukaemia follow up	80	80

Census of Haematology Day Care Centre: April 2005 to March 2006

Month	Total admission	Total BT	Total procedures	Bone biopsy/ Bone marrow aspirate	Chemotherapy (intrathecal + others)
April	445	287	158	86	72
May	492	327	165	89	76
June	556	357	199	111	88
July	398	249	149	76	73
August	552	350	200	82	118
September	448	262	186	85	101
October	457	274	183	80	103
November	478	297	181	68	113
December	583	362	221	100	120
January	483	305	178	80	98
February	493	322	171	73	98
March	570	339	231	104	129
Total	5955	3735	2220	1033	1187

Inpatient treatment

In the past year, 9 allogeneic transplants (BMT) were performed successfully and all of them are doing well. An increasing number of patients of leukaemia, aplastic anaemia, idiopathic thrombocytopenic purpura, hemophilia and multiple myeloma have been treated by the haematology department as indoor patients.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr V.P. Choudhry is Member, Advisory Committee for Thalassaemia Screening and Control Programme, Ministry of Health, Delhi Government; Member, Committee on Screening and Control Programme on Haemoglobinopathies, ICMR; continues to be Editor, *Indian Journal of Pediatrics*.

Dr R. Saxena was awarded the BGRC Silver Jubilee Oration Award for outstanding research in the field of Haematology and Immunohaematology by ICMR at New Delhi for 2002 in July 2005; elected as President, Delhi Society of Haematology, 2005–2007; elected as Executive Member, Indian Society of Haematology and Transfusion Medicine, 2006–2008; Member, Medical Advisory Board, HFI, 2005; Member, ICMR, Project Review Committee for Genetics, Haematology, Anatomy, 2005; Coordinator, ISHTM–AIIMS EQAP since 2003; Member, Subject Expert Committee for technical evaluation of proposals under women scientist scheme, Department of Science and Technology, Government of India, June 2005.

Dr H. Pati was elected as General Secretary, Indian society of Hematology and Transfusion Medicine, 2005–2008.

Dr Rajat Kumar was nominated as Joint Secretary (Dean's), Indian College of Physicians, Association of Physicians of India, 2006–2008; Executive Member, Indian Society of Haematology and Transfusion

Medicine, 2005–2006.

Dr M. Mahapatra was nominated as Executive Member, Delhi Society of Haematology; continues to be Assistant Editor, *Indian Journal of Haematology and Blood Transfusion*.

Dr Tulika Seth is Member, Advisory Committee to National Cancer Control Programme, Ministry of Health; Formulated Manual for Training of Health Professionals, NCCP.

The Department received FIST, DST grant worth Rs 60 lakh. The department is continuing external Quality Assessment programme in association with Indian Society of Haematology and Blood Transfusion and National Accreditation Board for laboratories at the national level in India. Presently, more than 300 laboratories are participating.

9.15 Hospital Administration

Professor and Head

P.C. Chaubey

Professor

R.K. Sarma(on deputation)

Additional Professor

D.K. Sharma

(Medical Superintendent, AIIMS, Main Hospital from September 2005)

Shakti Kumar Gupta

(CN Centre)(Medical Superintendent, AIIMS, R.P. Centre for Ophthalmic Sciences from September 2005)

Associate Professors

I.B. Singh

(AIIMS, Main Hospital)

Sidhartha Satpathy

(IRCH)

Aarti Viz

(ORBO, CNC and Media Centre)

Sanjay Arya

(AIIMS, Main Hospital)

EDUCATION

The Department of Hospital Administration is running a 2-year postgraduate programme for students in Hospital Administration. The present MHA (Master in Hospital Administration) course entered its 41st year of inception; it was officially started in February 1966, for the first time in India and has since been recognized as a distinct post-graduate discipline by Medical Council of India. The Residency Programme in Hospital Administration started by the department has shown excellent results. Resident Administrators man the control room of the hospital, round the clock as Duty Officers, and coordinate all the hospital activities. The control room has proved as the nerve centre of the hospital and success achieved in solving the problems has established the Duty Officer as an institution. The residents also assist the hospital activities and in turn gain experience of hospital management.

Faculty members conducted training programmes for the doctors working in various organizations including central, State Governments, Paramilitary Forces and in various PSUs such as NTPC, Coal India, etc. in Hospital Administration and Management and its various aspects.

Training was also imparted to:

- Eleven students of MD (Community Health Administration)/Diploma in Health Administration) from National Institute of Health and Family Welfare, New Delhi.
- Two students of MD (Hospital Administration) of Sher-i-Kashmir Institute of Medical Sciences, Srinagar.
- Two students of Indian Institute of Health Management and Research, Jaipur.
- One doctor from Bangladesh under WHO fellowship in the field of Hospital Waste Management.
- Three senior medical officers from DPR Korea under WHO fellowship in the field of Hospital Management and Reproductive Health.

- Two batches of senior medical officers from Indo-Tibetan Border Police (ITBP) in Hospital Administration.

Continuing Medical Education

The department is actively involved in ongoing ‘in-service programmes’ in Hospital Housekeeping, Hospital Support Services, Security and Fire-fighting, Hospital Infection Control and Biomedical Waste Management to various category of staff including Resident doctors, nursing, paramedical and sanitation personnel. A CME on ‘Emerging infections—challenges and strategies’, with participation from national and international speakers, was organized by the department on 23 July 2005.

Lectures delivered

Dr P.C. Chaubey

- Workshop for ‘Communication skills development for health care personnel’ for senior government doctors at Shimla, Himachal Pradesh; April 2005.

Dr I.B. Singh

- ‘Quality management—concept and application in health care’ and ‘Disaster management’, in the seminar for nurses organized by Indian Hospital Association, New Delhi; December 2005.

Dr Sidhartha Satpathy

- ‘Diseases of cardiovascular system’ and ‘Diseases of respiratory system’, during Orientation Training Course on ICD-10 for non-medical personnel at Mohali, organized by the Central Bureau of Health Intelligence, DGHS, Ministry of Health and Family Welfare, New Delhi; 27 April 2005.
- ‘Diseases of CVS and respiratory system’, during Orientation Training Course on ICD-10 for Third Party Administration (TPAs) at Mohali, organized by CBHI, DGHS; 28 September 2005.
- ‘Consumer Protection Act for doctors’, during training course in Hospital Administration for Senior Hospital Administrators, Ministry of Health and Family Welfare, New Delhi; 19 September to 7 October 2005.
- ‘Medical Audit, Consumer Protection Act, Organization Behaviour, Medical Records, Biomedical Waste Management, Labour Laws in Hospitals’ during ‘Special Training Programme on Hospital Management’ for Medical Superintendents of Coal India, IICM, Ranchi; 9–14 January 2006.
- ‘NABH Standards for Hospital Accreditation’, at Hyderabad during Orientation Programme on Hospital Accreditation organized by Quality Council of India; 29 January 2006.

Dr Aarti Vij

- ‘ORBO: Organizational and administrative issues’, in the South Asian Conference and CME on ‘Synergy in health care’, at Bhutan; 15–19 November 2005.
- ‘Medico-legal aspects of bone and tissue banking—the Indian perspective’, 50th Annual Conference of Indian Orthopaedic Association—2005 at Mumbai; 28 December 2005.
- ‘Organ Retrieval Banking Organization—India’, National Heart Failure Symposium, Hyderabad, Global Hospitals, Hyderabad; 11 March 2006.

Conferences, seminars, workshops

Dr P.C. Chaubey

- Course Coordinator for Hospital Management for senior level doctors of NTPC in Power Management Institute, Noida; 22–27 May 2005.

Dr I.B. Singh

- The training programme on ‘Laboratory Quality Management System and Internal Audit ISO-17025’, at IIQM, Jaipur.
- ‘India Health Summit’, organized by Confederation of India Industries, Hotel Hyatt Regency, New Delhi; 21–22 November 2005.
- The training programme ‘Information Technology for non IT Executives’, Port Blair, organized by National Productivity Council, New Delhi; 6–10 February 2006.
- Training programme ‘Managing the Contract Labour issues, concerns, problems and remedies’, Hotel Le Meridian, New Delhi, organized by the All India Management Association, New Delhi; 13–14 February 2006.

Dr Sidhartha Satpathy

- Member of Organizing and Scientific Committee of South Asian Conference and CME on ‘Synergy in health care’, at SASHCON–2005, organized by AIIMS and Ministry of Health, Royal Government of Bhutan, Paro, Bhutan; 15–19 November 2005.

Dr Aarti Vij

- International Symposium on ‘Stem cells: Premises and promises for research and therapeutics’ organized by National Institute for Research in Reproductive Health, ICMR, Indian Society for the Study of Reproduction and Fertility and Histostem, Inc, USA at Mumbai; 18–21 September 2005.
- CME on ‘Emerging infections: Challenges and strategies’, AIIMS; 3 July 2005.
- National Conference on ‘HIV/AIDS’, organized by Confederation of Indian Industry, Delhi; 26 May 2005.
- National Conference on ‘Accreditation, grading, rating and certification of health care facilities’, (GRACE 2005) organized by Department of Hospital Administration, AFMC, Pune and Department of Hospital Administration, AIIMS; 24–25 September 2005.
- Organized National Workshop on ‘Good Manufacturing Practice and Good Lab Practices (GMP and GLP Standards)’, at AIIMS, sponsored by Department of Biotechnology, Government of India. Experts from Centre for Cell and Gene Therapy, Texas, USA conducted the workshop, which was attended by participants engaged in stem cell research and therapy work from various institutes of India including AIIMS.

RESEARCH

Departmental Projects

Completed

1. Study on the patterns of financing of medical care of the patients admitted to a tertiary care hospital such as AIIMS
2. Study of patients attending AIIMS, Accident and Emergency department to evaluate the appropriateness of pre-hospital care and its effect on the outcome of patient management
3. Study on the magnitude of medicolegal workload on AIIMS administration: Existing status and recommendations
4. Study of sociological changes among nurses at AIIMS

Ongoing

1. Study of the Ambulance services with reference to type of vehicles, equipment fitted, its utilization pattern, so as to suggest an optimal model with its equipment and accessories

2. Evaluate the hospital planning with particular reference to allocation of space for different hospital facilities and identify the prime considerations which should be the determining factor for requirement of space for various service areas of a hospital.
3. A study of morbidity pattern in geriatric age group and identifying resource inputs for a geriatric centre at AIIMS
4. A study of the manpower deployment and its utilization in a hospital so as to identify the factors responsible for calculating need based manpower planning.
5. Study of the role and scope of Telemedicine Services at AIIMS for post-discharge follow-up of patient referred to AIIMS
6. Study of radio-diagnostic services of AIIMS hospital and their utilization pattern so as to identify equipment, physical facilities and manpower for the diagnostic imaging services of hospitals of Coal India Ltd commensurating with their needs
7. Study of the operation theatre services of Dr R.P. Centre for Ophthalmic Sciences in relation to the current technological advances in the field, so as to develop optimal modules for different levels of ophthalmic centres in India
8. To study and evaluate universal precautions practices being followed in high-risk areas of main hospitals of AIIMS

PUBLICATIONS

Journals

1. Bedi S, Arya SK, Sharma DK, Sarma RK. What it costs and what they get—A study of perceived costs and benefits among EHS beneficiaries. *J Acad Hosp Adm* 2005;**17**:13–18.
2. Chatteraj A, Satpathy S, Sarma RK. Standardising medical record forms: A study at a tertiary superspeciality hospital. *J Acad Hosp Adm* 2005;**17**:25–30.
3. Chaubey PC, Rampal P. Estimation of sterilization capacity in superspecialty tertiary care hospital in South East Asia Region. *J Acad Hosp Adm* 2005;**17**:2.
4. Singh B, Sarma RK, Sharma DK, Singh V, Arya S, Deepak. Assessment of Hospital services by Consumers: A study from NDDTC, AIIMS, Ghaziabad. *Medico legal Update* 2005;**5**:1–6.
5. Singh B, Singh V, Vij A. Sociodemographic profile of substance abusers attending a de-addiction center in Ghaziabad. *Medico-legal Update* 2006;**6**:2006.
6. Singh IB, Rathore Akhilendra, Sarma RK, Bedi S. Trends of absenteeism in a tertiary care premier institute in Delhi—approaches towards its reduction and improved productivity. *Hosp Adm* 2005;**40**:30–54.

Abstract

7. Maikhuri R, Seth S, Vij A, Reddy KS, Airan B. Effect of psycho-social intervention in improving morbidity and mortality of heart failure patients. Social science abstracts, Indian Academy of Social Sciences, India 2005;**29**.

PATIENT CARE

The department of Hospital Administration is closely associated with the provision of administrative support to various departments for delivery of patient care and control of costs in the hospital services. The department has been responsible for bringing quality care standards in patient care services. As per the need for efficient functioning of the patient care areas, various renovations have been planned and commissioned in the main hospital. Besides that, additional rooms are being added to the New Private Wards.

The department has been actively involved in improving the patient care services by revamping the support services to aid in provision of a quality clinical service. Extensive renovations and upgradation of support services has been done. Project of New Mortuary Complex was carried out. Installation of New Manifolds Gas Pipeline in the main hospital is under progress. An advanced, new laundry is also being installed. The pharmacy has been renovated for the benefit of patients. The department has successfully carried out the mobile telephone system project to improve communication in the hospital.

The department is involved in Planning, establishing and commissioning of facilities and services in superspeciality centres of AIIMS e.g. Jai Prakash Narain Apex Trauma Centre (JPNTC); National Drug De-addiction Treatment Centre (NDDTC).

Organ Retrieval Banking Organization (ORBO) in addition to being instrumental in facilitation of organ transplantation to the needy, it has also extended its services for tissue donation and whole body donation. Eleven whole bodies were donated through ORBO to Department of Anatomy at AIIMS. Awareness programmes with various NGOs, schools, religious bodies, academic institutions were conducted during the year. IEC material for creating awareness on organ and tissue donation were also developed.

Awards, Honours and Significant Events

Dr D.K. Sharma was awarded WHO fellowship in Training on Health Care Financing at Bureau of Health Policy and Planning, MOPH, Thailand, Centre for Health Economics, Chulalongkorn University, Bangkok, Thailand, from 1 to 26 August 2005; appointed as nominee of Director, AIIMS in the Selection Committee for the interview of Nursing Faculty at North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS), Shillong, Meghalaya.

Dr P.C. Chaubey was nominated by NTPC for selection of 'Award for best hospital' in Madhya Pradesh, Chattisgarh and Uttar Pradesh; nominated as Member of Expert Committee on 'Biomedical waste management and its treatment', for Central Pollution Control Board under Ministry of Environment and Forest, Government of India.

Dr Sidhartha Satpathy was Member of Technical Committee of National Accreditation Board for Hospitals and Health care providers (NABH) under the aegis of Quality Council of India (QCI); Executive Member of Academy of Hospital Accreditation by virtue of being Editor, *Journal of the Academy of Hospital Administration*.

Dr I.B. Singh was selected as Member of Hospital Planning Sectional Committee, Bureau of Indian Standard, and attended the Hospital Planning Sectional Committee MHR-14, New Delhi.

Dr Aarti Vij coordinated and assisted in the establishment of stem cell facility. She also developed an appointment system and helpline for patient queries on stem cell research and therapy from different parts of the country.

9.16 Laboratory Medicine

Professor and Head

B.L. Jaikhan

Professor

A.K. Mukhopadhyay

Additional Professors

M. Irshad

Sarman Singh

Associate Professor

Subhadra Sharma

Assistant Professors

Purva Mathur

S. Arulselvi

EDUCATION

Short-term training

The department participates in undergraduate (MB,BS) teaching programmes. It runs a 3-year residency programme leading to MD degree. The department also offers a PhD programme.

The department offers short-term training to postgraduates from the Department of Pathology and Biochemistry.

Nine students—4 from Bundelkhand University, Jhansi; 2 from CCS University, Meerut; 2 from Dr Bhim Rao Ambedkar University, Agra, and 1 from Madhav Institute of Technology Sciences, Gwalior—underwent short-term training in Molecular Biology during the year.

Continuing Medical Education

Workshops

Four hands-on workshops sponsored by DBT, DST and ICMR on: (i) Real-Time/Quantitative PCR for HIV viral load monitoring, (ii) Rapid culture and molecular identification methods for Mycobacterium disease diagnosis, (iii) Intestinal parasites causing diarrhoea in AIDS, and (iv) Laboratory diagnosis of acute toxoplasmosis were organized from 25 to 26 March 2006. The department also organized the International Conference on 'Opportunistic pathogens in AIDS'; 27–29 March 2006.

National and International Conferences

International conference

Dr Sarman Singh as the Chairman of the Organizing Committee organized the International Conference on 'Opportunistic Pathogens in AIDS' at AIIMS; 27–29 March 2006.

Lectures delivered

Dr A.K. Mukhopadhyay

- 'Human psyche, consciousness and psychotherapy', Department of Psychiatry and National Drug Dependence Treatment Centre, AIIMS; 29 March 2006.

- 'Layers in the matrix of spirit and matter', seminar on 'Science and spirituality in Modern India', Jawaharlal Nehru University, New Delhi; 6–7 February 2006.
- 'Elements of human psyche: Crystallizing new rationality and objectivity in psychotherapy', IV World Congress of Psychotherapy, Buenos Aires, Argentina; 27–30 August 2005.
- 'Elements of human psyche: Crystallizing new rationality and objectivity in psychotherapy', IVth World Congress of Psychotherapy at Buenos Aires, University of Belgrana, Capital Federal Argentina, Buenos Aires; 31 August 2005.
- 'A composite model of the psyche: Its practical relevance in psychotherapy', 2nd International Conference on 'Psychotherapy, yoga and spirituality', Haridwar; 26–27 November 2005.

Dr S. Singh

- 'Intestinal opportunistic pathogens in Indian AIDS patients seen at a tertiary medical institute in North India', Indo-US workshop on 'Diarrhoeal diseases' held at NICED, Kolkata; 3–5 October 2005.
- 'Epidemiology of non-tubercular mycobacterial infections in AIDS patients', 5th International Conference on 'AIDS in India', Chennai; 21–24 October 2005.
- 'AIDS associated toxoplasmosis', International Conference on 'Opportunistic Pathogens in AIDS', New Delhi; 27–29 March 2006.
- 'Intrauterine infections', Perinatology CME of the Indian Academy of Paediatrics, Noida, UP, 24 April 2005.
- 'Toxoplasmosis in meat animals', Summer School Programme of Punjab Agriculture University, Ludhiana; 10 October 2005.
- 'Diagnosis of acute toxoplasmosis by avidity test', 29th National Conference of Indian Association of Medical Microbiologists, Chennai; 21–23 October 2005.
- 'Food-borne toxoplasmosis', 17th National Congress of Parasitology, Dibrugarh, Assam; 24–26 October 2005.
- 'Diagnosis of non-tubercular mycobacterium', 4th National Workshop on 'Simple diagnostic methods in infectious diseases' JIPMER, Pondicherry; 22–26 November 2005.
- 'To harness and streamline the regulatory issues for import and export of biological materials', National Meeting on 'Global clinical trials in India—prospects and challenges', FICCI, New Delhi; 14–16 November 2005.
- 'Recent advances in the diagnosis of Leishmaniasis', National Conference on 'Immunology in health and diseases', Institute of Life Sciences, Chhatrapati Shahuji Maharaj University, Kanpur; 11–12 January 2006.
- 'TORCH investigations and their interpretation', National Conference of ISPAT, New Delhi; 18 February 2006.

Dr P. Mathur

- Laboratory diagnosis of toxoplasmosis and intestinal coccidian parasites; International Conference on 'AIDS', New Delhi; 27–29 March 2006.

RESEARCH

Funded projects

Completed

1. Baseline database collection and documentation of good manufacturing and supply practices adopted by the manufacturers of TORCH-ELISA kits and quality control assessment at the user level of

these kits. Sarman Singh. Funded by DST for 2 years (2003–2005) Funds: Rs 8.5 lakh.

2. Screening of marine products for *in vitro* antimicrobial activity. Sarman Singh. Funded by CSIR-NIO for 2 years (2003–2005) Funds: Rs 10 lakh.

Ongoing

1. Prevalence and significance of transfusion transmitted virus (TTV) and association of lipoprotein (a) with apoprotein A and B in various forms of liver diseases. M. Irshad. Funded by ICMR for 3 years (2005– 2007). Funds: Rs 24 lakh.
2. Optimization of carbohydrate–protein conjugate as vaccine for prevention of enteric fever. M. Irshad. Funded by DBT for 3 years (2004–2007). Funds: Rs 36 lakh.
3. Development of a rapid diagnostic test for detection of auto-antibodies in myasthenia gravis by plate and dot-blot ELISA. M. Irshad. Funded by ICMR for 2 years (2004–2006). Funds: Rs 15 lakh.
4. Rapid and accurate diagnosis of tuberculosis using a novel set of primers directly from clinical sample. Sarman Singh. Funded by ICMR for 3 years (2004–2007). Funds: Rs 13 lakh.
5. Comparative evaluation of various methods for diagnosis of pulmonary and extra- pulmonary tuberculosis. Sarman Singh. Funded by BioMerieux India for 1 year (2004–2005). Funds: Rs 1.6 lakh.
6. Expression, characterization and purification of recombinant kinesin-like protein of VL and PKDL-causing Indian strains of *Leishmania donovani*, and developing ELISA and other rapid test methods using the above antigen. Sarman Singh. Funded by DBT for 3 years (2003–2006). Funds: Rs 13 lakh.
7. Genetic heterogeneity amongst the *Leishmania donovani* isolated from eastern India. Sarman Singh. Funded by AIIMS for 3 years (2003–2006). Funds: Rs 1.35 lakh.
8. Evaluation of the toxicity and anti-leishmanial efficacy of liposomal amphotericin B (KALSOME) in mouse model. Sarman Singh. Funded by DST for 2 years (2005–2007). Funds: Rs 41.09 lakh.
9. To study the molecular mechanism(s) of miltefosine-induced drug resistance in *Leishmania donovani*. Sarman Singh. Funded by CSIR for 3 years (2004–2007). Funds: Rs 4.5 lakh.
10. Inhibition of kinetoplast DNA replication using topoisomerase inhibitors. Sarman Singh. Funded by ICMR for 3 years (2004–2007). Funds: Rs 4 lakh.
11. Genotypic characterization of *Mycobacterium tuberculosis* in clinical isolates from pulmonary tuberculosis by using spoligotyping and IS 6110 RFLP analysis. Sarman Singh. Funded by UGC for 3 years (2004–2007). Funds: Rs 4.2 lakh.

Departmental Projects

1. To assess the impact of viral hepatitis on steatosis of liver
2. Role of HCV core protein in the diagnosis of HCV infection
3. TTV and HCV infection in renal failure patients
4. Epidemiological studies on CRF in Indian communities
5. Cloning, sequencing and expression of TTV-related polypeptides
6. Synergism of hepatitis viruses and TTV-virus in liver diseases
7. Effect of core expression on oxidative status
8. Comparative evaluation of smear, LJ culture, MGIT-960 Bactec culture and bactericophage tests for the diagnosis of tuberculosis
9. Comparative evaluation of various TORCH test kits
10. Comparative evaluation of various PCR primers for the rapid and sensitive diagnosis of tuberculosis
11. Blood-borne infection after needle-prick injury in healthcare workers of AIIMS

12. *Toxoplasma gondii* plasma IgG avidity assays in pregnant women attending AIIMS
13. Sequence-based diagnosis of mycobacterial isolates from HIV-positive and HIV-negative patients
14. Comparison of transmission rates of hepatitis B and Hepatitis C viruses in family members of dually infected cases with HBV and HCV

Collaborative Projects

1. Bacterial and fungal pathogens in HIV-positive patients with CNS involvement (with Medicine).
2. Bacterial and fungal pathogens isolated by BacT/ALERT automated culture system from HIV-positive patient with PUO (with Medicine).

PUBLICATIONS

1. Agarwal SK, Dash SC, Irshad M, Raje S, Singh R, Pandey RM. Prevalence of chronic renal failure in adults in India. *Nephrol Dial Transplant* 2005;**20**:1638–42.
2. Irshad M, Dubey R. Clinical implications of apolipoproteins in different liver diseases. *Int Med J* 2005;**4**:1–7.
3. Irshad M, Sharma Y, Dhar I, Singh J, Joshi YK. Transfusion-transmitted virus in association with hepatitis A-E viral infections in various forms of liver diseases in India. *World J Gastroenterol* 2006;**12**:2432–6.
4. Mukhopadhyay AK. How deep is Rene Descarte’s cut? How am I related to the paperweight on my table? *Frontier Perspectives* 2005;**14**:37–42.
5. Sharma Y, Bashir S, Irshad M, Gupta SD, Dogra TD. Effects of acute dimethoate administration on antioxidant status of liver and brain of experimental rats. *Toxicology* 2005;**206**:49–57.
6. Sharma Y, Bashir S, Irshad M, Nag TC, Dogra TD. Dimethoate induced effects on antioxidant status of liver and brain of rats following subchronic exposure. *Toxicology* 2005;**215**:173–81.
7. Singh S, Sivakumar R. Polypeptides for the diagnosis and therapy of Leishmaniasis. PCT/IN03/00400. *Expert Opinion Therapeutic Patents* 2005;**15**:1439–65.
8. Singh S. New developments in diagnosis of leishmaniasis. *Indian J Med Res* 2006;**123**:311–330.
9. Singh S. Visceral leishmaniasis: An opportunistic infection in HIV-infected patients. *Lancet Infect Dis* 2005;**5**:197.
10. Sivakumar R, Sharma P, Chang KP, Singh S. Cloning, expression and purification of a novel recombinant antigen from *Leishmania donovani*. *Protein Expr Purif* 2006;**46**:156–65.
11. Upadhyay A, Aggarwal R, Kapil A, Singh S, Paul VK, Deorari AK. Profile of neonatal sepsis in a tertiary care neonatal unit from India: A retrospective study. *J Neonatol* 2006;**20**:50–7.
12. Wig N, Anupama P, Singh S, Handa R, Aggarwal P, Dwivedi SN, *et al.* Tumor necrosis factor-alpha levels in patients with HIV with wasting in South Asia. *AIDS Patient Care STDS* 2005;**19**:212–15.

Chapters in Books

1. Mukhopadhyay AK. Supracortical consciousness. An opening to multiple new doors of Science. In: Balasubramanian R (ed). *The enworlded subjectivity. Its three worlds and beyond, Project History of Indian Science, Philosophy and Culture (PHISPC)*. Vol. XI, Part 4, New Delhi:Centre for Studies in Civilization; 2006:380–446.
2. Mukhopadhyay AK. A composite model of the psyche, its practical relevance in psychotherapy. In: Ganesh Shankar (ed). *Psychotherapy, yoga and spirituality*. New Delhi:Jagdamba Publishing; 2005:20–9.

3. Singh S, Sivakumar R. Laboratory diagnosis of visceral leishmaniasis. In: Raghunath D, Nayak R (eds). *Trend and research in leishmaniasis*. New Delhi:Tata McGraw-Hill; 2005:113–30.
4. Singh S, Sood R, Rattan A. *Mycobacterium tuberculosis*. In: Seth V, Kabra SK (eds). *Essentials of tuberculosis in children*. New Delhi:Jaypee Brothers; 2006:51–65.

PATIENT CARE

Total tests performed 57,54,012

Centralized collection centres

Blood collection

For department	No. of specimen
Laboratory Medicine	1,62,744
Blood Bank	3,570
Microbiology	16,887
Miscellaneous	21,600
Total	2,04,801

Fluid and secretions collections

Specimen	Number
Urine	65,800
Faeces	12,400
Sputum	12,176
Semen	12,500
Other fluids	140
Blood for viral marker/HIV	16,541
Total	1,19,557

GRAND TOTAL : 3,24,358

Emergency Laboratory Services (Round-the-clock)

Clinical Biochemistry

Haemogram and Body Fluids

Test	Number	Test	Number
Blood sugar	64,390	Hb	75,888
Blood urea	94,200	TLC	75,888
Bilirubin	18,940	Platelets	75,888
Sodium	91,400	Prothrombin time	18,336
Potassium	91,400	Malarial parasite	3,982
Amylase	8,772	CSF	8,525
CSF sugar	7,691	Urine	1,486
CSF protein	7,691	Microbiology blood culture and CSF	10,619
SGOT	501	Gram stain	1,610
SGPT	501	Giemsa stain	8,450
Total protein	501	Stool hanging drop	1,436
Albumin	501	MCV	75,888
Creatinine	712	MCH	75,888
Arterial blood gas	14,136	MCHC	75,888
Total	4,01,336	RBC	75,888
		PCV	75,888
		Others	11,576
		B/C	2,768
		Total	6,75,892

GRAND TOTAL: 10,77,228

Clinical Biochemistry

Test	Blood	Urine	Fluid
Sugar	1,22,292	1,560	1,305
Urea	1,68,600	413	—
Total protein	1,56,000	—	1,305
Albumin	1,56,000	—	1,305
24-hour albumin	—	8,202	—
Bilirubin			
—Total	1,47,600	—	—
—Conjugated	1,02,300	—	—
Alk. phosphatase	1,59,600	—	—
Acid phosphatase	402	—	—
Cholesterol	38,400	—	—
Na	1,34,400	6,115	—
K	1,34,400	6,115	—
Calcium	1,03,200	3,264	—
Phosphate	99,600	3,264	—
Uric acid	97,200	2,502	—
Amylase	19,440	311	72
Creatinine	1,62,600	6,825	—
SGOT	1,68,600	—	—
SGPT	1,68,600	—	—
17-ketosteroid	—	—	—
pCO ₂	8,040	—	—
pH	8,040	—	—
pO ₂	8,040	—	—
HCO ₃	8,040	—	—
CO ₂	8,040	—	—
A-aDO ₂	8,040	—	—
O ₂ saturation	8,040	—	—
BE	8,040	—	—
Total	22,03,554	38,571	3,987

Miscellaneous investigations

Test	Number
HBsAg	360
Anti-HBs	200
HBeAg	75
IgM anti-HBc	200
Anti-HCV	300
Anti-HEV	300
IgM Anti-HAV	100
HCV-RNA	200
TTV-DNA	300
Superoxide dismutase	400
Total antioxidant	400

Apoprotein A	300
Apoprotein B	300
Lp(a)	200
CK	300
LDH	300
GGT	50
TG	200
LDLC	200
HDL	200
Adenosine deaminase assay	2,123
ELISA IgG-Ab tuberculosis	2,123
ELISA IgG-Ab neurocysticercosis	2,123
ELISA IgG-Ab Ach-R	103
Total	11,377

GRAND TOTAL **22,57,469**

Haematology Section

Test	OPD	Ward
Hb	78,198	63,744
TLC	78,198	63,744
PCV	78,198	63,744
DLC	69,791	62,534
ESR	63,181	29,294
D/Morphology	59,277	47,091
Platelet	78,198	63,744
Reticulocyte count	9,908	10,196
Absolute eosinophil count	17,347	13,055
Malarial parasite	39,992	14,280
Thick smear	—	13,207
MCV	78,198	63,744
MCH	78,198	63,744
MCHC	78,198	63,744
RBC	78,198	63,744
BT	1,518	—
CT	1,518	—
PT	6,224	10,520
Blood clotted	1,572	2,113
Other	6,418	
Total	9,02,330	7,12,242

GRAND TOTAL **16,14,572**

Microbiology Section

Patient care

Pre- and post-test counseling (total)	410
TORCH patients	150
HIV/AIDS	260

Yearly workload of the test done in Clinical Microbiology Section w.e.f. 1 April 2005 to 31 March 2006.

The clinical microbiology section caters to two types of patient care services (A) Free investigations and (B) Paid investigations through revolving funds.

A. Free investigations

Urine investigations

Name of the test	OPD	Ward	Total
Medical board	–	–	8,350
Routine	52,894	39,570	92,464
Microscopic	76,861	59,185	1,36,046
pH	2,039	19,735	21,774
Specific gravity	995	19,735	20,730
Acetone	1,480	19,735	21,215
Bile pigment/salt	1,084	19,735	20,819
Urobilinogen	920	19,735	20,655
Blood	35	19,735	19,770
Bence–Jones protein	190	280	470
Chyluria	120	190	310
Porphobilinogen	35	25	60
Myoglobinuria	6	10	16
Haemosiderin	5	8	13
Microalbumin	5	–	5
Urine culture	12,276	–	12,276
Strain identification test	11,870	–	11,870
Antibiotic sensitivity	2,112	–	2,112
Subtotal	1,62,927	2,17,678	3,80,605

Faecal investigations

Wet mount—saline	6,387	2,357	8,744
Wet iodine stain	6,387	2,357	8,744
Occult blood in stool	1,851	932	2,783
Fat globules	461	272	733
Special stains for HIV-positive patients	434	335	769
Subtotal	15,520	6,253	21,773

<i>Semen investigations</i>			
Routine	11,315	—	11,315
Morphology	3,322	—	3,322
Fructose	421	—	421
Subtotal	15,058	—	15,058

<i>Sputum investigations</i>			
Z–N Staining for AFB	350	12,176	12,526
Concentration/decontami-nation	175	—	—
AR staining	120	—	—
LJ culture	589	—	—
BACTEC culture	561	—	—
BACTEC sensitivity	88	—	—
Mycobacterial strains maintained	768	—	—
Biochemical tests	485	—	—
TB PCR done	314	—	—
Subtotal	3,450	12,176	15,626

<i>Miscellaneous investigations</i>		
Bone marrow examination,		100
▪ CSF latex agglutination for cryptococcosis		
▪ CSF latex agglutination for pyogenic meningitis,		
▪ Blood for malarial parasite		
▪ Blood for microfilaria,		
▪ Malaria antigen detection,		
▪ Stool hanging drop for <i>Vibrio</i> ,		
▪ Urine microalbumin,		
▪ Pus culture and sensitivity		
▪ <i>Pneumocystis carinii</i> ,		
▪ TPHA, etc.		
Total no. of mice, rabbit and hamster		460
<i>Leishmania</i> strain maintained		1,200
Subtotal		1,760
Total		4,34,822

B. Paid Investigations (Revolving fund)

<i>Serology</i>	
Name of the tests	Total
<i>Toxoplasma gondii</i> IgG	980
<i>Toxoplasma gondii</i> IgM	956
Rubella IgG	1,269
Rubella IgM	889
Cytomegalovirus IgG	1,448
Cytomegalovirus IgM	1,460
Herpes simplex virus IgG	818
Herpes simplex virus 2 IgG	818
Herpes simplex virus (1+2) IgM	800

Parvovirus B19 IgG	208
Parvovirus B19 IgM	208
Anti- <i>Leishmania</i> antibodies	950
<i>Leishmania</i> PCR	50
Cytomegalovirus PCR	65
<i>Toxoplasma gondii</i> PCR	25
HBsAg	11,055
Anti-HCV antibody	7,239
HIV (1+2)	8,075
HbeAg	1,396
Anti-HBcIgM	805
Anti-HBs	978
Anti-HEV IGL	480
HIV-Spot	306
Anti HAV total	480
Anti HBC	408
<i>Toxoplasma gondii</i> IgG avidity	158
Rubella IgG avidity	156
Cytomegalovirus IgG avidity	138
HEV IgM	1,547
Anti-HAV IgM	987
Toxo DAT	384
CCR-5 PCR	16
HIV westernblot	5
HSV westernblot	3
Subtotal	45,563
GRAND TOTAL (A + B)	4,80,385

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr Sarman Singh was nominated as one of the 8 members of the Kala-azar Elimination High Power Committee constituted by DGHS, Government of India, 2005 and a Member of the Expert Panel Member of SERC (FAST TRACK SCHEME) of the Department of Science and Technology, Government of India; 2004–2007. He also continues to be the Editor-In-Chief of *Journal of Laboratory Medicine* and Editor of *Journal of Immunology and Immunopathology*.

A patented recombinant antigen for the diagnosis of kala-azar and PKDL has been developed by the department for the first time in the world. The antigen (Ld-rKE16) has been cloned and expressed from the Indian strain of *Leishmania donovani* and the process and product have been commercialized nationally and internationally through Span Diagnostic Ltd., Surat, India. The kit was launched by the Honorable Minister for Science and Technology, Government of India.

VISITING SCIENTIST

David Lorimer, Director, Scientific and Medical Network, UK, visited the department on 28 January 2006.

9.17 Medicine

Professor and Head

S.K. Sharma

Professors

Rita Sood

A.B. Dey

Ashok Kumar

Rohini Handa

Randeep Guleria

G.C. Khilnani

Associate Professors

Naveet Wig

Ashutosh Biswas

Uma Kumar

Assistant Professors

Sanjeev Sinha

Anant Mohan

Rajiva Gupta

Vinay Gulati

Naval K. Vikram

Sheffali Sharma Khanna

EDUCATION

Short- and long-term training

- The department imparted training in Internal Medicine, pulmonary function testing and respiratory diseases to 24 elective students from foreign countries during the year 2005–2006.
- Mr Sanjay Basu from Yale University, USA has done research on ‘infectious disease’ for a period of 1 month.
- Duncan Smith-Rohrberg from Yale University, USA completed four months’ training in HIV/AIDS and infectious diseases in October 2005.
- Wing Commander S. Shankar, from the Indian Air Force, completed his training in Rheumatology for 2 years on 2.11.2005.
- Dr Kiran Soni completed her tenure as a short-term trainee in Rheumatology on 30.6.2005.
- Dr Mamun from Bangladesh joined as a short-term trainee in Rheumatology w.e.f. 1 March 2006 for 3 months.

Continuing Medical Education

- Professor S.K. Sharma organized and chaired the following:
 - CME on Tuberculosis (RNTCP), AIIMS; 25 April 2005.
 - Convenor of Medicine Update, jointly organized by the Department of Medicine and Association of Physicians of India (API), Delhi State Chapter, AIIMS; 2005.
 - Chairperson, State Task Force (STF), Meeting on the involvement of Medical Colleges in the Revised National TB Control Programme (RNTCP) of India, Ministry of Health and Family Welfare, Government of India, at Lady Harding Medical College; 2005.
 - Second Indo-US CME on Antiretroviral treatment in HIV/AIDS, jointly organized by AIIMS and UCLA, at AIIMS; 4–5 March 2006
- Professor Randeep Guleria was Convenor of the International Conference organized as part of AIIMS Golden Jubilee Celebration on ‘HIV/AIDS and TB: Past, present and future: 2006’; 13–15 January 2006.

- Dr Naveet Wig was Organizing Secretary of International Conference organized as part of AIIMS Golden Jubilee Celebration on ‘HIV/AIDS and TB: Past, present and future: 2006’; 13–15 January 2006.
- Dr Sanjiv Sinha was the Organizer of the following:
 - First Indo-US CME on ‘Antiretroviral treatment in HIV/AIDS’, AIIMS-UCLA (USA), collaborative project, AIIMS; 29–30 October 2005.
 - Second Indo-US CME on ‘Antiretroviral treatment in HIV/AIDS’, AIIMS-UCLA (USA), collaborative project, AIIMS; 4–5 March 2006.
- Dr Rajiva Gupta organized a workshop on ‘Clinical methods in medicine for post- graduates’, AIIMS; 4–5 March 2006.
- Dr Anant Mohan was the Joint Organizing Secretary of the Conference ‘HIV/AIDS and TB: Past, present and future: 2006’, AIIMS; 13–15 January 2006.

National and International Conferences

Lectures delivered

Professor S. K. Sharma

- ‘Integrated treatment of HIV and TB’, 15th Round Table Conference on ‘HIV and tuberculosis co-infections’ organized by Ranbaxy Science Foundation, New Delhi; 8 January 2005.
- ‘Management of HIV-TB co-infection’, Indo-US CME on ‘HIV AIDS’ and Symposium on ‘Recent advances in AIDS research’, jointly organized by the Postgraduate Institute of Medical Education and Research, Chandigarh, India and New York University School of Medicine, New York, USA, at Chandigarh, India; 9–10 January 2005.
- ‘Clinical scenario of HIV-TB infection’, Update on ‘HIV–TB nexus’, jointly organized by Department of Biotechnology, AIIMS and New York University (NYU) AIDS and Tuberculosis International Training and Research Programme (AITRP) at AIIMS; 12 January 2005.
- ‘Current diagnostic techniques and the future of TB diagnosis’, and ‘Antitubercular drugs induced hepatotoxicity: From bench to bedside’, 60th Annual Conference of Association of Physicians of India (Diamond APICON-2005), Mumbai; 22–25 January 2005.
- ‘Asthma’, CME on ‘Public health aspects of lung health’, for the 1st year postgraduate students of TB and chest diseases and community medicine of all the colleges of Delhi University, NIHFV and AIIMS, jointly organized by International Union against tuberculosis and lung disease (The Union) and World Lung Foundation (WLF); 27–29 October 2005.
- ‘HIV and TB co-infection’, 1st Indo-US CME on ‘Antiretroviral treatment in HIV/AIDS’, jointly organized by AIIMS and UCLA at AIIMS; 29–30 October 2005.
- ‘HIV-TB co-infection’ in the CME of 4th National Task Force meeting on the involvement of medical colleges in the RNTCP of India (Ministry of Health and Family Welfare, Government of India), AIIMS; 3–5 November 2005.
- ‘Is sarcoidosis an infectious disease?’, National Conference on ‘Pulmonary disease’, NAPCON-2005, Kolkata; 16–20 November 2005.
- ‘Obstructive sleep apnoea—Indian perspective’, 61st Annual Conference of Association of Physicians of India (APICON-2006), Patna; 30 January–2 February 2006.

- ‘HIV and TB co-infection’, 2nd Indo-US CME on ‘Antiretroviral treatment in HIV/AIDS’, jointly organized by AIIMS and UCLA, AIIMS; 4–5 March 2006.
- Inaugural address at the International Course on ‘Management, finance and logistics for TB Control’, jointly organized by Indian Institute of Health Management Research and International Union against Tuberculosis and Lung Disease (The Union, Paris, France), Jaipur; 7 February 2005.

Professor Rita Sood

- ‘Teaching of professionalism and ethics in postgraduate medical education’, South Asian Conference of postgraduate medical education, Colombo, Sri Lanka; 1–3 August 2005.
- ‘Management of pneumonia in elderly’ and ‘Tuberculosis in elderly—diagnostic and therapeutic challenges’, Annual National Conference of Geriatric Society of India, Pondicherry; 1–3 September 2005.
- ‘Good teaching practices’, Consultation meeting for the development of curriculum for CMCL–FAIMER Regional Institute, CMC-Ludhiana; 9–10 September 2005.
- ‘Undergraduate medical education at AIIMS’, Consultation meeting for the Undergraduate medical and pharmacy education, Negombo, Sri Lanka; 19–25 September 2005.

Professor Ashok Kumar

- ‘Systemic lupus erythematosus: Approach to diagnosis and management’, Hindu Rao Hospital, New Delhi; 10 November 2005.
- ‘Approach to a patient with pain in joints’, Rheumatology Update, Hindu Rao Hospital, Delhi Rheumatology Association, New Delhi; 5 February 2006.
- ‘Immune-based therapies’, 8th FIMSA/IIS Advanced Immunology Course, AIIMS; 1–5 March 2006.

Professor Randeep Guleria

- 5th CME—National Update on ‘COPD’, V.P. Chest Institute, Delhi; 24 April 2005.
- 1st National Conference of the Indian Society for ‘Study of lung cancer’ (NALCCON-2005), PGIMER, Chandigarh; 2–3 April 2005.
- 13th NESCON-2005, Mumbai; 13 May 2005.
- CME Programme, Indian Medical Association, Lucknow; 20 August 2005.
- National Update on ‘Allergy, asthma and COPD’, Banaras Hindu University, Varanasi; 3–4 September 2005.
- 39th Annual Convention, Indian College of Allergy, Asthma and Applied Immunology (ICAAICON), Jaipur; 16 October 2005.
- Participated as a faculty and discussed a CPC; 20th Annual Pulmonary and Critical Care Update, PGIMER, Chandigarh; 9 October 2005.

- 16th Annual CME (API-Delhi State Chapter), New Delhi; 22 October 2005.
- CME on 'Fever management', Indian Medical Association (Orissa State Branch), Cuttack; 26 November 2005.
- 24th IMACGP, Refresher Course, Kanpur; 4 December 2005.
- Medicine Update-2005, MAMC, New Delhi; 17 December 2005.
- 1st Annual Congress of Indian Academy of Nephrology (ACIAN), Department of Nephrology, AIIMS; 8–12 February 2006.
- CME on 'Management of community acquired pneumonia', IMA, Chandigarh; 16 April 2006.

Dr Rohini Handa

- 'Overview of osteoporosis', Symposium on 'Management of osteoporosis: Current status and future directions', Delhi Rheumatology Association, Delhi; 9 April 2005.
- 'New Developments in management of rheumatoid arthritis', Kanpur Orthopaedic Association Clinical Meeting, Kanpur; 25 June 2005.
- 'Rheumatological examination and drug treatment of ankylosing spondylitis', 5th Scientific Conference of Bangladesh Rheumatology Society, Dhaka, Bangladesh; 2–3 October 2005.
- 'When to suspect and how to manage antiphospholipid syndrome', AIIMS and API-Delhi State Chapter CME on 'Emergencies in haematology', New Delhi; 3 September 2005.
- 'Clinical evaluation and management of RA and osteoporosis: A clinical perspective', MCI sponsored rheumatology CME, Guwahati Medical College and IRA Assam Chapter, Guwahati; 30 September 2005 and 1 October 2005.
- 'Diagnosis and treatment of RA', Delhi Rheumatology Association Lecture Series, Hindu Rao Hospital, New Delhi; 11 October 2005.
- 'How to approach osteoporosis in the elderly?', 13th Annual Conference of Indian Academy of Clinical Medicine, Patna; 15–16 October 2005.
- 'Approach to seronegative arthritis', 7th Postgraduate Instructional Course in Orthopaedics, Maulana Azad Medical College, New Delhi; 19–22 October 2005.
- 'Vasculitis: A clinical approach and advances in management of osteoarthritis', 13th Annual Conference of Maharashtra Chapter of Association of Physicians of India, MAPICON-2005, Nagpur; 21–23 October 2005.
- 'Redefining the therapeutic paradigm in RA and SpA', XVI Annual CME of API-Delhi State Chapter, Delhi; 22–23 October 2005.
- 'Management of arthritis with special reference to RA', XV Madhya Pradesh APICON-2005, Sagar, Madhya Pradesh; 5–6 November 2005.
- 'WHO criteria for diagnosis and Indian patients', Indian Council of Medical Research (ICMR)-WHO Workshop on 'Osteoporosis', New Delhi; 29–30 November 2005.

- ‘Looking beyond the joints in rheumatoid arthritis’, 21st Annual Conference of Indian Rheumatology Association-IRACON 2005, Hyderabad; 1–4 December 2005.
- ‘Clinical approach and management of RA and vasculitis: When to suspect, what to do?’, Calicut Forum of Internal Medicine (CALFIM) CME, Kozhikode; 10–11 December 2005.
- ‘Approach to osteoporosis’, Calicut Medical College, Kozhikode; 12 December 2005.
- ‘Osteoporosis—the challenge of brittle bones’, Medicine Update 2005, MAMC, New Delhi; 15–17 December 2005.
- ‘Approach to connective tissue diseases’, 31st Annual Conference of Gujarat State Branch of Indian Association of Dermatologists, Venereologists and Leprologists, Vadodara; 17–18 December 2005.
- ‘Diagnosis of osteoporosis’, Bone and Joint Decade Symposium, Annual Conference of Indian Orthopaedic Association, Mumbai; 28 December 2005.
- ‘Advances in treatment of RA’, 30th Annual Conference of UP Chapter of Indian Orthopaedic Association (UP Orthocon-2006), Varanasi; 27–29 January 2006.
- ‘Osteoporosis—clinical perspective’, Clinical meeting of Bihar Orthopaedic Association, Patna; 29 January 2006.
- ‘How to make a diagnosis in Rheumatology without investigations and therapeutic advances in spondyloarthritides’, 61st Annual Conference of the Association of Physicians of India, Patna; 30 January–2 February 2006.
- ‘Recognition and management of spondyloarthropathies’, Rheumatology Update 2006, Delhi Rheumatology Association, Delhi, 5 February 2006.
- ‘How to recognize and manage RA’, Science-Med, Scientific Society of Department of Medicine, MG Medical College, Indore, Rheumatology CME; 19 February 2006.
- ‘Osteoarthritis—an overview’, The Regional Rheumatology Course, Aga Khan University, Nairobi, Kenya; 9–11 March 2006.

Dr G.C. Khilnani

- ‘Improving outcome in patients with VAP’, Critical Care and Emergency Medicine Update, EHRCL, Gurgaon; 17th December 2005.
- ‘Ventilator associated pneumonia—diagnosis and treatment’, Symposium on ‘Critical care’, SGPGI, Lucknow; 16 January 2006.
- ‘Mechanical ventilation modes and manipulations’, National Conference on Pulmonary Diseases, Kolkata; November 2005.
- ‘HIV/AIDS and TB: Past, present and future’, Antituberculosis induced hepatitis—Golden Jubilee Celebrations of AIIMS, 13–15 January 2006.

- Comparative risk assessment study in India—health and environment; Centre for Science and Environment, Indian Habitat Centre, New Delhi; 24–25 March 2006.
- ‘Non-invasive ventilation in hypercarbic respiratory failure and monitoring’, Delhi Chapter of Indian Society of Critical Care Medicine, Apollo Hospitals, New Delhi; 13–14 August 2005.
- ‘Community acquired pneumonia: Empirical antibiotic therapy—evidence-based approach’, National Conference on ‘Pulmonary diseases’, Kolkata; 16–20 November 2005.

Dr Naveet Wig

- Public lecture on ‘HIV/AIDS’, as part of series of public lectures during AIIMS Golden Jubilee Celebrations, New Delhi, AIIMS.
- Secondary database in HIV and drug abuse in South Asia: Male, Maldives.
- Secondary database in HIV and drug abuse in South Asia: Colombo, Srilanka
- ‘Managing tuberculosis in HIV: Indian experience’, 5th International AIDS India Conference at Chennai, organized by MGR University, Chennai.
- ‘Management of opportunistic infections in AIDS’, 1st Indo-US CME on ‘Antiretroviral treatment in HIV/AIDS’, New Delhi, AIIMS
- ‘Impact of antiretroviral therapy on HIV’, 2nd Indo-US CME on ‘Antiretroviral treatment in HIV/AIDS’, New Delhi, AIIMS

Dr Sanjiv Sinha

- ‘Diagnosis and management of antiretroviral drug-resistant HIV infection’, 1st Indo-US CME on ‘Antiretroviral treatment in HIV/AIDS’, New Delhi, AIIMS
- ‘Management of antiretroviral drug-resistant HIV infection’, 2nd Indo-US CME on ‘Antiretroviral treatment in HIV/AIDS’, New Delhi, AIIMS
- ‘HIV and pregnancy’, APICON-2006, Patna; January 2006.

Dr Rajiva Gupta

- ‘Arthritis in elderly’, Helpage India, New Delhi; August 2005.
- Panel discussion on ‘Arthritis: Myths and realities’, AIIMS Golden Jubilee Celebrations public lecture series; 11 November 2005.
- ‘Pain belief and coping strategies in chronic pain’, Workshop on ‘Psychological approaches to pain management’, AIIMS; 21 January 2006.
- ‘Raynaud’s phenomenon: Physician’s dilemma’, APICON, Patna; 31 January 2006.
- ‘Examination in Rheumatology’, Workshop on ‘Clinical methods in medicine for postgraduate’, AIIMS; 4–5 March 2006.

Dr Naval K. Vikram

- ‘Epidemiology of metabolic syndrome in Indians’, National Seminar on ‘Epidemiology of non-communicable diseases’, Madras Diabetes Research Foundation and University of Alabama, Chennai; 10–12 March 2006.

Dr Vinay Gulati

- ‘Pathophysiology of sleep apnoea’, National Conference-cum-Workshop on ‘Sleep disorders’, SLEEPCON-2005, New Delhi; 7–11 December 2005.
- ‘Clinical monitoring of patients on ART’, 2nd Indo-US CME on ‘Antiretroviral treatment in HIV/AIDS’, AIIMS; 4–5 March 2006.

RESEARCH

Funded Projects

Completed

1. Assess human health risk associated with environmental exposure under three parameters, i.e. air pollution, water pollution and solid and hazardous waste and to evaluate economic cost of health risk to enable ranking of particular environmental concerns on the basis of these health and economic risks. G.C. Khilnani. Funded by WHO for 2 years. Funds: Rs 5,52,400 per year.

Ongoing

1. Antiretroviral treatment (ART) centre for free treatment of HIV/AIDS patients, National AIDS Control Organization (NACO), Ministry of Health and Family Welfare, Government of India. S.K. Sharma. Funded by Delhi State AIDS Control Society for 1 year. Funds: Rs 4.5 lakh.
2. Efficacy of thrice weekly intermittent short course antituberculosis chemotherapy in tuberculosis patients with and without HIV infection. S.K. Sharma. Funded by NACO, Ministry of Health and Family Welfare, Government of India, for 3 years. Funds: Rs 45.42 lakh.
3. Nodal centre for free treatment of TB patients. S.K. Sharma. Funded by the Revised National Tuberculosis Control Programme (RNTCP), NCT of Delhi through the area District TB Centre, Ministry of Health and Family Welfare, Government of India, for 1 year. Funds: Rs 4.32 lakh
4. Treatment outcome and drug resistance among CAT II pulmonary tuberculosis under RNTCP. S.K. Sharma. Funded by RNTCP NCT of Delhi for 2 years. Funds: Rs 4.99.
5. A double-blind, placebo-controlled, parallel, multicentre study on extended VTE prophylaxis in acutely ill medical patients with prolonged immobilization. S.K. Sharma. Funded by Aventis Pharmaceuticals Inc., USA, for 1 year. Funds: Rs 4 lakh
6. A study of HIV seroprevalence among tuberculosis patients presenting to a DOTS centre, and an assessment of the impact of voluntary HIV testing on the Delhi TB and HIV. S.K. Sharma. Funded by RNTCP NCT of Delhi for 2 years. Funds: Rs 4.99 lakh.
7. Incidence of deep venous thrombosis (DVT) among patients admitted in medical wards and intensive care unit (ICU) of a tertiary care hospital (A study protocol). S.K. Sharma. Funded by Pfizer India for 2 years. Funds: Rs 5.7 lakh.

8. Genomic and molecular studies in patients with bronchial asthma. Collaborative project, Department of Medicine, AIIMS and Institute of Genomics and Integrated Biology, New Delhi. S.K. Sharma. Funded by DBT, Ministry of Science and Technology, Government of India, for 3 years. Funds Rs: 41.74 lakh.
9. Efficacy and safety of immnuomodulator (*Mycobacterium w*) as an adjuvant therapy in Category II and multi-drug resistant pulmonary tuberculosis along with reduction in the duration of therapy and to study immunological parameters. S.K. Sharma. Funded by DBT, Ministry of Science and Technology, Government of India and Cadila Pharmaceuticals for 3 years. Funds: Rs 98.95 lakh.
10. Evaluation of management strategy for pulmonary embolism. S.K. Sharma. Funded by International Atomic Energy Agency (IAEA), Vienna, Austria, for 3 years. Funds: Rs 1.74 lakh.
11. Methotrexate in rheumatoid arthritis: Pharmacogenetics and clinico-immunological correlates. Ashok Kumar. Funded by DBT, Government of India, for 3 years. Funds: Rs 97 lakh.
12. Design and development of personal use respiratory device for patients with respiratory failure. Randeep Guleria. Funded by Ministry of Information Technology for 3 years. Funds: 22.85 lakh.
13. Diagnostic approaches for the rapid and early diagnosis of *Mycoplasma pneumoniae* in asthmatics. Randeep Guleria. Funded by DST for 3 years. Funds: Rs 16 lakh.
14. Assessment of the efficacy of hydroxychloroquine as an alternative to corticosteroids in the treatment of sarcoidosis: A randomized control trial. Randeep Guleria. Funded by DST for 3 years. Funds: Rs 19.78 lakh.
15. Development of SNP Panel as a predictive marker for drug target identification and drug response of asthma patients in Indian population. Randeep Guleria. Funded by the Institute of Genomics and Integrative Biology (IGIB) for 3 years. Funds: Rs 20 lakh.
16. Spectrum of Pulmonary infection in HIV-positive patients: Indian Scenario. Randeep Guleria. Funded by NACO for 3 years. Funds: Rs 27.79 lakh.
17. Double-blind randomized placebo-controlled trial of herbal compound MA-364 in patients with mild to moderate bronchial asthma. Randeep Guleria. Funded by Maharishi Ayurveda for 2 years. Funds: Rs 1.5 lakh.
18. Herbal treatment of osteoarthritis and rheumatoid arthritis. R. Handa. Funded by CSIR for 4 years. Funds: Rs 12.8 lakh.
19. Effect of outdoor and indoor air pollution on children's health in Delhi: A controlled study. G.C. Khilnani. Funded by the Ministry of Environment and Forest, Government of India for 2.5 years. Funds: Rs 5,59,996 per year.
20. Study of early versus delayed initiation of antiretroviral therapy for HIV-infected patients with tuberculosis on antituberculosis chemotherapy in Indian subjects. Sanjiv Sinha. Funded by NACO for 3 years Funds: Rs 37.29 lakh.
21. To study the use of ASC antibodies in inflammatory bowel disease. Rajiva Gupta. Funded by AIIMS for 1 year. Funds: Rs 1 lakh.

22. Evaluation of antibodies against cyclic citrullinated peptide (CCP) as diagnostic and prognostic marker of rheumatoid arthritis. Rajiva Gupta. Funded by AIIMS for 2 years. Funds: Rs 1 lakh.
23. Intra-articular rbrrium radioisotope as chemical synovectomy. Rajiva Gupta. Funded by AIIMS for 2 years. Funds: Rs 1 lakh.
24. Study of the relationships between growth hormone-insulin like growth factor-1 axis and hypothalamo–pituitary–adrenal axis with body composition, insulin sensitivity, subclinical inflammation and cytokines in Asian Indians. Naval K. Vikram. Funded by DST for 3 years. Funds: Rs 7.5 lakh.
25. Development of appropriate prevention and intervention strategies for non-communicable nutrition-related disorders among women in post-reproductive period. Naval K. Vikram. Funded by DST, for 2 years. Funds: Rs 10 lakh.
26. Effect of feeding pectin on antioxidant status in patients with diabetes mellitus. Anant Mohan. Funded by AIIMS for 1 year. Funds: Rs 0.65 lakh.

Departmental Projects

Completed

1. Utility of diagnostic usefulness of bone-marrow examination in fever of unknown origin (with Microbiology)
2. A comparative study of various host factors in nodal and other forms of abdominal tuberculosis (with Radiodiagnosis).
3. Autonomic function in Indian fibromyalgia patients
4. Bronchial hyperreactivity in patient with sarcoidosis
5. Screening for primary antiphospholipid syndrome at AIIMS
6. Study of the efficacy of pilocarpine in the treatment of sicca symptoms in Sjogren syndrome
7. Clinical features of anti-beta-2 GPI defined subset of APLS
8. Dyslipidaemia in rheumatoid arthritis
9. Study of comparison of bronchoscopic and non-bronchoscopic techniques for the diagnosis of ventilator associated pneumonia
10. Predictors of requirement of mechanical ventilation and determinants of outcome in patients with COPD with acute or chronic respiratory failure
11. Utility of high-intensity cinefluoroscopy in detecting coronary artery disease in asymptomatic elderly subjects
12. *In vitro* MR spectroscopic evaluation of lymph nodes in patients with lymphadenopathy: A pilot study (with Surgery)

Ongoing

1. Utility of PCR on bone marrow and disseminated tuberculosis (with Microbiology).
2. Study of haematological abnormalities in HIV/AIDS (with Haematology).
3. Evaluation of existing assessment methods in undergraduate medical education (with CMET).
4. To study the therapeutic window in rheumatoid arthritis.
5. Screening for catastrophic antiphospholipid syndrome.
6. Serum nitrite as a discriminatory marker for inflammatory back pain.

7. Study of neuropathy associated with rheumatoid arthritis.
8. Serum vitamin D level as a marker of disease activity in rheumatoid arthritis.
9. Bronchial hyperactivity, respiratory muscle strength and dyspnoea in patients with mitral stenosis before and after balloon valvulotomy.
10. Study of the spectrum of pulmonary infections in HIV-infected persons.
11. Study of the nutritional status, respiratory profile in critically ill patients admitted in ICU.
12. To study the role of synovectomy of the wrist in case of inflammatory arthritis of the wrist.
13. Role of 18 FDG CT-PET in diagnosis and assessment of systemic necrotizing vasculitis.
14. To study the pregnancy outcome in systemic lupus erythematosus with special reference to cyclophosphamide therapy.
15. Study the effect of DMARD on lipid profile in rheumatoid arthritis with special reference to lipoprotein A and oxidized LDL.
16. Radiological outcome in rheumatoid arthritis.
17. Endothelial dysfunction in rheumatoid arthritis as measured by ultrasound.
18. Predictor of fall in older Indians.
19. Study of the prevalence of diabetes mellitus in the elderly population.
20. Carotid intimo-medial thickness in rheumatoid arthritis.
21. Expression of major histocompatibility complex (MHC-I and II) and cell adhesion molecules in idiopathic inflammatory myopathies.
22. Hospitalization for systemic rheumatic diseases.
23. Endothelial dysfunction in rheumatoid arthritis.
24. Colonization of upper and lower respiratory tract with pathogenic bacteria in patients receiving mechanical ventilation and risk of ventilator associated pneumonia.
25. Evaluation of 18-FDG CT-PET and comparison with CT findings in patients with mediastinal lymphadenopathy due to tuberculosis and sarcoidosis.
26. Dynamics of commensal flora and development of nosocomial infections in the critically ill.
27. Clinicopathological study of sepsis in dermatology ward (with Dermatology).
28. Role of 18-FDG PET scan in the diagnosis and evaluation of pulmonary nodules (with Surgery).
29. Evaluation of the role of MDCT, CT angiography and bronchial artery embolization in the management of haemoptysis (with Radiodiagnosis).
30. Study of neurocognitive impairment and atherogenesis in Indian subjects with obstructive sleep apnoea.
31. Treatment efficacy, clinical characteristics, laboratory features and outcome in ART clinic at AIIMS.

Collaborative Projects

Completed

1. A population based study of diabetes and metabolic correlates of cardiovascular risk factors among Asian Indians (A multi-centre collaborative project involving Asian Indians in India according to rural-urban divide and socio-economic strata and in migrant Asian Indians in the USA).
2. Evaluation of efficacy and safety of Wosulin Biphasic (Human Insulin Biphasic regular. NPH, 30:70) (rDNA origin) for control of hyperglycaemia in subjects with type 2 diabetes mellitus— phase IV study.
3. Double-blind randomized placebo-controlled clinical trial of herbal compound MA-471 on metabolic profile in diabetic patients.
4. Randomized placebo-controlled trial for herbal formulation ‘Amree Plus’ in patients with type 2 diabetes mellitus.

5. Comparison of ¹³C breath test with insulin area under curve to determine insulin resistance in urban and rural Asian Indians.
6. To study the correlation between instrumental hand function evaluation and activities of daily living in patients with rheumatoid arthritis (with Physical Medicine and Rehabilitation).

Ongoing

1. DNA amplification study by polymerase chain reaction (PCR) to detect sub-clinical *Pneumocystis carinii* pneumonia (PCP) infection and colonization in 'at risk' patients with or without respiratory symptoms (with Microbiology). Funding agency: DST.
2. A comparative study between pre- and post-operative pulmonary functions and diaphragmatic movements in congenital craniovertebral junction anomalies (with Neurosurgery).
3. Effect of yoga on pulmonary function, mast cell activation and quality of life in bronchial asthma: A Randomized controlled trial (with Physiology).
4. Primary drug resistance studies by genotypic and phenotypic analysis in HIV-Indian subtype C infected individuals (with Microbiology).
5. Brachial plexus neurotization with phrenic and or intercostals nerves and its effect on pulmonary function (with Neurosurgery).
6. Double-blind randomized placebo-controlled clinical trial of herbal compound MA-579 in patients with non-alcoholic fatty liver diseases. (Funding agency: Maharishi Ayurveda).
7. Double-blind randomized placebo-controlled clinical trial of herbal compound MA-471 on metabolic profile of type 2 diabetic patients. (Funding agency: Maharishi Ayurveda).
8. Evaluation of efficacy and safety of 'AD 002' tablets in newly diagnosed patients with type 2 diabetes mellitus (Funded by Solumiks Herbaceuticals).
9. Holmium radiosynovectomy in refractory arthritis (with Nuclear Medicine).
10. Study of aetiological risk factor profile in paediatric strokes (with Paediatrics).
11. Complement regulatory proteins and their significance in the pathophysiology of systemic lupus erythematosus (with Biochemistry).

PUBLICATIONS

Journals

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18. Jha A, Sharma SK, Tandon N, Lakshmy R, Kadiravan T, Handa KK, *et al.* Thyroxine replacement therapy reverses sleep-disordered breathing in patients with primary hypothyroidism. *Sleep Med* 2006;**7**:55–61.
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Chapters in books

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PATIENT CARE

Special clinics

Chest Clinic

New cases	1885
Old cases	4101
Total	5986

Medicine Intensive Care Unit

Number of arterial blood gas analyses done	1000
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Rheumatology Clinic

New cases registered	351
Number of follow up visits	6733
Total	7084

Intravenous pulses of steroids and cyclophosphamide	412
Joint and soft tissue injections	1852

Adult Haematology Clinic

New cases	81
Old cases	700

Geriatric Clinic

New cases	125
Old cases	642

Infectious Diseases Clinic

New cases	618
Old cases	1550

An antiretroviral centre was started in this clinic on 9 July 2005 with the purpose of free antiretroviral drug distribution to registered patients. 918 patients have been registered at this centre, out of which 530 are on regular treatment.

A Voluntary Counselling and Testing Centre (VCTC) has been established that provides free HIV counselling daily. 1632 persons have utilized this facility since its inception.

Laboratories

Respiratory Laboratory

	Number
Spirometry procedures	2750
Diffusion capacity estimation	563

Bronchoscopy Laboratory

Fiberoptic bronchoscopy performed	564
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Sleep Laboratory

Sleep studies	231
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ADA/ACE Laboratory

Adenosine deaminase tests	940
ACE tests	101

Clinical Immunology Laboratory

Number of blood samples received	8844
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Test

Number

RF	4615
ANA	5658
Anti-dsDNA	1245
C3	1027
Serum IgG, IgA and IgM	1133
Cryoglobulins	146
ANCA	1615
aCL	3195
Anti-LKM-1	904
Nailfold capillary microscopy	25
Synovial fluid examination	75
(including polarizing light microscopy)	
CD4/CD8 counts (Flowcytometry)	88

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor S.K. Sharma received the following honours: M.N. Sen Oration Award 2002 in Medicine (Respiratory diseases); NCCP (I) Lupin Chest Oration Award 2005 in Pulmonary Medicine and Allied Disciplines; Fellow, Indian College of Physician since 2005; Fellow, American College of Physicians since 2005; Editor *Indian Journal of Chest Diseases and Allied Sciences* since 2001; Member, Advisory Board Chest (India edition) since 2000; Member, Advisory Board, *Journal of Association of Physicians of India* since 2000; Member, Advisory Board, *Journal of Indian Academy of Clinical Medicine* since 2002; Member, Editorial Board, *Indian Journal of Tuberculosis* since 2003; Member, Editorial Board, *Lung India* since 2004; Member, International Advisory Board, *Clinical Medicine* by Kumar and Clark (6th edition) 2005; Member, Editorial Board, *Chest* in 2006; continues to be a reviewer for *American Journal of Respiratory and Critical Care Medicine*, *Molecular and Cellular Proteomics*, *Indian Journal of Medical Research*, *Indian Journal of Chest Diseases and Allied Sciences*, *Lung India*, *World Journal of Surgical Oncology*, *Cytokine*, *The Lancet Infectious Disease*, *Chest*, *Respiratory Medicine* and *Davidson's Study book*.

He is Member, World Lung Health (initiative of International Union Against Tuberculosis and Lung Diseases IUATLD- India office) since 2005; Expert Member, Phase II Revised National TB Control Programme, Ministry of Health and Family Welfare (Government of India) since 2005; Expert Member, Meeting on Chemotherapy to review Drug Policy of Malaria at National Vector Borne Diseases Control Programme, Directorate General of Health Service since 2005; Member, Special Task Force meeting to review the programmes of Ghatampur Unit at Central JALMA Institute for Leprosy and other Mycobacterial Diseases since 2005; Member, National consultation for developing joint HIV-TB training curriculum organized by National AIDS Control Organization, Ministry of Health and Family Welfare, Government of India in collaboration with WHO (SEARO) and Central TB Division, Ministry of Health and Family Welfare, Government of India, New Delhi since 2005; Expert Member, Implementation of DOTS plus for MDR-TB cases which is planned for the next 5 years of TB control project, Ministry of Health and Family Welfare (Government of India) 2005; Member, Technical Advisory Committee meeting to review the progress of the project 'Socio-economic impact of TB on patients and their families' organized by Techno Economic Research Institute (TERI), 2006; Member, Governing Body of L.R.S. Institute of TB and Respiratory Diseases (Ministry of Health and Family Welfare, Government of India) as 'eminent non-official person' from the field of Tuberculosis and Chest Diseases, Medical Sciences and Education by the Chairman of Governing Body of this Institute, 2006; Member, Extra Ordinary Meeting of the Governing Body of L.R.S. Institute of TB and Respiratory Diseases to discuss eligibility conditions for the post of Director, L.R.S. Institute; Member, Member-expert Committee for promotion of faculty members, University of Delhi, 2005; Chairperson, Operational Research in TB (Ministry of Health and Family Welfare, Government of India), and the National Task Force on 'Involving Medical Schools in DOTS programme'; Member, Drug Selection Committee, National AIDS Control Organization.

He was invited to participate in Asthma Workshop to formulate National Guidelines at Postgraduate Institute of Medical Education and Research, Chandigarh; 19–20 February 2005; in brainstorming workshop on 'Tuberculosis', ICGEB, New Delhi; 2005; in 'Global HIV/AIDS alliances: Charting healthy pathways for vulnerable populations in the Global South and the Global North', Hyderabad; 20–26 February 2006.

Professor Rita Sood was designated as Professor-in-Charge, K.L. Wig Centre for Medical Education and Technology, AIIMS; WHO Temporary Advisor during the WHO-SEAR/WPR meeting on 'Psychosocial issues and ethics in Medical Education' at Bangkok in June 2005; On the International Advisory Board of *Textbook of medicine* by Kumar and Clark 6th edition, Elsevier publications; Editorial

Board of *Journal of Indian Academy of Clinical Medicine*; awarded FAIMER Institute Fellowship 2005 at FAIMER institute, Philadelphia, USA in 2005; Membership of Association for the Study of Medical Education; Nominated as a member of South-East Asian Network for postgraduate medical education; nominated as Executive Committee Member of South East Asian Regional Association for Medical Education; Member of Credential Committee of Indian College of Physicians.

Professor Ashok Kumar was elected Vice President of the Delhi Rheumatology Association w.e.f. 1 April 2005; took over as Editor of the *Journal of Indian Rheumatology Association* from 1 January 2006; elected President of the Indian Rheumatology Association in September 2005 (to assume charge with effect from December 2007).

Dr Rohini Handa was conferred Fellowship of Royal College of Physicians and Surgeons of Glasgow; conferred Fellowship of National Academy of Medical Sciences, India; elected Faculty Council Member of Indian College of Physicians (2005–2007); elected Member Governing Body of Bone and Joint Decade India (2004–2007); Smt. Meena Dhamija First Prize for Young Investigators by Association of Physicians of India-Delhi State Chapter at XVI Annual CME of API-Delhi State Chapter, Delhi, 22–23 October 2005; invited to serve on the ICMR Advisory Committee for Osteoporosis; set up the website of Asia Pacific League of Associations for Rheumatology.

Dr Sanjeev Sinha was selected for the Fogarty fellowship on HIV/AIDS (Awarded by David Geffen School of Medicine at UCLA, Los Angeles, CA, USA) in July 2005.

Dr Uma Kumar was awarded travel bursary to attend Annual European Congress of Rheumatology 'EULAR 2005' in Vienna.

Dr Rajiva Gupta is Member Advisory Board of JK Science—*Journal of Medical Research and Education* and Member, Editorial Committee, *Indian Journal of Rheumatology*.

Dr Anant Mohan is a member of the Influenza Foundation of India.

On behalf of the Clinton Foundation, Mr Bill Clinton Ex-President of USA visited Anti- Retroviral Treatment Clinic in the Medical OPD at AIIMS. He appreciated the efforts of AIIMS for care being provided to PLWHA; 19 February 2006.

VISITING SCIENTISTS

1. Dr A.K. Clarke, Director, Royal National Hospital for Rheumatic Diseases, Bath, UK, visited the department and delivered a lecture on 'Joint and soft-tissue injections' on 5 December 2005 at AIIMS.
2. Dr Sachin Gupta, University of Texas, Houston, Texas, USA, delivered a lecture on the topic titled 'Diffuse alveolar haemorrhage and constructive bronchilitis' in the seminar room of the Department of Medicine on 6 December 2005.

9.18 Microbiology

Professor and Head

J.C. Samantaray

Professors

S. Broor

R. Chaudhry

Additional Professors

A. Kapil

B.R. Mirdha

B.K. Das

L. Dar

Associate Professors

B. Dhawan

M. Vajpayee

I. Xess

Assistant Professors

S. Sood

U.B. Singh

EDUCATION

Short-term training

Short-term summer training was provided to 39 students (MSc) from various institutes/universities including three students from Nepal and two from Korea.

Postgraduates from the Department of Microbiology of all the three medical colleges of the University of Delhi (MAMC, LHMC, UCMS) underwent short-term training in newer microbiological techniques and postgraduate students of the Centre of Community Medicine, AIIMS, were provided short-term training in Entomology.

Continuing Medical Education

The faculty of the department delivered 23 lectures in various continuing medical education (CME) programmes, seminar, workshops and symposia. Eight papers were presented in various national and international conferences.

RESEARCH

Funded Projects

Completed

1. Aerobic and anaerobic bacteriological profile of diabetic, foot ulcers with special reference to Methicillin-resistant *Staphylococcus aureus*. B. Dhawan. Funded by ICMR for 3 years (March 2003–February 2006). Funds: Rs 6,06,600.
2. Genetic variability of among ‘G’ protein of respiratory syncytial virus (RSV) strains from India and studies of antibody differences to these ‘G’ proteins (Indo-US Vaccine Action Programme). S. Broor. Funded by Indo-US Vaccine Action Programme and DBT for 3 years (2001–2005). Funds: Rs 37.63 lakh.

Ongoing

1. A multicentric study on detection and characterization of human caliciviruses (HuCVs) in acute gastroenteritis and food-borne disease. S. Broor. Funded by ICMR for 3 years (2003–2006). Funds: Rs 30.9 lakh.
2. Cloning and expression of *Mycoplasma pneumoniae* P1 gene and its fragments to study their role in cytoadherence. R. Chaudhry. Funded by ICMR for 3 years (February 2005–January 2008). Funds: Rs 17 lakh.
3. Congenital CMV infection in offspring of immune mothers. S. Broor. Funded by ICMR for 3 years (2004–2007). Funds: Rs 35 lakh.
4. Development of multiplex real time quantitative PCR assay to detect *Chlamydia pneumoniae*, *Legionella pneumophila* and *Mycoplasma pneumoniae* to community acquired pneumonia. R. Chaudhry. Funded by DBT for 3 years (February 2005–January 2008). Funds: Rs 34.65 lakh.
5. Development of PCR test for the SARS Virus. S. Broor. Funded by DBT for 3 years (2004–2006). Funds: Rs 45.16 lakh.
6. Diagnostic and prognostic evaluation of leishmaniasis by PCR and a newly developed buffy coat assay using patient's blood. J.C. Samantaray. Funded by CSIR for 2 years (2004–2006). Funds: Rs 7.5 lakh.
7. DNA amplification study by polymerase chain reaction (PCR) to detect subclinical *Pneumocystis carinii* infections and colonization in 'at risk' patients with or without respiratory symptom. B.R. Mirdha. Funded by DST for 3 years (2004–2007). Funds: Rs 18 lakh.
8. Evaluation of cytokine profile and Th1/Th2 shift. M. Vajpayee. Funded by ICMR for two years (January 2004–June 2006). Funds: Rs 28 lakh.
9. Metapneumovirus infections of children in India. S. Broor. Funded by National Institutes of Health, USA, for 3 years (2005–2007). Funds: US\$ 100,000.
10. Molecular characterization of invasive and noninvasive *Haemophilus influenzae*. B.K. Das. Funded by DST for 3 years (December 2004–December 2007). Funds: Rs 20 lakh.
11. Multisite monitoring of human influenza in India, phase-I. S. Broor. Funded by WHO, ICMR and Department of Health and Human Services, USA (DHHS), for 3 years (2004–2007). Funds: 38 lakh.
12. Optimization of carbohydrate-protein conjugates as vaccine for prevention of enteric fever. S. Sood. Funded by DBT for 3 years (2004–2007). Funds: Rs 36.5 lakh.
13. Optimization of lab diagnosis of pertussis. A. Kapil. Funded by DBT for 1.5 years. Funds: Rs 17 lakh.
14. Phenotypic and genotypic characterization of Methicillin and Mupirocin resistant *Staphylococci*. B. Dhawan. Funded by DBT for 3 years (2005–2008). Funds: Rs 28.18 lakh.
15. Pneumococcal surface protein A (Psa A) tPA DNA construct as vaccine candidate against *Str. Pneumoniae*. B.K. Das. Funded by DBT for 3 years (2003–2005). Funds: Rs 23 lakh.
16. Pneumolysin (Ply)-tpA DNA construct as a vaccine candidate against *Str. Pneumoniae*. B.K. Das. Funded by DST for 3 years (April 2006–May 2009). Funds: Rs 20 lakh.
17. Prevalence of intestinal coccidiosis and other parasitosis in 'at risk' individuals—Intramural Project. B.R. Mirdha. Funded by AIIMS for 1 year (2005–2006). Funds: Rs 0.35 lakh.
18. Role of *Ureaplasma urealyticum* in prematurity and disease in newborn. B. Dhawan. Funded by DST for 3 years (May 2003–2006). Funds: Rs 13.5 lakh.
19. Study of carbapenemase production amongst nosocomial isolates of Gram-negative bacteria in a tertiary care hospital. A. Kapil. Funded by ICMR for 3 years (February 2005–March 2008). Funds: Rs 13 lakh.

Departmental Projects

Ongoing

1. Antigenic and molecular characterization of human influenza virus from the patients of acute respiratory infections
2. Characterization of T helper cell immune response to HIV-1 subtype C in infected individuals from India
3. Cloning and expression of capsid gene of norovirus strains from India in baculovirus expression system
4. Detection and genotyping of human cytomegalovirus from neonates and renal transplant recipients
5. Detection, genotyping and immune response study to human metapneumovirus
6. Evaluation of cell-mediated immune response in HIV-1 infected individuals in north India.
7. Multiplex RT-PCR for detection of viruses causing lower respiratory tract infections, viz. human respiratory syncytial viruses (RSV), human parainfluenza viruses, influenza viruses (FLU), and human metapneumovirus (hMPV) and real time RT-PCR for detection of human Respiratory Syncytial viruses (RSV) and human metapneumovirus (hMPV).
8. Rapid detection technique of candidemia in critically ill patients and its therapeutic outcome.
9. Role of IL-7 in peripheral homeostasis and its relationship with CD4+ T cell level
10. Sequencing and phylogenetic analysis of dengue virus strains from Delhi.
11. Study of inhibition of respiratory syncytial virus and human metapneumovirus multiplication by RNA interference in tissue culture and animal model.

Collaborative Projects

Ongoing

1. A comparative study of VIA, cytodiagnosis, HPV testing and colposcopy as tools for cervical cancer screening (DBT Indo-US project, with Obstetrics and Gynaecology).
2. Diagnosis of visceral leishmaniasis by use of the polymerase chain reaction (PCR) on patient blood (with Medicine and Institute of Pathology).
3. Drug resistance surveillance under RNTCP. Ministry of Health, Government of India. (with Medicine).
4. Efficacy and safety of immuno-modulator *Mycobacterium W*, Mw as an adjunct therapy in pulmonary tuberculosis (with Medicine).
5. Immunomodulatory and antimicrobial effects of *Ocimum sanctum* (with Physiology, Medicine and Institute of Pathology).
6. Microscopy Centre for Directly Observed Therapy, Short-course (DOTS) (with Medicine).
7. Molecular, biological and serological detection of parameters of association of *Campylobacter jejuni* infection in children with Guillain-Barre syndrome. (with Paediatrics).
8. Prevention of infection in Indian neonates, Global Network Project (with AIIMS and NIH).
9. Spectrum of respiratory infections in HIV-infected patients (with Medicine).
10. Study of emerging parasitic agents (intestinal coccidia and microsporidia) in aetiologies of malabsorption syndrome. (with Gastroenterology and HNU, and Paediatrics).
11. Treatment outcome and drug resistance among Category II pulmonary tuberculosis patients under RNTCP. Ministry of Health, Government of India. (with Medicine).
12. Tuberculosis as an aetiological factor in liver abscess in adults (with Medicine, Dr R.M.L. Hospital).

PUBLICATIONS

Journals

1. Agarwal G, Kapil A, Kabra SK, Das BK, Dwivedi SN. Characterization of *Pseudomonas aeruginosa* isolated from chronically infected children with cystic fibrosis in India. *BMC Microbiol* 2005;**5**:43.
2. Agarwal G, Kapil A, Kabra SK, Das BK, Dwivedi SN. *In vitro* efficacy of ciprofloxacin and gentamicin against a biofilm of *Pseudomonas aeruginosa* and its free-living forms. *Natl Med J India* 2005;**18**:184–6.
3. Aggarwal P, Kumar S, Vajpayee M, Seth P. Adjuvant action of murine IL-2/Ig plasmid after intramuscular immunization with Indian HIV-1 subtype C recombinant env_gp 120 construct. *Viral Immunol* 2005;**18**: 649–56.
4. Bhanu NV, Singh UB, Chakraborty M, Suresh N, Arora J, Rana T, Takkar D, Seth P. Improved diagnostic value of PCR in the diagnosis of female genital tuberculosis leading to infertility. *J Med Microbiol* 2005;**54**:927–31.
5. Biju SS, Ahuja A, Khar RK, Chaudhry R. Formulation and evaluation of an effective pH balanced topical antimicrobial product containing tea tree oil. *Pharmazie* 2005;**60**:208–11.
6. Broor S. Chromium: Can it be useful in treatment of DHF? *Indian J Med Res* 2005;**122**:96–7.
7. Broor S. Recent avian influenza outbreaks: A pandemic in the waiting. *Indian J Med Microbiol* 2005;**23**:72–3.
8. Chaudhry R, Chandel DS, Pandey A, Dhawan B., Gulati V, Sood R. Utility of PCR in diagnosing complicated cases of unusual clinical manifestations of *Salmonella enterica* var. paratyphi A. *Am J Med* 2005;**118**:799–800.
9. Dhawan B, Gupta V, Khanna N, Singh M, Chaudhry R. Evaluation of the diagnostic Efficacy of PCR for *Ureaplasma urealyticum* infection in Indian adults with symptoms of genital discharge. *Jpn J Infect Dis* 2006;**59**:57–8.
10. Dhawan B, Mohanty S, Das BK, Kapil A. Bacteriology of orthopaedic wound infections in an Indian Tertiary Care Hospital. *Indian J Med Res* 2005;**121**:784–5.
11. Dar L, Gupta E, Narang P, Broor S. Cocirculation of dengue serotypes, Delhi, India, 2003. *Emerg Infect Dis* 2006;**12**:352–3.
12. Kadhiravan T, Wig N, Kapil A, Kabra SK, Renuka K, Misra A. Clinical outcomes in typhoid fever: adverse impact of infection with nalidixic acid-resistant *Salmonella typhi*. *BMC Infect Dis* 2005;**5**:37.
13. Kalra V, Agarwal SK, Khilnani GC, Kapil A, Dar L, Singh UB, Mirdha BR, Xess I, Gupta S, Bhowmik D, Tiwari SC, Dash SC. Spectrum of pulmonary infections in renal transplant recipients in the tropics: A single center study. *Int Urol Nephrol* 2005;**37**:551–9.
14. Kar UK, Satapathy G, Panda SK, Das BK. Utility of random amplification of polymorphic DNA assay and BOX-A PCR in molecular characterization of *Streptococcus pneumoniae* isolates recovered from various ophthalmic infections. *Ophthalmic Res* 2006;**38**:36–43.
15. Kaushik S, Vajpayee M, Sreenivas V, Seth P. Correlation of T-lymphocyte subpopulations with immunological markers in HIV-1-infected Indian patients. *Clin Immunol* 2006;**119**:330–8.
16. Kumar S, Aggarwal P, Vajpayee M, Pandey RM, Seth P. Development of a candidate DNA/MVA HIV-1 subtype C vaccine for India. *Vaccine* 2006;**24**:2585–93.
17. Malik S, Samantaray JC, Bagga A, Das A. Refractory isosporiasis. *Indian J Pediatr* 2005;**72**:437–9.
18. Mathur P, Kapil A, Das B. Nosocomial bacteraemia in intensive care unit patients of a tertiary care centre. *Indian J Med Res* 2005;**122**:305–8.
19. Mathur P, Samantaray J, Chauhan NK. Evaluation of a rapid immunochromatographic test for diagnosis of kala-azar and post kala-azar dermal leishmaniasis at a tertiary care centre of north India. *Indian J Med Res* 2005;**122**:485–90.

20. Mohanty S, Chandra SP, Dhawan B, Kapil A, Das BK. Meningitis due to *Escherichia vulneris*. *Neurol India* 2005;**53**:122–3.
21. Mohanty S, Das BK, Kapil A. Pleural empyema due to group a beta-hemolytic streptococci in an adult. *Indian J Med Sci* 2005;**59**:213–14.
22. Mohanty S, Dhawan B, Kapil A, Das BK, Pandey P, Gupta A. Brain abscess due to *Enterococcus avium*. *Am J Med Sci* 2005;**329**:161–2.
23. Mohanty S, Jose S, Singhal R, Sood S, Dhawan B, Das BK, Kapil A. Species prevalence and antimicrobial susceptibility of enterococci isolated in a tertiary care hospital of North India. *Southeast Asian J Trop Med Public Health* 2005;**36**:962–5.
24. Mohanty S, Kapil A, Das BK, Dhawan B. *Enterococcus avium* cerebellar abscess. *Neurol India* 2006;**54**:108–9.
25. Mohanty S, Renuka K, Sood S, Das BK, Kapil A. Antibioqram pattern and seasonality of *Salmonella* serotypes in a North Indian tertiary care hospital. *Epidemiol Infect* 2006;**14**:1–6.
26. Mohanty S, Singhal R, Sood S, Dhawan B, Das BK, Kapil A. Comparative *in vitro* activity of beta-lactam/beta-lactamase inhibitor combinations against gram negative bacteria. *Indian J Med Res* 2005;**122**:425–8.
27. Pandey A, Chaudhry R, Kapoor L, Kabra SK. Acute lower respiratory tract infection due to *Chlamydia* species in children under five years of age. *Indian J Chest Dis Allied Sci* 2005;**47**:97–101.
28. Parveen S, Broor S, Kapoor SK, Fowler K, Sullender WM. Genetic diversity among respiratory syncytial viruses that have caused repeated infections in children from rural India. *J Med Virol* 2006;**78**:659–65.
29. Renuka K, Sood S, Das BK, Kapil A. High-level ciprofloxacin resistance in *Salmonella enterica* serotype Typhi in India. *J Med Microbiol* 2005;**54**:999–1000.
30. Singhal R, Mirdha BR, Guleria R. Human pneumocystosis. *Indian J Chest Dis Allied Sci* 2005;**47**:273–83.
31. Tejasvi T, Sharma VK, Sethuraman G, Singh MK, Xess I. Invasive dermatophytosis with lymph node involvement in an immunocompetent patient. *Clin Exp Dermatol* 2005;**30**:506–8.
32. Vajpayee M, Kaushik S, Sreenivas V, Wig N, Seth P. CDC staging based on absolute CD4 count and CD4 percentage in an HIV-1-infected Indian population: treatment implications. *Clin Exp Immunol* 2005;**141**:485–90.

Chapters in Books

1. Mirdha BR. Air pollution and health hazards. In: Singh KK (ed). *Air, water, soil pollution*. Ludhiana: Kalayani Publishers; 2006.
2. Mirdha BR. Water borne microbes. In: Singh KK (ed). *Air, water, soil pollution*. Ludhiana: Kalyani Publishers 2006.

PATIENT CARE

Bacteriology

Bacteriology laboratory

Clinical samples	82,332
Antimicrobial susceptibility tests	28,633
Total	1,10,966

Sexually transmitted diseases

Clinical samples

Expressed prostatic secretions (EPS)	100
High vaginal swab (HVS)	262
Semen	187
Urethral discharge	47
Vaginal/cervical discharge	121
Total	717

Antimicrobial susceptibility testing

EPS	15
HVS	69
Semen	33
Urethral discharge	02
Total	119

Hospital infection control

Surveillance	12,368
CSSD samples (Central sterile supply department)	600

Water bacteriology

Samples for water bacteriology	1149
Total	14,117

Anaerobic bacteriology

Anaerobic culture	700
Antimicrobial sensitivity	48
Referred Anaerobic culture	1
Anaerobic strains supplied to other hospitals	10
ELISA for <i>Clostridium difficile</i> toxin	63
<i>Leptospira</i> culture	177
<i>Leptospira</i> serology for IgM antibodies	
— By ELISA	177
— By Lepto dri-dot	177

Mycoplasma

<i>Mycoplasma pneumoniae</i> IgM antibodies by ELISA/GPA	285
<i>Mycoplasma pneumoniae</i> culture	223
<i>Mycoplasma hominis</i> culture	263
<i>Ureaplasma urealyticum</i> culture	264
<i>Campylobacter jejuni</i> culture	200
PCR for <i>Salmonella typhi</i>	37
PCR for <i>Mycoplasma pneumoniae</i>	149
PCR for <i>Leptospira</i>	36
Total	2 810

Parasitology

Serological Investigations

<i>Toxoplasma gondii</i> serology for IgG antibodies by ELISA	167
Hydatid diseases serology by indirect haemagglutination test	176
Amoebic serology of IgG antibodies by ELISA	199

Investigation for malaria

Fluorescent staining (Acridine Orange)	2897
Giemsa staining	2897
Quantitative Buffy Coat (QBC) Assay	842
HRP-II antigen detection	250

Investigation for kala-azar

Fluorescent staining (Acridine Orange)	170
Giemsa staining	170
Quantitative Buffy Coat (QBC) Assay	70
Kala-azar serology	252
Aldehyde test	252

Examination of faecal samples for intestinal parasitosis

Direct and concentration	1007
Culture	30
Modified acid-fast and special staining for intestinal coccidia	1007
Tissue specimens (homogenates)	60

Examination of aspirates

Sputum, pus and others	78
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Investigation for filariasis

Direct and concentration	79
Acridine Orange	79
Thin and thick smear	79
QBC	79
Hetrazan provocative test	22

Other investigations

Broncho-alveolar lavage (BAL), induced sputum, Tracheal aspirate, Nasopharyngeal aspirates	131
Cerebrospinal fluid examination for free living amoebae (FLA)	79

Total **13,075**

Tuberculosis laboratory

Smear microscopy and LJ culture	10,000
PCR	3,641
Drug susceptibility testing (Bactec 460)	80
Rapid culture by Bactec 460	375

Total **14,096**

Virology Laboratory	
Viral culture and identification (HSV, dengue, etc.)	74
<i>Viral serology</i>	
Rubella IgG	155
Rubella IgM	95
CMV IgM	96
HSV (serum and CSF)	383
Measles (serum and CSF)	233
Dengue	629
<i>Polymerase chain reaction</i>	
CMV	177
HSV	81
CMV antigen detection (pp65)	53
Miscellaneous (staining for inclusions, etc.)	21
Total	1997
Mycology	
Total number of samples processed for direct demonstration and isolation of pathogenic fungi	6570
<i>Fungal Serology</i>	
Aspergillus	22
Histoplasma	06
Cryptococcus	450
<i>Antifungal susceptibility</i>	
Candida (micro dilution method)	43
Outside strains came for identification	10
Strains given to other institutes	10
Total	7111
Immunology	
CD4/CD8 counts by flow cytometer	1200
HIV testing	
Total	7864
Serology laboratory	
VDRL	6920
WIDAL	4770
ASLO	133
Total	11,823

VISITING SCIENTISTS

1. Dr John Stelling, Co-Director, WHO Collaborating Centre for Surveillance of Antimicrobial Resistance, 20 February 2006.
2. Dr Pinaki Panigrahi, Associate Professor, Department of Paediatrics, University of Maryland, USA, 20 December 2005.
3. Dr Judith Johnson, Department of Microbiology, University of Maryland, USA, from 12–14 April 2005.

9.19 Nephrology

Professor and Head

S.C. Dash

Professor

S.C. Tiwari

Additional Professor

S.K. Agarwal

Associate Professors

S. Gupta

D. Bhowmik

S. Mahajan

EDUCATION

Short-term training

During the year 2005–2006, 1 consultant from Lady Hardinge Medical College (LHMC) and 1 from Patna Medical College and 1 senior consultant from I.G.H., Rourkela took training in Nephrology—dialysis and transplantation at the department. Eighteen nurses and technicians from LHMC and Jamia Millia took training in dialysis and transplantation. Also, BSc nurses were posted in the department for training.

Long-term training

The department mainly runs a 3-year DM Nephrology course for post-MD (Medicine) candidates, who get selected by AIIMS on the basis of merit. Four candidates were admitted to the DM course and 4 passed out. Postgraduates in Internal Medicine are posted on a rotational basis for a short period of 1–2 months.

Continuing Medical Education

Conferences, seminars, workshops

- First Annual Conference of Indian Academy of Nephrology on 8–11 February 2006.
- Patient Education Programme in April 2005.
- School Health Education Programme on 'Prevention of renal disease' in October 2005.
- An interactive seminar was organized by the department on World Kidney Day on 9 March 2006, which was inaugurated by the Union Minister of State Health and Family Welfare, Smt Panabaka Laxmi.

Lectures delivered

Dr S.C. Dash

- 'Global challenge of chronic kidney disease', Royal College of Physicians, London, UK; 14 June 2005.
- 'Hypertension and kidney', Royal Manchester Infirmary, Department of Renal Medicine; 7 June 2005.

- 'Management of Microalbuminuria and cardiovascular risk', East London GPs' Association; 9 June 2005.
- 'Hypertension and kidney: Current perspectives', Annual Conference of Northern Chapter of ISN, Jammu; April 2005.
- 'Ethics of kidney transplant—An Indian context', 16th Annual Conference of Indian Society of Organ Transplantation, Jaipur; 30 September 2005.
- Presidential Address, 36th Annual Congress of Indian Society of Nephrology, Cochin, Kerala; 1–3 December 2005.
- Plenary lecture, 6th Nephrology-Urology-Transplant Meeting of SAARC Countries, Dhaka, Bangladesh; 6–7 December 2005.
- Clinicopathological Conference, Annual Update of Delhi Nephrology Society, Sir Ganga Ram Hospital, New Delhi; 21–22 January 2006.
- 'Prevention of chronic kidney disease', 1st National Congress of Indian Academy of Nephrology, AIIMS; 8–11 February 2006.
- 'Minimization of immunosuppressant therapy' and 'Management of CKD Stage II-III', Annual Conference of East Zone ISN, Imphal, Manipur; 17 September 2005.

Dr S.C. Tiwari

- 'A patient with cerebral involvement in renal transplant', CPC conducted as a clinical discussant at Sir Ganga Ram Hospital, New Delhi; October 2005.
- 'Daily haemodialysis', Peritoneal Dialysis Society of India; February 2006.
- 'Kidney and heart interaction', University of Manitoba, Winnipeg, Canada; September 2005.
- 'Diabetic nephropathy', University of Manitoba, Winnipeg, Canada; September 2005.
- 'Acute renal failure in pregnancy', Long Island Medical Center, New York, USA; October 2005.

Dr S.K. Agarwal

- 'Management of diabetic kidney disease', 1st Inaugural Meeting of Diabetic Kidney Patients Society, Indian Medical Association House, New Delhi; 10 April 2005.
- 'Prevention and management of chronic kidney disease', Haridwar Indian Medical Association, CME, Haridwar; 11 June 2005.
- 'Screening and early detection of chronic kidney disease', CME, Fortis Hospital, Noida; 18 June 2005.
- 'Emergencies in haematology', as a discussant for clinical case in Haematology, CME, Department of Haematology, New Delhi; 3 September 2005.
- 'Interferon in end-stage renal disease', Mid-term single theme conference on 'Hepatitis and renal disease', Indian Association of Study of Liver Disease, Delhi; 3 December 2005.

- ‘Cardio-renal syndrome’, Annual update, Delhi Nephrology Society, Sir Ganga Ram Hospital, New Delhi; 21–22 January 2006.
- ‘Definition and epidemiology of chronic kidney disease’, 1st National Congress of Indian Academy of Nephrology, New Delhi; 8–11 February 2006.
- ‘Hepatitis C virus infection during renal replacement therapy’, 1st National Congress of Indian Academy of Nephrology, New Delhi; 8–11 February 2006.
- ‘Diet in renal replacement therapy’, Indian Dietetic Association, New Delhi; 22 February 2006.
- Invited faculty, 8th FIMSA/Indian Immunology Society course, New Delhi; 1–5 March 2006.

Dr S. Gupta

- ‘Water balance in health and disease’, BHU, Varanasi, Dean’s CME; 24 October 2005
- ‘Acute renal failure: Recent concept’, Bikaner Medical College, Bikaner; 11–13 February 2006.
- ‘Renal transplant in Indian scenario’, Bikaner Medical College, Bikaner; 11–13 February 2006.

Dr D. Bhowmik

- Guest lecture, Annual Conference, Northern Chapter of Indian Society of Nephrology, Jammu; April 2005.
- ‘Integral health management’, Symposium at Sri Aurobindo Ashram, New Delhi; October 2005.
- Guest lecture, Symposium on ‘Stem cell research’, AIIMS; November 2005.
- Guest lecture, Annual Conference of Peritoneal Dialysis Society of India, Chandigarh; February 2006.

Dr S. Mahajan

- ‘CAPD in Indian scenario’. ESI Hospital, Delhi; April 2005
- ‘Peritoneal dialysis in diabetic patients’, PD Update SGRH, Delhi; June 2005.
- ‘Rapporteur for hypertension and renal diseases’, 4th International CME on ‘Hypertension and ISHCON, 2005’, GTB and UCMS Hospital, Delhi.
- ‘Renal diseases in the elderly’, CME on ‘Geriatric care’, Directorate of Health Services, Government of NCT, Delhi; November 2005.
- ‘Management of diabetic nephropathy’, CME on ‘Recent advances in diabetes’, Sant Parmanand Hospital, New Delhi; March 2006.

RESEARCH

Funded projects

1. IV Iron therapy in CRF and its outcome. S.C. Dash. Funded by Panacea Biotec for 6 months. Funds: Only necessary materials will be supplied by the company.
2. Effect of Ketoanalogue of EAA and protein restriction on progression of CKD. S.C. Dash. Funded by Fresenius Kabi for 1 year. Funds: Materials used for the project will be supplied directly by the company.

3. Impact of isolation on incidence of hepatitis C virus infection in patients on maintenance haemodialysis. S.K. Agarwal. Funded by ICMR for 3 years. Funds: Rs 12 lakh (approx.).
4. An open-label prospective multicentric trial to evaluate the efficacy and safety of lanthanum carbonate in patients of hyperphosphataemia of CKD. S.K. Agarwal. Funded by Panacea Biotec for one and a half year. Funds: Rs 2 lakh.
5. Linezolid vs vancomycin/cefazolin in treatment of haemodialysis patients with catheter-related Gram-positive blood-borne infection. S.K. Agarwal. Funded by Pfizer for 1 year. Funds: Rs 5 lakh (approx.).

Departmental Projects

Completed

1. Sympathetic and rennin–angiotensin–aldosterone system status in chronic renal failure
2. Study of hepatitis B and hepatitis C infection in primary glomerular diseases
3. Impact of isolation of HCV-positive patients on incidence of HCV infection during haemodialysis
4. Post-renal transplant tuberculosis: Comparison between double and triple immunosuppression
5. Estimation of anti-oxidant in blood in renal and liver diseases.
6. Spectrum of acute renal failure (ARF) and factors predicting its outcome among elderly population in India.
7. Spectrum and outcome predictors of acute renal failure (ARF) in intensive care unit (ICU) of a developing country.
8. Therapeutic drug monitoring of rifampicin in tuberculosis patients with normal renal function and chronic renal failure.

Ongoing

1. Tuberculosis prophylaxis in patients on maintenance haemodialysis.
2. Open-label study of effect of lamivudine in hepatitis B renal transplant recipient.
3. Clinicopathological correlation of HBV and HCV infection in patients on renal replacement therapy.
4. Open-label study of peg-interferon for treatment of HCV infection in patients on maintenance haemodialysis.
5. Sleep studies in renal failure.
6. Incidence of depression in patients on CAPD.
7. Use of mupirocin cream at the exit site and the incidence of peritonitis and exit-site infection as an ongoing project.

Collaborative Projects

Ongoing

1. A study of psychiatric morbidity and quality of life in patients before and after renal transplantation (with Psychiatry).
2. Diagnosis of cytomegalovirus pneumonitis in immunocompromised patients at AIIMS (with Microbiology).
3. Detection and genotyping of human cytomegalovirus from neonates and renal transplant recipients (with Microbiology).
4. Prevalence of CKD in high-risk population.
5. Molecular detection and characterization of *Pneumocystis jiroveci* in respiratory samples from the patients both immunocompromised as well immunocompetent with suspected interstitial pneumonia and other chronic lung diseases.

6. Effect of N. acetyl cystein on serum creatinine and glomerular filtration rate in healthy subjects with normal renal function with or without contrast exposure.
7. To study the clinicopathological correlations and assess the clinical, laboratory and renal histology predictors for long-term outcome in lupus nephritis.
8. To study the pregnancy outcomes in systemic lupus erythematosus with special reference to cyclophosphamide therapy.
9. Evaluation of protective effect of garlic extract on cyclosporin-induced nephrotoxicity in rats.
10. To study the outcome of immunological high-risk renal allograft recipients.
11. Importance of C₄d staining in allograft biopsies for the diagnosis of antibody-mediated acute rejection (with Pathology).
12. Use of proteonomics in the diagnosis and follow up of acute rejection (with Biophysics).
13. Change in cytokines profile in acute rejection (HLA).
14. Cytokine studies in renal transplant patients.
15. Assessing glomerular filtration rate in healthy Indian adults: A comparison of various prediction equations.
16. Incidence of depression in patients on CAPD: First 2 years' outcome.
17. Tacrolimus in steroid-resistant nephritic syndrome.

PUBLICATIONS

Journals

1. Agarwal SK, Dash SC, Irshad M, Raju DSB, Singh R, Pandey RM. Prevalence of chronic renal failure in adults in Delhi, India. *Nephrol Dial Transplant* 2005;**20**:1638–42.
2. Agarwal SK. Chronic kidney disease and its prevention in India. *Kidney Int* 2005;**98**:S41–S45.
3. Bansal R, Agarwal SK, Tiwari SC, Dash SC. A prospective randomized study to compare ultrasound-guided with nonultrasound-guided double lumen internal jugular catheter insertion as a temporary hemodialysis access. *Ren Fail* 2005;**27**:561–4.
4. Bhowmik D, Sharma M, Kalra V, Mahajan S, Gupta S, Agarwak SK, *et al.* Safe administration of sodium ferric gluconate complex in a patient with history of allergic reaction to low molecular weight iron dextran. *Indian J Nephrol* 2005;**15**:60–1
5. Bhowmik D, Tiwari SC. Do we need to change our administration practice with regard to sodium ferric gluconate complex in glucose? *Nephrol Dial Transplant* 2005;**20**:1279.
6. Dash SC, Agarwal SK. Incidence of chronic kidney disease in India. *Nephrol Dial Transplant* 2005;**1**:232–3.
7. Dash SC, Bhowmik DM, Agarwal SK, Gupta S, Tiwari SC. Obstructive uropathy as cause of rickets: Often a forgotten entity. *Indian J Pediatr* 2005;**72**:265.
8. Dirk JH, De Zeeuw D, Agarwal SK, Atkins RC, Correa Rotter R, D'Amico G, *et al.* Prevention of chronic kidney disease: Towards global health equity—The Bellagio 2004 declaration. *Kidney Int* 2005;**98**:S1–S6.
9. Guleria S, Agarwal RK, Guleria R, Bhowmik D, Agarwal SK, Tiwari SC. The effect of renal transplantation on pulmonary function and respiratory muscle strength in patients with end-stage renal disease. *Transplant Proc* 2005;**37**:664.
10. Guleria S, Agarwal RK, Guleria R, Bhowmik DM, Agarwal SK, Tiwari SC. The effect of renal transplantation on pulmonary function and respiratory muscle strength in patients with end-stage renal disease. *Transplant Proc* 2005;**37**:664–5.
11. Gupta S, Shyam Sunder, Agarwal SK, Bhowmik D, Tiwari SC, Dash SC. Initial experience of tacrolimus in steroid resistant or dependent adult nephritic syndrome. *Indian J Nephrol* 2005;**15**:125.

12. Gupta U, Tiwari P, Tiwari SC. Daily Haemodialysis. *J Ren Sci* 2005;**5**:18–21.
13. Kalra V, Agarwal SK, Khilnani GC, Kapil A, Dar L, Singh UB, *et al.* Spectrum of pulmonary infections in renal transplant recipients in the tropics: A single center study. *Int Urol Nephrol* 2005;**37**:551–9.
14. Kalra V, Mahajan S, Agarwal SK, Tiwari SC. Cardiorenal disease a clinical intersection. *Int Urol Nephrol* 2005;**37**:175–84.
15. Mahajan S, Kalra V, Dinda AK, Tiwari SC, Agarwal SK, Bhowmik D. Fibrillary glomerulonephritis presenting as rapidly progressive renal failure in a young female: A case report. *Int Urol Nephrol* 2005;**37**:561–4.
16. Mahajan S, Mukhiya GK, Singh R, Tiwari SC, Kalra V, Bhowmik DM, *et al.* Assessing glomerular filtration rate in healthy Indian adults: A comparison of various prediction equations. *J Nephrol* 2005;**18**:257–61.
17. Mahajan S, Mukhiya GK, Singh R, Tiwari SC, Kalra V, Guleria S, *et al.* Assessing suitability for renal donation: Can equations predicting glomerular filtration rate substitute for a reference method in the Indian population? *Nephron Clin Pract* 2005;**101**:c128–c133.
18. Mahajan S, Tiwari SC, Kalra V, Bhowmik DM, Agarwal SK, Dash SC, *et al.* Effect of local mupirocin application on exit-site infection and peritonitis in an Indian peritoneal dialysis population. *Perit Dial Int* 2005;**25**:473–7.
19. Tiwari SC, Bhowmik DM, Dash SC. Is the term ‘renal support therapy’ more appropriate than renal replacement therapy? *Nephrol Dial Transplant* 2005;**20**:1770–1. Epub 2005 Jun 14.
20. Vikrant S, Agarwal SK, Gupta S, Bhowmik D, Tiwari SC, Dash SC, *et al.* Prospective randomised control trial of isoniazid chemoprophylaxis during renal replacement therapy. *Transp Infect Dis* 2005;**7**:99–108.

Abstracts

21. Bhowmik D, Prasad SM, Tiwari SC, Bhatia M, Sharma SK, Dash SC. Sleep disturbances are common in hemodialysis patients and are associated with a poor quality of life: A case controlled study. *Sleep Medicine* 2005;**6** (Suppl 2): S88–S89.
22. Mahajan S, Mukhiya GK, Singh R, Tiwari SC, Kalra V. Can equations predicting GFR be used to assess suitability for renal donation in Indian population? A single center prospective study. *Nephrol Dial Transplant* 2005;**20** (Suppl 5): v360.

PATIENT CARE

Facilities available in the department

1. Haemodialysis
2. Acute peritoneal dialysis
3. Continuous ambulatory peritoneal dialysis
4. Vascular access (minor surgery)
5. Plasmapheresis/plasma exchange
6. CRRT (C II ICU, AB8 and CTVS)
7. Renal transplants
8. Renal laboratory tests

Specialized treatment procedures

The department provides specialty care for seriously ill patients with acute and chronic kidney failure. It conducts the following specialized treatment procedures:

• Haemodialysis	5114
• Intermittent peritoneal dialysis	630
• Continuous ambulatory peritoneal dialysis	72
• Plasmapheresis/plasma exchange	33
• Continuous renal replacement therapy (venovenous/arteriovenous haemofiltration and haemodialysis)	9
• Femoral vein catheterization	1233
• Preparation for kidney transplantation	123

Other therapeutic procedures (Day-care treatment)

• Intravenous pulse therapy for Immunosuppressants and iron therapy	590
• Jugular and subclavian catheter insertion	342
• AV fistula	47
• SV shunt	28
• Kidney biopsy	274
• Laboratory facilities for early and late diagnosis of renal diseases	
— No. of patient	9,814
— No. of investigations	87,726

Clinics

• Renal clinic (6 days per week)	12,347
• Renal transplant counselling clinic (3 days per week)	1,248
• Renal transplant clinic (2 days per week)	4,213
• Indoor admissions (long and short)	3,195
• Nephrology consultations	2,285

Community service

The faculty members participated in 4 telemedicine and 4 public lecture programmes.

AWARDS AND HONOURS

Dr S.C. Dash was elected as the President of the Indian Society of Nephrology; Editor of *Journal of NUTS* of SAARC Countries; invited by the Royal College of Physicians, London to speak on the premises of the Royal College Physicians, St Andrews Palace, London, UK; 14 June 2005; awarded the Professor B.C. Bansal Oration Award by the Indian Academy of Clinical Medicine, Patna, 14–15 October 2005; Dr R.T. Jain Memorial Oration Award by the West Zone Chapter of the Indian Society of Nephrology, Nagpur, 22 October 2005; Dr P.N. Chugh Oration Award by the Association of Physicians of India, Delhi Chapter; 23 October 2005.

Dr S.C. Tiwari was felicitated for 'Excellence in Nephrology', by the Indian Medical Association, Delhi, in April 2005; continues to be Editor, *Journal of Renal Sciences*; and Reviewer of *Nephron*, 2005–2006 and *Nephrology Dialysis Transplantation*.

Dr S.K. Agarwal has been working as a Member of the 'Chronic Kidney Diseases (CKD) Collaborative Group' for making guidelines for the management of CKD in India by the Indian Society of Nephrology; Member, Collaborative group for making CKD registry in India by the Indian Society of Nephrology, January 2005; invited to Chair the meeting for the Task Force Project being initiated by ICMR, New Delhi on 'Chronic kidney disease'; Member, Ethics Committee, Central Council for Research in Homeopathy.

Dr S. Mahajan was felicitated for the best abstract, Post Congress Satellite Meeting, ISN and NKFS, Singapore, for 'Renal disease in minority populations and developing nations'; June–July 2005.

VISITING SCIENTISTS

Professor Sir Netar Mallick from Manchester conducted a teaching programme for residents.

9.20 Nuclear Magnetic Resonance

Professor and Head

N.R. Jagannathan

Associate Professor

Rama Jayasundar (on long leave)

Assistant Professor

S. Senthil Kumaran

Scientist II

Jasbeer Dhawan (on leave)

Uma Sharma

Scientist I

Sujit Mewar

EDUCATION

Postgraduate

The faculty participated in and delivered several lectures in the MBIotech programme of the Department of Biotechnology.

Short- and long-term training

Eleven persons from medical and science disciplines from various institutes and universities from all over India and abroad underwent training in MRI and MRS techniques.

Continuing Medical Education

The faculty participated in and delivered several lectures in CME programmes, symposia and annual conferences during the year.

Lectures delivered

Professor N.R. Jagannathan

- 'Present status of MRI and MR spectroscopy in medicine', Workshop on 'Imaging techniques in Medicine and Industry', Kolkata; 1 December 2005.
- 'Role of *in vivo* MR methodologies in the study of cancer', National Symposium on 'Molecules, interactions and design: A biophysical perspective', Indian Biophysics Society, West Bengal University of Technology and Saha Institute of Nuclear Physics, Kolkata; 7 January 2006.
- 'MRI and *in vivo* MRS in humans', National Symposium on 'Advances in Magnetic Resonance and its applications' and 12th National Magnetic Resonance Society, Jammu; 8 October 2005.
- 'Role of MRI and MR spectroscopy in molecular medicine', 3rd Symposium on 'Frontiers in molecular medicine', Jawaharlal Nehru University, New Delhi; January 2006.
- 'Role of MR imaging and spectroscopy in Medicine', Indian Chemical Society Meeting, Ranchi; 16 December 2005.
- 'Applications of MR imaging and spectroscopy in biological systems', Academic Staff College Programme for College Teachers, Jawaharlal Nehru University, New Delhi; September 2005.

- 'Basics of MRI', National Conference of Radiology Technologists, AIIMS; October 2005.
- 'MRI and spectroscopy in Biomedicine', SBSPGIBMSR, Dehradun; August 2005.

RESEARCH

Funded Projects

Ongoing

1. Upgradation of the existing animal MR scanner for biomedical research. N.R. Jagannathan. Funded by DST for 5 years (November 2004–November 2009). Funds: Rs 365 lakh.
2. Evaluation of the role of proton MR spectroscopy in the non-invasive detection, assessment of treatment response and tumour metabolism in breast cancer. N.R. Jagannathan. Funded by DST for 3 years (June 2003–June 2006). Funds: Rs 18.8 lakh.

Departmental Research

Ongoing

1. Development of novel pulse sequences for *in vivo* MR spectroscopy

Collaborative Projects

Completed

1. High-resolution NMR spectroscopy of blood plasma in patients with cardiovascular disease (with Cardiology).
2. MRI/MRS studies to evaluate brain metabolism in sleep apnoea patients (with Medicine).
3. *In vivo* MRS of muscle in non-insulin dependent diabetes mellitus (NIDDM) patients (with Medicine).
4. MRI/MRS studies of brain metabolism in malnutrition (with Paediatrics).

Ongoing

1. *In vivo* MRI/MRS study of prostate cancer (with Urology and Pathology).
2. *In vivo* and *in vitro* study of breast cancer (with Surgery, Radiology and Pathology).
3. High-resolution ¹H MR spectroscopy of lymph nodes (with Surgery and Urology).
4. *In vitro* MR spectroscopy studies of tissue extracts of breast cancer and prostate tumours (with Urology).
5. *In vivo* and *in vitro* NMR spectroscopy of soft tissue sarcoma (with IRCH).
6. *In vitro* MR spectroscopy of colon tissue in patients of Crohn disease (with Gastroenterology).
7. Evaluation of neuroprotective agents in animal model of stroke using diffusion MRI (with Pharmacology).
8. ³¹P MRS study of skeletal muscle in patients of Duchenne muscular dystrophy (with Paediatrics).

PUBLICATIONS

Journals

1. Barthwal R, Sharma U, Srivastava N, Jain M, Awasthi P, Kaur M, *et al.* Structure of daunomycin complexed to d-TGATCA by two-dimensional nuclear magnetic resonance spectroscopy. *Eur J Med Chem* 2006;**41**:27–39.
2. Gupta YK, Briyal S, Sharma U, Jagannathan NR, Gulati A. Effect of endothelin antagonist (TAK-044) on cerebral ischemic volume, oxidative stress markers and neurobehavioral parameters in the middle cerebral artery occlusion model of stroke in rats. *Life Sci* 2005;**77**:15–27.
3. Khubchandani M, Jagannathan NR, Mallick HN, Mohan KV. Functional MRI shows activation of the medial preoptic area during sleep. *Neuroimage* 2005;**26**:29–35.

4. Kumar R, Thulkar S, Kumar V, Jagannathan NR, Gupta NP. Contribution of investigations to the diagnosis of bilateral vas aplasia. *ANZ J Surg* 2005;**75**:807–9.
5. Mathur P, Ramagopal UA, Ramakumar S, Jagannathan NR, Chauhan VS. Stabilization of unusual structures in peptides using alpha, beta-dehydrophenylalanine: Crystal and solution structures of Boc-Pro-DeltaPhe-Val-DeltaPhe-Ala-OMe and Boc-Pro-DeltaPhe-Gly-DeltaPhe-Ala-OMe. *Biopolymers* 2006;**84**:298–399.
6. Seenu V, Pavan Kumar MN, Sharma U, Gupta SD, Mehta SN, Jagannathan NR. Potential of magnetic resonance spectroscopy to detect metastasis in axillary lymph nodes in breast cancer. *Magn Reson Imaging* 2005;**23**:1005–10.
7. Sinha S, Rathi M, Misra A, Kumar V, Kumar M, Jagannathan NR, *et al.* Subclinical inflammation and soleus muscle intramyocellular lipids in healthy Asian Indian males. *Clin Endocrinol (Oxf)* 2005;**63**:350–5.

Abstracts

8. Danishad KA, Seenu V, Sharma U, Julka PK, Rath GK, Jagannathan NR. Evaluation of tumor response of breast cancer patients by diffusion weighted MRI. *Eur Biophys J* 2005;**34**:575.
9. Danishad KA, Seenu V, Sharma U, Julka PK, Rath GK, Jagannathan NR. Evaluation of tumor response of breast cancer patients by diffusion weighted MRI. *Eur Biophys J* 2005;**34**:816.
10. Jagannathan NR, Danishad KA, Sharma U, Seenu V, Kumar V. Potential of DW-MRI in monitoring the therapeutic response in breast cancer patients. *Proc Intl Soc Magn Reson Med* 2005;**13**:1372.
11. Jagannathan NR, Sharma U, Pal K, Pratap A, Gupta DK. Potential of *in vitro* ¹H NMR spectroscopy of cerebrospinal fluid in the evaluation of patients with tethered cord syndrome. *Proc Intl Soc Mag Reson Med* 2005;**13**:2486.
12. Khursheed MA, Malik A, Sharma U, Lakshmy R, Narang R, Jagannathan NR. Role of *in vitro* NMR spectroscopy in coronary artery disease. National symposium on Advances in Magnetic Resonance and its Applications and 12th National Magnetic Resonance Society Meeting, Jammu; 8–11 October 2005: 23.
13. Krithika B, Kumar S, Sharma U, Ahuja V, Makharia G, Jagannathan NR. Role of *in vitro* NMR spectroscopy in the study of inflammatory bowel disorders. National Symposium on Advances in Magnetic Resonance and its Applications and 12th National Magnetic Resonance Society Meeting, Jammu; 8–11 October 2005: 64.
14. Kumar V, Jagannathan NR, Kumar R, Thulkar S, Hemal AK, *et al.* 3D ¹H MR spectroscopic imaging and diffusion weighted imaging of prostate in men with raised PSA. *Eur Biophys J* 2005;**34**:761.
15. Kumar V, Jagannathan NR, Kumar R, Thulkar S, Hemal AK, *et al.* 3D ¹H MRSI directed TRUS-guided biopsy for detecting prostate cancer in men with PSA 4-10 ng/mL. *Eur Biophys J* 2005;**34**:762.
16. Sharma U, Pal K, Pratap A, Gupta DK, Jagannathan NR. Proton (1H) magnetic resonance spectroscopy of CSF in patients of spina bifida. National Symposium on Advances in Magnetic Resonance and its Applications and 12th National Magnetic Resonance Society Meeting, Jammu; 8–11 October 2005: 63.
17. Sharma U, Seth R, Kalra V, Jagannathan NR. *In vivo* proton MRS of brain in children with malnutrition. *Eur Biophys J* 2005;**34**:771.

Chapters in Books

1. Jagannathan NR. The role of magnetic resonance imaging (MRI) and *in vivo* magnetic resonance spectroscopy (MRS) in diagnosis and management of diseases. In: Banerjee SP, Mukherjee SP (eds). *Platinum Jubilee Lectures*, 87th and 88th Sessions of the Indian Science Congress (Biological Sciences). Kolkata 2005:27–39.

PATIENT CARE

The old MR scanner available at the department was upgraded with a new state-of-the-art MRI scanner in November 2004. The department provides 12 hours per day of MRI scanning for patients. The details of the number of patients scanned during the year are:

Clinical diagnostic MRI Scan	4,820 patients
MRS research	217 patients

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor N.R. Jagannathan is a Member, Executive Council, Indian Biophysical Society (IBS); Member, Steering Committee of the Sophisticated Instruments Facilities (SAIFs) of DST, Government of India; Council Member, International Conference on Magnetic Resonance in Biological Systems (ICMRBS); Coordinator, Expert Panel on 'Biomedical devices and bioengineering', Life Sciences Research Board (LSRB), DRDO; Member, INSA Combined Committee for International Union of Pure and Applied Biophysics (IUPAB) and International Union of Crystallography (IUCr); Member, Facility Management Committee (FMC), Sophisticated Instruments Facility, Indian Institute of Science (IISc), Bangalore; Member, Programme Advisory Committee (PAC), National Facility for High Field NMR, Tata Institute of Fundamental Research (TIFR), Bombay; Expert Member for MRI of Centre for Cellular and Molecular Biology (CCMB), Hyderabad; Expert Member for MRI for Government Hospital, Royal Government of Bhutan, Thimphu, Bhutan; Expert Member for MRI of Dr B. Barooah Cancer Institute, Guwahati.

A symposium on 'MRI and MRS' was conducted on the occasion of the Inauguration Day of the department on 22 March 2006.

9.21 Nuclear Medicine

Professor and Head

A. Malhotra

Professors

G.P. Bandopadhyaya

G.S. Pant

C.S. Bal

Associate Professor

Rakesh Kumar

Assistant Professor (CNC)

Chetan D. Patel

EDUCATION

The faculty of the department participated in and delivered 23 lectures in CME programmes, workshops, symposia and annual conferences during the year.

RESEARCH

Funded Projects

Completed

1. Radiation dose to relation of patients of thyrotoxicosis and Ca-thyroid treated with I-131. G.S. Pant. Funded by AERB, Mumbai for 3 years. Funds: Rs 4,71,780.
2. Incidence of micronuclei in differentiated thyroid cancer treated with low dose of I-131 for remnant ablation. G.S. Pant. Funded by ICMR for 1 year. Funds: Rs 1,23,160
3. Role of radionuclide techniques in the management of neonatal hydronephrosis. Rakesh Kumar. Funded by the International Atomic Energy Agency (IAEA), Vienna, Austria for 3 years. Funds: US\$ 15,000

Ongoing

1. Rhenium-188 tin colloid synovectomy in refractory arthritic knee joints. Funded by AIIMS. Funds: Rs 50,000
2. Role of Tc-99m labelled cyclodextrin for infection imaging. Funded by ICMR for 3 years. Funds: Rs 11,85,460.
3. Irradiation induced chromosome aberrations and their use in biodosimetry. Funded by AERB, Mumbai for 3 years. Funds: Rs 13,85,280.

Departmental Projects

Completed

1. Studies on development of radiolabelled targeted drug.
2. Role of I-131 MIBG in diagnosis of neuroendocrine tumours.

Ongoing

1. Comparative analysis of ^{99m}Tc MDP versus ¹⁸F FDG and ¹⁸F Fluoride PET-CT for detection of bone metastasis in Ca-breast/Ca-lung/Ca-prostate.

PUBLICATIONS

Journals

1. Anandaraja S, Kumar A, Agarwala S, Gulati GS, Bal CS, *et al.* Liver herniation into the pericardium: An unusual cause of massive pericardial effusion with intrapericardial mass in a neonate. *Pediatr Cardiol* 2005;**26**:862–5.
2. Bal C, Kumar A, Tripathi M, Chandrashekar N, Phom H, Murali NR, *et al.* High-dose radioiodine treatment for differentiated thyroid carcinoma is not associated with change in female fertility or any genetic risk to the offspring. *Int J Radiat Oncol Biol Phys* 2005;**63**:449–55.
3. Bal CS, Kumar A, Chandra P. Effect of iopanoic acid on radioiodine therapy of hyperthyroidism: Long-term outcome of a randomized controlled trial. *J Clin Endocrinol Metab* 2005;**90**:6536–40.
4. Bal CS, Kumar A. Alternative strategies in the management of de-differentiated thyroid Cancer. *Indian J Oncol* 2005;**26**:28–41.
5. Barai S, Bandopadhyaya GP, Patel CD, Rathi M, Kumar R, Bhowmik D, *et al.* Do healthy potential kidney donors in India have an average glomerular filtration rate of 81.4 ml/min? *Nephron Physiol* 2005;**101**:21–6. Epub 2005 May 27.
6. Barai S, Bandopadhyaya GP, Rathi M, Singh NG. Accumulation of Tc99m-DMSA-3 in the spleen in a case of multiple myeloma with associated amyloidosis. *J Postgrad Med* 2005;**51**:119–21.
7. Barai S, Patel CD, Malhotra A, Bandopadhyaya GP, Gambhir S, Kumar R, *et al.* Use of atropine in patients with recent myocardial infarction during exercise myocardial perfusion study. Use of atropine during exercise myocardial perfusion SPECT. *Int J Cardiovasc Imaging* 2005;**21**:413–19.
8. Chawla MNC, Agarwala S, Shamim SA, Gupta A, Bandopadhyaya GP, Malhotra A, *et al.* Serial renal dynamic scintigraphy in evaluation of renal function in patient with bilateral Wilms' tumors. *Clin Nucl Med* 2005;**30**:820–2.
9. Gowda NK, Agrawal D, Bal C, Chandrashekar N, Tripathi M, Bandopadhyaya GP, *et al.* Technetium Tc-99m ethyl cysteinate dimer brain single-photon emission CT in mild traumatic brain injury: A prospective study. *Am J Neuroradiol* 2006;**27**:447–51.
10. Gowda NK, Agrawal D, Bal CS, Chandrashekar N, Tripathi M, Bandopadhyaya GP, *et al.* Tc-99m ECD brain spect in mild traumatic brain injury—a prospective study. *Am J Neuroradiol* 2006;**27**:447–51.
11. Kumar A, Bal CS, Srivastava DN, Thulkar SP, Sharma S, Acharya SK, *et al.* Management of multiple intrahepatic recurrences after radiofrequency ablation of hepatocellular carcinoma with rhenium-188-HDD-lipiodol. *Eur J Gastroenterol Hepatol* 2006;**18**:219–23.
12. Kumar A, Nadig M, Patra V, Srivastava DN, Verma K, Bal CS. Adrenal and renal metastases from follicular thyroid cancer. *Br J Radiol* 2005;**78**:1138–41.
13. Kumar A, Srivastava DN, Bal CS. Management of postsurgical recurrence of hepatocellular carcinoma with rhenium 188-HDD labeled iodized oil. *J Vasc Interv Radiol* 2006;**17**:157–61.
14. Kumar R, Chauhan A, P Lakhani, Xiu Y, Zhuang H, Alavi A. F18-FDG-PET in characterization of solid renal masses. *Mol Imaging Biol* 2005;**7**:431–9.
15. Kumar R, Chauhan A, Zhuang H, Schnall M, Orel S, Conant E, *et al.* FDG-PET positive lymph nodes are highly predictive of metastasis in breast cancer. *Nucl Med Commun* 2006;**27**:231–6.
16. Kumar R, Loving V, Chauhan A, Zhuang H, Alavi A. Dual time point imaging and its potential to improve breast cancer diagnosis with F18-fluorodeoxyglucose positron emission tomography. *J Nucl Med* 2005;**46**:1819–24.
17. Kumar R, Nadig M, Chauhan A. Positron emission tomography: Clinical application in oncology: Part I. *Expert Rev Anticancer Ther* 2005;**5**:1079–94.
18. Kumar R, Tripathi M, Chanrashekar N, Agarwala S, Kumar A, Dasan JB, *et al.* Diagnosis of ectopic gastric mucosa using Tc99m-pertechnetate: Spectrum of scintigraphic findings. *Br J Radiol*

- 2005;**78**:714–20.
19. Kumar R, Xiu Y, Dhurairaj T, Yu JQ, Alavi A, Zhuang H. F-18 FDG-positron emission tomography in non-Hodgkin's lymphoma of breast. *Clin Nucl Med* 2005;**30**:246–8.
 20. Kumar R, Xiu Y, Mavi A, El-Haddad G, Zhuang H, Alavi A. FDG-PET imaging in primary bilateral adrenal lymphoma: A case report and review of literature. *Clin Nucl Med* 2005;**30**:222–30.
 21. Nayak PK, Agrawal D, Gowda NK, Bal CS, Mahapatra AK. Does cerebral perfusion improve following CSF diversion in pediatric hydrocephalus? A prospective study using 99mTc ECD single photon emission computed tomography. *Pediatr Neurosurg* 2005;**41**:117–21.
 22. Pant GS, Sharma PD, Pandey AK, Sharma SK, Tripathi M, Kumar R. Development and testing of an interactive multimedia package of learning quantitative renography. *Indian J Nucl Med* 2005;**20**:49–52.
 23. Pant GS, Sharma SK, Bal CS, Kumar R, Rath GK. Radiation dose to family members of hyperthyroidism and thyroid cancer patients treated with ¹³¹I. *Radiat Prot Dosimetry* 2006;**118**:22–7.
 24. Pant GS, Sharma SK, Bal CS, Kumar R, Rath GK. Radiation dose to family members of hyperthyroidism and thyroid cancer patients treated with ¹³¹I. *Radiat Prot Dosimetry* 2006;**118**:22–7.
 25. Pant GS. Dosimetric and Radiation Safety considerations in Radioiodine therapy. *Indian J Nucl Med* 2005;**20**:1–3.
 26. Pant GS. Operational and radiation safety aspects in a self shielded cyclotron. *Medi Phys* 2005;**30**:131–4
 27. Sethuraman G, Malhotra AK, Khaitan BK, Kumar R, Sharma VK, Kabra M, *et al.* Osteoma cutis in pseudohypoparathyroidism. *Clin Exp Dermatol* 2006;**31**:225–7.
 28. Shukla G, Bhatia M, Padma Srivastava MV, Tripathi M, Srivastava A, Singh VP, *et al.* Unidirectional whole body turning: A new lateralising sign in complex partial seizures. *J Neurol Neurosurg Psychiatry* 2005;**76**:1726–9.
 29. Shukla J, Bandopadhyaya GP, Varma IK. 188Rhenium(V)-dimercaptosuccinic acid loaded poly(lactic-co-glycolic)acid microspheres for targeted radiotherapy: production and effectivity. *Pharmazie* 2005;**60**:583–7.
 30. Singhal T, Bal CS, Chandra P. Adjunctive antithyroid drugs in radioiodine therapy for hyperthyroidism. *Cochrane Database Syst Rev* 2005; 3: CD005447.
 31. Sinha S, Misra A, Bal CS, Gouda NK, Pandey RM, Tiwari S. Evaluation of cerebral blood flow by single-photon emission computed tomography in young Asian Indians with hypertension. *J Hum Hypertens* 2006;**20**:143–8.
 32. Trikha V, Kumar R, Khan SA, Rastogi S. Characteristic appearance on bone scintigraphy of a 'stone man'. *Clin Nucl Med* 2005;**30**:517–18.
 33. Tripathi M, Chandershekar N, Kumar R, Malhotra A. Reflux in transplant kidney mimicking urine leak. *Clin Nucl Med* 2005;**30**:344–6.
 34. Tripathi M, Kumar R, Chandrashekar N, Sharma S, Bal C, Bandopadhyaya GP, *et al.* Diuretic radionuclide renography in assessing Anderson-Hynes pyeloplasty in unilateral pelviureteric junction obstruction. *Hell J Nucl Med* 2005;**8**:154–7.
 35. Tripathi M, Singhal T, Chandrasekhar N, Kumar P, Bal C, Jhulka PK, *et al.* Samarium-153 ethylenediamine tetramethylene phosphonate therapy for bone pain palliation in skeletal metastases. *Indian J Cancer* 2006;**43**:86–92.
 36. Zhuang H, Cheng E, Yu JQ, Kumar R, Dhurairaj T, Alavi A. Pelvic horseshokidney mimics sacral metastases on bone scan. *Clin Nucl Med* 2005;**30**:506–9.

PATIENT CARE

Inpatients

<i>Radionuclide investigations</i>	<i>Number</i>
Ca thyroid treatment	480
Hyperthyroidism	235
Pain palliation	85
MIBG therapy	25
Rhenium	45
DMSA	860
LLEC	3200
GFR	2000
HIDA	488
Thyroid	850
DRCG	467
DTPA	48
Liver (sulphur colloid scan)	160
Sentinel lymph node	115
Meckel's diverticulum	50
Tetrofosmin (Scintimamography)	30
Blood pool study	108
MIBI	600
Parathyroid scan	115
Bone Scan	2940
ECD	800
GER	750
Stress Thallium	1381
Stress Tetrofosmin	400
MUGA study	1638
Lung perfusion study	108
Miscellaneous	24
RAIU	1250
Iodine whole body scan	800
PET whole body scan	1135

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor G.S. Pant delivered a talk on ‘Cyclotron and PET’ at SGPGI, Lucknow, at the Annual Meeting of AMPI, UP–Delhi Chapter; January 2006.

Dr Rakesh Kumar was awarded ‘Scholar Award’ on ‘Advances in breast cancer research’ at La Jolla, California, USA, 21–25 September 2005; Alavi–Mandell Award by the Society of Nuclear Medicine for best publication in the *Journal of Nuclear Medicine*, USA, November 2005.

9.22 Obstetrics and Gynaecology

Professor and Head

Suneeta Mittal

Professors

Alka Kriplani

Sunesh Kumar

Deepika Deka

Additional Professors

Neerja Bhatla

K.K. Roy

Renu Misra

Associate Professors

Neena Malhotra

Vatsla Dadhwal

Nutan Agarwal

Assistant Professors

J.B. Sharma

Neeta Singh

Pradeep Garg
(ad hoc)

Scientist Grade I

Rohini Sehgal

EDUCATION

Undergraduate, Postgraduate and Paramedical

The Delhi Post Graduate Medical Education Forum is organized by the department as a monthly meetings for postgraduate training since 2001. These are held to supplement training of postgraduates in clinical and surgical skills, a problem-oriented approach to Obstetrics and Gynaecology, protocols and guidelines, case presentations and discussions. Invited faculty from various academic and teaching institutions of Delhi as well as international faculty contribute towards the training of postgraduates.

Short- and long-term training

The department offers short- and long-term training in various subspecialty subjects such as Gynaecological Endoscopic Surgery, Maternal–Foetal Medicine, Gynaecological Oncology, and Gynaecological and Obstetrics Ultrasonography. During the year 2005–2006 we had 2 fellows undergoing training in subspecialty subjects and 5 short-term trainees.

Continuing Medical Education

The department organizes a national CME in Obstetrics and Gynaecology in collaboration with the National Board of Examinations and National Academy of Medical Sciences every six months. It is a unique, innovative modular teaching programme in which the MD syllabus is covered in six modules over 3 years. Series 1, Module VI and Series 2, Module I were held on 10–11 September 2005 and 18–19 March 2006, respectively. The CME modules are attended by more than 200 students as well as senior gynecologists and are accredited by Delhi Medical Council.

Conferences, seminars, workshops

1. National CME in Obstetrics and Gynaecology (Module VI, Series 1), AIIMS; 10–11 September 2005.

2. National CME in Obstetrics and Gynaecology (Module I, Series 2), AIIMS; 18–19 March 2006.

Lectures delivered

Dr Suneeta Mittal

- ‘DUB’, Annual CME programme of the Bangalore Society for Obstetrics and Gynaecology, Bangalore; 23–26 June 2005.
- ‘Screening for genital cancers’, CME, V.M.K.V. Medical College and Hospital, Salem; 26 June 2005.
- ‘Endometriosis in unmarried’, 5th Annual CME, Noida Obstetric and Gynaecology Society, Noida; 21 August 2005.
- ‘Management of infertility’, Panel discussion at CME, Maulana Azad Medical College, New Delhi; 22 August 2005.
- ‘Importance of evidence-based medicine and interpretation of research evidence’, National CME in Obstetrics and Gynaecology (Module VI, Series 1), AIIMS, New Delhi; 10–11 September 2005.
- ‘Screening for ovarian cancer’, CME, Delhi Gynaecologists Forum; 9 November 2005.
- ‘Prevention of parent to child transmission of HIV’, 1st Indo-US CME on ‘Antiretroviral treatment in HIV/AIDS’, New Delhi; 29 October 2005.
- Moderator panel discussion on ‘PCOD and adolescent girls’, NARCHI Annual CME, Sir Ganga Ram Hospital, New Delhi; 4 February 2006.
- ‘Intrauterine growth restriction’, National CME in Obstetrics and Gynaecology (Module I, Series 2), AIIMS; 18–19 March 2006.

Dr Alka Kriplani

- ‘PIH—case presentation’, CME for postgraduates, organized by MAMC and AOGD, Delhi; 6 August 2005.
- ‘Genital fistulae’, National CME in Obstetrics and Gynaecology (Module VI, Series 1), AIIMS; 10–11 September 2005.
- ‘Newer concepts in managing PCOS’, CME, Rockland Hospital, Delhi; 24 December 2005.
- ‘Controversies in management of endometriosis and adenomyosis’, C.G. Saraiya CME, 49th AICOG 2006, FOGSI, Kochi, Kerala; 6 January 2006.
- ‘Management of endometriosis and adenomyosis’, National CME in Obstetrics and Gynaecology (Module 1), Department of Obstetrics and Gynaecology, AIIMS; 18–19 March 2006.

Dr Sunesh Kumar

- ‘Case Discussion: Obstetrics’, National CME in Obstetrics and Gynaecology (Module VI, Series 1), AIIMS; 10–11 September 2005.

- ‘Procedure: Application for forceps and venturouse’, National CME in Obstetrics and Gynaecology (Module 1), Department of Obstetrics and Gynaecology, AIIMS; 18–19 March 2006.

Dr Deepika Deka

- ‘Recurrent pregnancy loss’, CME of Delhi Gynaecologist Forum (East) (DGF), Poorv Sanskritic Kendra, Vikas Marg, Delhi; 13 October 2005.
- ‘Maternal and perinatal mortality’, National CME in Obstetrics and Gynaecology (Module VI, Series 1), AIIMS; 10–11 September 2005.
- ‘Antepartum care and complications’, CME on ‘Multiple pregnancy’, Fernandez Hospital, Hyderabad; 21 January 2006.
- ‘Prenatal genetic counselling and care’, National CME in Obstetrics and Gynaecology (Module I, Series 2), AIIMS; 18–19 March 2006.

Dr Neerja Bhatla

- ‘Research methodology with reference to thesis writing’, National CME in Obstetrics and Gynaecology (Module VI, Series 1), AIIMS; 10–11 September 2005.
- ‘Gestational trophoblastic disease’, National CME in Obstetrics and Gynaecology (Module 1, Series 2), AIIMS; 18–19 March 2006.
- ‘Staging of cancer cervix’, National CME-cum-Workshop on ‘Cervical pathology’, MAMC; 6 March 2006.

Dr Renu Misra

- ‘Screening for ovarian cancer’, CME, Delhi Gynaecologist Forum; 9 November 2005.
- ‘Prolapse and SUI’, National CME, Obstetrics and Gynaecology (Module I, Series 2), AIIMS; 18–19 March 2006.

Dr K.K. Roy

- ‘Postpartum haemorrhage’, National CME, Obstetrics and Gynaecology (Module I, Series 2), AIIMS; 18–19 March 2006.

Dr Neena Malhotra

- ‘Intrauterine infections’, Perinatology CME, Indian Academy of Paediatrics, Noida; 24 April 2005.
- ‘Recent advances in contraception’, Annual CME, Jalandhar Society of Obstetrics and Gynaecology; 30 April 2005.
- ‘Maternal and foetal toxoplasmosis’, CME organized by FOGSI, Deharadun; 30 June 2005.
- ‘Approach and management of infertility’, 8th practical course and CME in Obstetrics and Gynaecology at Maulana Azad Medical College, New Delhi; 5 August 2005.
- ‘Epilepsy and pregnancy’, CME, Neuropsychiatric disorders in women, AIIMS; 20 November 2005.

- ‘PCOD and adolescent girls’, CME on ‘Adolescent health’, Sir Ganga Ram Hospital, New Delhi; 4 February 2006.
- ‘Prenatal genetic counselling and care’, National CME, Obstetrics and Gynaecology (Module I, Series 2), AIIMS; 18–19 March 2006.

Dr Vatsla Dadhwal

- ‘HIV in pregnancy’, National CME, Obstetrics and Gynaecology (Module I, Series 2), AIIMS; 18–19 March 2006
- ‘Pelvic inflammatory disease’, National CME in Obstetrics and Gynaecology (Module I, Series 2), AIIMS; 18–19 March 2006.

Dr Nutan Agarwal

- ‘Thyroid disorder in pregnancy’, National CME, Obstetrics and Gynaecology (Module VI) AIIMS; 10 September 2005.
- ‘Abortion, recurrent pregnancy loss’, National CME, Obstetrics and Gynaecology (Module I, Series 2), AIIMS; 18–19 March 2006.

Dr Neeta Singh

- ‘Management of infertility’, CME, Maulana Azad Medical College, New Delhi; 22 August 2006.

Dr J.B. Sharma

- ‘Recent advances in male contraception’, National CME, Obstetrics and Gynaecology (Module VI, Series 1), AIIMS; 10–11 September 2005.
- ‘Surgical management of female urinary incontinence’, 5th Annual CME, Noida Obstetric and Gynaecological Society; 10 September 2005.
- ‘Stress urinary incontinence’, National CME, Obstetrics and Gynaecology, AIIMS; 18 March 2006.

National and International Conferences

National

- Delhi Post Graduate Medical Forum meeting, AIIMS; 2 April 2005.
- Delhi Post Graduate Medical Forum meeting, AIIMS; 14 May 2005.
- Workshop on ‘Advanced techniques in vaginal hysterectomy’, AIIMS; 21 May 2005.
- Delhi Post Graduate Medical Forum meeting, AIIMS; 25 June 2005.
- Delhi Post Graduate Medical Forum meeting; AIIMS; 16 July 2005.
- Second Clinical Meeting of Delhi Society for Perinatal Diagnosis and Therapy (DESPAT), New Delhi; 8 October 2005.
- Symposium on ‘Recent advances in endoscopic surgery in gynaecology’, AIIMS; 10 November 2005.

- Delhi Post Graduate Medical Forum meeting, New Delhi; 19 November 2005.
- Symposium on ‘Neuropsychiatric disorders in women’, AIIMS; 20 November 2005.
- Interactive workshop on ‘Effective communication skills for better doctor, patient interaction’, AIIMS; 30 March 2006.

Lectures delivered

Dr Suneeta Mittal

- ‘WHO reproductive health library’ and ‘Difficult decision-making in contraception’, Faridabad Obstetrics and Gynaecological Society; 3 April 2005.
- ‘Women and children’, Chairperson in 1st National AIDS Conference, NACO; 4 April 2005.
- ‘Guidelines for medical abortion’, Annual Conference of North Obstetrics and Gynaecology Society, Silchar; 23–24 April 2005.
- ‘HIV infection in pregnancy’, National Conference on ‘Recent advances in RTI/STI and HIV/AIDS’, Jaipur; 17 April 2005.
- ‘Emergency choices for the female’, Workshop on ‘Contraceptive technology’, NIHF, Delhi; 2 April 2005.
- ‘Vaginal hysterectomy in the era of minimally invasive surgery: Where does it stand?’, Workshop on ‘Advance techniques in vaginal hysterectomy’, AIIMS; 21 May 2005.
- ‘Anaemia during pregnancy’, National Conference in Obstetrics and Gynaecology, Vinayaka Mission’s Kirupananda Variyar Medical College and Hospital, Salem, 25 June 2005.
- ‘Population stabilization and update on contraception—what do we have?’, World Population Day, DMA; 11 July 2005.
- ‘Pregnancy after forty’, Academic session, Ghaziabad Obstetrics and Gynaecological Society; 15 July 2005.
- ‘IUGR’, MRCOG Part II Course, AIIMS; 12 July 2005.
- ‘Abortion with special reference to female foeticide’, Golden Jubilee celebration, Lady Shri Ram College, New Delhi; 9 August 2005.
- ‘Recurrent early abortions: Therapeutic modalities’, Gyane Update 2005, IMA, Janak Puri, New Delhi; 25 September 2005.
- ‘A decade of research on emergency contraception and introduction in India’, Workshop for ‘Sharing the experience on emergency contraceptive’, Obstetrics and Gynaecology Society, Jaipur, Rajasthan; 24 October 2005.
- ‘Postpartum contraception’, 27th Annual Conference of AOGD, New Delhi; 5–6 November 2005.

- Moderator, panel discussion on ‘Reproductive health—prevention of unintended pregnancy’, Conference on ‘Women, work and health’; 27 November 2005.
- ‘Dummy doll-cephalic, occipitoposterior, face, brow, breech and shoulder dystocia presentations’, AICC–RCOG–North Zone; 9 November 2005.
- ‘Maternal health’, Meeting on ‘Technology for maternal, newborn and child health’, DBT; 10 November 2005.
- ‘Endometriosis—new challenges in diagnosis and treatment’, XVIIth Conference of Meerut Obstetrics and Gynaecology Society, Meerut; 13 November 2005.
- ‘Adolescent SRH (sex education, attitude, married adolescent, pre-marital sex, etc.)’ and ‘Emergency contraception, IUDs, breast-feeding, adoption’, Seminar on ‘Reproductive and sexual health: Role of nursing professionals’, AIIMS; 23–24 November 2005.
- ‘Indian Scenario’, Symposium-cum-Workshop on ‘Neonatal—perinatal transport’, National Neonatology Forum, New Delhi; 29–30 November 2005.
- ‘*Bharat mei betion ki ghatati sankhya: Ek chintan*’, Civil Service Officers Institute, New Delhi; 17 December 2005.
- ‘Perinatal risk management: Obstetrics methods to prevent birth asphyxia’, Precongress Workshop at the 49th All India Congress of Obstetrics and Gynaecology, Kochi; 6 January 2006.
- ‘Contraception: Unmet needs’, 49th All India Congress of Obstetrics and Gynaecology, Kochi; 5–9 January 2006.
- ‘Emergency contraception’, Maulana Azad Medical College, New Delhi; 20 January 2006.
- ‘Emergency contraception’, Workshop on ‘Adolescent health’, Women Wing of IMA headquarters, Meerut; 26 January 2006.
- ‘Emergency contraception’, Adolescent Health Workshop, Gurgaon Obstetrics and Gynaecological Society, Gurgaon, Rajasthan; 29 January 2006.
- ‘Guidelines for medical abortion in India’, ISOPARB-2006, Ahmedabad; 12 February 2006.
- ‘Preimplantation genetic diagnosis’, Workshop on ‘Emerging genetic techniques in prenatal diagnosis’, 8th National Conference for Prenatal Diagnosis and Therapy, Sir Ganga Ram Hospital, New Delhi; 17 February 2006.
- ‘First trimester ultrasonography for congenital malformations’, Workshop on ‘Emerging genetic techniques in prenatal diagnosis’, New Delhi; 17–18 February 2006.
- ‘Reproductive issues in HIV’, AICC-RCOG (West Zone) Oration, Scientific Programme ‘Infections in OB-GYN’, Mumbai; 19 February 2006.

- ‘Introduction of emergency contraception in India’, Symposium on ‘Frontiers in reproduction: Concepts and applications in genomic era’ and 16th Annual Meeting of ISSRF, NDRI, Karnal; 23–24 February 2006.
- ‘Umbilical cord blood banking and *in vitro* expansion of stem cells’, Symposium on ‘Frontiers in reproduction: Concepts and applications in genomic era’ and 16th Annual Meeting of ISSRF, NDRI, Karnal; 23–24 February 2006.
- ‘Weight gain during pregnancy and postpartum weight retention’, during Asia Pacific Obesity Conclave, New Delhi; 1–5 March 2006.
- ‘Emergency contraception’, Training of Trainers (TOT), Course for No Scalpel Vasectomy (NSV) for candidates from Punjab; 25 March 2006.
- Resource Person, Workshop, WHO–Reproductive health library for Reproductive healthcare providers, Fiji Islands; 9–11 May 2005.
- ‘Technology for medical abortion’, WHO-Regional Workshop on ‘Safe abortion’, Bangkok; 31 May 2005.
- ‘Guidelines for medical abortion’, during the 5th SAFOG Conference/7th NESOG International Conference organized by the Nepal Society of Obstetricians and Gynaecologists at Kathmandu, Nepal; 2–5 June 2005.

Dr Alka Kriplani

- ‘Operative endoscopy in infertility’, FOGSI certified advanced training programme in gynae, endoscopy and endosuturing, Jeevan Mala Hospital, Delhi; 2 June 2005.
- ‘Abnormal uterine bleeding’, MRCOG Part II Course, organized by the Department of Obstetrics and Gynaecology, AIIMS; 17–22 July 2005.
- ‘Dilemmas in infertility management’, IVF Centre, Batra Hospital, Delhi; 31 July 2005.
- ‘Managing PCOS—current concepts’, on ‘Concepts and trends in obstetrics, gynaecology and infertility’, Deccan College of Medical Sciences and RCOG South Zone, Hyderabad; 3 September 2005.
- ‘Newer IUCDs—a rationale approach’, Workshop on ‘Emerging intrauterine device forms—frameless and shape memory IUDs’, IIT, Kharagpur and NIHF, Delhi; 15–16 September 2005.
- ‘Proximal tubal block—hysteroscopic cannulation’, 9th Regional Meeting, International Society for Gynaecological Endoscopy, Indian Association of Gynaecological Endoscopists, Mumbai; 22–25 September 2005.
- ‘Hysteroscopic myomectomy’, (Video lecture), 27th AOGD 2005, AOGD, Delhi; 5–6 November 2005.

- ‘Epithelial cancer ovary’, Intensive Preparatory Course in Obstetrics and Gynaecology for MRCOG-II, AICC-RCOG, North Zone, Delhi; 14 November 2005.
- ‘Cancer endometrium’, Intensive Preparatory Course in Obstetrics and Gynaecology for MRCOG-II, AICC-RCOG, North Zone, Delhi; 14 November 2005.
- ‘PCOD—what is new?’, 5th Yuva FOGSI North Zone 2005, Gwalior Obstetrics and Gynaecology Society, Gwalior; 19 November 2005.
- ‘Fibroid in infertility’, Fertilvision 2005, Indian Fertility Society (IFS), Delhi; 4 December 2005.
- ‘Trouble shooting in the management of PCOS’, Tele-video conference with Chandigarh, Patiala, Jalandhar, Delhi; 9 December 2005.
- ‘Managing complications of operative hysteroscopy’, Hysteroscopy training course, Ethicon Institute of Training, Delhi; 11 December 2005.
- ‘Are present therapies for osteoporosis equivocal’, 49th AICOG 2006, FOGSI, Kochi, Kerala; 6 January 2006.
- ‘Management of hirsutism in the adolescent period’, 49th AICOG 2006, organized by FOGSI, Kochi, Kerala; 6 January 2006.
- ‘Treatment of herpes simplex and toxoplasmosis—outcome’, 8th National Conference, ISPAT, Delhi; 17–19 February 2006.
- ‘PCOS—current concepts’, AIIMS Golden Jubilee International Symposium on ‘Reproductive biology’, Department of Reproductive Biology, AIIMS; 21 February 2006.

Dr Sunesh Kumar

- ‘Vulval disorders’, RCOG training programme, New Delhi; 19 June 2005.
- ‘Dealing with menopause’, Seminar on ‘Reproductive and sexual health: Role of nursing professional’, FPAI, New Delhi; 22 November 2005.
- ‘Screening for cancer in developing countries: Hurdles and alternatives’, IRCH, AIIMS; 18 February 2006.
- ‘Workup of a case of early onset IUGR’, 8th National Conference of ISPAT, New Delhi; 19 February 2006.

Dr D. Deka

- ‘Basic foetal medicine and genetics for every obstetrician’, North-east Obstetrics and Gynaecology Society, Silchar; 23–24 April 2005.
- ‘Rubella’, an Update on ‘TORCH infections in pregnancy’, Moolchand Hospital; 30 April 2005.

- ‘Amniocentesis’; 6th National Conference on ultrasound, Institute of Ultrasound Training, Hotel Intercontinental, New Delhi; 3 July 2005.
- ‘Recurrents pregnancy loss’, MRCOG Part-II Course, AIIMS; 18 July 2005.
- ‘Human umbilical cord blood collection and preservation for stem cell transplant: A state of the art’, FICCI Auditorium, West Delhi IMA, Janakpuri Branch under aegis of AOGD, New Delhi; 25 September 2005.
- ‘Human umbilical cord blood collection for stem cell transplant and banking—a state of the art’, AOGD, New Delhi; 5 November 2005.
- ‘Preterm PROM’, Symposium on ‘Evidence-based management’ 27th Annual Conference of AOGD, New Delhi; 6 November 2005.
- ‘Prophylaxis and management of Rh isoimmunization’, All India Congress of Obstetrics and Gynaecology, Kochi, Kerala; 8 January 2006.
- ‘Methods used for obtaining samples for prenatal diagnosis’, WET Workshop on ‘Recent advances in diagnosis of genetic disorders’, Department of Anatomy, AIIMS; 1 March 2006.
- ‘SERMS—the future of HRT?’, 21st Annual Conference of the AICC RCOG (All India Co-ordinating Committee of the Royal), Calcutta, West Bengal; 4 March 2006.
- ‘Breaking bad news of foetal malformation’, Delhi PG Medical Education Forum (Obstetrics and Gynaecology), The Young Talent Promotion Committee of FOGSI in WHO Collaboration and Interactive Workshop on Effective Communication Skills for Better Doctor–Patient Interaction, Board Room, AIIMS; 30 March 2006.

Dr Neerja Bhatla

- ‘Research methodology with reference to thesis writing’, National CME on Obstetrics and Gynaecology (Module 6), AIIMS; 11 September 2005
- ‘HPV and gynaecological malignancies’, 1st National CME on ‘Mature women’s health’, Jaipur, Rajasthan; 16 October 2005.
- ‘Cancer cervix’, PG course MRCOG II, New Delhi; 10 November 2005.
- ‘Master trainer: Cervical cancer screening methods and treatment of lesions with loop electrosurgical excision procedure’, Course conducted by IARC–WHO, Ambilikai, Tamil Nadu; 1–3 January 2006.
- ‘HPV in gynaecological oncology’, 49th All India Congress of Obstetrics and Gynaecology, Kochi; 5–9 January 2006.
- ‘Staging of cancer cervix’, National CME cum Workshop on Cervical Pathology, Maulana Azad Medical College, New Delhi; 6 March 2006.

- ‘Gestational trophoblastic disease’, National CME in Obstetrics and Gynaecology (Module 1, Series 2), AIIMS, New Delhi; 19 March 2006.
- ‘Cervical Cancer: Preventable but far from prevented’, Sri Aurobindo Ashram, New Delhi; 9 April 2005.
- ‘Epidemiology and screening of cervical cancer’, Asia Oceania Genital Infections and Neoplasia (AOGIN) Meeting, Malaysia; 18–21 July 2005.
- ‘Screening for cervical cancer: Time for a new paradigm?’, South Asian Conference and CME on Synergy in Healthcare, Paro, Bhutan; 15–19 November 2005.

Dr Renu Misra

- ‘Free radicals and menopause’, The Free Radical Vision 2005, IMA, New Delhi Branch; 15 May 2005.
- ‘Chronic pelvic pain’, Gynaecology Update 2005, IMA, Janak Puri, New Delhi; 25 September 2005.
- ‘Premenstrual syndrome’, Department of Obstetrics and Gynaecology, AIIMS; 20 November 2005.
- ‘Endoscopic surgery in gynaecology’, IMA Meeting at Kashi Pur; 5 March 2006.
- ‘Diabetes complicating pregnancy’, at FOGSI, Association of Obstetricians and Gynaecologists of Kashi Pur; 5 March 2006.
- ‘Endometriosis’, Indraprastha Apollo Hospital, All India Co-ordination Committee—Royal College of Obstetricians and Gynaecologists (UK), North Zone; 14 November 2005.

Dr Neena Malhotra

- ‘Contraception for MRCOG’, MRCOG Part-II Course, AIIMS; 17–22 July 2005.
- ‘Medicolegal aspects for MRCOG’, MRCOG Part-II Course, AIIMS; 17–22 July 2005.
- ‘Confidential enquires into still births and infant deaths’, AICC-RCOG, North Zone Course, Delhi; 17 November 2005.
- ‘Management of common gynaecological problems’, Seminar on ‘Reproductive and sexual health: Role of nursing professional’, organized by Family Planning Association, India; 22 November 2005.
- ‘Cord blood collection for stem cell transplant’, Annual Conference of ISPAT, New Delhi; 18–9 February 2006.

Dr Vatsla Dadhwal

- ‘Intrapartum and postpartum management of HIV positive women’, National Conference on ‘Inter-state networking of States AIDS Societies’, Jaipur; 16–17 April 2005.

- ‘Infertility update on primary health care’; Seminar on ‘Reproductive and sexual health: Role of nursing professional’; 22–23 November 2005.
- ‘Perinatal hepatitis infection and its prevention’, 8th National Conference (ISPAT-CON-2006). New Delhi; 17–19 February 2006.
- ‘Management of pregnant ladies with HIV infection and prevention of mother-to-child transmission’, 2nd Indo-US CME on ‘Antiretroviral treatment in HIV/AIDS’, AIIMS; 4–5 March 2006.
- ‘Modern methods of contraception’, International Conference on ‘Women, work and health’, Society for Working Life Women, Work and health, New Delhi; 27–29 November 2005.

Dr Nutan Agarwal

- ‘Diagnosis and medical management of ectopic pregnancy’, Clinical meeting of North Delhi Obstetrics–Gynaecology group, New Delhi; 14 July 2005.
- ‘Are present therapies in management of post-menopausal osteoporosis equivocal?’, in ‘New paradigm in management of osteoporosis’, New Delhi; 1 October 2005.
- ‘Traditional barrier methods of contraception’, International Conference on ‘Women, work and health’, Ashoka Hotel, New Delhi; 27–29 November 2005.

Dr J.B. Sharma

- ‘New horizons on the surgical management of SUI’, East Delhi Gynae Forum; 5 May 2005.
- ‘Free radicals and gynaecological disorders’, in ‘Free Radical Vision 2005’, Conference of IMA, New Delhi; 15 May 2005.
- ‘Stress urinary incontinence’, MRCOG Part II Course; 18 July 2005.
- ‘Surgical management of SUI in women’, in North Indian Urology Forum; December 2005.
- ‘Prediction and prevention of preeclampsia and role of antioxidants in prevention of pre-eclampsia’, ICMR Task Force Meeting on ‘Hypertensive disorders in pregnancy’; 17 March 2006.

Dr Neeta Singh

- ‘Global prevalence of genital tuberculosis in infertile women’, WHO, Geneva; 27 March 2006.

RESEARCH

Funded Projects

Completed

1. Double-blind randomized placebo controlled trial to investigate the effect of lycopene on lipid peroxidation and lipid profile in postmenopausal women. Renu Misra. Funded by AIIMS for 1 year (December 2004–December 2005). Funds: Rs 40,000.
2. Pretreatment with misoprostol before vacuum aspiration for first-trimester induced abortion. Suneeta

Mittal. Funded by WHO from December 2003 to June 2005. Funds: Rs 12,25,926.

3. Open label non-comparative clinical survey of Centchroman in dysfunctional uterine bleeding. Alka Kriplani. Funded by Hindustan Latex for 1 year (1 August 2003–31 August 2004). Funds: Rs 1,75,000.
4. Efficacy and safety of tranexamic acid for dysfunctional uterine bleeding and its comparison with cyclical progesterone therapy. Alka Kriplani. Funded by ICMR, New Delhi (15 November 2002–14 May 2005). Funds: Manpower.

Ongoing

1. Prevention of parents-to-child transmission of HIV. Suneeta Mittal. Funded by Delhi State AIDS Control Society for ‘Ongoing long project’. Funds: Rs 50,000.
2. Phase-I clinical trial of once weekly administration of 50 mg mifepristone as oral contraceptive. Suneeta Mittal. Funded by ICMR for ‘Ongoing long project’. Funds: HRRC funds.
3. Monthly statistics on eclampsia. Suneeta Mittal. Funded by ICMR (1 February 2006–31 January 2007). Funds: HRRC.
4. Clinical trial of *Pipplayadi Yoga*. Suneeta Mittal. Funded by Ministry of Health and Family Welfare for ‘Ongoing long project’. Funds: Rs 10 lakh.
5. Role of intravenous immunoglobulins in recurrent abortions. D. Deka. Funded by Bharat Serum and Vaccines Ltd for 18 months. Funds: Rs 2,88,000.
6. Clinical effects of human placental extract (placentrex) in PID. Nutan Agarwal. Funded by Albert David Ltd for 1 year (November 2005–November 2006). Funds: Rs 1,03,185.
7. Weekly 70 mg oral alendronate therapy in postmenopausal osteopenic women. Nutan Agarwal. Funded by Troikaa Pharmaceuticals (September 2005–August 2007). Funds: Rs 3,00,000.
8. Role of bile acids in diagnosis and therapeutic effects of ursodeoxycholic acids in intrahepatic cholestasis of pregnancy. Nutan Agarwal. Funded by Troikaa Pharmaceuticals (September 2005–August 2007). Funds: Rs 3,00,000.
9. Diagnosis of genital tuberculosis in infertile women and the effect of antitubercular therapy. Alka Kriplani. Funded by ICMR (1 February 2006–31 January 2007). Funds: Rs 4,79,465.
10. Efficacy and safety of administration of Evanova capsules in the management of menopausal symptoms. Alka Kriplani. Funded by Charak Pharma (26 December 2003–31 December 2006). Funds: Rs 4,50,000.
11. Screening with cytology, visual inspection, acetic acid and with Lugol iodine for early detection of cervical neoplasia, and comparative evaluation of single versus double freeze cryotherapy technique in the treatment of cervical intraepithelial neoplasia. Neerja Bhatla. Funded by IARC, WHO from November 2003 to December 2006. Funds: Rs 27 lakh.

12. Development of HPV candidate vaccine/s: Preparation of clinical trial site/cohort for vaccine testing. Neerja Bhatla. Funded by DBT for 3 years (March 2005–March 2008). Funds: Rs 84,98,000.
13. Association of Chlamydia infection with cervical intraepithelial neoplasia. Neerja Bhatla. Funded by ICMR (October 2005–September 2007). Funds: Rs 7 lakh.
14. A comparative study of VIA, cytodiagnosis, HPV testing and colposcopy as tools for cervical cancer screening. Neerja Bhatla. Funded by DBT (November 2002–September 2006). Funds: Rs 43 lakh.
15. Evaluation of curcumin in the management of advance cancer cervix. Sunesh Kumar. Funded by DBT (January 2006–March 2008). Funds: Rs 51 lakh (approx.).
16. Levels of interleukin (IL-8) and leptin in peritoneal fluid of Indian women with endometriosis Neena Malhotra. Funded by AIIMS Research Grant for 1 year. Funds: Rs 40,000.

Departmental Projects

Completed

1. Effect of Betamethasone in preterm labour on foetal biophysical profile score and Doppler studies
2. To compare the efficacy, safety and patient acceptability of various routes of misoprostol administration for induction of labour at term
3. The study of aromatase inhibitor letrozole in cases of clomiphene resistant anovulation.
4. Changes in the foetal biophysical profile and cerebral circulation in women with preterm labour administered beta methasone

Ongoing

1. Perinatal outcome in foetuses with sonographic diagnosis of nuchal cord
2. Detection and quantification of foetomaternal haemorrhage (FMH) following deliveries in Rh-ve non-immunized pregnancy by KBT, flow cytometry
3. Comparison of harmonic scalpel with bipolar cautery in laparoscopic-assisted vaginal hysterectomy
4. A comparative study of VIA, cytodiagnosis, HPC testing and colposcopy as tools for cervical cancer screening
5. Screening with cytology, visual inspection, acetic acid and Lugol iodine for early detection of cervical neoplasia and comparative evaluation of single versus double freeze cryotherapy technique in the treatment of cervical intraepithelial neoplasia
6. Conscious pain mapping: A new technique of laparoscopy for evaluation of chronic pelvic pain
7. The effect of warmed and humidified carbon dioxide pneumo-insufflation on intraoperative and postoperative pain in laparoscopy

8. An RCT of prophylactic sublingual misoprostol, I/M methergin and I/M PgF₂a for active management of 3rd stage of labour
9. Evaluation of laparoscopic occlusion of uterine artery and compare to uterine artery embolization for symptomatic uterine fibroids
10. Evaluation of single session diagnosis and management of CIN in VIA/VILLI positive patients by LEEP
11. Comparison of single vs double IUI in unexplained and mild male factor infertility
12. Doppler assessment in various foetal vessels and foetal weight estimation using antenatal soft tissue thickness in intra-uterine growth restriction with normal pregnancies
13. Prevention of uterine atony during cesarean section: Randomized comparison of sublingual misoprostol versus syntocinon
14. To study the efficacy of uterine biophysical profile, antral follicle count and ovarian diameter in predicting outcome in infertile women on ovulation induction
15. Value of routine antenatal screening ultrasonography at 24–28 weeks of gestation
16. Effect of intraperitoneal bupivacaine in reducing postoperative pain after laparoscopic gynaecological surgery
17. Comparisons of unilateral versus bilateral ovarian drilling in patients of clomiphene-resistant PCOS.
18. Endometrial changes and ovarian function in women with early breast cancer
19. Evaluation of MRI in diagnosis of foetal congenital anomalies
20. A randomized study to compare two surgical technique of laparoscopic stripping of ovarian endometrioma

Collaborative Projects

1. Sequence based identification of *Mycobacterium* species isolated from extra-pulmonary tuberculosis cases (with Laboratory Medicine).
2. Establishment and characterization of human foetal liver hematopoietic stem cell line (with Medical Oncology, IRCH).
3. To study the subset of antiphospholipid syndrome defined by anti-beta-2 glycoprotein 1 antibody (with Laboratory Medicine).
4. Role of centchroman in benign breast disease (with Surgery).
5. Epidural analgesia in labour (with Anaesthesiology).

6. Chromosome aneuploidy and mosaicism in preimplantation embryo (with Reproductive Biology).
7. Prenatal development and maturation of the human inferior colliculus (with Anatomy).
8. Evaluation of ovarian function in female patients with multi-bacillary leprosy (with Dermatology and Venereology).
9. Apoptosis in placental membranes in pre-eclampsia: An immunohistochemical study (with Anatomy).
10. Development of human papillomavirus vaccine prototypes—molecular epidemiology of HPV types prevalent in India and identification of HPV-16 L1 and E6 variants (with Biochemistry).
11. PEARL study (Postmenopausal Evaluation And Risk reduction with Lazofoxifene). Global research and development (with Endocrinology).
12. The Generations Trial. Effects of arzoxifene on vertebral fracture incidence and on invasive breast cancer incidence in postmenopausal women with osteoporosis or with low bone density (with Anatomy).
13. Biostatistical aspects in case-control studies on unintended pregnancies (with Biostatistics).
14. A study of molecular basis of endometrial receptivity for blastocyst implantation in primates (with Physiology).
15. Prevention of parent-to-child transmission of HIV (with Paediatrics and Microbiology).
16. Diabetes mellitus and vulvovaginal candidiasis: Prevalence and its rational management (with Endocrinology).
17. Prevalence of bacterial vaginosis and other reproductive tract infections among symptomatic women (study in a tertiary centre) (with Microbiology).
18. To study the effect of human chorionic gonadotrophin (hCG) on vascular endothelial growth factor (VEGF) expression by human mid-secretory endometrial cells grown on rat-tail collagen matrix (with Physiology).
19. Effect of progesterone on *hsp 27* expression in human, mid-secretory stage endometrial cells grown on collagen matrix *in vitro* (with Physiology).

PUBLICATIONS

Journals

1. Agarwal N, Kumar L, Kumar S, Vijayaraghavan M, Bhatnala N, Hariprasad R. Tailored management of TRAP sequence. *Int J Gynecol Obstet India* 2005;**8**:30–5.
2. Agarwal R, Agarwal S, Roy KK, Kumar S. Diploid partial mole with neonatal survival—a case report. *Indian J Pathol Microbiol* 2005;**48**:225–7.
3. Banerjee K, Mittal S, Kumar S. Clinical vs. ultrasound evaluation of fetal weight. *Int J Gynecol and Obstet* 2005;**8**:52–4.

4. Bhowmick D, Dadhwal V, Dhinda AK, Handa R, Dash SC. Steroid responsive focal segmental glomerulosclerosis in primary antiphospholipid syndrome with successful pregnancy outcome. *Nephrol Dial Transplant* 2005;**20**:1726–8.
5. Chakraborty S, Khurana N, Sharma JB, Chaturvedi KU. Endometrial hormone receptors in women with dysfunctional uterine bleeding. *Arch Gynecol Obstet* 2005;**272**:17–22.
6. Dadhwal V, Mittal S, Kumar S, Arora V. Expectant management of ectopic pregnancy: Analysis of four cases. *JK Science* 2005;**7**:161–3.
7. Deka D, Sharma N. Nutrition in pregnancy and lactation. *Perinatology* 2005; **7**:1–15.
8. Dutta T, Sharma H, Kumar L, Dindia AK, Kumar S, Bhatla N, *et al.* Neoadjuvant chemotherapy for epithelial ovarian cancer—role of apoptosis. *Cancer Chemother Pharmacol* 2005;**56**:427–35.
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Books

1. Kriplani A, Rozati R. *Controversies in obstetrics, gynaecology and infertility*. 1st ed. New Delhi: Jaypee Brothers; 2005.

Chapters in Books

1. Agarwal N, Kriplani A. Birth control and termination of pregnancy—medical means. In: Kriplani A, Rozatti R (eds). *Controversies in obstetrics, gynaecology and infertility*. 1st ed. New Delhi: Jaypee Brothers; 2006:**5**:567–89.
2. Abbi M, Kriplani A. *Multiple gestation*. In: Kriplani A, Rozatti R (eds). *Controversies in obstetrics, gynaecology and infertility*. 1st ed. New Delhi: Jaypee Brothers; 2006:**3**:36–43.
3. Deka D, Vatsla D. Hypertensive disorders in pregnancy. In: Konar H (ed). *Medical disorders in pregnancy*. FOGSI Publication; 2005.
4. Deka D, Chadda V. Fetal Medicine—a multispeciality approach. In: Gogate S (ed). *Preventive genetics*. New Delhi: Jaypee Brothers; 2006:385–96.
5. Deka D, Janga D. Controversies in the management of preterm labor and PPROM. In: Kriplani A, Rozati R (eds). *Controversies in obstetric, gynaecology and infertility*. New Delhi: Jaypee Brothers; 2006: 44–6.
6. Deka D, Summana. Management of post-partum haemorrhage. In: Mittal C (ed). *Emergencies in obstetrics and gynaecology*. New Delhi: Peepee Brothers; 2005.
7. Garg P, Kriplani A. Disease of the urinary system. In: Kriplani A, Rozatti R (eds). *Controversies in obstetrics, gynaecology and infertility*. 1st ed. New Delhi: Jaypee Brothers 2006;171–89.
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11. Mittal S, Gupta MM. Drugs used in pregnancy. Contemporary perspectives on clinical pharmacotherapeutics/ Elsevier; 2006: P744–P754.
12. Mittal S, Vimala N. Recent Advances in m/m of PPH. In: Sinha J, Saxena N (eds). *Practical obstetrics and gynaecology*. New Delhi: Jaypee Brothers; 2006:P119–P133.
13. Mukhopadhyay A, Sumana G, Kriplani A. Endometrial cancer. In: Kriplani A, Rozatti R (eds). *Controversies in obstetrics, gynaecology and infertility*. 1st ed. Delhi: Jaypee Brothers 2006:231–42.
14. Sharma JB, Malhotra M. Menorrhagia. In: Rhaj SA, Jain S (eds). *Textbook of family medicine*. 1st ed. Delhi: Pushpanjali Medical Publishers; 2005:798–801.
15. Sharma JB, Mittal S. Prevention of pre-eclampsia. In: Studd J, Tan TL, Chervenak FA (eds). *Progress in obstetrics and gynaecology*. Vol. 17. Edinburgh: Churchill Livingstone; 2006:141–63.

16. Sharma JB, Mittal S. *Somatic cell haploidization: Endoscopy and infertility*. 1st ed. Delhi: Jaypee Brothers; 2006: p592–p594.
17. Zalud I, Deka D, Matai A. Hormone replacement therapy: Ultrasound role. In: Kurjak A, Arenas JB (ed). *Donald School textbook of transvaginal sonography*. Delhi: Jaypee Brothers; 2005: 260–71.

PATIENT CARE

Hospital care: Facilities available with the department include special clinic and special laboratory facilities besides the regular Gynaecology OPD which is held every day. The following special clinics are held.

Clinics		Number of patients	
		New	Old
1. General OPD	6/ week	29,582	39,310
2. High-risk pregnancy clinic	3/week	2,076	11,069
3. Gynaecological endocrine clinic	3/week	166	181
4. Gynaecological cancer clinic	2/week	800	2,324
5. Postnatal clinic	3/week	162	74
6. Medical termination of pregnancy clinic	6/week	963	
7. Family welfare clinic	6/week	2,949	5,452

Operations performed

Gynaecological

Major

Surgery for benign diseases	1424
Oncology surgery	206
Infertility	158
Endoscopic surgeries: Laparoscopy	1240
Hysteroscopy	104
Plastic surgery	75

Minor

D&C/EA	2569
Colposcopy/cryo/LEEP	712/8/72
Diagnostic hysteroscopy	726
MTP	1143
Pap smear	3284
Cervical biopsies	380

Obstetrics

Major

LSCS	763
Em. laparotomies	46

Minor

Operative vaginal deliveries	472
Vaginal deliveries	2048

Foetal medicine

Cordocentesis	63
Chorionic villus sampling	123
Amniocentesis	120

Foetal cyst aspiration	15
Intrauterine infusion	45
High-risk obstetrics	
—Obstetric ultrasound	3036
—NST	2250
—BPP	1140
Gynaecological ultrasound	3190
Interventional ultrasound	72
Laboratory investigations	
Urine pregnancy test	410
Haemoglobin	3510
Blood groups	75
Urine albumin/sugar	2134

POSTPARTUM PROGRAMME

The Postpartum Programme (PPP) is a maternity-centred, hospital-based approach to family welfare programme by providing a package of RCH and family welfare services in the vicinity of the hospital as well as in the field practice areas. It is run as an integrated multidisciplinary exercise where the Department of Obstetrics and Gynaecology coordinates with the Departments of Paediatrics, Community Medicine, Surgery and Anaesthesiology.

Achievement of different family planning methods, Postpartum Programme (2005–2006)

Method	Achievement
Copper T	503
Oral pills (13 cycles=1 user)	149
Conventional contraceptives (72 pieces=1 user)	71,161
Sterilization	
(a) Tubectomy	654
(b) Vasectomy	85

Note: Family planning methods are free of targets.

Maternal and Child Health (MCH) Performances (2005–2006), Postpartum Programme

Services target	Achievement
Pregnant women	
TT (mothers) (2nd or booster)	1675
Iron and folic acid tablets	1924
Children (0–1) years	
DPT (3rd dose)	1440
Polio (3rd dose)	1067
BCG	1533
Measles	
Vitamin A (1st dose)	639

Children (1–2) years	
DPT booster dose	745
Polio booster dose	1149
Children (under 5 years)	
DT	497

COMMUNITY SERVICES/CAMPS

The faculty participated in community awareness programmes through public education talks on radio, phone-in programmes and panel discussions on AIR and allied TV channels.

- Camp on emergency contraception; 14 November 2005–28 November 2005
- Contraception at Health Pavillion, Pragati Maidan, Trade Fair, New Delhi
- Govindpuri slum’s mela organized by Katha Organization; 3 December 2005
- Cancer detection camp at Janakpuri, New Delhi, in collaboration with the Rotary Club; 11 December 2005
- RCH Camp in Sagarpur, New Delhi; 29 January 2006
- RCH Camp in Shahbad, Mohamad Pur, New Delhi; 19 February 2006

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr Suneeta Mittal was awarded the Dr (Mrs) Jagdishwari Mishra Prize, Federation of Obstetric and Gynaecological Societies of India; and Dr Labhsetwar Trust 2006 Award. She is the Editor, Reproductive Health Library, WHO; Chairperson, North Zone, ISOPARB; Fellow of the Royal College of Obstetrics and Gynaecology, London; Vice-President, Federation of Obstetricians and Gynaecologists of India; Vice-President, Indian Society for Study of Reproduction and Fertility.

Dr Sunesh Kumar

Member of the Project Advisory Committee on Screening for common cancers being conducted by ICMR in three districts of Himachal Pradesh.

Dr Alka Kriplani was awarded the DMA Medical Teachers Award 2005; and Dr Jagdishwari Mishra Prize 2006, by FOGSI for best poster on official theme of congress. She is the Editor, *Asian Journal of Obstetrics and Gynaecology Practice*; Vice President, North Zone, IMAGES (Indian Society of Minimal Access and Gynaecological Endoscopic Surgery) 2003—continuing; Member, Governing Council ICOG—2006–2008.

Dr D. Deka received the Dr V.G. Patel Oration on ‘Periconceptional care and counselling—a multidisciplinary approach’, by Indian Medical Association, Vadodara; Dr Amarendra Nath Prize at AICOG 2006, Kochi, Kerala. She is Founder Hon. Secretary, Delhi Society for Prenatal Diagnosis and Therapy (DESPAT), February 2005 onwards; Joint Secretary of Indian Society for Prenatal Diagnosis and Therapy (ISPAT), March 2006 onwards.

Dr Neerja Bhatla is Member, Advisory Group, Strategic Assessment of Cervical Cancer Prevention and Treatment programme in three districts of Uttar Pradesh.

Dr Neena Malhotra received the FOGSI Imaging Science award for 2005–2006 by FOGSI.

Dr Nutan Agarwal is Assistant Editor, *Asian Journal of Obstetrics and Gynaecology Practice*.

Dr J.B. Sharma is Editor, *Obstetrics and Gynaecology Today*, Delhi; Associate Editor, *International Journal of Gynaecology and Obstetrics*; Associate Editor, *Indian Journal of Gynaecological Endoscopy*, New Delhi..

Dr Neeta Singh received the Fellowship of WHO and International Association of Maternal and Neonatal Health, Geneva, Switzerland.

The department has

- established Endoscopy Centre for Training Course on Minimally Invasive Gynaecology under Women's Health Initiative
- construction of ART Centre at the Department of Obstetrics and Gynaecology.

VISITING SCIENTISTS

1. Dr John E. Shervin, Department of Health Services, Richmond, USA
2. Dr Jorge E. Tolosa, Oregon Health and Science University, USA
3. Dr Lily Arya, Hospital of University of Pennsylvania, USA
4. Dr Deborah Ambrosder, POPPHI, Washington DC, USA
5. Dr Kiyomi Tsuyuki, University of Michigan, Bolivia
6. Dr Antigoni Kompangoni, WHO, India
7. Dr Vishal Anand, Canada
8. Dr Karunakar Marikinti, Baunn Hall Clinic, Cambridge, UK
9. Dr Tony Hollingworth, Whipps Cross University Hospital, London, UK
10. Dr Viveca Odland, University of Uppsala, Sweden
11. Dr Nitica Tandon, University of Manchester, UK
12. Dr Wolfzang Zubbe, University of Tribingen, Germany
13. Dr Radha Syed, New York, USA
14. Dr Suzen Garland, Royal Women's Hospital, Australia
15. Dr John Wark, Osteoporosis Centre, Melbourne, Australia

9.23 Orthopaedics

Professor and Head

Surya Bhan

Emeritus Professor

P. Chandra

Professors

Prakash P. Kotwal

Shishir Rastogi

Arvind Jayaswal

Rajesh Malhotra

Additional Professor

Hira Lal Nag

Associate Professors

Ravi Mittal

Chandrashekhar Yadav

Vikas Gupta

Assistant Professors

Shah Alam Khan

Vijay Kumar

EDUCATION

Undergraduate and Postgraduate

The department had several doctors from various parts of the country and Afro-Asian region for short-term training in various aspects of Orthopaedics.

Teaching to undergraduate and postgraduates in the form of lecture, bedside teaching, assessment, clinicopathology seminars was imparted.

Short- and long-term training

- Training ‘Sports Medicine and Arthroscopic Surgery’ to fellows and observers, for long- and short-terms, respectively, who come after postgraduation for special training in this specialized field of Orthopaedics. Many younger surgeons and few faculty from government teaching hospitals of different parts of India and abroad come to the Department of Orthopaedics for this training.
- ‘Distance Education Programme in Medicine’—an altogether different and innovative way of educating and updating knowledge of doctors practicing medicine in rural India. From the start, Dr H.L. Nag is associated with this programme at the School of Health Sciences, Indira Gandhi National Open University (IGNOU), Maidan Garhi, New Delhi, in preparation of the syllabus of Orthopaedics and for conducting the Certificate Course in Rural Surgery.

Continuing Medical Education

CME programmes organized

- The Department of Orthopaedics organized the CME entitled ‘Current concepts in arthroplasty’ at New Delhi; 17–18 September 2005.

Lectures delivered

Dr Surya Bhan

- 'Biology of bearing surfaces', at 'Current concepts in arthroplasty', New Delhi; 17–18 September 2005.
- 'Mechanisms of septic failure, risk factors, presentation, diagnostic work-up, predictors of outcome, remedies', at Current concepts in arthroplasty, New Delhi; 17–18 September 2005.
- Technical tips on video session of 'Flexion deformity', at 'Current concepts in arthroplasty', New Delhi; 17–18 September 2005.
- 'Mechanisms of failure—Septic failure', at 'Current concepts in arthroplasty', New Delhi; 17–18 September 2005.
- Technical tips on video session on 'Bony ankylosis', at 'Current concepts in arthroplasty', New Delhi; 17–18 September 2005.
- 'Management of bilateral hips and knee ankylosis/arthritis', at 'Current concepts in arthroplasty', New Delhi; September 17–18, 2005.
- 'Two-incision MIS', at 'Current concepts in arthroplasty', New Delhi; 17–18 September 2005.
- 'Revision THA—Acetabular revision using allografts', at 'Current concepts in arthroplasty', New Delhi; 17–18 September 2005.

Dr P.P. Kotwal

- 'Acute flexor tendon injuries', CME programme on 'Acute hand injuries', Indian Society for Surgery of the Hand, Dibrugarh; April 2005.
- 'Acute fractures of the scaphoid', CME programme on 'Acute hand injuries', Indian Society for Surgery of the Hand, Dibrugarh; April 2005.
- 'Flexor tendon injuries', P.G. Instructional Course at Maulana Azad Medical College, New Delhi; October 2005.

Dr A. Jayaswal

- 'Spinal tuberculosis—an overview', Spine Centre, Dartmouth Hitchcock Medical Center, New Hampshire, USA; 9 February 2006.
- 'Micro endoscopic discectomy—A minimally invasive procedure for lumbar disc herniation', at '2nd Asia Pacific Spine Course', Bangkok, Thailand; 22–24 August 2005.
- 'VATS for Tuberculous Spondylitis'; Faculty Lecture 2nd Asia Pacific Spine Course, Bangkok, Thailand; 22–24 August 2005.

Dr Rajesh Malhotra

- 'Recurrent haemarthrosis following total knee arthroplasty due to isolated PF3 availability defect', Hyderabad, ROC (Ranawat Orthopaedic Center) Fourth Winter Meeting; 16–18 February 2006.
- 'Mechanisms of failure—Instability after THA', at 'Current concepts in arthroplasty', New Delhi; 17–18 September 2005.
- Technical tips on video session of 'Protrusio', at 'Current concepts in arthroplasty', New Delhi; 17–18 September 2005
- Revision THA 'Femoral Revision using HA-coated interlocking stem', at 'Current concepts in arthroplasty', New Delhi; 17–18 September 2005.

NATIONAL AND INTERNATIONAL CONFERENCES

Dr P.P. Kotwal

- 'Recent advances in hand surgery', South Asian Conference on 'Synergy in healthcare', Paro, Bhutan; November 2005.
- 'Fracture of the distal radius', Annual Meeting of the Gujarat Orthopaedic Association, Surendranagar; October 2005.
- 'Fractures of the scaphoid', Annual Meeting of the Gujarat Orthopaedic Association, Surendranagar; October 2005.
- 'Management of flexor tendon injuries', Annual Meeting of the Gujarat Orthopaedic Association, Surendranagar; October 2005.
- 'Pollicization', Golden Jubilee Conference of the Indian Orthopaedics Association, Mumbai; December 2005.
- 'Management of neglected tendon injuries', Golden Jubilee Conference of the Indian Orthopaedics Association, Mumbai; December 2005.
- 'Common tendon transfers', Golden Jubilee Conference of the Indian Orthopaedics Association, Mumbai; December 2005.
- 'Injuries around the wrist', Annual Conference of Rajasthan Orthopaedic Association, Kota; February 2006.

Dr A. Jayaswal

- 'Minimally invasive spinal instrumentation and fusion', at 'Spinal intervention—Full spectrum', New Delhi; 9–10 April 2005.
- 'Failed back syndrome: A patho-surgical prospective', at 'Spinal intervention—full spectrum', New Delhi; 9–10 April 2005.
- 'Management of spinal tumours (Benign)', AO Spine Summer Seminar, New Delhi; 5 May 2005.
- 'Surgical management for lumbar disc herniations: Current concepts', Spine Course, Coimbatore; 7–10 May 2005.
- 'Coping with intra-operative complication during disc surgery', Spine Course, Coimbatore; 7–10 May 2005.
- 'Implant failure and pseudoarthrosis', Spine Course, Association of Spine Surgeons of India, Coimbatore; 7–10 May 2005.
- 'Anterior approach to lumbar spine', Spine Course, Coimbatore; 7–10 May 2005.
- 'Controversies in management of spondylolisthesis', Spine Course, Coimbatore; 7–10 May 2005.
- 'Iatrogenic instabilities', Spine Course, Coimbatore; 7–10 May 2005.
- 'Endoscopic discectomy', Workshop on Lumbar Disc Surgeries at the Annual Conference of the Delhi Orthopaedics Association (DOACON), LHMC, New Delhi; 18 November 2005.
- 'Technique of MED-Video presentation', Workshop on Lumbar Disc Surgeries, Annual Conference of the Delhi Orthopaedics Association (DOACON), LHMC, New Delhi; 18 November 2005.
- 'Newer Horizons in Spine Surgery', Annual Conference of the Delhi Orthopaedics Association (DOACON), LHMC, New Delhi; 18–20 November 2005.
- 'Pedic screw fixation in complex deformation-complication and preventive measures', International Workshop and Conference in Spine, Arthroplasty and Orthopaedics Trauma, Kolkata; 26–27 November 2005.
- 'Spinal instability in active spinal tuberculosis and role of instrumentation', International Workshop and Conference in Spine, Arthroplasty and Orthopaedics Trauma; Kolkata; 26–27 November 2005.
- 'Minimally invasive pedicle screw fixation techniques in lumbar spine', International Workshop and Conference in Spine, Arthroplasty and Orthopaedics Trauma, Kolkata; 26–27 November 2005.

- ‘Minimally invasive thoracoscopic spine surgery’, International Workshop and Conference in Spine, Arthroplasty and Orthopaedics Trauma, Kolkata; 26–27 November 2005.
- ‘Principles of spinal instrumentation’, Workshop on Spinal Instrumentation; 30th Annual Conference of the UP Chapter of Indian Orthopaedics Association UPCON; 27–29 January 2006.
- ‘Newer horizons in spine surgery’, Workshop on Spinal Instrumentation, 30th Annual Conference of the UP Chapter of Indian Orthopaedics Association UPCON; 27–29 January 2006.
- ‘Use of matrix in minimally invasive surgery at workshop on minimally invasive surgery’, 19th Annual Conference of the Association of Spine Surgeons of India (ASSICON 2006), Chandigarh; 17–19 February 2006.
- ‘Failed implants—surgeons failure?’ at 19th Annual Conference of the Association of Spine Surgeons of India (ASSICON 2006), Chandigarh; 17–19 February 2006.
- Video on ‘Minimally Invasive Lumbar Instrumentation—how I do it’, 19th Annual Conference of Associate of Spine Surgeons of India (ASSICON 2006), Chandigarh; 17–19 February 2006.
- ‘Problem and complication in thoracoscopic assisted surgery’, 19th Annual Conference of the Association of Spine Surgeons of India (ASSICON 2006), Chandigarh; 17–19 February 2006.
- ‘Minimally invasive spine surgery—Role in management of PIVD’; International Spine and Spinal Injuries Conference (ISSICON 2006), New Delhi; 3–5 March 2006.
- ‘Controversies in surgical management of adolescent idiopathic scoliosis— management by anterior approach’, International Spine and Spinal Injuries Conference (ISSICON 2006), New Delhi; 3–5 March 2006.

Dr Rajesh Malhotra

- ‘Management of neuropathic pain’, presented under the auspices of API—Ajmer Chapter; 3 July 2005.
- ‘Uncemented total hip arthroplasty-technique and protocol’, Symposium on Hip—All Points, New Delhi; 7 August 2005.
- ‘Templating’, Delhi Arthroplasty Course (Basic), Ethicon Institute of Surgical Education (Johnsons and Johnsons), New Delhi; 21 August 2005.
- ‘The valgus knee—tips for correction’, Delhi Arthroplasty Course (Basic), Ethicon Institute of Surgical Education (Johnsons and Johnsons), New Delhi; 21 August 2005.
- ‘Kamjor kadiyon ki roktham’, Eve of Hindi Divas, Indian Council of Medical Research Headquarters, New Delhi; 13 September 2005.
- ‘Femoral revision using HA coated interlocking stem’, at ‘Current concepts in arthroplasty’, New Delhi; 17–18 September 2005.
- ‘Instability after THA’, at ‘Current concepts in arthroplasty’, New Delhi; 17–18 September 2005.
- ‘THA septic—failure’, at ‘Current concepts in arthroplasty’, New Delhi; 17–18 September 2005.
- ‘Protrusio’, at ‘Current concepts in arthroplasty’, New Delhi; 17–18 September 2005.
- ‘The new paradigm in the management of osteoporosis’, at CME, New Delhi; 1 October 2005.
- ‘TRAP approach for distal humerus fractures’; Universitatlinik Ulm, Germany, 9 November 2005.
- Scientific Session on the ‘Different approaches and exposures, acetabular fractures’, AO Alumni Association India Symposium, 9th Annual Meeting 2006, Kolkata, 4–5 January 2006.
- ‘Disease modifying agents in the management of osteoarthritis’, New Delhi; 11 March 2006.
- ‘Surgical management of osteoporotic fractures’, New Delhi; 18 March 2006.
- ‘Current status of bisphosphonates in the management of osteoporosis’, New Delhi; 25 March 2006.

Dr H.L. Nag

- ‘Management of sports injuries’, at the National Seminar on Sports Medicine, Indian Federation of Sports Medicine and Sports Authority of India, VIP Lounge, JLN Stadium, New Delhi; July 30 2005.
- ‘Posterior cruciate ligament reconstruction—when to do it?’, at Indian Arthroscopic Society 2005 Annual Congress, India Habitat Centre, New Delhi; 14–16 October 2005.
- ‘Harvesting of semitendinosus and gracilis grafts’ at 1st International Symposium on Current Concepts, ACL Reconstruction, Indian Spinal Injury Centre, New Delhi; 11–12 March 2006.
- ‘Revision of ACL reconstruction surgery’, at 1st International Symposium on Current Concepts in ACL Reconstruction; Indian Spinal Injury Centre, New Delhi; 11–12 March 2006.
- ‘Panel discussion of arthroscopy section’, DOACON 2005, XIII Annual Conference, Lady Hardinge Medical College, New Delhi; 10 November 2005.
- Demonstrated ‘Basic arthroscopic technique of knee’, at Workshop on Cadaver, IAS-2005 Congress, Safdarjung Hospital, New Delhi; 10 October 2005.
- Video demonstration on ‘Meniscal pathology and arthroscopic tips of their treatment’; Workshop on Cadaver, IAS 2005 Congress, Safdarjung Hospital, New Delhi; 10 October 2005.
- ‘Transfixation technique of ACL reconstruction’, Hands-on Workshop on Saw Bone Models, 1st International Symposium on ‘Current concepts in ACL reconstruction’, Indian Spinal Injury Centre, New Delhi; 12 March 2006.
- ‘Arthroscopic assisted posterior cruciate ligament reconstruction’, to the faculty and students at the Government Medical College, Srinagar, Jammu and Kashmir; 16 March 2006.
- ‘A newer clinical method to diagnose anterior cruciate ligament tear’ to the faculty and students at the Government Medical College, Srinagar, Jammu and Kashmir; 16 March 2006.

Dr C.S. Yadav

- ‘Joint replacement arthroplasty’ IMA (Baraut); February 2005.

Dr Ravi Mittal

- ‘Torn meniscus—to be removed or preserved’, Sports Medcon 2005, Delhi; 10–12 November 2005.
- ‘ACL reconstruction using hamstrings tendon graft’, CGORTHOCON 2006, Bilaspur; 28–29 January 2006.
- ‘Arthroscopic management of common shoulder problems’, CGORTHOCON Bilaspur; January 28–29 2006.
- ‘Knee: Radiology and imaging’, Sports Medicine and Arthroscopy Workshop, Delhi; 19 March 2006.
- ‘Imaging of knee: Surgeon’s perspective’, AIIMS, Delhi; 1 April 2006.

Dr Vikas Gupta

- ‘Wrist arthroscopy’ at IOACON; 27–30 December 2005.

RESEARCH

Funded Projects

1. Comparison of recovery, and complications and recurrence rate after endoscopic versus open carpal tunnel release. Rajesh Malhotra. Funded by ICMR for 3 years (1.6.2003–1.6.2006). Funds: Rs 21 lakh.

2. Determination of the therapeutic range of temperature for heat therapy for Indian patients a preliminary study. Kanchan Mittal. Funded by ICMR for 3 years (1.1.2003–30.6.2005). Funds: Rs 2.5 lakh.
3. Bone bank for allografts from living and non-living donors. S. Bhan. Funded by DST for 3 years. Funds: Rs 69.56 lakh.
4. Evaluation of efficacy of platelet concentrates in the treatment of non-union of fracture of long bones. S. Bhan. Funded by ICMR for 3 years. Funds: Rs 27.49 lakh.
5. A new hip hemiarthroplasty option-based on femoral stem design suitable for the morphology of proximal femur of elderly Indian population. S. Bhan. Funded by CSIR for 3 years. Funds: Rs 23.33 lakh.
6. Role of free radical scavengers and the effect of antioxidants on their levels in patients with ankylosing spondylitis—to investigate the possible role of antioxidants as therapeutic agents in ankylosing spondylitis'. Arvind Jayaswal. Funded by ICMR from 23 December 2004 to 22 December 2007. Funds: Rs 9.47 lakh.
7. 'Proteomics of human body fluids: Structural characterization of proteins and target identification for diagnosis and drug discovery'. H. L. Nag. Funded by DBT from June 2005 to May 2008. Funds: Rs 34.5 lakh.

Departmental Projects

1. Evaluation of alteration in joint line and patellar height and their effect on range of motion and instability after TKA in severely degenerated knee
2. Role of arthroscopic synovectomy of wrist in inflammatory arthritis of wrist joint
3. Outcome of result of MISS in lumbar and thoracic disorders
4. Evaluation of results of Hybrid THR versus cementless THR in young adults
5. A comparative prospective and retrospective study of outcome of core decompression with and without fibular grafting (non-vascularized) in osteonecrosis of hip
6. Short and mid-term results following total knee arthroplasty with a posterior stabilized rotating platform prosthesis—retrospective and prospective results
7. Role of artificial bone substitution in management of fracture distal end radius
8. Evaluation of results of total knee arthroplasty in stiff and ankylosed knee
9. Presence of P53 in malignant giant cell tumour
10. Comparative analysis both PFC RP mobile bearing and PFC sigma with minimum one year follow up
11. Arthroscopic and MRI correlation of meniscus lesion in ACL deficient knee
12. Comparative study between vascularized and non-vascularized bone grafting in non-union fracture scaphoid
13. Arthroscopic Bankart's repair of acute recurrent shoulder dislocation and radiological correlation
14. Arthroscopic assessment of the extent of Bankart lesion in acute traumatic anterior shoulder dislocation and radiological correlation
15. MR evaluation of glenohumeral instability
16. Phenotypic molecular and ultra structural study of coagulase negative staphylococcal and their biofilms in device related infection

Collaborative Projects

Development of biodegradable plastic composite scaffolds for bone growth through microcellular injection moulding. Shah Alam Khan (with IIT, Delhi).

PUBLICATIONS

Journals

1. Bhan S, Pankaj A, Malhotra R. One or two-stage bilateral total hip arthroplasty: A prospective, randomized, controlled study in an Asian population. *J Bone Joint Surg Br* 2005;**88**:298–303.
2. Garg B, Malhotra R, Bhan S. Pigmented villonodular synovitis. *J Orthopaedics* 2005;**2**:e4.
3. Jhangid S, Khan SA. Freeman Sheldon Syndrome. *Indian Paediatr* 2005;**42**:717.
4. Kotwal PP, Gupta V. Neglected tendon and nerve injuries of the hand. *Clin Orthop Relat Res* 2005;**431**:66–71.
5. Malhotra R, Bhan S, Krishnakiran E. Recurrent hemarthrosis following total knee arthroplasty due to isolated PF3 availability defect. *J Bone Joint Surg Br* 2005;**87**:1549–52.
6. Mittal R, Sharma V. Ipsilateral supracondylar humeral and segmental both bones forearm fractures in a child: A case report. *Middle East J Emerg Med* 2005;**5**:44–6.
7. Mittal R, Trikha V, Rastogi S. Tuberculosis of the patella. *Knee* 2006;**13**:54–6.
8. Pankaj A, Malhotra R, Bhan S. Dome osteotomy for posttraumatic cubitus varus: A surgical technique to avoid lateral condylar prominence. *J Pediatr Orthop* 2006;**26**:61–6.
9. Pankaj A, Malhotra R, Bhan S. Post-burn heterotopic ossification of the popliteal space treated by surgical excision. *Injury Extra* 2005;**36**:7232–6.
10. Sethuraman G, Kaur J, Nag HL, Khaitan BK, Sharma VK, Singh MK. Symmetrical scrofuloderma with tuberculosis verrucosa cutis. *Clin Exp Dermatol* 2006;**31**:475–7.
11. Trikha V, Kumar R, Khan SA, Rastogi S. Characteristic appearance on bone scintigraphy of a ‘stone man’. *Clin Nucl Med* 2005;**30**:517–18.
12. Trikha V, Mittal R, Kotwal PP. Paget’s disease: An unusual cause of backache in an adult male. *Indian J Orthopaedics* 2005;**39**:193–4.
13. Trikha V, Varshney MK, Rastogi S. Tuberculosis of the ilium: Is it really so rare? *Acta Orthop Belg* 2005;**71**:366–8.

Books

1. Aggarwal P, Murmu LR, Yadav CS. The essential and practice of emergency medicine. 1st ed. New Delhi: BI Publications; 2005.
2. Bhan S, Malhotra R. *Key issues in total hip arthroplasty*. AIIMS; September 2005.
3. Kotwal PP, Natarajan MV. *Textbook of orthopaedics*, New Delhi: Elsevier; 2005.
4. Malhotra R. *Text book of fractures and dislocations*. New Delhi: PEEPEE Publishers; 2005.
5. Mittal R. *Step by step guide to basics of knee arthroscopy*. New Delhi: JP Brothers Medical Publishers; 2006.

Chapter in Books

1. Bhan S, Nag HL. Skeletal tuberculosis. In: Sharma SK, Mohan A (eds). *Tuberculosis*. 2nd ed. New Delhi: Jaypee Brothers Medical Publishers; 2006:237–60.
2. Bhan S. Orthopaedic instruments and procedures. In: Kapur MM (ed). *A complete hospital manual of instruments and procedures*. 1st ed. New Delhi: JP Brothers; 2006.
3. Gupta V, Trikha V, Sivaraman ST. *Hand and foot*. In: Chumber S (ed). *Essentials of surgery*. 1st ed. New Delhi: Jaypee Publications; 2005:545–66.
4. Malhotra R. Ethics in Orthopedic practice. In: *Executive reference book on Health Economics*. Hyderabad: ICFAI University Press; 2006.
5. Nag HL, Aggarwal S, Yadav CS. Bone and Joint Infections. In: Chumber S (ed). *Essentials of surgery*. New Delhi: Jaypee Brothers; 2005:1182–93.

6. Yadav CS, Nag HL, Malhotra KS, Rastogi S. *Bone tumors*. In: Chumber S (ed). *Essentials of surgery*. New Delhi: Jaypee Brothers; 2005:1213–30.

PATIENT CARE

The department runs special clinics in addition to the regular OPDs.

- *TB clinic*
- *Hand clinic*
- *Arthritis clinic*
- *CTEV clinic*
- *Polio clinic*
- *Scoliosis clinic*

The injured athletes and sports personnel are attended and examined by Dr H.L. Nag once in every week at Jawaharlal Nehru Stadium, New Delhi. Their demand of high-level physical fitness for pre-injury level performance is met with properly planned surgery and sustained rehabilitation back up.

Community Service

H.L. Nag

- ‘Total Health’, a live one hour D.D. News Television Programme by Dr H.L. Nag in Hindi on ‘Joint Problems, Sports Injuries, Arthroscopy and Arthroplasty’, New Delhi at 9.00–10.00 am, July 24, 2005.
- ‘Why Injuries are so Common in Cricket Players during India versus Pakistan One Day Series Matches’, a live 30 minutes Television Programme by Dr H.L. Nag in English, at Channel 7 JTV Film City, NOIDA at 7.30–8.00 pm, February 14, 2006.
- ‘Khel, Khiladi aur Choten’, a live All India Radio Programme by Dr H.L. Nag, 30 minutes National Broadcast in Hindi, New Delhi, at 6.00–6.30 pm, May 31, 2005.
- ‘Khel me Choten’ a live All India Radio Programme by Dr H.L. Nag, 30 minutes National Broadcast in Hindi, New Delhi at 6.00–6.30 pm, February 15, 2006.
- ‘How and What to do?’ – a Tele Video Conference by Dr H.L. Nag for a ‘Severe CTEV deformity with AMC in a new born child’ with the doctor from Lakshadweep, at Media Centre, AIIMS, at 2.00–2.20 pm, June 21, 2005.

Ravi Mittal

Attended the Health Mela organized at Leh, Ladakh; March 25–28, 2006

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor S. Bhan took over as chairman of ‘Stem Cell applications in Orthopaedics’ committee of DBT; was co-opted as member of the working group constituted by the Ministry of Health and Family Welfare to prepare a module for NCD Surveillance under the Integrated Disease Surveillance Programme; was consultant for the Expert Group for New Millennium Indian Technology Leadership Initiative (NMITLI) project entitled ‘Medical implants’ Council of Scientific and Industrial Research, Headquarters, New Delhi.

Dr P.P. Kotwal was elected Fellow of the National Academy of Medical Sciences, 2005; elected President, Delhi Orthopaedic Association 2005–2006; continued as Honorary Vice-President, Orthopaedic

Research Society of AIIMS; Reviewer, *Journal of International Medical Sciences Academy*; nominated External Expert, Core Technical Committee, Postgraduate Institute of Medical Education and Research, Chandigarh; nominated Expert by the Federation of Indian Chambers of Commerce and Industry (FICCI) to evaluate FICCI Awards in the field of empowerment of the physically handicapped; Member, Selection Committee of M.G.M. Medical College, Indore; Member, Selection Committee, Postgraduate Institute of Medical Education and Research, Chandigarh.

Dr A. Jayaswal was elected Member, Board of Directors, World Spine Society (WSS); elected Executive Committee Member of Pacific Asia Society for Minimally Invasive Spine Surgery (PASMIS), Asian Academy of Minimally Invasive Spine Surgery (AAMISS) and Spine section of Asia Pacific Orthopaedic Association (APOA); was elected President, Delhi Spine Society; Vice-President, Association of Spine Surgeons of India (ASSI); Vice President, The Spinal Cord Society; Visiting Consultant, Ministry of Health Care, Human Service and Family Welfare, Government of Sikkim, Gangtok, Sikkim; Member, Abstract Review Committee, World Spine III Conference, Rio de Janeiro, Brazil.

Dr Rajesh Malhotra was awarded AO Fellowship (Trauma and Reconstructive Surgery) at Universitätsklinik Ulm, Germany under Professor L. Kinzl, Ärztlicher Direktor; October– November 2005; awarded K.T. Dholakia Award for the best paper presentation in arthroplasty for ‘Recurrent spontaneous hemarthrosis following total knee arthroplasty due to isolated PF3 availability defect’ at Hyderabad ROC (Ranawat Orthopaedic Center) Fourth Winter Meeting; 16–18 February, 2006; was co-opted as member of the working group constituted by the Ministry of Health and Family Welfare to prepare a module for NCD Surveillance under the Integrated Disease Surveillance Programme; was consultant for the Expert Group for New Millennium Indian Technology Leadership Initiative (NMITLI) project entitled ‘Medical implants’ Council of Scientific and Industrial Research, Headquarters, New Delhi; nominated as Expert for the Golden Triangle Partnership (GTP) a scheme between the department of AYUSH-CCRAS, ICMR and CSIR; nominated Member, Advisory Group of ICMR for WHO-ICMR, Workshop at the Institute of Pathology, Safdarjung Hospital, New Delhi; nominated consultant, Expert Group Meeting for drafting National consensus development prophylaxis DVT Guidelines for Indian Patients.

Dr H.L. Nag was Honorary Consultant, Sports Authority of India, New Delhi; elected Secretary General, Indian Federation of Sports Medicine (IFSM); Co-opted Member, Executive Committee, Indian Arthroscopic Society; Member, Scientific Committee for Sports Medicine, International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS); Founder Member, Indian Federation of Sports Medicine (IFSM); Executive Member, Delhi Orthopaedic Association (DOA) and North Zone of Indian Orthopaedic Association (NZIOA); Core Committee Member, Multidisciplinary Core Committee for DOTS team under Revised National Tuberculosis Control Programme (RNTCP); Chairman, Scientific Committee, Annual Conference of Indian Arthroscopic Society, New Delhi.

Dr Ravi Mittal was awarded Fellowship at Flinders Medical Center at Adelaide, Australia, July to September 2005.

Dr C.S. Yadav did an appraisal of DNB students for Hindu Rao Hospital; delivered many health talks and participated in discussion on various government and private television channels.

9.24 Otorhinolaryngology (ENT)

Professor and Head

R.C. Deka

Professors

S. Bahadur

S.C. Sharma

Associate Professors

K.K. Handa

A. Thakar

Assistant Professors

R. Kumar

C.V. Karthikeyan

A. Kumar (ad hoc)

EDUCATION

The department has developed an undergraduate (MB,BS) teaching manual. The department provided short- and long-term training to 11 national and international doctors.

Continuing Medical Education

Organized by the department

- The department organized and hosted the monthly meeting of the Delhi Chapter of the Association of Otolaryngologists of India, AIIMS; March 2006.
- Professor R.C. Deka, in collaboration with Assam Cancer Society, organized a seminar in cancer prevention and control; he also delivered a public lecture on oral cavity cancer at Barpeta, Assam; 25 March 2006.
- Professor R.C. Deka organized a CME on 'Teaching and methods of examination' to the faculty of Shankar Madhab Hospital, Guwahati; March 2006.
- Professor S. Bahadur helped in organizing the surgical workshops on Head and Neck cancer at the Regional Cancer Hospital at Nagpur in September 2005, Guwahati in October 2005, and Army (RR) Hospital, New Delhi in April 2005.
- Dr K.K. Handa organized Phonocon 2006 from 3 to 5 February AIIMS; which included a pre-conference CME on 'IT and media' on 3 February and 2nd Annual Conference of the Association of the Phonosurgeons of India on 4–5 February 2006.

National and International Conferences

Organized by the department

Dr K.K. Handa organized Phonocon 2006, 2nd annual conference of the Association of Phonosurgeons of India, AIIMS; 3–5 February 2006.

Lectures delivered

The faculty of the department participated in and delivered 37 lectures in continuing medical education, symposia, workshops, national and international conferences during the year.

Professor R.C. Deka

- ‘Use of CO₂ laser in oral cavity in benign disease (including leukoplakia and oral submucous fibrosis)’, 16th World Congress of the International Society for Laser Surgery and Medicine (16th ISLSM) and 1st Congress of the World Federation of Societies for Laser Medicine and Surgery (1st WFLSMS), Tokyo, Japan; 7–10 September 2005.
- ‘Surgery of large juvenile nasopharyngeal angiofibroma’, 11th Congress of IRS, Sydney, Australia; 25–29 October 2005.
- ‘Surgery of ethmoiditis-sphenoid in allergic fungal sinusitis’, 11th Congress of IRS, Sydney, Australia; 25–29 October 2005.
- ‘Cochlear implantation in patients with chronic otitis media after successful tympanoplasty’, ASOHNS Meeting, Sydney, Australia; 25–29 October 2005.
- ‘Role of intratympanic dexamethasone in the treatment of sudden sensorineural hearing loss’, 25th Congress of the Politzer Society’s Meeting, Seoul, Republic of Korea; 6–9 October 2005.
- ‘A study to evaluate the effect of prednisolone and acyclovir compared with prednisolone alone in the treatment of Bell’s palsy’, 25th Congress of the Politzer Society’s Meeting, Seoul, Republic of Korea; 6–9 October 2005.
- ‘Genetics of deafness—The Indian scenario’, 25th Congress of the Politzer Society’s Meeting, Seoul, Republic of Korea; 6–9 October 2005.
- ‘Surgical treatment of nasopharyngeal angiofibroma’, 2nd International ENT Conference, Dhaka, Bangladesh; 18–21 November 2005.
- ‘Combination therapy of intratympanic dexamethasone and oral acyclovir in the treatment of sudden sensorineural hearing loss’, 2nd International ENT Conference, Dhaka, Bangladesh; 18–21 November 2005.
- ‘Management of nasopharyngeal angiofibroma’, 10th ARSR Meeting, Kuala Lumpur, Malaysia; 2–3 December 2005.
- ‘Surgical management of nasopharyngeal angiofibroma and other anterior skull base tumours including endoscopic approach’, International Symposium on Skull Base Surgery, King Faisal Specialist Hospital and Research Centre, Riyadh, KSA; 28–30 January 2006.

Professor S. Bahadur

- ‘Childhood malignancies’, 12th Annual Conference of APOI, Paediatric Otolaryngology, Lady Hardinge Medical College, New Delhi; 25–26 February 2006.
- ‘Management of hypopharyngeal cancer’, 5th International Conference on Head and Neck Oncology, Rajeev Gandhi Cancer Hospital, New Delhi; 18–19 March 2006.

- 'Recent concepts of head and neck cancer', IX Eastern Zonal AOI Conference, Agartala, Tripura; 9–11 September 2005.
- 'Treatment protocols in cancers of hypopharynx', in the Head and neck Oncology Surgical Workshop, Barooah Cancer hospital, Guwahati; October 2005.
- 'Surgical management of oral cancer', 5th Annual Conference of Foundation for Head and Neck Oncology; K.G.M.C. Lucknow; 3–5 January 2006.
- 'Surgery for carcinoma tongue', Regional Cancer Hospital, Nagpur; September 2005.

Professor S.C. Sharma

- 'Evaluation of epithelial proliferation in pediatric and adult cholesteatoma using MIB-1 antibody', 17th Annual Conference of the North American Skull Base Society, Phoenix, USA; 16–19 February 2006.

Dr K.K. Handa

- Presentation on 'Post-traumatic psuedoaneurysm of the inguinal artery'; Association of Otolaryngologists of India, Delhi Chapter, AIIMS; March 2006.
- 'Videostroboscopy', Phonocon 2006, AIIMS; 3–5 February 2006.
- 'Spasmodic dysphonias'; Phonocon 2006, AIIMS; 3–5 February 2006.
- Guest orator at the Annual Conference of the Association of Otolaryngologists of India, Orrisa Branch, Bhuwaneshwar; March 2006.
- 'Hoarseness in children', Annual Conference of the Association of Paediatric Otorhinolaryngologists of India, New Delhi; February 2006.
- 'Facial nerve paralysis', 27th Annual conference of the Neuro-otological and Equilibrium Society of India, Mumbai; September 2005
- 'Paralytic dysphonias', Phonocon 2006, AIIMS; 3–5 February 2006.

Dr Alok Thakar

- 'Approaches to the infratemporal fossa', Lateral Skull Base Surgery Workshop, SGPGIMS, Lucknow; 29–30 April 2005.
- 'The intra-parotid facial nerve', Lateral Skull Base Surgery Workshop, SGPGIMS, Lucknow; 29–30 April 2005.
- 'Facial nerve monitoring and re-animation', XXVII Annual Conference of the Association of Otolaryngologists of India, Delhi Branch; May 2005.
- 'BPPV, diagnosis, management and Epley's manoeuvre', Neuro-Otology and Vertigo Workshop, Sir Ganga Ram Hospital, New Delhi; June 2005.

- ‘Vertigo—diagnosis and management’, Association of Otolaryngologists of India (Meerut Branch); August 2005.
- ‘Endoscopic ligation of the sphenopalatine artery’, Association of Otolaryngologists of India (Ludhiana Branch); 26 August 2005.
- ‘Endoscopic CSF leak repair, orbital and optic nerve decompression, fungal rhinosinusitis, tumours of the Skull Base’, Dayanand Medical College and Hospital, Ludhiana; 27 August 2005.
- ‘Management of vertigo—moving beyond labyrinthine suppressants’, Annual Conference of the Association of Otolaryngologists of India (Andhra Pradesh Branch), Tirupati; September 2005.
- ‘Endoscopic endonasal skull base surgery’, Annual Conference of the Association of Otolaryngologists of India (East Zone), Agartala; September 2005.
- ‘Facial nerve monitoring and re-animation of the paralysed face’; Association of Otolaryngologists of India (Haryana Branch), Temporal Bone Dissection Course, Karnal; September 2005.
- ‘Endoscopic endonasal skull base surgery’, Endoscopic Skull Base Surgery Workshop, Nizam’s Institute of Medical Sciences, Hyderabad; September 2005.
- ‘Endoscopic optic nerve decompression in post-traumatic visual loss’, Annual Conference of the Association of Otolaryngologists of India (North West Branch), Jalandhar; October 2005.
- ‘Epley’s manoeuvre for BPPV’, Neuro-otology Workshop, Mumbai; 8–9 October 2005.
- ‘Intratympanic gentamycin therapy’, Neuro-otology Workshop, Mumbai; 8–9 October 2005.
- ‘Management of oral cancer—current status and future directions for research’, ORAL CANCER Conference, Regional Cancer Centre, Tiruvananthapuram; 27–29 January 2006.
- ‘Endoscopic endonasal skull base surgery’, (Dr N.K. Agarwala Oration), Association of Otolaryngologists of India (North-Eastern Branch), Guwahati; March 2006.
- ‘Diagnostic aspects of vertigo’, CME on Neuro-Otology, Government ENT Hospital, Koti, Hyderabad; 26 March 2006.
- ‘Vertigo in children’, Annual Conference of the Association of Paediatric Otolaryngologists of India, New Delhi; February 2006.

Dr Rakesh Kumar

- ‘Surgical management of nasopharyngeal angiofibroma—Endoscopic approach’, Association of Otolaryngologists of India, Delhi Chapter, AIIMS; March 2006.

Dr C.V. Karthikeyan

- ‘Bilateral cochlear implantation’, Association of Otolaryngologists of India, Delhi Chapter, AIIMS; March 2006.

RESEARCH

Funded Projects

Ongoing

1. Role of intratympanic dexamethasone therapy in sudden SN loss. R.C. Deka. Funded by ICMR for 2.5 years. Funds: Rs 4.99 lakh.
2. Role of amphotericin lavage and corticosteroid nasal spray combination therapy in allergic fungal sinusitis. R.C. Deka. Funded by ICMR for 3 years. Funds: Rs 6.32 lakh.
3. Development of educational and training material for rehabilitating cochlear implantees. R.C. Deka. Funded by the Ministry of Social Justice and Empowerment Project for 1.5 years. Funds: Rs 2.93 lakh
4. Assessment of etiological factors for conductive hearing impairment in rural/urban population. R.C. Deka. Funded by WHO for 1.5 years. Funds: Rs 3.6 lakh.
5. Role of acyclovir–prednisolone therapy in treatment of bells palsy. R.C. Deka. Funded by ICMR for 2.5 years. Funds: Rs 4.74 lakh.
6. Quality of life in head and neck cancer following multi-modality treatment. S. Bahadur. Funded by CSIR for 3 years. Funds: Rs 7.8 lakh.
7. Phase II/III randomized placebo-controlled clinical trial of curcumin in respectable stage III and IV squamous head and neck cancers. S. Bahadur. Funded by ICMR for 3 years. Funds: Rs 35.75 lakh.
8. Study of clinico-pathological and immune profile of patients of chronic invasive fungal sinusitis. S.C. Sharma. Funded by ICMR for 3 years. Funds: Rs 5.49 lakh.
9. A population-based study of prevalence, risk factors and associated co-morbid illnesses in sleep disordered breathing in South Delhi. K.K. Handa. Funded by AIIMS for 2 years.
10. A randomized double-blind study of efficacy of lactobacillus CD2 lozenges in preventing radiation and chemotherapy-induced oral mucositis in head and neck cancer. Alok Thakar.
11. Role of human papillomavirus subtype as prognostic factor in recurrent respiratory papillomatosis. Abhineet Kumar. Funded by the Institute Research Grant for 1 year. Funds: Rs 35,000.

Departmental Projects

Ongoing

1. Otolaryngological and head and neck manifestations in HIV/AIDS patients
2. Ki-67 expression in retraction pocket of TM and to evaluate its effect on healing of TM
3. Study of indications, outcome and limitations of endoscopic management of CSF rhinorrhoea
4. Prevalance of mitochondrial DNA mutations among non-syndromic sensorineural hearing-impaired population in India
5. Significance of tumour thickness and molecular margins in cancer of tongue
6. Comparative study of results of cochlear implantation in children (age groups <5 years and >5 years)
7. Evaluation of epithelial proliferation in paediatric and adult cholesteatomas using MIB-1—a comparative study.
8. ENT manifestations in HIV patients.

PUBLICATIONS

Journals

1. Arhur SR, Ruma Ray, Handa KK. Isolated laryngeal leishmaniasis in an immunocompetent patient in India. *Trop Doct* 2006;**36**:55–6.

2. Bahadur S, Mohanti BK, Thakar A, Handa KK, Rath GK. Role of combined therapy of surgery and radiotherapy versus salvage surgery following radiation failures and advanced carcinoma of larynx. *Indian J Otolaryngol Head Neck Surg* 2005;**1**:56–9.
3. Bahadur S. Oral cancer. *Indian J Otolaryngol Head Neck Surg* 2005;**1**:2–7.
4. Deka RC, Venkatarathikeyan C. Role of cinnarizine in peripheral vertigo. *Vertigo viewpoint* 2006:1–3.
5. Handa A, Handa KK. Migranous vertigo. *Vertigo Viewpoint* 2006:4.
6. Handa AC, Handa KK. Sphenocchoanal polyp—diagnosis and management. *Indian J Otolaryngol Head Neck Surg* 2005;Special issue II:515–17.
7. Handa KK. Laryngopharyngeal reflux: Current opinion. *Indian J Otolaryngol Head Neck Surg* 2005;**57**:267–70.
8. Jha A, Sharma SK, Tandon N, Handa KK. Thyroxine replacement therapy reverses sleep-disordered breathing in patients with primary hypothyroidism. *Sleep Med* 2006;**7**:55–61.
9. Jha A, Sharma SK, Tandon N, Handa KK. Thyroxine replacement therapy reverses sleep-disordered breathing in patients with primary hypothyroidism. *Sleep Med* 2006;**7**:55–61.
10. Kumar A, Sharma SC. Treatment of pediatric acquired subglottic stenosis with anterior cricoid split. *Asian J Ear, Nose Throat* 2006;**4**:23–7.
11. Manchanda P, Sharma SC, Das SN. Differential regulation of IL-2 and IL-4 in patients with tobacco-related oral squamous cell carcinoma. *Oral Dis* 2006 doi 09.05–07–0222.
12. Prakash M, Bahadur S, Thakar A, Gupta SD. Role of tumour thickness in carcinoma of oral tongue with clinically negative neck. *Indian J Otolaryngol Head Neck Surg* 2005;**1**:8–12.
13. Sharan CJ, Thakar A. Spontaneous perilymph fistula. *Otology India* 2005;**3**:41–6.
14. Thakar A, Sharan CJ. Endoscopic ligation of the sphenopalatine artery for intractable epistaxis. *Indian J Otolaryngol Head Neck Surg* 2005;**57**:215–18.
15. Thakar A. Horizontal canal BPPV. *Kerala J ENT—Head Neck Surg* 2005;**9**:5–8.
16. Thakar A. Skull base surgery in South Asia. *ENT News* 2005;**14**:70–3.

Abstracts

17. Sharma SC, Sikka K, Thakar A, Gupta SD. Evaluation of epithelial proliferation in pediatric and adult cholesteatoma—A comparative study. *Skull Base* 2006;**16** (Suppl.):15–16.

PATIENT CARE

Facilities available in the department

The department provides state-of-the-art ENT service and is equipped with the entire range of diagnostic and therapeutic equipment including a cochlear implant laboratory, audiological facilities, electronystagmographic facilities, electrodiagnostic audiometry, hearing aid analyzer, ear mould laboratory, speech therapy, stroboscopy and computer aided speech analysis and nasal and laryngeal endoscopes. It has a well staffed rehabilitation unit of Audiology and Speech Pathology. This functions with the clinical department to provide supportive, diagnostic and rehabilitative services for hearing impairment, speech problems and post-laryngectomy speech disabled.

The department has been successfully conducting cochlear implant surgery for both children and adults with bilateral profound sensorineural hearing loss and has provided support in starting cochlear implant surgery in R.R. Hospital, Central Railway Hospital and PGIMER, Chandigarh.

The Head and Neck Cancer clinic of our department in the B.R. Ambedkar Institute Rotary Cancer Hospital, with the collaborative support of radiotherapists and medical oncologists, caters to large number of patients suffering from head and neck malignancies. The department provides surgical

expertise for the effective management of head and neck cancers. The department also runs specialty clinics (Vertigo, Audiology, Skull Base, Rhinology, Voice Clinics) and provides services to a large number of patients.

OPD and speciality clinics

ENT OPD: New and old cases 88,662

Specialty Clinics

Head and neck	5451
Voice	1297
Speech	2385
Hearing	2014
Vertigo	231
Audiology	174
Skull base	137
Rhinology	190

In-patients

Long admission	1041
Short admission	216

Surgical Procedures

Major	1929
Minor	1774
Minor OT	23,465

Community Services/Camps

The department provides comprehensive ENT services at CRHSP at Ballabgarh, Haryana. In addition, Dr R. Kumar runs once-a-week OPD services at the Deaf Centre, Gurgaon, under the Government of Haryana. The department also organized several ENT health camps in rural areas and schools during the year.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor R.C. Deka did the country's first bilateral cochlear implantation; was distinguished International faculty at the 16th World Congress of the International Society for Laser Surgery and Medicine (16th ISLSM) and 1st Congress of the World Federation of Societies for Laser Medicine and Surgery (1st WFSLMS) at Tokyo, Japan; was faculty as well as on the International Advisory Committee of the Indian Rhinology Society; distinguished faculty for the 11th Congress of IRS at Sydney, Australia; invited faculty to the ASOHNS; international faculty for the 25th Congress of the Politzer Society's Meeting at Seoul, Republic of Korea; distinguished faculty for the 2nd International ENT Conference at Dhaka, Bangladesh (18–21 November 2005); chaired a scientific session at the 4th International Voice Conference at Pune (25–26 November 2005); was international faculty for the 10th ARSR Meeting at Kuala Lumpur, Malaysia (2–3 December 2005); was distinguished faculty for the AOI Conference at Lucknow (6 January 2006); was international faculty at the International Symposium on Skull Base Surgery (28–30 January 2006), King Faisal Specialist Hospital and Research Centre, Riyadh, KSA; is Founder Chairman of Indian Academy of Otolaryngology, Head Neck Surgery; a MCI and NBE Inspector;

Chairman, Technical advisory group for speech and hearing handicapped, Ministry of Social Welfare; Editorial Board Member of *Acta-Otolaryngologica* (Stockholm), *Otolaryngology-HN Surgery* (USA), *Otology-Neurotology* (USA), *Pakistan Journal of Otology*, *Indian Journal of Otology* (Chief Editor), *Vertigo Viewpoint* (Chief Editor).

Professor S Bahadur is President-elect, Skull Base Surgery Society of India 2005–06; delivered P.K. Kakar oration on ‘Changing concepts in the management of head and neck cancer’, Delhi Branch of AOI April 2005; distinguished faculty for 12th Annual Conference of APOI (Paediatric Otolaryngology), Lady Hardinge Medical College, New Delhi; 25–26 February 2006; invited for 5th International Conference on Head and Neck Oncology by Rajeev Gandhi Cancer Hospital, New Delhi; 18–19 February 2006; distinguished faculty for the IX Eastern Zonal AOI Conference; Agartala, Tripura; 9–11 September 2005; invited for Head and neck Oncology Surgical Workshop; Barooah Cancer Hospital, Guwahati; October 2005;

Professor SC Sharma was international faculty at the 17th Annual conference of North American skull base society at Phoenix (AZ), USA, 16–19 February 2006; guest faculty at the annual conference of Indian Society of otology at Bangalore.

Dr KK Handa was appointed founder secretary, Association of Phonosurgeons of India; continued as Treasurer, Neurootological and Equilibrium Society of India; guest faculty at the live surgery workshop on Phonosurgery, Bhuwaneshwar, March 2006.

DrAlok Thakar received the Shakuntala Amir Chand Prize by the ICMR for Excellence in biomedical research. Award for work on ‘Treatment Strategies in Head and Neck Cancer: Optimizing Cure and disability limitation’; is Invited Expert; ICMR Task Force Meeting, Directions of Research on Oral Cancer; delivered Dr N.K. Agarwala Oration on ‘Endoscopic endonasal skull base surgery’. Association of Otolaryngologists of India (North-Eastern Branch), Guwahati, March 2006; co-author for the best paper award for ‘Endoscopic ligation of the Spheno-palatine artery’, All India Rhinology conference, August 2005, New Delhi, and ‘Near total laryngectomy’ at the Annual Conference of the Association of Otolaryngologists of India, January 2006, Lucknow and Best Poster Award for ‘Quality of life following treatment of head-neck cancers’, Head and Neck Oncology Conference (RGCON2006), March 2006, New Delhi.

Dr R. Kumar is Member, Governing Body, All India Rhinology Association of India; Member, Governing Body of AOI (Delhi); invited faculty for All India Rhinology Conference, New Delhi, August 2005; was expert for the ‘Endoscopic sinus surgery course’ held at Dr Hedgwar Hospital, Karkardooma, Delhi Administration in March 2006; received ‘Certificate of Merit’ for organizing a camp in association with ‘Friends for People’ at Jodhpur in April 2006.

Dr C.V. Karthikeyan is Assistant Editor, *Indian journal of Otology*.

Dr Abhineet Kumar is Honorary Treasurer, Association of Phonosurgeons of India, 2005–2006.

VISITING SCIENTISTS

Eleven doctors visited the department as observers.

9.25 Paediatrics

Professor and Head

Veena Kalra

Professors

M.K.Bhan (on leave)
A.K. Deorari

V.K.Paul
Arvind Bagga

N.K Arora
(on leave)

Additional Professors

S.K.Kabra

Madhulika Kabra

Associate Professors

Pankaj Hari

Sheffali Gulati

Assistant Professors

Rakesh Lodha
Ramesh Aggarwal

Rachna Seth

Vandana Jain

Scientists

Shinjini Bhatnagar
Madhumita Roy Choudhary

Pratima Ray
Suman Vashisht

Manju Ghosh

EDUCATION

Undergraduate and Postgraduate

The department organized various clinical epidemiology seminars/symposia. A college round of Undergraduate Paediatric Quiz was organized under the aegis of Indian Academy of Paediatrics. The departmental faculty (Dr Rakesh Lodha) regularly participated in the organization of Hospital Infection Control Training Programme for resident doctors, nurses and technicians. The DM programmes in Child Neurology and Neonatology are ongoing.

Short-term training

A total of 30 short-term trainees were trained in different superspecialties in the department: Paediatric Neurology: 16 (8 from India and 8 from abroad); Paediatric Nephrology: 4; Paediatric Pulmonology and Intensive Care 2; Genetics 2; and Neonatology: 6.

Continuing Medical Education

CMEs, Updates, Conferences organized by the department

- First Workshop on 'Clinical and laboratory approach to inborn metabolic disorders'; 21–23 July 2005 (V. Kalra, M. Kabra).
- CME on 'Paediatric neurology', National Conference of Paediatrics, New Delhi; 2006 (Veena Kalra).
- Workshop on 'Research methodology in neonatology'; May 2005 (V.K. Paul).
- Workshop on 'IMNCI (Integrated Management of Neonatal and Childhood Illnesses) in Undergraduate Curriculum (V.K. Paul).
- Expert Group Meeting to Review and Plan Expansion of Pre-service IMNCI in India; 5–6 November 2005 (V.K. Paul, S. Bhatnagar, R. Lodha).

- National Protocol Finalization Workshop on ‘Model injection centres: Programme to improve injection practices in the country’, Hotel Hill View, Faridabad, Haryana; 18–20 November 2005 (N.K. Arora).
- Workshop on ‘Essentials of research methodology—A pre-conference activity’ during 43rd National Conference of IAP Pedicon 2006, RP Centre, AIIMS; 4 January 2006 (N.K. Arora).
- 12th NCCPE Meeting, AIIMS Board Room, New Delhi; 17–18 February 2006 (N.K. Arora).
- ‘Essential newborn nursing’, Gujarat State, Baroda; August 2005, Halol District; October, December 2005 (A.K. Deorari).
- Workshops on ‘Kangaroo mother care’, Bangalore; April 2005 (A.K. Deorari).
- Neonatal Ventilation Workshop at AIIMS; May 2005 (A.K. Deorari).
- Neonatal Ventilation Workshop at King George Medical University, Lucknow; 19–22 November 2005 (A.K. Deorari).
- CME on ‘Paediatric nephrology’ during the National Conference of Paediatrics, New Delhi; 2006. (Arvind Bagga, Pankaj Hari).
- 5th Workshop on ‘Prenatal and postnatal diagnosis of genetic disorders using molecular methods’, Departments of Anatomy, Paediatrics and Haematology, AIIMS; 16–30 September 2005 (M. Kabra).
- 8th ISPAT Conference of Indian Society of Prenatal Diagnosis and Therapy organized in collaboration with the Department of Obstetrics and Gynecology; 17–20 February 2006 (M Kabra).
- Indo-British meet on ‘Dysmorphology’; 9 January 2006 (M. Kabra).
- Workshop on ‘Paediatric intensive care nursing for nurses’; 3–4 January 2006 (Rakesh Lodha).
- Indo-US CME on ‘Use of antiretroviral drugs in HIV/AIDS’, AIIMS; 29–30 October 2005 (S.K. Kabra).
- Indo-US CME on ‘Use of antiretroviral drugs in HIV/AIDS’, AIIMS; 4–5 March 2006 (S.K. Kabra).

The faculty members of the department took a total of 153 lectures, were part of panel discussions, chaired sessions at various national and international conferences.

RESEARCH

Funded Projects

Completed

1. Promoting Kangaroo mother care in India. Ashok K Deorari. Funded by Saving Newborn Lives (A US based NGO) from January 2004 to December 2005. Funds: US\$ 19,000.
2. Capacity building in newborn nursing at District and Sub-District Hospitals. Ashok K. Deorari. Funded by Saving Newborn Lives (A US based NGO) from January 2004 to December 2005. Funds: US\$ 23,000.
3. Efficacy of intramuscular vitamin K₁ versus K₃ in prevention of sub-clinical vitamin K deficiency. Ashok K. Deorari. Funded by AIIMS from January 2004–2005. Funds: Rs 1 lakh.
4. Alpha-1-antitrypsin deficiency in chronic liver diseases of childhood: Genetic and phenotypic characterization. N.K. Arora. Funded by DBT from 2001 to 2005. Funds: Rs 28,64,000.
5. Evaluation of AFP surveillance and universal immunization program in India. N.K. Arora. Funded by INCLEN and USAID from 2004 to 2005. Funds: Rs 1,39,83,842.
6. Development of CME on use of antiretroviral in HIV/ AIDS. Collaborative project with UCLA. S.K. Kabra. Funded by NIH, USA from 2004 to 2005. Funds: US\$ 39,000.
7. Serum levels of cystatin C and creatinine in malnourished and normally nourished boys. Pankaj Hari. Funded by AIIMS from 2004 to 2005. Funds: Rs 70,000.
8. Randomized double blind placebo controlled trial of Gabapentin in children with Spinal Muscular Atrophy. Sheffali Gulati. Funded by AIIMS for 2 years (2003–2005). Funds: Rs 50,000.

Ongoing

1. Molecular, biological and serological detection of parameters of association of *Campylobacter jejuni* infection in children with Guillain–Barre syndrome. Veena Kalra. Funded by DBT for 3 years (2003 onwards). Funds: Rs 22.68 lakh.
2. Lead pollution and health in Delhi—a follow up study. Veena Kalra. Funded by Ministry of Environment and Forests for 1 year (2005–2006). Funds: Rs 4,23,790.
3. An international phase 3 study titled ‘A randomized, open label, multicenter study with open-label extension of the pharmacokinetics and safety of opiramate administered as the oral liquid and sprinkle formulations as an adjunct to concurrent anticonvulsant therapy in infants (Aged 1–23 months, Inclusive) with refractory partial-onset seizures’ (Protocol TOPMAT-PEP-1002 Phase I’). Veena Kalra. Funded by PPD Pharmaceutical Development India (PPD) for 2 years (2006–2007). Funds Rs 347,635.80.
4. The Indo–US collaboration to develop rotavirus vaccine. M.K. Bhan, Pratima Ray. Funded by NIH from 2003 to 2008. Funds: Rs 213,43,185.
5. Safety and immunogenicity of 116E rotavirus vaccine candidate. M.K. Bhan, Pratima Ray. Funded by DBT from 2000 to 2008. Funds: Rs 27,54,000.
6. Impact of zinc supplementation on mortality and hospitalization in children aged 1 month to 23 months. M.K. Bhan, Arvind Bagga. Funded by WHO from 2001 to 2006. Funds: Rs 9 crore.
7. Impact of zinc supplementation in low birth weight infants on severe morbidity and zinc status: A randomized controlled trial. M.K. Bhan, A. Bagga. Funded by KLPF, USA from 2004 to 2007. Funds: Rs 31,50,000.
8. South East Asia Regional Neonatal—Perinatal database network. V.K. Paul. Funded by WHO South East Asia Region from October 2005 to December 2006. Funds: US\$ 40,000.
9. Enhancing networking capacity for advancing newborn health in South East Asia. V.K. Paul. Funded by Save the Children (USA) from July 2005 to July 2007. Funds: USD 4,300.
10. Young infant sepsis study: A multi-centric project with AIIMS-Safdarjung as one of the participating centres. Ashok K. Deorari. Funded by SEARO office, WHO from January 2004 to August 2006. Funds: US\$ 70,000.
11. IndiaCLEN Program for Health Intervention Development and Evaluation. N.K. Arora. Funded by INCLEN Total from 2002 to 2008. Funds: Rs 24 lakh.
12. National certification committee for polio eradication. N.K. Arora. Funded by MOHFW, GoI from 1998 to 2008. Funds: Funds: Rs 40,00,000.
13. Evaluation of safe water systems intervention project in urban slums of Dehradun and Haridwar. N.K. Arora. Funded by INCLEN and USAID from 2004 to 2007. Funds: Rs 28,57,250.
14. Model injection centres (MIC): A program to improve injection practices in the country. N.K. Arora, Sheffali Gulati. Funded by INCLEN and USAID for 2005 to 2006. Funds: Rs 11,501,866.
15. Integrated management of neonatal and childhood illnesses: Baseline assessment of childhood morbidity, mortality in selected districts in India. N.K. Arora. Funded by UNICEF from 2005 to 2009. Funds Rs 2,47,31,179.
16. Effectiveness of zinc supplementation in reducing relapse rates in patients with steroid sensitive nephrotic syndrome. Arvind Bagga. Funded by AIIMS from 2005 to 2006. Funds Rs 70,000.
17. An open-label, long-term study to evaluate the safety of eplerenone in the treatment of hypertension. Arvind Bagga. Funded by Pfizer. Funds: Rs 10,34810.
18. A double blind, randomized, multicentric study followed by 12 months open-label treatment to evaluate the dose-response and safety of valsartan in paediatric hypertensive patients 1–5 years of age. Arvind Bagga. Funded by Novartis from 2005 to 2006. Funds: Rs 6,59,008.

19. Dose-ranging study to evaluate the safety and efficacy of Olmesartan Medoxomil in children and adolescents with hypertension. Arvind Bagga. Funded by Sankyo Pharma from 2006 to 2008. Funds: Rs 7,60,734.
20. Randomized double blind controlled trial in the treatment of non severe pneumonia with wheeze in children aged 2–59 months of age: A multi-centric double blind trial. S.K. Kabra. Funded by INCLEN from 2003 to 2005. Funds: Rs 760,950.
21. ICMR INDIACLEN collaborative trial: Effectiveness of 3-day amoxicillin versus 5-day co-trimoxazole in the treatment of non-severe pneumonia in children aged 2–59 months—a multi-centric open labeled trial. S.K. Kabra. Funded by ICMR and USAID from 2004 to 2006. Funds: Rs 460,264.
22. High dose and low dose azithromycin in cystic fibrosis and interventional study to evaluate effect on disease parameter. S.K. Kabra. Funded by ICMR from 1 July 2005 to 30 June 2007. Funds: Rs 672,461.
23. Capacity building for sweat chloride estimation test by indigenously developed method. Funded by Solvey Pharma from 2005–2006. Funds Rs 126,000.
24. Childhood Hodgkin’s disease: Role of Epstein–Barr virus association, cellular proliferation and apoptosis parameters in relation with the treatment outcome. S.K. Kabra (from November 2005). Funded by ICMR from 2004 to 2006. Funds: Rs 681,843.
25. Survey of prenatal diagnostic practices in India as a part of multi-country survey—developing methods to facilitate informed choice taking into account concordance between the principles that govern the undergoing of prenatal tests and practice across Europe and beyond. Madhulika Kabra. Funded by SAFE from 2004 to 2005. Funds: Euro 9,000.
26. Economic modelling study: Non-invasive (NI) RhD testing in Europe and Asia. Madhulika Kabra. Funded by SAFE from 2005 to 2006. Funds: Euro 9,000.
27. Noninvasive prenatal diagnosis of fetal Rh status and Beta Thalassemia using cell free fetal DNA in maternal circulation. Madhulika Kabra. Funded by SAFE from 2005 to 2006. Funds: Euro 9,000.
28. Diagnosis and counseling of genetic disorders testing Cytogenetics and molecular methods. Kiran Kucheria. Madhulika Kabra. Funded by DBT from 2006 to 2008. Funds: Rs 30 lakh.
29. Molecular studies for Wilson’s disease (CSIR). Madhulika Kabra. Funded by CSIR for 2004 to 2006. Funds: Fellowship+contingency.
30. Cytogenetics and molecular studies in chromosomal breakage syndromes (CSIR). Madhulika Kabra. Funded by CSIR for 2003 to 2007. Funds: Fellowship+ contingency.
31. Molecular genetic studies in osteogenesis imperfecta. Madhulika Kabra. Funded by CSIR for 2005 to 2008. Funds: Fellowship+contingency.
32. Molecular genetic studies in leukodystrophy. Madhulika Kabra. Funded by UGC for 2005 to 2007. Funds: Fellowship+contingency
33. To understand the deviation in cell signaling pathway of autism through neurotrophic factors (Insulin like growth factor-1) and undertake a randomized blinded trial with Olanzapine to evaluate its effect on Insulin like Growth factor-1 (IGF-1), clinical symptoms of autism and Autism rating scales. Rachna Seth. Funded by DST from 2005 to 2008. Funds: Rs 4,08,000.
34. Serum cystatin C assay for the detection of early renal insufficiency in malnourished children with chronic kidney disease. Pankaj Hari. Funded by AIIMS from 2005 to 2006. Funds: Rs 70,000.
35. Extended studies on safety and efficacy of zinc-ORS compared to ORS alone in hospitalized children with severe and complicated acute diarrhea. Shinjini Bhatnagar. Funded by Norwegian Agency for Development Cooperation from 2003 to 2006. Funds: Rs 81,92,000.
36. Zinc as an immunomodulator in the treatment of possible serious bacterial infections in infants more than 7 days and up to 2 months of age. Shinjini Bhatnagar. Funded by DBT from 2005 to 2008. Funds: Rs 96,02,533.

37. Specific targeted research or innovation project. Shinjini Bhatnagar. Funded by European Union from 2005 to 2008. Funds: Rs 89,15,509.
38. Program to improve child health and nutrition in South Asia. Shinjini Bhatnagar. Funded by Norway from 2002 to 2006. Funds: Rs 61,88,000.
39. Etiological significance of microscopic colitis in chronic diarrhea in children and its pathogenesis. Shinjini Bhatnagar. Funded by ICMR from 2003 to 2005. Funds: Rs 23,50,580.
40. Cloning and expression of NSP4 enterotoxin of rotavirus in *E.coli* and evaluation of NSP4 specific immune responses during natural rotavirus infection in children. Pratima Ray. Funded by DST from 2004 to 2007. Funds: Rs 19,90,000.
41. Characterization of rotavirus strains from a multicentric Rotavirus study at AIIMS. Pratima Ray. Funded by DBT from 2005 to 2008. Funds: Rs 26,07,000.
42. Troponin levels in children with septic shock. Rakesh Lodha. Funded by AIIMS from 2005 to 2006. Funds: Rs 50,000.

Departmental Projects

1. A randomized controlled trial of mosapride versus metoclopramide for treatment of Gastroesophageal reflux in developmentally delayed children
2. Randomized trial of 28 days albendazole v. 1 day praziquantel in children with neurocysticercosis
3. Blood lead levels estimation in patients with suspected lead poisoning
4. Rett syndrome: Clinical evaluation, genetic evaluation, stimulation and therapeutic trials
5. To study the cognitive and behavioral profile of children with celiac disease before and after the introduction of a gluten free diet and the various neuropsychiatric manifestations of celiac disease
6. Evaluation of genetic polymorphism in MTHFR gene as a risk factor for neural tube defect in offspring
7. Effect of short term phenytoin monotherapy on bone mineral density in ambulatory epileptic children
8. Prevalence of spina bifida occulta in patients with enuresis and its relation to urodynamic and neurophysiological measurements
9. Prospective randomized double blind controlled trial of dexamethasone versus albendazole on calcification as an outcome in 1–2 ring enhancing lesions in neurocysticercosis in children
10. Study of antinuclear antibody and antiphospholipid antibody in intractable epilepsy
11. A double blind placebo controlled trial to study the efficacy of Baclofen in reducing tone in children with spastic Cerebral palsy 2–5 years of age
12. A randomized open label placebo controlled study of the effect of creatine supplementation on muscle P³¹ MRS spectra in Duchenne muscular dystrophy Molecular genetics of Wilson's disease in Indian patients
13. Molecular genetic studies in patients with leukodystrophy
14. Molecular genetic studies in Indian children with Rett syndrome
15. Mutant hepatitis B virus infection in paediatric patients with chronic liver disease
16. Role of immunoglobulin therapy in Rh isoimmunization
17. Pulse oximetry in diagnosis of congenital heart disease
18. Phototherapy with slings in neonatal hyperbilirubinemia—a randomized controlled trial
19. Early versus delayed feeding in VLBW babies
20. Role of zinc in neonatal jaundice
21. Oil application for decreasing insensible water losses in VLBW babies
22. Randomized controlled trial of effect of enalapril on glomerular filtration rate in children with chronic renal failure

23. Comparison of antiproteinuric effect of enalapril and a combination of enalapril with irbesartan in patients with steroid resistant nephrotic syndrome
24. Randomized controlled crossover trial to compare the diuretic and natriuretic effects of intravenous frusemide infusion with coadministration of frusemide and human albumin infusions in children with nephrotic syndrome and refractory edema
25. Effect of vitamin D3 supplementation on bone disorder in children with chronic kidney disease
26. Randomized controlled trial on efficacy and safety of cyclosporine versus tacrolimus in children with steroid resistant nephrotic syndrome
27. Efficacy of sevelamer versus calcium acetate in patients with chronic kidney disease stage 3 and 4: An open-label, randomized study
28. Double blind placebo controlled randomized trial of montelukast as monotherapy versus low dose inhaled steroids for management of mild persistent asthma
29. Determination of the factors affecting the outcome of children under 5 years of age hospitalized with severe community acquired pneumonia IVS8-5T allele polymorphism in Asthma
30. Gastrointestinal manifestations of cystic fibrosis
31. Molecular genetic studies in Rett syndrome
32. Evaluation of genetic polymorphism in MTHFR gene (C677t) as a risk factor for neural tube defects in offsprings
33. IVS8 5T allele polymorphism in asthma
34. Prevalence of mitochondrial DNA mutations among nonsyndromic sensorineural
35. Hearing impaired population in India
36. Clinical profile of autistic children in India
37. Role of olanzapine in modifying some of the core features of autism
38. Role of tissue Doppler imaging (TDI) to detect early myocardial dysfunction in duchenne muscular dystrophy

Collaborative Projects

1. Cardiac dysfunction in Becker muscular dystrophy (with Cardiology).
2. Cardiac dysfunction: Duchenne muscular dystrophy carriers (with Cardiology).
3. Autistic spectrum disorders network established- Screening tests, autism rating scales and drug trials with resperidone, olanzepine under Indo–US Science and Technology Collaboration, training resource material developed, Awareness generation, networking with NGOs and parents, Registry for Autism initiated in Delhi.
4. Magnetic resonance spectroscopy (MRS) in Rett syndrome (with NMR).
5. Analysis of muscle response to flexible and rigid fixed functional appliance—an EMG study of masseter and anterior temporalis muscle (with Dental Department).
6. Evaluation of the adaptive changes associated with twin block therapy on the masseter and temporalis with and without prior muscle deprogramming: An EMG study (with Dental Department).
7. Real time PCR for enteroviruses in cerebrospinal fluid of aseptic meningitis patients (with Microbiology).
8. Comparative evaluation of expression of dystrophin, utropin and n-NOS in muscle and skin biopsy of patients with dystrophinopathies (with Pathology)
9. Home-based management of young infants' ICMR task force 5-site study Indian Council of Medical Research.
10. Incidence, clinical profile of mycoplasma infections in preterms (with Microbiology).
11. Screening for CMV infection by PCR (with Microbiology).

12. Role of human Meta pneumo virus in acute respiratory infection funded by NIH, USA (with Microbiology).
13. Multiplex-RT PCR for detection of viruses causing lower respiratory tract infections viz. human respiratory syncytial viruses (hRSV), human para-influenza viruses (h PIV), influenza virus (FLU) and human metapneumovirus (hMPV) and real-time RT-PCR for the detection and quantification of hRSV (with Microbiology).
14. Detection genotyping and immune response study of human metapneumovirus (with Microbiology).
15. Prospective evaluation of 99m Tc Ciprofloxacin in pyrexia of unknown origin (with NMR).
16. Antigenic and molecular characterization of influenza virus strains from acute respiratory infection (with Microbiology).
17. Mapping genes for non-syndromic hereditary hearing impairment (with the National Institute of Deafness and Other Communication Disorders (NIDCD), NIH, Rockville, Maryland, USA).
18. An integrated approach for mutation analysis and identification of new gene(s) for X-linked mental retardation?. Funded by DBT for 3 years (with Delhi University, South Campus).
19. A study of chronic pancreatitis and other risk factors for the development of cancer of the pancreas (with Gastroenterology).

PUBLICATIONS

Journals

1. Agarwal G, Kapil A, Kabra SK, Das BK, Dwivedi S. Characterization of *Pseudomonas aeruginosa* isolated from chronically infected children with cystic fibrosis in India. *BMC Microbiol* 2005;**21**:43.
2. Agrawal G, Kapil A, Kabra SK, Dwivedi SN. In vitro efficacy of ciprofloxacin and gentamycin against biofilm of *pseudomonas aeruginosa* and its free living forma. *Natl Med J India* 2005;**18**:184-7.
3. Arora NK, Ahuja A. Pancreatic diseases in children Referral Hospital. *Indian Pediatr* 2005;**42**:849-50.
4. Arora NK, Das MK, Mathur P, Mishra R. Hepatitis C virus (HCV) in children. *Paediatr Gastroenterol* 2005;**12**:5-9.
5. Bagga A, Bajpai A, Menon S. Approach to renal tubular disorders. *Indian J Pediatr* 2005;**72**:771-6.
6. Bagga A, Mantan M. Nephrotic syndrome in children. *Indian J Med Res* 2005;**122**:13-28.
7. Bagga A. Editorial. *Indian J Pediatr* 2005;**72**:761-2.
8. Bagga A. Steroid resistant nephrotic syndrome recent developments. *Indian Pediatr* 2006;**43**:9-13.
9. Bahl R, Ray P, Subodh S, Shambharkar P, Saxena M, Parashar U, *et al*. Incidence of severe rotavirus diarrhea in New Delhi, India and the G and P types of the infecting strains. *J Infect Dis* 2005;**192** (Suppl. 1): S114-S119.
10. Bajpai A, Bagga A, Hari P, Bardia A, Mantan M. Long-term outcome in children with primary distal renal tubular acidosis. *Indian Pediatr* 2005;**42**:321-8.
11. Bajpai A, Kabra M, Gulati S, Kalra V. Nephrogenic diabetes insipidus presenting with developmental delay and intracranial calcification. *Indian J Pediatr* 2005;**72**:527-8.
12. Bang AT, Paul VK, Reddy HM, Baitule SB. Why do neonates die in Gadchiroli, India? (Part I): Primary causes of death assigned by neonatologist based on prospectively observed records. *J Perinatology* 2005;**25** (Suppl. 1): S29-S34.
13. Barman D, Mirdha BR, Samantray JC, Kironde F, Kabra SK, Guleria R. Evaluation of quantitative buffy coat (QBC) assay and polymerase chain reaction (PCR) for diagnosis of malaria. *J Commun Disord* 2003;**35**:170-81.

14. Bashir S, Sharma Y, Irshad M, Nag TC, Tiwari M, Kabra M, *et al.* Arsenic induced apoptosis in rat liver following repeated 60 days exposure. *Toxicology* 2006;**217**:63–70.
15. Bhan MK, Bahl R, Bhatnagar S. Typhoid and paratyphoid fever. *Lancet* 2005;**366**:749–62.
16. Bhatia MS, Kabra M, Sapra S. Behavioral problems in children with Down syndrome. *Indian Pediatr* 2005;**42**:675–80.
17. Bhatnagar S, Gupta SD, Mathur M, Phillips AD, Kumar R, Knutton S, *et al.* Coeliac disease with mild to moderate histological changes is a common cause of chronic diarrhoea in indian children. *J Pediatr Gastroenterol Nutr* 2005;**41**:204–9.
18. Chawla D, Deorari AK. Inferential statistics: Introduction to hypothesis testing. *J Neonatol* 2005;**19**:259–65.
19. Chawla D, Deorari AK. Design and conduct of cohort studies. *J Neonatol* 2005;**19**:356–60.
20. Chawla D, Deorari AK. Hypothesis and ample size calculations: Basic concepts. *J Neonatol* 2005;**19**:66–9.
21. Chawla D, Deorari AK. Neonatal resuscitation guidelines. *J Neonatol* 2005;**19**:371–76.
22. Chawla D, Deorari AK. Use of diagnostic tests in evidence based medicine. *J Neonatol* 2005;**19**:164–70.
23. Dixit A, Chatterjee TC, Mishra P, Choudhry DR, Mahapatra M, Tyagi S, Kabra M, Saxena R, Choudhry VP. Hydroxyurea in thalassemia intermedia—a promising therapy. *Ann Hematol* 2005;**84**:441–6.
24. Girish G, Deorari AK. Bias and Confounding factors in a clinical research. *J Neonatol* 2005;**19**:253–8.
25. Girish G, Deorari AK. Case control study. *J Neonatol* 2005;**19**:354–8.
26. Girish G, Deorari AK. Numerical Representation of Data. *J Neonatol* 2005;**19**:160–3.
27. Girish G, Deorari AK. Study Designs. *J Neonatol* 2005;**19**:60–5.
28. Glass RI, Bhan MK, Ray P, Bahl R, Parashar UD, Greenberg H, *et al.* Development of a candidate rotavirus vaccine in India derived from a neonatal strains. *J Infect Dis* 2005;**192** (Suppl 1): S30–S35.
29. Guglani L, Kabra SK. Management of acute asthma. *Indian J Pediatr* 2006;**73**:S24–S31.
30. Guglani L, Lodha R, Kabra SK. Natural history of asthma. *Indian J Pediatr* 2006;**73**:S5–S16.
31. Gulati S, Kalra V, Sridhar MR. Status epilepticus in Indian children in a tertiary care center: Clinical profile and immediate outcome. *Indian J Pediatr* 2005;**72**:105–8.
32. Gulati S, Saxena A, Kumar V, Kalra V. Duchenne muscular dystrophy: Prevalence and patterns of cardiac involvement. *Indian J Pediatr* 2005;**72**:389–93.
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PATIENT CARE

Outpatients Services

Department of Paediatrics provides general OPD services daily from 9 a.m. in Pediatrics OPD. There are 17 superspeciality services provided by department, which are as follows:

Name of service	New cases	Total attendance
General OPD	35,070	72,387
Pediatric Neurology	4,990	7,134
Myopathy clinic	403	951
Neurocysticercosis	–	319
Pediatric Gastroenterology, Hepatology and Nutrition	1,098	5,484
Well Baby Clinic	506	523
High Risk Neonatology Clinic	478	1,367
Pediatric Nephrology	0474	4,389
Pediatric Chest	471	4,310
Pediatric Tuberculosis	360	2,527
Pediatric rheumatology	152	1,250
Genetics and birth defects	1,368	2,430

Paediatric oncology clinic	240	2,000
Paediatric cancer survivor clinic	200	200
Paediatric endocrine and metabolism 300	1,400	
Development defect clinic	–	1274
Grand total		107,945

In addition Cystic fibrosis and Paediatric HIV clinics are held.

Indoor Services

Indoor services include admission facilities in general wards, day care facility, oral rehydration unit and Pediatric Intensive care facility.

Children requiring short procedures or interventions are admitted for a day in day care facility situated in C5 ward.

Children suffering from acute diarrhoeal diseases are admitted and provided with oral rehydration therapy in Oral rehydration unit (ORU) situated in C5 ward.

Children requiring intensive care are admitted in Paediatric Intensive care unit which is well equipped to provide care to critically ill children.

Patients admitted in ORU	2000
Regular admissions (long admission)	2490
Admitted in day care facility (Short admission)	4127
Patients admitted in Pediatric Intensive Care Unit (PICU)	240

Procedures and laboratory investigations

Paediatric Neurology

Electroencephalography	1399
Electrophysiological studies—EMG, NCV, BERA, VER	225
Blood lead estimations	20
Arterial lactate	300
CSF lactate	25
Muscle biopsies	245
Nerve biopsies	10
Skin biopsies	20

Paediatric gastroenterology, hepatology and nutrition

Upper gastrointestinal endoscopy	540
Endoscopic sclerotherapy (EST)	356
Colonoscopy	119
Intestinal biopsies	154
Polypectomy	30
Stricture dilation	132
HBV DNA	12
Anti-HCV	58

HCV RNA	12
a1 Antitrypsin Pi-phenotype	97
Tyrosinemia	317
D-xylose	130
24-hour faecal fat estimation	170
Immunofluorescence assay (IFA) to detect anti-endomysial antibodies (AEA) and tissue transglutaminase ELISA for diagnosis of celiac disease	400
<i>C-reactive protein</i>	
Semi-quantitative	4500
Quantitative	240
Nitro-blue tetrazolium test for CGD	40
Serum Zn estimation	1200
Serum Cu estimation	200
Serum ferritin	160
Pro-calcitonin (this test has been standardized, no samples processed)	
 <i>Paediatric nephrology</i>	
Haemodialysis	420
Peritoneal dialysis	60
CAPD	5
Automated PD	17
Renal biopsy	108
Renal transplantation	8
 <i>Paediatric pulmonology</i>	
Sweat chloride	680
Fibre-optic	150
Spirometry	500
 <i>Paediatric intensive care</i>	
Mechanical ventilation	200
Arterial blood gas analysis	10000
Electrolyte estimation	7000
 <i>Birth defect genetics services</i>	
Developmental/behavioural evaluation and intervention	1274
 <i>Cytogenetics laboratory</i>	
Peripheral blood cultures	526
Cord cultures for karyotyping	41
 <i>Biochemical laboratory</i>	
Urine and plasma for disorders of aminoacid metabolism	541
Disorders of mucopolysaccharidosis (Spot test)	55
Galactosemia	11

Prenatal diagnosis for high risk pregnancies	
by maternal serum alfafoetoprotein	1644
for Down syndrome by maternal serum beta-hCG	1472
for Down syndrome by estriol	1472
Homocystenuria test	60

Plasma ammonia	307
Enzyme assays	52

Molecular laboratory

Thalassemia family studies	122
Thalassemia prenatal diagnosis	85
Duchenne muscular dystrophy family studies	88
Duchenne muscular dystrophy prenatal diagnosis	19
Cystic fibrosis family studies	57
Cystic fibrosis prenatal diagnosis	3
Spinal muscular atrophy family studies	79
Spinal muscular atrophy prenatal diagnosis	12
Hemophilia A family studies	6
Hemophilia A prenatal diagnosis	3
Hemophilia B family studies	4
Hemophilia B prenatal diagnosis	5
Fragile X screening	85
Fragile X Prenatal diagnosis	3
Xmn polymorphism studies	22
Amniotic fluid Rh genotyping	12
Intersex cases for genotyping	64

Paediatric Oncology Services

Bone marrow biopsy, aspirations	500
CSF examinations	600

Paediatric endocrinology

Water deprivation test	30
Vasopressin challenge test	24
ACTH stimulation test	20
HCG stimulation test	20
Dexamethasone suppression test	30

Community service and camps

- Paediatric Neurology division volunteered professional services through Pulse Polio Initiative, Spastic Society of North India, Inner Wheel (Rotary), Prayas and other NGO's.
- Talk on '*Uthiye achaye swasthye ke saath, Maa and Shishu ki dekhbhal*'; 6 April 2005 (N.K. Arora).
- Talk on AIR Foreign Services on 'Health care for mother and child in India'; 7 April 2005 (N.K. Arora).
- Talk on Doordarshan 'Common Illnesses in Childhood'; 15 April 2005 (N.K. Arora).

- Radio talk on ‘*Uthiye achaye swathye ke saath, Bachaon mein pet samabandhi bimariyan*’; 22 June 2005 (N.K. Arora).
- AIR talk on ‘*Uthiye achaye swathye ke saath, Bachaon mein motape ki samasya*’; 20 July 2005 (N.K. Arora).
- Interview for a film, ‘Environmental Health and Children’ on 4 November 2005. (N.K. Arora).
- Talk on ‘*Bachhon Mein Gurda Rog*’ on Doordarshan: Program Subha Savere. (Pankaj Hari).
- Talk on AIR on ‘HIV/AIDS in children’ (S.K. Kabra).
- Cancer awareness week from 1–7 November 2005. A camp for early detection of retinoblastoma was also held as part of the cancer awareness activity from the division of Paediatric Oncology at the slums of Sanjay Colony, Okhla.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr Veena Kalra served as expert for Science and Society division of DST for review of health projects

Dr V.K. Paul was conferred the fellowship of the National Neonatology Forum; delivered the Kamlesh Gandhi Oration at the Annual Conference of the Gujarat Chapter of the National Neonatology Forum at Mount Abu; delivered the NNF Oration at the Annual Conference of the Karnataka Chapter of the National Neonatology Forum at Chitradurga; was elected Member of the monitoring group for the ASHA worker’s formed by the Ministry of Health and Family Welfare; Member of consultative groups on child and maternal mortality and evaluation of the National Rural Health Mission at the Planning Commission; Invited to develop the Child Health Strategy by the Ministry of health and an approach paper on Child Health in the XIth Five Year Plan; Designated Member of Steering Committee, Global Partnership for Maternal Newborn and Child, Health, Geneva; Member, Advisory Committee of ‘Community-led initiatives for child survival’ project, Wardha (Maharashtra); Member, Steering Committee of SNEHA, the Society of Nutrition, Education and Health Activity, Mumbai; Member, Technical Advisory Committee on Human Reproduction Research Centres of the ICMR; Continued to be a Member of the Technical Advisory Committee of the Saving Newborn Lives initiative, Save the Children (USA); Co-chair, Technical Advisory Panel for the Gates Foundation funded Sure Start Project of PATH; Member International Editorial Board, *Journal of Perineonatology*; Coordinator, Drafting team, Delhi Declaration on Maternal Newborn and Child Health, the outcome document of global meeting on MNCH (April 2006), released by Mrs Sonia Gandhi, Chairperson, National Advisory Committee; Invited expert, WHO Expert Group Meeting on developing global guidelines on low birth weight feeding, September 2005.

Dr N.K. Arora was elected a Fellow of the National Academy of Medical Sciences; Member, WHO-ICMR-GOI Tribal Health Project Scientific Advisory Group Meeting. Collaborative Project on ‘Development of Capacity Building for Health Care among primitive tribes’; Member, National Advisory Group on Immunization (NTAGI)- Ministry of Health and Family Welfare, Government of India; 2003–till date; Core Group Member, India Injection Safety Coalition; 2002–till date; Member, Working group for Review of National Nutrition Policy and National Plan of Action on Nutrition, Department of Women and Child Development, Food and Nutrition Board, Ministry of Human Resource Development, Government of India; January 2004–till date; Member, Planning Group for ‘Centre for Public Health and Biotechnology’, DBT, New Delhi; December 2004–till date; Nominated Member of Data Safety Monitoring Board (DSMB), Hib-Probe Study (ICMR-JHU-USA), New Delhi; Member, Committee to review Zinc as an adjunct therapy with ORS for acute diarrhea, MOHFW–GOI; Member, ICMR selection

Committee for Senior Research Officer, New Delhi; Member, DGHS Meeting of Expert Group to consider finalization of draft notification no. GSR 37 (E) dated 20.01.05 regarding standards and labeling of Infant food/infant milk substitute, New Delhi; Member, 3rd Meeting of Expert Committee constituted for Vitamin A and Iron Folic Acid Supplementation on Reproduction and Child Health Program, ICMR MOHFW, New Delhi; Invited to attend the meeting 'To establish Applied Research Program for HIV/AIDS in Africa; Nominated to 'Label Subcommittee of CCFS. Its nomenclature is changed to 'Nutrition, Food for Special Dietary uses and infant foods/Infant Milk Substitute. Subcommittee of CCFS-DGHS, MOHFW and GoI.

Dr A.K. Deorari was conferred Fellowship of National Neonatology Forum of India, in December 2005 during Annual Convention at Indore; delivered Simin Irani Oration during Maha Neocon 2005 at Aurangabad; served as member of team to Indira Gandhi Hospital, Kabul, Afghanistan for feasibility of creating Maternal Newborn Unit; Led a team of Doctors and Nurses to develop a high quality training tool on Essential Newborn Nursing based on participatory learning methods for nurses working in district hospital. State of Gujarat is undertaking systematic scaling of this programme with introduction of ENBC in pre-service education; Created uniform structured Teaching Aids on Newborn Care consisting of 12 common topics on newborn health to be used by teachers of Medical and Nursing Schools.

Dr Arvind Bagga was conferred the Fellowship of the National Academy of Medical Sciences; Councilor, International Pediatric Nephrology Association (2001–07); Member, Expert Group on Classification of Childhood Vasculitides, European League Against Rheumatism (2005–07); Member, Expert Group, Acute Kidney Injury Network (International Society of Nephrology, National Kidney Foundation, American Society of Nephrology) (2005–2008); Associate Editor, *Indian Paediatrics*; Editor, *Bulletin Indian Paediatric Nephrology Group*.

Dr S.K. Kabra was the Associate Editor: *Indian Journal of Paediatrics*; Assistant Editor: *Paediatric Pulmonology*; Editorial Advisor: *Paediatrics Today*; Treasurer: Respiratory chapter Indian Academy of Paediatrics.

Dr Pankaj Hari was elected Secretary, Indian Paediatric Nephrology Group, Indian Academy of Pediatrics; won the Best paper award at the 9th Asian Congress of Paediatric Nephrology, Beijing; was a reviewer for *Pediatrics*, the official Journal of the American Academy of Pediatrics.

Dr Sheffali Gulati was elected Member, National Academy of Medical Sciences, India; was appointed Member, Editorial Board, *Indian Journal of Paediatrics* and *Indian Paediatrics*, 2005 onwards.

Dr Rakesh Lodha attended a WHO Consultation on HIV Testing and Counselling Policies, the use of HIV Rapid Tests and HIV/AIDS Clinical Staging and Surveillance, New Delhi; appointed member of WHO Technical Reference Group on Pediatric HIV Care and Treatment, Château de Penthes, Geneva-Switzerland; participated in the Collaborative refinement of 2nd level Integrated Management of Adult and adolescent Illnesses Clinical Training Program at Geneva, Switzerland; appointed a member of IAP-NACO taskforce on HIV, 2006.

Dr Vandana Jain was made a Life Member of the Paediatric and Adolescent Endocrinology chapter of the Indian Academy of Paediatrics

Dr Shinjni Bhatnagar was elected Member, National Academy of Sciences, Allahabad; WHO consultant for evaluating pre-service IMNCI in four medical colleges in India; nominated on the Research Subcommittee of the India Clinical Epidemiology Network; nominated by UNICEF as consultant for the initiation of the pre-service IMNCI in medical colleges in Maharashtra; nominated as Member of the Human Trial Group, Department of Biotechnology, Government of India

Some important achievements of the department are listed below:

- Genetics services continue to be ‘WHO collaborative center for training in clinical and laboratory Genetics in developing countries’
- Division of Neonatology continues to be ‘WHO collaborating center for Training and Research in New born care’
- Division of Neonatology has created a website *www.newbornwhocc.org*. The website highlights the activities of the Division and provides free access to learning resource materials developed by the division
- Department was selected for award of FIST in subject area of life sciences for level II support by Department of Science and Technology, Government of India
- Division of Paediatric Nephrology recognized for short term Fellowship training in Paediatric Nephrology, International Pediatric Nephrology Association
- Division of Paediatric Nephrology recognized as ‘Sister Center’ (Level C), International Society of Nephrology; 2005–2007.

VISITING SCIENTISTS

Olivier Fontaine, Medical Officer, Department of Child and Adolescent Health and Development (CAH), World Health Organization, 20 Avenue Appia 1211 Geneva 27, Switzerland.

9.26 Paediatric Surgery

Professor and Head

D.K. Gupta

Professors

V. Bhatnagar

M. Bajpai

Associate Professors

S. Agarwala

M. Srinivas

EDUCATION

Undergraduate, Postgraduate and Paramedical

- Teaching of undergraduate medical and nursing students
- Postgraduate teaching and training of MCh Paediatric Surgery trainees; this included of seminars, journal clubs, case discussions, thesis presentations
- Trainees on rotation—MCh trainee in Neurosurgery, DM trainees in Neonatology, MS trainees in General Surgery
- Training of BSc and MSc Nursing students

Short- and long-term training

Two overseas doctors underwent short-term training/observership at the department.

Continuing Medical Education

Conferences/seminars/symposia/workshops organized

Dr D. K. Gupta organized the

- Cancer Awareness Day, AIIMS; 4 November 2005.
- Golden Jubilee International Symposium on 'Paediatric malignancies'; 29–31 December 2005.
- Delhi chapter meeting of the Indian Association of Paediatric Surgeons, AIIMS; 30 July 2006.

Lectures delivered

D.K. Gupta

- 'Congenital pouch colon—a regional variant of anorectal anomalies', 'Rectal ectasia', 'Rectal atresia', 'Duplication of ani' and 'Anorectal agenesis', International Workshop cum Symposium on 'Anorectal malformations', Cologne, Germany; 18–21 May 2005.
- 'Hepatic tumors in children' and 'Extrahepatic biliary atresia—Role of stem cells, a pilot study', Symposium cum Workshop on 'Gastro-intestinal disorders in children', Foggia, Italy; May 2005.
- 'Extrahepatic biliary atresia—management options' and 'Esophageal replacement in children in emergency', Symposium on 'Recent advances in paediatric surgery', Children Hospital, Riga, Latvia; May 2005.
- 'Congenital pouch colon—an Indian experience on the rare form of anorectal malformation' and 'Late presentation of Hirschsprung's disease—experience with various operative techniques', Colorectal Club meeting, International Congress of the British Association of Pediatric Surgeons, Dublin, Ireland; 9–14 July 2005.

- 'Formation of the SAARC Association of Pediatric Surgeons and the efforts towards the development of paediatric surgery in India and the Far east region', World Federation of the Association of Pediatric Surgeons, Dublin, Ireland; 13 July 2005.
- 'Intersex disorders in children—strategies for management', University of Graz, Austria; May 2005.
- 'Hormonal therapy in undescended testes', International Pediatric Surgery Update, India Habitat Centre, New Delhi; 4 December 2005.
- 'Cancer in children is curable', Cancer Awareness day, AIIMS; 4 November 2005.
- 'Intersex disorders in children—a paradigm shift in Indian Scenario (1980–2005)', 1st World Congress on Intersex and hypospadias, Istanbul, Turkey; 17–19 November 2005.
- 'Challenges of paediatric tumors in India', Golden Jubilee International Symposium on 'Pediatric malignancies', AIIMS; 29–31 December 2005.
- 'Stem cell therapy in pediatric malformations', Neonatal and fetal surgical anomalies and role of stem cell transplantation, Banaras Hindu University, Varanasi; 13–15 February 2006.
- 'Antenatal diagnosis and prenatal management', Paediatric Urology Conference, Apollo Hospital; 18–19 February 2006.
- 'Surgical management of congenital malformations', Annual conference and workshop on Prenatal Diagnosis and Therapy, AIIMS; 20 February 2006.
- 'Challenges in pediatric surgery in developing countries', 'Anorectal malformations—Wingspread to Krickenbeck' and 'Biliary atresia—role of stem cells', CME, Beijing Children Hospital, Beijing, China, October 2005.
- 'Neonatal esophageal replacement using stomach', 'Biliary atresia—management options', 'Congenital pouch colon' and 'Intersex disorders in children', CME, Shanghai Children Hospital, Shanghai China, October 2005.
- 'Management of Wilms' tumor including bilateral tumors', Symposium on 'Pediatric solid tumors—role of surgeon, Seoul Children Hospital, Seoul, South Korea, October 2005.
- 'Challenges of sex assignment in Intersex disorders—an Indian scenario', Symposium on 'Recent advances in paediatric surgery', Mafraq Hospital, Ministry of Public Health Abu Dhabi, UAE; November 2005.
- 'Recent trends in the management of Hirschsprung's disease' and 'Management of long segment/total colonic aganglionosis', Symposium on 'Hirschsprung's disease', University of Cluj-Napoca, Romania; 9 December 2005.

Dr V. Bhatnagar

- ‘Staged reconstruction of urinary bladder exstrophy’, International Workshop cum Symposium on ‘Hypospadias, epispadias and exstrophy bladder’, Lucknow; 10–12 February 2006.
- ‘Recent studies in biliary atresia’, Department of Surgical Gastroenterology, Sanjay Gandhi Postgraduate Institute, Lucknow; 13 February 2006.

Dr M. Bajpai

- ‘Gastrocystoplasty: Long term follow-up’ and ‘Technique of ureteric reimplantation in bladder extrophy’, CME and Live operative workshop on Bladder exstrophy, KGMC, Lucknow; **DATE**

National/International Conferences

Lectures delivered

Dr V. Bhatnagar

- ‘Benign liver tumours—Indian perspective’, 31st National Conference of Indian Association of Pediatric Surgeons, Bangalore; 26–29 October 2005.
- ‘Urodynamics in voiding dysfunction’, 31st National Conference of Indian Association of Pediatric Surgeons, Bangalore; 26–29 October 2005.
- ‘Management of liver tumours in children’, 3rd Annual Conference of the NE Chapter of IAPS, Guwahati; 26 November 2005.
- ‘Choledochal cysts’, 3rd Annual Conference of the NE Chapter of IAPS, Guwahati; 26 November 2005.
- ‘Surgical treatment of achalasia cardia’, 43rd National Conference of Indian Academy of Paediatrics, New Delhi; 5–8 January 2006.
- ‘Gastroesophageal reflux disease—course after surgical knife’, 43rd National Conference of Indian Academy of Pediatrics, New Delhi; 5–8 January 2006.

Dr Sandeep Agarwala

- ‘Esophageal atresia with or without tracheo-esophageal fistula: Incidence of cardiovascular anomalies and its effect on survival’, 2nd Annual Conference of the Association of Pediatric Surgeons of Bangladesh and the 1st Conference of the Federation of Association of Pediatric Surgeons of SAARC, Chittagong, Bangladesh; 8–10 December 2005.
- ‘Initial experience with treatment of pediatric rhabdomyosarcoma with high dose cyclophosphamide based regime, surgery and radiotherapy’, 2nd Annual Conference of the Association of Pediatric Surgeons of Bangladesh and the 1st Conference of the Federation of Association of Pediatric Surgeons of SAARC, Chittagong, Bangladesh; 8–10 December 2005.
- ‘Results of AIIMS-MGCT-94 trial: A prospective trial on surgery and cisplatin based regime for malignant germ cell tumors in children’, 2nd Annual Conference of the Association of Pediatric Surgeons of Bangladesh and the 1st Conference of the Federation of Association of Pediatric Surgeons of SAARC, Chittagong, Bangladesh; 8–10 December 2005.
- ‘Surgical aspects of extrapulmonary tuberculosis’, Meeting of the Tuberculosis Sub-specialty Chapter of the Indian Academy of Pediatrics (IAP) Annual Conference Pedicon-2006; January 2006.
- ‘Hepatoblastoma: The Indian perspective’, Annual Meeting of SIOPEL held at Amsterdam; 8–10 March 2006.

RESEARCH

Funded projects

1. N-myc gene amplification by polymerase chain reaction in neuroblastoma and tumor surveillance by detecting tyrosine hydroxylase protein using RT PCR. D.K. Gupta. Funded by DBT from 2005 to 2007. Funds: Rs 19.5 lakh.
2. ACE I/D gene polymorphism in Posterior urethral valves and its correlation with transforming growth factor- β 1, Tumour Necrosis Factor (TNF)— α , soluble TNF receptor-1, interleukin-6 (IL-6), microalbuminuria, Angiotensin II and plasma renin activity in the early diagnosis of renal damage. M. Bajpai. Funded by DST for 3 years. Funds: Rs 20 lakh.
3. To study the activity of nuclear factor kappa B (NF kB) in experimentally produced renal scarring and the role of AT1 receptor blockage in preventing the progression of renal disease. M. Bajpai. Funded by AIIMS Research Grant for 1 year. Funds: Rs 50,000.

Departmental Projects

Completed

1. Prognostic correlation of molecular markers in urine with severity of vesico-ureteric
2. Assessment of results of surgery in anorectal malformations by anorectal manometry
3. Assessment of results of surgery in Hirschsprung's disease by anorectal manometry
4. Assessment of postoperative bladder dysfunction in anorectal malformations by cystometry
5. Assessment of postoperative bladder dysfunction in Hirschsprung's disease by cystometry

Ongoing

1. Clinical and urodynamic changes after ablation of posterior urethral valves and correlation with radiological anatomy before and after pharmacotherapy
2. Long term systemic and metabolic consequences of gastrocystoplasty
3. Urodynamic observations after repair in bladder exstrophy with and without osteotomy and their correlation with pelvic anatomy on MRI
4. Results of the outcome of treatment of neuroblastoma in children by using moderately intense chemotherapy consisting of cyclophosphamide, doxorubicin, etoposide and cisplatin in combination with surgery and radiotherapy.
5. Results with the use of platinum based regimes in the treatment of pediatric malignant germ cell tumors.
6. Prospective study of treatment of children with Wilms' tumor on treatment with NWTS-5 regimen.
7. Prospective study of treatment of children with rhabdomyosarcoma on treatment with IRS-5 regimen.
8. Prospective study of treatment of children with hepatoblastoma on treatment with PLADO regime.
9. Outcome of patients with antenatally diagnosed unilateral pelviureteric junction obstruction managed conservatively and surgically.
10. Prospective study on five drug regimen for the management of clear cell sarcoma of the kidney.
11. Effect of intralesional injection sclerotherapy using sodium tetradecyl sulphate in vascular malformations.
12. Mucous production in the neobladder after augmentation colocolocystoplasty.

Collaborative Research

Ongoing

1. Urodynamic observations in children with Cerebral palsy (with Physical Medicine and Rehabilitation).
2. Evaluation of cardiotoxicity related to adriamycin in children with solid tumors (with NMR).
3. Evaluation of hearing deficiencies in children who have received cis-platinum for treatment of solid tumors (with ENT).
4. Evaluation of restrictive lung disease in long-term survivors of malignant germ cell tumors who have received bleomycin as a part of treatment (with Pediatrics).
5. Hepatoblastoma: Role of DNA ploidy, cell proliferation and cytokeratin 19 expression in subtyping and prognosis (with Pathology).
6. Wilms' tumor: Relation of apoptotic gene expression with subtype, chemoresponse and prognosis (with Pathology).
7. Gain of chromosome 17q and its effect on outcome in patients with neuroblastoma (with Anatomy).
8. Whole body MR imaging for detection of skeletal metastases in pediatric patients of small cell neoplasms: Comparison with skeletal scintigraphy and FDG-PET CT scan (with NMR and Radiodiagnosis).
9. Comparison of efficacy and safety of oral antibiotics (amoxycillin-clavulanic acid and ofloxacin) with intravenous combination (ceftriaxone and amikacin) in outpatient setting in pediatric patients of low risk febrile neutropenia (with Medical Oncology).
10. Renal function reserve in hydronephrotic children (with Nuclear Medicine).
11. Antibiotic prophylaxis in the management of vesicoureteric reflux: A multicentric randomized double blind placebo controlled trial (with Pediatrics).
12. Assessment of latent manganese toxicity in follow-up cases of biliary atresia (with Radiology).
13. Development of intrapulmonary arteriovenous shunting in follow-up cases of biliary atresia (with Pediatric Cardiology).
14. Long-term follow-up of patients after augmentation cystoplasty (with Endocrinology and Metabolism).
15. Comparison of imaging modalities in the evaluation of neonatal cholestasis (with Radiodiagnosis).
16. Comparison of imaging modalities in the evaluation of portal hypertension (with Radiodiagnosis).

PUBLICATIONS

Journals

1. Agarwala S, Bhatnagar V. Cystic neuroblastoma in an older child. *J Indian Assoc Pediatr Surg* 2005;**10**:103–04.
2. Agarwala S. Soft tissue sarcomas in children. *Indian J Med Pediatr Oncol* 2005;**26**:21–32.
3. Agarwala S. Transporting a surgical neonate. *J Neonatol* 2005;**19**:359–64.
4. Anandaraja S, Kumar A, Agarwala S, Gulati GS, Bal CS, Kothari SS. Liver herniation into the pericardium: An unusual cause of massive pericardial effusion with intrapericardial mass in a neonate. *Pediatr Cardiol* 2005;**26**:862–5.
5. Bajpai M, Pal K, Agarwala S, Seth T, Gupta AK. Midterm results with hepatectomy after preoperative chemotherapy in hepatoblastoma. *Pediatr Surg Int* 2005;**21**:364–8.
6. Bhat NA, Grover VP, Bhatnagar V. Manometric evaluation of postoperative patients with anorectal anomalies. *Indian J Gastroenterol* 2004;**23**:206–8.
7. Bhatnagar V. Assessment of postoperative results in anorectal malformations. *J Indian Assoc Pediatr Surg* 2005;**10**:80–5.

8. Chaki SP, Misro MM, Ghosh D, Gautam DK, Srinivas M. Apoptosis and cell removal in the cryptorchid rat testis. *Apoptosis* 2005;**10**:395–405.
9. Gupta DK, Sharma S. Management of empyema—role of a surgeon. *J Indian Assoc Pediatr Surg* 2005;**10**:142–6.
10. Gupta DK, Sharma S. Neonatal Surgical Emergencies. *Ann Inst Child Health* 2005;**6**:59–65.
11. Gupta DK, Sharma S. Penile agenesis. *J Indian Assoc Pediatr Surg* 2005;**10**:258.
12. Gupta DK, Sharma S. Stem cell therapy—hope and scope in pediatric surgery. *J Indian Assoc Pediatr Surg* 2005;**10**:138–41.
13. Gupta DK, Shilpa S, Agarwala S, Carachi R. Wilms Tumor—Saga of surgeon. *J Indian Assoc Pediatr Surg* 2005;**10**:217–28.
14. Gupta DK. JIAPS on the marching path. *J Indian Assoc Pediatric Surg* 2005;**10**: 137.
15. Gupta DK. Anorectal malformations—wingspread to Krickenbeck. *J Indian Assoc Pediatr Surg* 2005;**10**:79.
16. Gupta DK. Empyema thoracic—controversies and technical hints. *J Indian Assoc Pediatr Surg* 2005;**10**:194.
17. Gupta DK. Intersex disorders and hypospadias—A recent global hype. *J Indian Assoc Pediatr Surg* 2005;**10**:215–16.
18. Gupta DK. Pectus excavatum, pectus carinatum and other thoracic deformities. *J Indian Assoc Pediatr Surg* 2005;**10**:157.
19. Gupta DK. Posterior urethral valves—the value of high diversion. *J Indian Assoc Pediatr Surg* 2005;**10**:163.
20. Gupta DK. Prenatally diagnosed surgical malformations—who should decide next? *J Indian Assoc Pediatr Surg* 2006;**11**:7–9.
21. Gupta DK. President's speech. *J Indian Assoc Pediatr Surg* 2005;**10**:9–12.
22. Gupta DK. Sub-specialization in paediatric surgery—who, when, where? *J Indian Assoc Pediatr Surg* 2006;**11**:70–2.
23. Gupta DK. The challenges ahead. *J Indian Assoc Pediatr Surg* 2005;**10**:7.
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30. Kumar A, Bhatnagar V. Respiratory distress in neonates. *Indian J Pediatr* 2005;**72**:425–8.
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32. Kumar A, Gupta AK, Bhatnagar V. Choledochal cyst associated with extrahepatic bile duct atresia. *J Indian Assoc Pediatr Surg* 2005;**10**:48–9.

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37. Singal AK, Agarwala S. Tumor markers in pediatric solid tumors. *J Indian Assoc Pediatr Surg* 2005;**10**:183–90.
38. Singal AK, Jindal B, Bhatnagar V. Penetrating diaphragmatic injury caused by a pencil. *J Indian Assoc Pediatr Surg* 2005;**10**:112–13.
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Abstracts

40. Gupta DK, Sharma S, Arora MK, Gupta AK, Malhotra AK. Replacing the esophagus with stomach in the neonatal period. *J Indian Assoc Pediatr Surg* 2005;**10** (Suppl 1): S17.
41. Gupta DK, Sharma S, Bal CS, Kumar R, Gupta AK, Arora MK. Pediatric pyeloplasty—an approach to reduce complications. *J Indian Assoc Pediatr Surg* 2005;**10** (Suppl 1):S5.
42. Gupta DK, Sharma S. Acute presentation of choledochal cyst. *J Indian Assoc Pediatr Surg* 2005;**10** (Suppl 1): S7.
43. Jain V, Singal AK, Gupta AK, Bhatnagar V. Dumb-bell thoracic lipoma in a child—report of successful excision. *J Indian Assoc Pediatr Surg* 2005;**10** (Suppl 1):S38.
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Chapters in Books

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2. Bajpai M, Gupta DK. Abdominal tuberculosis. In: Seth V, Kabra S (eds). *Essentials of tuberculosis in children*. 3rd ed. New Delhi: Jaypee Brothers; 2006:143–56.
3. Gupta DK, Sharma S. *Abdominal Cysts*. In: Bhav S (ed). *Textbook of adolescent medicine*. New Delhi: Jaypee Brothers; 2005: 670–4.

4. Gupta DK, Sharma S. Abdominal tuberculosis in adolescence. In: Bhavé S (ed.) *Textbook of adolescent medicine*. New Delhi: Jaypee Brothers; 2006: 663–9.
5. Gupta DK, Sharma S. Benign abdominal tumors. In: Bhavé S (ed.) *Textbook of adolescent medicine*. New Delhi: Jaypee Brothers; 2006:675–77.
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11. Gupta DK, Sharma S. Rectal atresia and rectal ectasia. In: Pena A, Hutson J, Holschneider A (eds). *Anorectal Malformations*. 1st ed. Germany: Springer Heidelberg; 2006:223–30.
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PATIENT CARE

Attendance in OPD and specialty clinics

	New cases	Old cases	Total
General OPD	7,042	11,044	18,086
<i>Specialty clinics</i>			
Hydrocephalus	22	281	303
Intersex	27	34	61
Craniosynostosis	2	20	22
Pediatric urology	367	2,350	2,717
Pediatric solid tumor	96	2,540	2,634
CRHSP, Ballabgarh	443	–	–
Minor procedures	2,974	–	–

Admissions	
AB-5 ward	2408
AB5-ICU	161
Surgical procedures	
Major	1515
Minor	543
At CRHSP, Ballabgarh	151
Total	2208
Special investigations:	
Urodynamic evaluation	385
Uroflometry	548
Anorectal manometry	34
Esophageal manometry	4
24-hour pH monitoring	4

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr D.K. Gupta was conferred the Doctor Honoris Causa (DSc) and the Medal conferred by the Ministry of Education and Research, University of Medicine and Pharmacy, Cluj, Romania, September 2005; conferred Honorary FRCS, Royal College of Surgeons and Physicians, Glasgow, September 2005; conferred the Lecturer of the Year Award–2005, European Association of Pediatric Surgeons, Austria in May 2005; received the P.C. Gupta Memorial President’s Medal of the Indian Association of Pediatric Surgeons, for rendering the meritorious services to the Association; awarded the Imre Pilszanovich Visiting Professorship to University of PECS, Hungary; nominated Editor for Asia to *Journal of Romanian Pediatric Surgery*; conferred Professor Iulil Hatieganu Medal and Honorary Membership of the Romanian Association of Pediatric Surgery; Chief Guest to conduct the International Symposium on Hirschsprung’s Disease, University of Medicine and Pharmacy, Cluj-Napoca, Romania; 9 December 2005; Executive Council Member and National Delegate of the Indian Association of Pediatric Surgeons at World Federation of Association of Pediatric Surgeons; President, Federation of SAARC Association of Pediatric Surgeons (FAPSS), Chittagong, Bangladesh; nominated Founder President, Basic research Chapter, Indian Association of Pediatric Surgeons; Editor-in-Chief, *Journal of Indian Association of Pediatric Surgeons*; Overseas Council Member, British Association of Pediatric Surgeons; Secretary-cum-Treasurer, International Society of Hypospadias and Intersex Disorders; invited expert on Doordarshan to speak Live on cancer in children; invited expert to assist CSIR pool officer’s selection; Section Editor, *Textbook on Adolescent Medicine. Swati Bhave (ed)*. Jaypee Brothers, New Delhi; Co-editor, *Atlas of Pediatric Surgery*. G.H. Willital, E. Kielly, A. Gohary, D. K. Gupta, M. Li, Y. Tsuchida (eds). PABST Publishers, Germany; Member, Team of Medical Experts, Ministry of Health and Family Welfare for Developing Maternal and Neonatal services at Indira Gandhi Institute of Child Health, Kabul Afghanistan.

Dr V. Bhatnagar was co-author of the paper ‘Dumb-bell thoracic lipoma in a child—report of successful excision’ which won the best poster award at the 31st National Conference of Indian Association of Pediatric Surgeons, Bangalore, October 2005; was Invited Faculty at XV National Conference of Paediatric Gastroenterology, Hepatology and Nutrition, Hyderabad; Visiting Professor, Department of Surgical Gastroenterology, Sanjay Gandhi Post-Graduate Institute, Lucknow; was invited to demonstrate various operative techniques at 3rd Annual Conference of the NE Chapter of IAPS, Guwahati, 5th International Workshop cum Symposium on Pediatric Urology at the Joint meeting of Indian Society of

Pediatric Urology and Asian Society of Pediatric Urology, Kochi and International Workshop cum Symposium on Hypospadias, Epispadias and Exstrophy Bladder, Lucknow.

Dr M Bajpai was Fulbright Scholar, Johns Hopkins Medical Institutions, Baltimore, USA; Ramanna Fellow: Ministry of science and technology, Government of India.

VISITING SCIENTISTS

Dr Richard G. Azizkhan (USA); Dr Irfan Karaca (Turkey); Dr Bhaskar N. Rao (USA); Dr Purna Kurkure (Mumbai); Dr Bharat Aggarwal (Mumbai); Dr Daniel C. Anorson (Netherlands); Dr Michio Kaneko (Japan); Dr Piotr Czauderna (Poland); Dr Robert Carachi (UK); Dr Larry Hadley (South Africa); Dr S.H. Choi (Korea); Dr Tatsuo Kuroda (Japan); Dr Michael Harrison (USA); Dr Maru Norton (USA); Dr Ioan Paraian (Romania); Dr Akira Nakagawara (Japan); Dr PSN Menon (Kuwait); Dr Staffan Meurling (Sweden).

9.27 Pathology

Professor and Head

Kusum Verma
(superannuated September 2005)

Subrat K. Panda
(from October 2005)

Professors

Chitra Sarkar
S. Datta
Ruma Ray

M. Vijayaraghavan
Gupta
V.K. Arora

Manoj K. Singh
Rajni Safaya
(joined on 31 October 2005)

Additional Professors

A.K. Dinda

A.K. Karak

Associate Professors

M.C. Sharma

K. Venkateswar Iyer

Manju Aron

Assistant Professors

Sandeep Mathur
(Blood Bank)

Vaishali Suri

Kabita Chatterjee

EDUCATION

Undergraduate

No change from previous years.

Postgraduate

No change from previous years.

Short- and long-term training

- One doctor each from Sastra Deemed University, Tamil Nadu and Sadar Hospital, Bihar underwent training for 8 weeks and one doctor from National Thermal Power Corporation (NTPC) underwent training for one month.
- Two students of DM (Gastroenterology) from Sanjay Gandhi Postgraduate Institute of Medical Education and Research were on rotational posting (in addition to Department of Gastroenterology) for two weeks to train in Gastrointestinal and Liver pathology.
- One doctor from Army Hospital completed his 2-year training in Neuropathology in October 2005.
- Three PG students from BP Koirala Institute of Health Sciences, Nepal completed their training for one month in February 2006.
- Two doctors from the air force are currently undergoing training in the department.

Continuing Medical Education

Dr M.K. Singh organized the 3rd International CME on Dermatopathology; November 2005.

National and International Conferences

Lectures delivered

S.K. Panda

- ‘HIV and HCV and other hepatotrophic viruses’, International Conference on ‘Opportunistic pathogens in AIDS’, Department of Laboratory Medicine, AIIMS; March 2006.
- ‘HEV replication: Subcellular sites’, 15th Asia Pacific Liver Congress, Bali, Indonesia; 2005.
- ‘HBV mutants and blood banking in India’, Guha Research Conference, Goa.; November 2005
- ‘Implication of HBV mutants on blood banking’, Guha Research Conference, Goa; November 2005.

C. Sarkar

- ‘Medulloblastomas—recent concepts’, Nizam’s Institute of Medical Sciences, Hyderabad; February 2006.

S. Datta Gupta

- Conducted the first Clinicopathological Conference (CPC) of the University College of Medical Sciences (UCMS), New Delhi; March 2005.
- ‘Liver biopsy interpretation’, West Bengal Chapter of the Indian Association of Pathologists and Microbiologists, NRS Medical College, Kolkata; October 2005.
- ‘Clinico-pathological correlation in chronic hepatitis B and C’, Annual Liver Meeting on ‘Current concepts in the management of hepatitis B and C infections’, Hyderabad; December 2005.
- ‘Evidence-based approach to gastrointestinal scopy biopsy interpretation’, Evidence-based Symposia—Diagnostic Pathology, Tata Memorial Centre, Mumbai; February 2006.
- ‘Liver biopsy in non-neoplastic liver diseases’, 15th Annual State Conference of the West Bengal Chapter of the Indian Association of Pathologists and Microbiologists, NRS Medical College; Kolkata; October 2005.
- ‘Transplantation pathology—liver transplantation pathology’, 54th Annual Conference of the Indian Association of Pathologists and Microbiologists (APCON 2005), Indore; December 2005.
- ‘Liver biopsy interpretation’, ‘Visceral leishmaniasis with chronic hepatitis B infection’ and ‘Management of chronic hepatitis C: Indian perspective’, 14th Annual Conference of the Indian Association for Study of the Liver, Nagpur; February 2006.

R. Safaya

- ‘Current perspectives on tumour and tumour-like lesions of the bone’, 8th Annual CME programme—2005, Bangalore; August 2005.

M.C. Sharma

- ‘Molecular classification of glial tumours’, IRCH, AIIMS; April 2005.
- ‘Role of histochemistry and electron microscopy in non-dystrophic childhood muscle diseases’, Quarterly Meeting of Delhi Chapter of IAPM, New Delhi; August 2005.
- ‘Chordoid glioma: A recently described entity’, Monthly Meeting of Delhi Neurological Association, AIIMS; March 2006.
- ‘WHO classification of CNS tumours’, Bihar Chapter of IAPM; 28 March 2006.
- ‘Optic nerve glioma’, 1st Annual Conference of Ophthalmic Pathology Society; 27 March 2006.

V.K. Iyer

- ‘Role of radiology in the diagnosis of liver and spleen diseases’, Preconference CME on ‘Fine needle aspiration cytology of liver and spleen’, 35th Annual Conference of Indian Academy of Cytologists, Jamnagar, Gujarat; 16 December 2005.
- Preconference CME on ‘Fine needle aspiration cytology of liver and spleen’, 35th Annual Conference of Indian Academy of Cytologists, Jamnagar, Gujarat; 16 December 2005.

Manju Aron

- ‘Scope and limitation of fine needle aspiration cytology of the liver’, CME on ‘Cytology of liver and spleen’, Indian Academy of Cytologists, Jamnagar, Gujarat; December 2005.
- ‘Role of fine needle aspiration cytology in pediatric tumours’, AIIMS Golden Jubilee International Symposium on Pediatric Malignancies, AIIMS; December 2005.

Sandeep Mathur

- CME on ‘Liver diseases—FNAC of hepatocellular carcinomas’, 35th Annual Conference of Indian Academy of Cytology; 16 December 2005.

RESEARCH

Funded Projects

Completed

1. Multicentric study of interferon-glycyrrhizin combination therapy and interferon-ribavirin combination therapy in management of chronic hepatitis C. S. Datta Gupta. Funded by ICMR for 3 years. Funds: Rs 10.10 lakh.
2. Utility of p53 immunostaining as a prognostic indicator in fine needle aspiration cytology of Wilms tumor. Venkateswaran K. Iyer. Funded by AIIMS for 3 years. Funds: Rs 0.75 lakh.
3. Development of biodegradable hydrogel for controlled drug release for the treatment of osteomyelitis: Phase II; To evaluate immunotoxicity of implantable interpenetrating network polymer (IPNs) hydrogel for human application. A.K. Dinda. Funded by LSRB for 3 years. Funds: Rs 10 lakh.

Ongoing

1. To study the site of replication of hepatitis-E virus (HEV) by inlocalizing the viral replicase (RdRp) into the subcellular compartments by transfection studies using HepG2/Huh7 cells and fusion reporter construct. S.K. Panda. Funded by DST from 2004 to2007. Funds: Rs 21.47 lakh.
2. Development of non-radioactive antigen specific reporter release cytotoxicity assay and analysis of cytotoxicity against HEV proteins. S.K. Panda. Funded by DBT for 3 years (2004–2007). Funds: Rs 45.95 lakh.
3. Development of small interfering RNAs (siRNAs) for Inhibition of Hepatitis-E virus (HEV) Replication and Transcription. S.K. Panda. Funded by DBT for 3 years (2004–2007) Funds: Rs 42.05 lakh.
4. Myopathic disorders: A comparative clinico-pathological and in vitro proton magnetic resonance spectroscopy (MRS) study on muscle biopsies. Chitra Sarkar. Funded by ICMR for 3 years (2004—2007); Funds: Rs 6 lakh.
5. Genomics and molecular studies on the immunopathogenesis of Bronchial Asthma: A multicentric Project. A.K. Dinda. Funded by DBT for 3 years. Funds: Rs 40 lakh.
6. Role of renin-angiotensin system in the pathogenesis of muscular dystrophy. M.C. Sharma. Funded by AIIMS for 1 year. Funds: Rs 0.75 lakh.
7. Post-chemotherapeutic expression of apoptotic proteins in hepatoblastoma. K. Venkateswar Iyer. Funded by AIIMS for 2 years. Funds: Rs 1.05 lakh.

8. Diagnostic utility of Hep Par1, pCEA and CD-34 in differentiating non-neoplastic, and metastatic liver lesions from primary hepatocellular carcinoma in fine needle aspiration samples. Manju Aron. Funded by AIIMS for 3 years. Funds: Rs 1.50 lakh.
9. Utility of immunocytochemistry using antibodies to Calretinin and Ber-EP4 in distinguishing reactive mesothelial cell proliferation from metastatic adenocarcinoma. Sandeep Mathur. Funded by AIIMS for 2 years. Funds: Rs 1.16 lakh.
10. Histopathological evaluation of aortic aneurysm and aortic dissections with special reference to collagen type IV. Ruma Ray. Funded by AIIMS for 1 year (2005–2006). Funds: Rs 0.50 lakh.
11. Advanced center for liver disease. S.K. Panda. Funded by ICMR for 5 years (2004–2009). Funds: Rs 61.91 lakh per year.
12. Ligand-based selection from combinatorial libraries for generating recombinant antibodies to the placental (oncofoetal) isoenzymes of alkaline phosphatase: Characterization and validation in clinical cancer. Chitra Sarkar. Funded by DBT for 3 years (2005–2008). Funds: Rs 25 lakh.
13. Clinical correlation of quantitative analysis and immunohistochemical localization of VEGF and HCG in the serum and placenta at different gestational ages in normal and PIH cases. Chitra Sarkar. Funded by CSIR for 3 years. Funds: Rs 12 lakh.
14. Immunohistochemical and image analytic characterization of the stromal component in giant cell tumour of bone. Venkateswaran K. Iyer. Funded by AIIMS for 3 years. Funds: Rs 1 lakh.
15. Evaluation of VEGF and p53 expression as prognostic markers in giant cell tumour of bone. Venkateswaran K. Iyer. Funded by ICMR for 2 years. Funds: Rs 0.89 lakh.

Departmental Projects

Completed

1. Angiogenic patterns in high grade astrocytic tumors and correlation with proliferative markers
2. Pilocytic astrocytomas—tumor regulatory gene protein expression and correlation with histopathological spectrum
3. A morphometric study on renal biopsies of Membranous glomerulonephritis
4. Study of microvascular density, DNA ploidy, cellular proliferation and p53 expression in renal cell carcinoma
5. Study of peritubular capillary density in renal biopsy of idiopathic childhood nephrotic syndrome
6. Fine needle aspiration cytology of hepatoblastoma
7. Fine needle aspiration cytology of clear cell sarcoma of the kidney
8. Fine needle aspiration cytology of paediatric hepatocellular carcinoma
9. Fine needle aspiration cytology of Wilms' tumor: An analysis of 119 aspirates
10. Histopathological profile of Wilms tumor: A study of 99 cases
11. Hypoplastic left heart syndrome: An autopsy study of six cases
12. Role of cytologic scoring and image morphometry in fine needle aspiration cytology of proliferative breast disease
13. Cervical acid phosphatase cytochemistry as an aid to cervical smear cytology
14. Cytological delineation of peripheral T-cell lymphomas from Hodgkin's lymphomas

Ongoing

1. Primary and secondary glioblastomas: A study of EGFR amplification using real-time PCR
2. GBMs with long term survival—role of cell cycle regulatory genes
3. Paediatric astrocytic tumours—study of cyclin-dependent kinases and their inhibitors
4. Comparative study of diagnostic efficacy of stereotactic, ultrasound guided and image guided

biopsies in lesions of CNS

5. Protein aggregating myopathy—a clinicopathological and immunohistochemical study
6. Mitochondrial myopathy—a clinicopathological and ultrastructural study
7. Congenital myopathies—clinicopathological and ultrastructural evaluation
8. Expression of major histocompatibility complex (MHC-I and II) and cell adhesion molecules in idiopathic inflammatory myopathies
9. Comparative evaluation of expression of dystrophin, utrophin and n-NOS in muscle and skin biopsy of patients with dystrophinopathies
10. Application of image analysis in evaluation of immunofluorescence of renal biopsies
11. Role of urine sediment examination in early diagnosis of recurrence of lupus nephritis
12. Study of alteration of microvasculature in renal biopsy in chronic renal transplant rejection
13. Study of C4d deposition in peritubular capillaries of renal transplant biopsy and its correlation with morphological features of severity of rejection
14. Role of macrophage in modulation of renal fibrosis
15. Ultrastructural study of podocyte changes in immune and non-immune mediated glomerular diseases
16. Study of endocytosis and fate of calcium phosphate based and gold nanoparticle
17. Modulation of macrophage function with nanoparticle
18. Wilms' Tumor: Relation of Apoptotic Gene Expression with subtype, chemoresponse and prognosis
19. Hepatoblastoma: Role of DNA ploidy, cell proliferation and cytokeratin 19 expression in subtyping and prognosis
20. Morphological and morphometric evaluation of follicular lesions of thyroid on fine needle aspiration cytology

Collaborative Projects

Completed

1. Study of hypothalamic lesions in head injury (with Neurosurgery).
2. Overexpression of IL-4 and IL-13 receptors in meningiomas (with Biochemistry).
3. Study of the function of mitochondria in apoptosis and human disease (with Biochemistry).
4. A multi-national multi-centric open labeled active controlled randomized parallel group dose finding study to evaluate the efficacy of two doses of AP-12009 in adult patients with recurrent high grade glioma administered intract-tumorili as continuous high flow micro perfusion over 7 days period every other week (with Neurosurgery).
5. Role of minimal invasive surgery for thyroid and parathyroid lesions in collaboration (with Surgery).
6. Identification of bcl-6 and bcl-2 proteins by immunohistochemistry in non-Hodgkin's lymphoma and their correlation with clinical features, laboratory parameters and response to therapy (with Medical Oncology).

Ongoing

1. Morphological features of steatosis in non-alcoholic steatohepatitis and HCV hepatitis (with Gastroenterology).
2. Evaluation of epithelial proliferation in pediatric and adult cholesteatoma (with ENT).
3. Histological diagnosis of Celiac disease and its correlation with other markers (with Paediatrics).
4. Clinicopathological study of reflux Esophagitis (with Gastroenterology).
5. Distinction between Crohns Disease and Tuberculosis in Indian patients (with Gastroenterology, Biotechnology).
6. Histopathology of Acute and Subacute Liver Failure (with Gastroenterology).

7. Evaluation of molecular markers and anticancer agents in non-small cell lung cancer (with Biochemistry).
8. A comparison of urease based tests and conventional histology with immunohistochemistry for detection of *H. pylori* in gastric biopsies (with Gastroenterology, Microbiology, Nuclear Medicine).
9. A study of molecular markers in oral cancers (with Biochemistry, Surgery, Surgical Oncology).
10. A study of molecular markers in cervical cancers (with Biochemistry, Obstetrics and Gynecology).
11. Evaluation of efficacy of radiofrequency ablation of primary tumour in early breast cancer (with Surgery, Radiation Oncology, Nuclear Medicine, Radiodiagnosis).
12. Emerging parasitic etiologies in malabsorption syndromes (with Microbiology, Pediatrics, Gastroenterology).
13. Significance of tumour thickness and molecular margins in cancer of the tongue. (ENT)
14. Effect of glutamine supplementation on structure and function of the intestines in patients with Crohn's disease (with Gastroenterology).
15. Histopathological study of aorta and pulmonary artery in congenital heart diseases. (with Cardiothoracic Surgery).
16. Etiological significance of microscopic colitis in chronic diarrhea in children and its pathogenesis. (with Paediatrics).
17. Multicentre phase III randomized trial comparing doxorubicin and cyclophosphamide followed by docetaxel (AC'T) with doxorubicin and cyclophosphamide followed by docetaxel and trastuzumab (herceptin®) (AC'TH) and with docetaxel, carboplatin and trastuzumab (TCH) in the adjuvant treatment of node positive and high risk node negative patients with operable breast cancer containing the Her2 alteration. (with Radiation Oncology).
18. Relationship between genetic polymorphism in drug metabolizing enzymes, CYP1A1 and GSTM1, and risk of developing oral precancer and cancer among consumers of tobacco and chewing products. (with Biochemistry, Surgery, Radiation Oncology, Surgical Oncology).
19. In-vivo magnetic resonance spectroscopic (MRS) evaluation with pathologic and radiological correlation of metabolic imaging of soft tissue tumours (with Surgical Oncology, RadioDiagnosis Dr BRA IRCH, NMR Facility).
20. Expression of tumor suppressor gene HIC-1 in human glial tumors and cell lines (with Biochemistry).
21. Altered DNA sequences in gliomas: Characterization of changes and context sequences with reference to tumor type (with Biochemistry).
22. Characterization of the properties of an amplified region of DNA in primary meningeal tumors (with Biochemistry).
23. Prevalence of alteration at microsatellite loci in 1p and 19q in primary human gliomas (with Biochemistry).
24. Invasive versus non-invasive meningiomas: Comparative study of proliferation index, and expression of VEGF, p53 and cathepsin (with Neurosurgery).
25. Mismatch repair genes (Hmlh1 and Hmlh2) in glial tumors (with Biochemistry)
26. Clinicopathological study of Bcl-2 and Bcl-6 expression in non-Hodgkin lymphoma (with IRCH).
27. A comparative study of VIA, cytodiagnosis, HPV testing and colposcopy as tools for cervical cancer screening (with Gynaecology).
28. The role of percutaneous vertebroplasty in the management of painful vertebral lesions. (with Radiodiagnosis).
29. Evaluation of Sentinel Lymph Node by Imprint Cytology (with Surgery).
30. Evaluation of the comparative efficacy of single- and double-freeze technique of cryotherapy in controlling CIN lesions: Multicentre randomized clinical trial (with Obstetrics and Gynaecology).

31. Development of HPV candidate vaccines: Preparation of a clinical trial site/cohort for vaccine testing (with Gynaecology).
32. Expression and modulation of complement regulatory proteins in immune complex and autoimmune diseases and their diagnostic significance (with Biochemistry).
33. Study of potassium channel binding protein in carcinoma prostate (with Urology).
34. A study of T cell homing pattern and cytokine profile in tubercular pleural effusion (with HLA and Immunogenetics).
35. A correlative study of Th1 and Th2 upregulation with lepromin challenge in clinically 'anergic' cases of leprosy (with JALMA, Agra).
36. Development of tumor targeting with nanogel system (with Center for Biomedical Engineering, IIT, Delhi)
37. Role of macrophage and oxidative stress in airway remodeling (with IGIB, Delhi).

PUBLICATIONS

Journals

1. Ahmad FU, Suri A, Mahapatra AK, Mehta VS, Garg A, Sharma MC, *et al.* Intraventricular rhabdoid tumor. *Indian J Pediatr* 2005;**72**:693–6.
2. Ahuja V, Bhatia V, Datta Gupta S, Raizada A, Sharma MP. Efficacy and tolerability of rifampicin-based rescue therapy for *Helicobacter pylori* eradication failure in peptic ulcer disease. *Dig Dis Sci* 2005;**50**:630–3.
3. Aron M, Kapila K, Verma K. Neural tumors of the neck presenting as thyroid nodules: A report of three cases. *Cytopathology* 2005;**16**:206–9.
4. Aron M, Kapila K, Verma K. Role of fine-needle aspiration cytology in the diagnosis of secondary tumors of the thyroid—twenty years' experience. *Diagn Cytopathol* 2006;**34**:240–45.
5. Aron M, Ray R, Verma K. Pseudoangiomatous stromal hyperplasia of the breast—cytological features of two cases and review of literature. *Indian J Pathol Microbiol* 2005;**48**:260–4.
6. Arora VK, Kumar S, Singh N, Bhatia A. Intraoperative bile cytology of the dysplasia, carcinoma in situ sequence of gall bladder carcinoma. *Cancer* 2005; **105**:277–81.
7. Bashir S, Sharma Y, Irshad M, Datta Gupta S, Dogra TD. Arsenic-induced cell death in liver and brain of experimental rats. *Basic Clin Pharmacol Toxicol* 2006;**98**:38–43.
8. Bhatnagar S, Datta Gupta S, Mathur M, Phillips AD, Kumar R, Knutton S, *et al.* Celiac disease with mild to moderate histologic changes is a common cause of chronic diarrhea in Indian children. *J Pediatr Gastroenterol Nutr* 2005;**41**:204–9. Erratum in: *J Pediatr Gastroenterol Nutr* 2005;41.
9. Biswas K, Goyal R, Ammini A, Karak AK, Sarkar C, Mishra NK, *et al.* Recurrent lymphocytic hypophysitis in a woman 27 years after subtotal adrenalectomy for hypocortisolism possibly of autoimmune origin. *JAPI* 2005;**53**:1066–69.
10. Changez M, Koul V, Dinda AK. Efficacy of antibiotics-loaded interpenetrating network (IPNs) hydrogel based on poly(acrylic acid) and gelatin for treatment of experimental osteomyelitis: In vivo study. *Biomaterials* 2005;**26**:2095–104.
11. Chaturvedi S, Bala K, Thakur R, Suri V. Mitochondrial encephalomyopathies: advances in understanding. *Med Sci Monit* 2005;**11**:RA238–RA246.
12. Dahiya S, Mathur S, Iyer VK, Verma K. Diagnosis of *Pneumocystis carinii* pneumonia by bronchoalveolar lavage cytology: Experience at a tertiary care centre in India. *Indian J Chest Dis Allied Sci* 2005;**47**:259–65.
13. Dahiya S, Sarkar C, Hedley-Whyte ET, Sharma MC, Zervas NT, Sridhar E, *et al.* Spindle cell oncocytoma of the adenohypophysis: Report of two cases. *Acta Neuropathol (Berl)* 2005;**110**:97–9.

14. Das AK, Verma K, Aron M. Fine needle aspiration cytology of glycogen rich carcinoma of breast: Report of a case and review of literature. *Diagn Cytopathol* 2005;**33**:263–7.
15. Das S, Ray R, Snehlata, Das N, Srivastava LM. Effect of ascorbic acid on prevention of hypercholesterolemia induced atherosclerosis. *Mol Cell Biochem* 2006; [Epub ahead of print 2006 Feb 14].
16. Deb P, Gupta A, Sharma MC, Gaikwad S, Singh VP, Sarkar C. Meningioangiomas with meningioma: An uncommon association of a rare entity-report of a case and review of the literature. *Childs Nerv Syst* 2006;**22**:78–83
17. Deb P, Sarkar C, Garg A, Singh VP, Kale SS, Sharma MC. Intracranial gliofibroma mimicking a meningioma: A case report and review of literature. *Clin Neurol Neurosurg* 2006;**108**:178–86.
18. Deb P, Sharma MC, Chander B, Mahapatra AK, Sarkar C. Giant cell glioblastoma multiforme: report of a case with prolonged survival and transformation to gliosarcoma. *Childs Nerv Syst* 2006;**22**:314–9.
19. Deb P, Sharma MC, Gaikwad S, Gupta A, Mehta VS, Sarkar C. Cerebellopontine angle paraganglioma—report of a case and review of literature. *J Neurooncol* 2005;**74**:65–9.
20. Deb P, Sharma MC, Gaikwad S, Tripathi M, Chandra PS, Jain S, *et al.* Neuropathological spectrum of Rasmussen encephalitis. *Neurol India* 2005;**53**:156–61.
21. Deb P, Sharma MC, Mahapatra AK, Agarwal D, Sarkar C. Glioblastoma multiforme with long term survival. *Neurol India* 2005;**53**:329–32.
22. Dinda A, Gitman M, Singhal PC. Immunomodulatory effect of morphine: Therapeutic implications. *Expert Opin Drug Saf* 2005;**4**:669–75.
23. Gupta DK, Ojha BK, Sarkar C, Mahapatra AK, Sharma BS, Mehta VS. Recurrence in pediatric craniopharyngiomas: analysis of clinical and histological features. *Childs Nerv Syst* 2006;**22**:50–5.
24. Gupta DK, Suri A, Mahapatra AK, Mehta VS, Sarkar C, Kumar L. When an unusual lesion occurs in an odd place. *Spine J* 2005;**5**:471–2.
25. Gupta RS, Bhatnager AK, Joshi YC, Sharma MC, Khushalani V, Kachhawa JB. Induction of antifertility with lupeol acetate in male albino rats. *Pharmacology* 2005;**75**:57–62.
26. Iyer VK, Agarwala S, Verma K. Fine needle aspiration cytology of clear cell sarcoma of the kidney: Study of eight cases. *Diagn Cytopathol* 2005;**33**:83–9.
27. Iyer VK, Kapila K, Agarwala S, Verma K. Fine needle aspiration cytology of hepatoblastoma. Recognition of subtypes on cytomorphology. *Acta Cytol* 2005;**49**:355–64.
28. Iyer VK, Verma K. Convolutd and cleaved nuclei in rhabdomyosarcoma: An unusual morphologic feature causing diagnostic difficulty. *Acta Cytol* 2005;**49**:465–7.
29. Jaiswal AK, Jaiswal S, Mahapatra AK, Sharma MC. Unusually long survival in a case of medullomyoblastoma. *J Clin Neurosci* 2005;**8**:962–4.
30. Kaur J, Puri T, Julka PK, Gunabushanam G, Iyer VK, Singh MK, *et al.* Adenocarcinoma of the gall bladder presenting with a cutaneous metastasis. *Indian J Dermatol Venereol Leprol* 2006;**72**:64–6.
31. Kumar A, Bal C, Srivastava DN, Thulkar SP, Sharma S, Acharya SK, *et al.* Management of multiple intrahepatic recurrences after radiofrequency ablation of hepatocellular carcinoma with rhenium-188-HDD-lipiodol. *Eur J Gastroenterol Hepatol* 2006;**18**:219–23.
32. Madan K, Ahuja V, Datta Gupta S, Bal C, Kapoor A, Sharma MP. Impact of 24-h esophageal pH monitoring on the diagnosis of gastroesophageal reflux disease: defining the gold standard. *J Gastroenterol Hepatol* 2005;**20**:30–7.
33. Madan K, Batra Y, Datta Gupta S, Chander B, Anand Rajan KD, Singh R, *et al.* Vitamin E-based therapy is effective in ameliorating transaminasemia in nonalcoholic fatty liver disease. *Indian J Gastroenterol* 2005;**24**:251–5.

34. Malhotra P, Arora VK, Singh N, Bhatia A. Algorithm for cytological diagnosis of nonneoplastic lesions of the salivary glands. *Diagn Cytopathol* 2005;**33**:90–4.
35. Malhotra P, Tandon R, Singh N, Arora VK, Bhatia A. Cytoplasmic processes a distinct cytomorphological feature of Langerhan cell histiocytosis. *Acta Cytol* 2005;**49**:580–2.
36. Mannan AASR, Karak AK. Sinus histiocytosis with massive lymphadenopathy (Rosai-Dorfman disease): Evidence for a dendritic cell derivation? *Indian J Pathol Microbiol* 2005;**48**:300–4.
37. Manocha M, Pal PC, Chitralkha KT, Thomas BE, Tripathi V, Datta Gupta S, *et al*. Enhanced mucosal and systemic immune response with intranasal immunization of mice with HIV peptides entrapped in PLG microparticles in combination with ulex Europaeus–I lectin as M cell target. *Vaccine* 2005;**23**:5599–617.
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39. Mathur S, Handa KK, Ray R. Isolated laryngeal leishmaniasis in an immunocompetent patient. *Trop Doct* 2006;**36**:55–6.
40. Mathur S, Kapila K, Verma K. Role of fine needle aspiration cytology in the diagnosis of goiter. *Indian J Pathol Microbiol* 2005;**48**:166–9.
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Abstracts

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Books

1. Singh MK. *Diagnostic dermatopathology*. NAMS CME Monograph Series VIII 2005.

Chapters in Books

1. Datta Gupta S. Pathology of hepatitis due to HEV. In: Tandon BN, Tandon V, Sood S, Tandon A (eds). *Hepatitis E*. New Delhi: Indian Council of Medical Research and Digestive Disease Foundation; 2004:58–64.
2. Datta Gupta S. Mechanism of liver injury in HEV infection. In: Tandon BN, Tandon V, Sood S, Tandon A (eds). *Hepatitis E*. New Delhi: Indian Council of Medical Research and Digestive Disease Foundation; 2004:65–71.
3. Dinda AK. Immunopathogenesis of lupus nephritis with reference to prognosis and treatment. In: Kundu-Roychoudhury SK, Roychoudhury S (eds). *Recent advances in immunology*. Trivandrum: Research Signpost; 2005:85–104.
4. Karak AK, Chumber S. Surgical pathology techniques. In: Chumber S (ed). *Essentials of surgery*. New Delhi: Jaypee Brothers; 2005:345–55.
5. Mathur S, Verma K. Pathologic spectrum of tuberculosis in children. In: Seth V (ed) *Textbook of pediatric tuberculosis*. 2nd ed.
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7. Sarkar C, Sharma S. CNS shunt infections. In: Chakravarthy A, Chatterjee S (eds). *Neurology in neurosurgical practice*. Kolkata: JANEI; 2005:126–32.

PATIENT CARE

Laboratory services

Surgical pathology

Specimens processed 34,427

Special stains 24,720

Frozen sections 505

Cytopathology

Specimens processed 17,708

FNAC 8,866

Exfoliative 8,842

Immunocytology specimens 223

Autopsies performed 35

Electron microscopy

Specimens processed 8,931

Immunohistochemistry

Specimens processed 8,931

Neuropathology

Neuropathology surgical specimens 2,864

Immunohistochemistry 2,245

Electron microscopy 650

Muscle enzyme histochemistry 1,754

Muscle immunohistochemistry 2,180

Renal pathology

Immunofluorescence on renal biopsies 436

Immunohistochemistry 135

Urinary sediment analysis 350

Electron microscopy 36

Cardiac pathology

Immunohistochemistry 645

Endocrine pathology

Immunohistochemistry 159

Hepatic pathology

Markers for hepatitis viruses

HBsAg 2,884

HBeAg 712

HBe-Ab (IgG)	427
IgM-HBc	431
HAV IgM	282
Anti-HCV IgG	545
Anti-HEV IgM	358
Anti-HEV IgG	100
Anti-HBc IgG	345

Molecular diagnostic tests

HBV DNA	1,000
HBV DNA (quantitative)	332
HCV RNA	421
HEV RNA	116

Hematopathology

Immunohistochemistry	406
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AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor S.K. Panda continues as Member, International Advisory Committee for Triennial International Symposium on ‘Viral Hepatitis and Liver Disease’; Member, Editorial Board, *Indian Journal of Medical Research*; nominated Member, Task Force on Infectious Diseases Biology, DBT; nominated Member, Advisory Committee on Biotechnology, Government of Orissa; nominated Member, Medical Sciences Research Committee, CSIR for selection of Pool Officers.

Professor Chitra Sarkar co-authored the paper ‘Role of CD34 expression in glioneuronal lesions associated with intractable epilepsy’ which received the best paper award at the Annual Conference of Neurological Society of India, Vishakhapatnam; elected Executive Member, Neurological Society of India (2005–2008); nominated Member, Advisory Committee of the Centre for Research and Development in Medical Sciences and Technology at IIT, Kharagpur; Member, National Advisory Committee, XXVI Annual Conference of Indian Association of Biomedical Scientists; Member, Research Advisory Committee, National Brain Research Centre; continues as Member, Scientific Advisory Committee and Academic Committee, National Brain Research Centre (NBRC), Manesar; Institute body and Governing body, Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Thiruvananthapuram; Technical Development Committee, SCTIMST, Thiruvananthapuram; Executive Member, Delhi Neurological Association (DNA).

Dr M.K. Singh was nominated Member, Royal College of Pathologists London (MRC Path).

Dr S. Datta Gupta was elected Honorary Secretary, Indian Association of Pathologists and Microbiologists (2005); delivered the 8th M.V. Parthasarathy—A.V. Ramaprasad Silver Headed Cane Oration, XXXIII Annual Conference of the Karnataka Chapter of the Indian Association of Pathologists and Microbiologists, Hubli.

Dr Kabita Chatterjee selected Member, Governing Body, National Blood Transfusion Council, NACO, Ministry of Health and Family Welfare; Expert, Blood Bank Accreditation Programme, NACO, Ministry of Health and Family Welfare; Expert, Blood and Blood Products Committee, Indian Pharmacopeia

Commission, Ministry of Health and Family Welfare; selected Technical Expert to the Standing Selection Committee for Blood Bank Incharge North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong; preparing guidelines for Neonatal and Paediatrics Transfusion of Blood Components with Indian Paediatrics Association.

The Department has been recognized by the Indian College of Pathologists (ICP) as a centre for Postgraduate Certificate Course in Neuropathology.

VISITING SCIENTISTS

1. Professor Francesco Scaravilli, Institute of Neurology, University of London, UK visited India as Archivist of International Society of Neuropathologists to evaluate the practice of Neuropathology at AIIMS, New Delhi; 9–12 March 2006. He delivered two lectures on ‘Neuropathology of HIV/AIDS’ and ‘Neuropathology of epilepsy’.
2. Professor Martin Mihm, Professor of Pathology and Dermatology, Harvard Medical School, USA visited the department and delivered two lectures on ‘Cutaneous vasculitis and DD of melanocytic spindle cell lesions’; January 2006.
3. Professor Atul K. Bhan, Professor of Pathology, Harvard Medical School, Boston, USA visited the department and delivered a lecture on ‘Hepatitis C’; October 2005.
4. Professor Manju Lata Prasad from USA conducted a slide seminar on ‘Head and neck lesions’ in April 2005.

9.28 Pharmacology

Professor and Head

Y.K. Gupta

Professors

V.L. Kumar

K. Kishore

N.R. Biswas

Additional Professor

S.K. Maulik

Associate Professor

D.S. Arya

Assistant Professors

Jagriti Bhatia
Surender Singh

J.P.K. Katyal

K.H. Reeta

Scientists

Uma Singh
Nabanita Halder

Sujata Joshi
Thomas Kaleekal (ad hoc)

Sharda S. Peshin
Amita Srivastava (ad hoc)

EDUCATION

The department is engaged in the teaching programme of MB,BS (3rd, 4th and 5th Semester), BSc Nursing (Hons), MSc, MD and PhD courses.

Continuing Medical Education

Organized by the department

- Symposium–cum–workshop on ‘Strengthening of poison information centers in India’, AIIMS, 20–21 April 2005.
- ‘Orientation and harmonizing workshop’ for the National Pharmacovigilance Programme, AIIMS, 6 October 2005. This workshop was organized in collaboration with CDSCO, Government of India.
- ‘GCP workshop for regulators’, AIIMS, 7–8 October 2005. This workshop was organized in collaboration with CDSCO, Government of India.
- Symposium on ‘Medical writing’, AIIMS, 31 January 2006. Sponsored by Indian Pharmacological Society (Delhi Branch).

National and International Conferences

Lectures delivered

Y.K. Gupta

- ‘Poison control centers (PCC) in India: Status and challenges’, Symposium–cum–workshop on ‘Strengthening of Poison Information Centres in India’, AIIMS; 20–21 April 2005.

- ‘Current trends in antiepileptic drugs’ at Regional Conference of Indian Pharmacological Society, Jaipur; September 2005.
- ‘Human resource development for clinical research in India’, Symposium on ‘Good Clinical Practice’, Sri Aurobindo Medical College, Indore; December 2005.
- ‘Medical writing and impact factor’, GCP Workshop for Investigators, Nizam’s Institute of Medical Sciences, Hyderabad; 23–24 September 2005.
- ‘Therapeutic drug monitoring’, First Annual Congress of Indian Academy of Nephrology, AIIMS; 8–11 February 2006.
- ‘Impact factor and medical writing’, Jiwaji University, Gwalior; 12 March 2006.
- ‘Safety aspects of herbo-metallic preparations’, Indian National Science Academy Congress, New Delhi; 14 March 2006.
- ‘Safety aspects of herbal drugs’, Ranbaxy Laboratories, Gurgaon; 25 March 2006.
- ‘Safety aspects of herbo-metallic preparations’, Hamdard University, New Delhi; 30 March 2006. N.R. Biswas
- ‘Role of clinical pharmacology in drug development’, National Seminar on ‘Clinical research—practice and prospects’, Kolkata; 1 October 2005.
- ‘Role of nanotechnology in health care delivery’, Indian Council of Chemists, Ranchi; 15 November 2005.
- ‘Need for trained personnel for clinical trial: The qualitative and quantitative aspects’, 38th Annual Conference of the Indian Pharmacological Society, Chennai; 29 December 2005.

RESEARCH

Funded Projects

Completed

1. Evaluation of topical cyclosporine-A in the prevention of corneal graft rejection. N.R. Biswas. Funded by ICMR for 3 years (2002–2005). Funds: Rs 14 lakh.
2. Ocular kinetic study of newer fluoroquinolones measured by HPLC. N.R. Biswas. Funded by DST for 4 years (2001–2005). Funds: Rs 14.18 lakh.
3. Ophthalmic drug formulation using polymeric nanoparticles as carriers. N.R. Biswas. Funded by ICMR for 3 years (2002–2005). Funds: Rs 14 lakh.
4. Experimental study of anti-hyperlipidemic and hypolipidemic effects of a polyherbal preparation. S.K. Maulik. Funded by Dabur Research Foundation for 10 months (January–October 2005). Funds: Rs 2,04,727.95.

Ongoing

1. Screening of herbal drugs. Y.K. Gupta. Funded by Dabur Research Foundation for 2 years (2005–2007). Funds: Rs 5.5 lakh.
2. Evaluation of herbal compounds in a rat model of sporadic dementia of Alzheimer’s type. Y.K. Gupta. Funded by DST for 3 years (2005–2008). Funds: Rs 10 lakh.
3. Studies on the effect of latex of *Calotropis procera* against renal complication in diabetes. V.L. Kumar. Funded by AIIMS for 1 year (2005–06). Funds: Rs 30,000.
4. Amniotic membrane transplantation in acute ocular burns: A randomized controlled clinical trial. N.R. Biswas. Funded by ICMR for 4 years (2002–2006). Funds: Rs 12.27 lakh.
5. Diagnostic approaches for rapid and specific diagnosis of *Mycoplasma pneumoniae* infections in asthmatics. N.R. Biswas Funded by DST for 2 years (2004–2006). Funds: Rs 16.8 lakh.

6. Anti-cataract activity of Itone and other herbal isolates. N.R. Biswas. Funded by Dey's Medical for 1 year (2005–2006). Funds: Rs 6 lakh.
7. Evaluation of topical cyclosporine-A in acute ocular Steven–Johnson syndrome. N.R. Biswas. Funded by ICMR for 3 years (2003–2006). Funds: Rs 17 lakh.
8. Evaluation of the role of retinal P-gp drug transporters in the ocular disposition of drugs. N.R. Biswas. Funded by AIIMS for 2 years (2004–2006). Funds: Rs 82,000.
9. Evaluation of the biodisposition of xanthophylls in Indian donors eyes and detection of their content in commonly available fruits and vegetables. N.R. Biswas. Funded by DST for 3 years (2004–2007). Funds: Rs 6.5 lakh.
11. Clinical trials of a standardized preparation of *Terminalia arjuna* in patients with left ventricular dysfunction. S.K. Maulik. Funded by DBT for 3 years (2004–2007). Funds: Rs 23 lakh.
12. Studies on cardioprotective potential of some medicinal plants in experimentally induced myocardial infarction in rats. D.S. Arya. Funded by CSIR for 3 years (2004–2007). Funds: Rs 1.5 lakh.
13. Pharmacokinetics of thalidomide in patients with relapsed and refractory multiple myeloma. Jatinder Katyal. Funded by AIIMS for 1 year (2004–2005) Funds: Rs 35,000.

Departmental Projects

Completed

1. High dose methotrexate in acute lymphoblastic leukemia and T-cell lymphoblastic lymphoma: Role in central nervous system prophylaxis and in relapse.

Ongoing

1. Evaluation of antioxidants-curcumin and vineatrol in rat model of seizures
2. Evaluation of antioxidants in rat model of Alzheimer's disease
3. Inflammation related studies on the latex of *Calotropis procera*
4. Comparative evaluation of anti-arthritic activity of *Calotropis procera* and COX-2 inhibitors
5. Studies on the nociceptive effect of latex of *Calotropis procera*
6. Studies on the hepatoprotective effect of *Calotropis procera*
7. Studies on the anti-hyperglycemic effect of *Calotropis procera*
8. Intense post-marketing surveillance (ADR monitoring) of platinum-based drugs
9. Studies on the cardioprotective effects of benazepril and valsartan in experimental models of acute myocardial infarction
10. Studies on the cardioprotective effects of curcumin in experimental model of acute myocardial infarction
11. Quantification of plasma level of imatinib mesylate (STI-571) in CML patients and to correlate this with its safety and efficacy profile
12. Evaluation of heavy metals content in herbal medicinal products marketed in and around Delhi
13. Role of central neurotransmitters on cardiac hypertrophy in rats
14. Effect of *Terminalia arjuna* on cardiac hypertrophy in rats
15. Modulation of small G-proteins in rat model of heart failure
16. The effect of chronic oral administration of *Terminalia arjuna* in a rat model of hyperlipidemia
17. Pharmacokinetics of thalidomide in patients with relapsed and refractory multiple myeloma

PUBLICATIONS

Journals

1. Arya S, Kumar VL. Antiinflammatory efficacy of extracts of latex of *Calotropis procera* against different mediators of inflammation. *Mediators Inflamm* 2005;**4**:228–32.
2. Datta S, Biswas NR, Saxena R, Deepak KK, Menon V, Garg SP, *et al.* Ocular and cardiovascular autonomic function in diabetic patients with varying severity of retinopathy. *Indian J Physiol Pharmacol* 2005;**49**:171–8.
3. Devi R, Banerjee SK, Sood S, Dinda AK, Maulik SK. Extract from *Clerodendron colebrookianum Walp* protects rat heart against oxidative stress induced by ischemic reperfusion injury (IRI); *Life Sci* 2005;**77**:2999–3009.
4. Dogra PN, Biswas NR, Ravi AK, Mani K, Kumar V. Comparative evaluation of prostina and terazosin in the treatment of benign prostatic hyperplasia. *J Indian Med Assoc* 2005;**103**:108–10, 112.
5. Gauthaman K, Banerjee SK, Dinda AK, Ghosh CC, Maulik SK. *Terminalia arjuna* (Roxb.) protects rabbit heart against ischemic-reperfusion injury: Role of antioxidant enzymes and heat shock protein *J Ethnopharmacol* 2005; **96**:403–09.
6. Guleria R, Nisar N, Chawla TC, Biswas NR. Mycoplasma pneumoniae and central nervous system complications: A review. *J Lab Clin Med* 2005;**146**:55–63.
7. Gupta M, Gupta YK. Modulation of serum concentrations of melatonin by carbamazepine and valproate. *Indian J Physiol Pharmacol* 2006;**50**:79–82.
8. Gupta SK, Saxena A, Singh U, Arya DS. Bosentan, the mixed ETA-ETB endothelin receptor antagonist, attenuated oxidative stress after experimental myocardial ischemia and reperfusion. *Mol Cell Biochem* 2005;**275**:67–74.
9. Gupta YK, Briyal S. Protective effect of vineatrol against kainic acid induced seizures, oxidative stress and on the expression of heat shock proteins in rats. *Eur Neuropsychopharmacol* 2006;**16**:85–91.
10. Gupta YK, Gupta M. Post-traumatic epilepsy: A review of scientific evidence. *Indian J Physiol Pharmacol* 2006;**50**:7–16.
11. Katyal J, Gupta YK, Kumar G. Effect of chemically induced seizures on learning, memory and behaviour in rats. *Epilepsia* 2005; **46** (Suppl. 6);313.
12. Narang D, Sood S, Thomas M, Dinda AK, Maulik SK. Dietary palmolein oil augments cardiac antioxidants enzymes and profiles against isoproterenol induced myocardial necrosis in rats. *J Pharm Pharmacol* 2005;**57**:1445–51.
13. Padhy BM, Kumar VL. Inhibition of *Calotropis procera* Latex-Induced inflammatory hyperalgesia by oxytocin and melatonin. *Mediators Inflamm* 2005;**6**:360–5.
14. Puri A, Maulik SK, Ray R, Bhatnagar V. Electrocardiographic and biochemical evidence for the cardioprotective effect of vitamin-E in doxorubicin-induced acute cardiotoxicity in rats. *Eur J Pediatr Surg* 2005;**15**:387–91.
15. Roy A, Sood S, Dinda AK, Das TK, Maulik SK. Oxidative stress and histopathological changes in the heart following oral lindane (gamma hexachlorohexane) administration in rats. *Med Sci Monit* 2005;**11**:325–9.
16. Roy S, Sehgal R, Padhy BM, Kumar VL. Antioxidant and protective effect of latex of *Calotropis procera* against alloxan-induced diabetes in rats. *J Ethnopharmacol* 2005;**102**:470–3.
17. Sehgal R, Kumar VL. *Calotropis procera* latex-induced inflammatory hyperalgesia—effect of antiinflammatory drugs. *Mediators Inflamm* 2005; **4**:216–20.
18. Sharma M., Briyal S, Gupta YK. Effect of alpha lipoic acid, melatonin and trans resveratrol on intracerebroventricular streptozotocin induced spatial memory deficit in rats. *Indian J Physiol Pharmacol* 2005;**49**:395–402.

19. Sood S, Narang D, Dinda AK, Maulik SK. Chronic oral administration of *Ocimum sanctum Linn* augments cardiac endogenous antioxidants and prevents 'isoproterenol-induced myocardial necrosis in rats'. *J Pharm Pharmacol* 2005;**57**:127–33.
20. Tamhane A, Vajpayee RB, Biswas NR, Pandey RM, Sharma N, Titiyal JS, *et al.* Evaluation of amniotic membrane transplantation as an adjunct to medical therapy as compared with medical therapy alone in acute ocular burns. *Ophthalmology* 2005;**112**:1963–69.
21. Thomas MK, Narang D, Lakshmy R, Gupta R, Naik N, Maulik SK. Correlation between inflammation and oxidative stress in normocholesterolemic coronary artery disease patients 'on' and 'off' atorvastatin for short time intervals. *Cardiovasc Drugs Ther* 2006;**20**:37–44.
22. Velpandian T, Ravi AK, Kumai SS, Biswas NR, Tewari HK, Ghose S. Protection from ultraviolet radiation by spectacle lenses available in India: A comparative study. *Natl Med J India* 2005;**185**:242–4.

Chapters in Books

1. Maulik SK, Thomas M. Inflammation and its modulations in coronary artery disease. In: Tripathi Y (ed). *Chronic inflammatory diseases and nutraceuticals*. 1st ed. Varanasi: Professor S.N. Tripathi Memorial Foundation; 2005:106–10.
2. Reeta KH (contributor). In: Sharma S, Sethi GR, Sethi S, Sachdev GK, Gupta U, Gulati RK (ed). *Standard guidelines: A manual for medical therapeutics*. 2nd ed. New Delhi: BI Publications for Delhi Society for Promotion of Rational Use of Drugs; 2005.

Books

1. Kohli K, Gupta M, Tejwani S. *Contemporary perspectives on clinical pharmacotherapeutics*. 1st ed. New Delhi: Elsevier; 2006.
2. Sharma S, Reeta KH. *Essential drugs formulary*. New Delhi: Delhi Society for Promotion of Rational Use of Drugs; 2005.
3. Singh S, Aslam M. *Research methodology and biostatistics in pharmacology*. 1st ed. New Delhi: Academia Publishers; 2006.

PATIENT CARE

Urinary catecholamine test

Urinary catecholamines estimation is routinely performed in the department for the diagnosis of pheochromocytoma (adrenal gland tumor). A total of 70 samples from different departments were analyzed during the year.

The National Poison Information Centre

The National Poison Information Centre (NPIC) in the department is operational round the clock throughout the year. It provides information on the management of poisoning to treating physicians, first-aid instructions to general public and information to government and non-government agencies from all over India. The centre also provides specific antidotes in selected cases of poisonings.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr Y.K. Gupta was elected President, Indian Pharmacological Society (2005–2006).

Dr N.R. Biswas visited Institute of Nanotechnology, Karlsruhe, Germany for 3 weeks as Guest Professor under International Collaboration/Exchange Programme of INSA during 2005–2006.

Dr Mathew K. Thomas, MD student, was awarded UK Seth prize for best paper in clinical pharmacology for ‘Pharmacokinetic assessment of interaction between clopidogrel and atorvastatin in CAD patients’ at 38th Indian Pharmacological Society Annual Conference, Chennai; 29–30 December 2005.

Dr Madhur Gupta, Senior Demonstrator, was awarded A.V. Tilak Parvathi Devi Prize for best paper in neuroendocrinology for ‘A randomized, double-blind, placebo controlled trial of melatonin add-on therapy in epileptic children on valproate monotherapy: Effect on glutathione peroxidase and glutathione reductase enzymes’ at 51st Annual Conference of the Association of Physiologists and Pharmacologists of India, Pondicherry; 12–16 December 2005.

Seema Briyal, PhD student, was awarded the C.L. Malhotra Prize for the best paper in pharmacology for ‘Effect of endothelin antagonist (TAK-044) on cerebral ischemic volume, oxidative stress markers and neurobehavioral parameters in the middle cerebral artery occlusion model of stroke in rats’ at 51st Annual Conference of Association of Physiologists and Pharmacologists of India, Pondicherry; 12–16 December 2005.

Dr Monisha Sharma, Senior Research Associate, was awarded the Dev Raj Bajaj Prize for the best paper in newer techniques and development for ‘Intracerebroventricular injection of streptozotocin in rats produces both oxidative stress in the brain and cognitive impairment’ at 51st Annual Conference of Association of Physiologists and Pharmacologists of India, Pondicherry; 12–16 December 2005.

9.29 Physical Medicine and Rehabilitation

Professor and Head

U. Singh

Additional Professor

Sanjay Wadhwa (on lien from 1 March 2006)

Associate Professor

S.L. Yadav

Assistant Professor

Gita Handa

EDUCATION

The department is involved in teaching of undergraduate medical students during MB,BS course through lectures, integrated seminars and practical demonstration/visit to department including prosthetic–orthotic workshop.

The department is providing MD (PMR) training to postgraduate students, besides orientation training of MHA, MD (Community Medicine, Pharmacology, Medicine, Rheumatology, Paediatrics), MS (Orthopaedics), DM (Neurology and Paediatric Neurology) students, postgraduate nursing students. The faculty has been involved in guiding postgraduate students of Orthopaedics, Pharmacology, Community Medicine and Paediatrics in their thesis, and Computer Facility Project trainees are also provided guidance.

Continuing Medical Education

The faculty and resident doctors of the department participated in a number of national and international CME programmes, conferences, seminars, symposia and panel discussions.

Lectures delivered

Dr U. Singh

- ‘Exercise and health’, Sri Aurobindo Ashram, Delhi Branch; 16 April 2005.
- ‘Cancer rehabilitation’, Course on Nursing in Cancer, College of Nursing, AIIMS; 3 May 2005.
- ‘Rehabilitation of sports injuries’, Sports Medicine Seminar, Indian Federation of Sports Medicine and Sports Authority of India, New Delhi; 30 July 2005.
- ‘Web designing and web hosting’, Course on Information Retrieval in Health Sciences, CMET, AIIMS; 10–11 August 2005 and 2 September 2005.
- ‘Orthosis and prosthesis’, Seventh Postgraduate Instructional Course in Orthopaedics, Department of Orthopaedic Surgery, MAMC and Associated Hospitals, New Delhi; 22 October 2005.

- ‘Autonomic dysreflexia’, CME programme, RRC, SMS Hospital, Jaipur; 25 February 2006.
- ‘Supportive rehabilitation strategies for the management of patients with osteoporosis’, ICMR–WHO Workshop on Osteoporosis, ICMR, Safdarjang Hospital, New Delhi; 29–30 November 2005.

Dr Sanjay Wadhwa

- ‘Aging with disability’, An International Conference, Aastha, University of Delhi; September 2005.
- ‘Changing concepts in the field of Caregivers’, Meeting of Experts for Developing Care Givers Programme, Rehabilitation Council of India, New Delhi; 19–20 September 2005.

Dr S.L. Yadav

- ‘Specific problems of physically challenged women and children’, World Health Day celebrations, National Institute of Human Values, YMCA International Conference Center; 7 April 2006.
- ‘Pediatrics rehabilitation’, Indian Association of Paediatrics, Alwar; 12 November 2005.
- ‘Role of phenol block in spastic cerebral palsy children’, CME, RRC, SMS Medical College, Jaipur; 25 February 2006.
- ‘Physiatrist management of diabetic foot’, IMA House, Alwar; 8 April 2006.
- ‘Pediatrics rehabilitation’, Indian Association of Paediatrics, Alwar; 12 November 2005.

National and International Conferences

Organized by the Department

- Hands on workshop on ‘*Ultrasound evaluation of neurogenic bladder*’, ‘*Dynamic posturography*’ and ‘*Isokinetic dynamometry*’ conducted by Dr U. Singh, Dr S.L. Yadav, Dr Gita Handa as Faculty Incharge respectively during the National Mid-Term CME programme of the IAPMR and 6th Annual Conference of DARM, AIIMS; 11 September 2005.

Lectures delivered

Dr U. Singh

- ‘Secondary and tertiary rehabilitation services for the general disabled and leprosy disabled provided at the PMR institutions in the country’, National Workshop on Integration of Leprosy Rehabilitation Services into the Mainstream of Physical Medicine and Rehabilitation’, Alert India and AIIPMR, Mumbai; 10 October 2005.
- ‘Different methods of Gait analysis’; CME program, 34th Annual National Conference of Indian Association of Physical Medicine and Rehabilitation, AIIPMR, Mumbai; 20–22 January 2006.
- ‘Conservative management in spinal cord injury’, ISSICON 2006, Indian Spinal Injuries Centre, New Delhi; 3–5 March 2006.

Dr Gita Handa

- ‘Role of isokinetic dynamometry in sports medicine’, National Congress on Sports Medicine, New Delhi; 10–12 November 2005.
- ‘Spasticity—clinical and quantitative evaluation’, IAPMR Mid-term CME, National Conference of Delhi Association of Rehabilitation Medicine; 10 September 2005.
- ‘Human resource development for paramedical personnel in the field of spinal injuries’, International Spine and Spinal Injuries Conference, Indian Spinal Injuries Centre, New Delhi; 3–5 March 2006.

Dr Sanjay Wadhwa

- ‘Spasticity management—an overview’, IAPMRCON, AIIPMR, Mumbai; 18 January 2006.

Dr S.L. Yadav

- 'Balance and gait in total hip replacement: A pilot study'; 3rd World Congress of ISPRM, Sao Paulo, Brazil; 10–14 April 2005.

RESEARCH

Funded Projects

Completed

1. 'Prospective evaluation of neurogenic bowel and bladder disorders in children with cerebral palsy'. Gita Handa. Funded by Ministry of Social Justice and Empowerment under S and T Mission Mode from 2003 to 2005. Funds: 3.5 lakh.

Collaborative Projects

1. Impact of multidisciplinary intervention on health related quality of life (QOL) in ambulatory older subjects. (with Medicine).

PUBLICATIONS

Journals

1. Singh U. Thoughts on the management of osteoporosis. *Indian J Phys Med Rehabil* 2005;**16**:i–ii.
2. Nallegowda M, Mathur B, Singh U, Prakash H, Khanna M, Sachdev G, *et al.* Oral health status in Indian children with cerebral palsy—a pilot study. *Indian J Phys Med Rehabil* 2005;**16**:1–4.
3. Singh NA, Singh U, Wadhwa S, Yadav SL, Ramakrishnan S, Das P, *et al.* Study of surface electromyographic changes in paraspinal muscles following spinal muscle strengthening exercises in non-specific chronic low back pain patients. *Indian J Phys Med Rehabil* 2005;**16**:5–11.
4. Singh U. Cox-2 inhibitors—controversy over controversy: Editorial. *Indian J Phys Med Rehabil* 2005;**16**: iv.
5. Goswami A, Reddaiah VP, Kapoor SK, Singh B, Singh U, Dey AB, *et al.* Prevalence of determinants of disability in the rural elderly population in northern India. *Indian J Phys Med Rehabil* 2005;**16**:39–44.
6. Nallegowda M, Singh U, Khanna M, Shivananda G, Yadav SL. An unusual case of scaphoid fracture with both fragments avascular necrosis with delayed carpal tunnel syndrome. *Indian J Phys Med Rehabil* 2005;**16**:50–3.
7. Nallegowda M, Singh U, Handa G. Oral health status in Indian children with cerebral palsy—A pilot study. *Indian J Phys Med Rehabil* 2005;**16**:1–4.

Abstract

8. Handa G, Nallegowda M, Sachdev G, Bajpai M, Singh U. 'Bladder function in cerebral palsy—a prospective study'. *Neurorehabil Neural Repair* 2006;**20**:131.

PATIENT CARE

The department provides outpatient, inpatient and outreach services to people with disabilities. The department has many diagnostic as well as therapeutic facilities which include comprehensive rehabilitation facilities, balance laboratory, computerised dynamometry, electrophysiology laboratory, minor OT, etc.

OPD and special clinics

New Cases

OPD	14,365
Ballabgarh	5,152
Camps	250
Prosthetic and Orthotic	2,653
Total	22,420

Old Cases

OPD 9599	
OPD visits: PT section	20,946
OPD visits: OT section	13,314
OPD visits: MSW	4,260
OPD visits: Vocational counselor	1,736
Disability evaluation clinic	256
Railway concession certificates	1,290
Prosthetic and orthotic	10,694
Minor OT procedures	2,460
Total	64,555

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr U. Singh won the Second Prize in the Hindi Dictation for non-Hindi speaking persons given by Hindi Section, AIIMS, during 2004–2005; continued to be Member, Sub-Committee on Locomotor, Leprosy Cured, etc, of the Rehabilitation Council of India, Ministry of Social Justice and Empowerment; Chairman, Specialty Advisory Board in PMR, National Board of Examinations; Chairman, Technical Advisory Group, S and T Mission Mode Project, District Rehabilitation Center Scheme, Ministry of Social Justice and Empowerment, Government of India; Member, Governing Council, National Institute for the Orthopaedically Handicapped, Kolkata; Member, Executive Council, National Institute for the Orthopaedically Handicapped, Kolkata; Inspector, GGS IP University, Government of NCT, Delhi; Member BIS, Rehabilitation Appliances and Equipment for Disabled Sectional Committee (MHD 10); Consulting Editor and Reviewer, *Journal of Rehabilitation Council of India, Locomotor and Associated Disabilities*; Editor, *Indian Journal of Physical Medicine and Rehabilitation*; Expert Member, Board of Studies, School of Medicine and Para Medical Health Sciences, Guru Gobind Singh Indraprastha University, Delhi; Member, Expert Committee for evolving formal procedure and determining the quantitative and qualitative parameters for grant of permanent affiliation to institutions conducting programs under the aegis of GGS IP University, Delhi; Member expert, Affiliation committee for grant of deemed university's status, University Grants Commission, New Delhi; Chairman, Scientific Committee, National Mid-Term CME Program of the IAPMR and Annual Conference of the Delhi Chapter of DARM, New Delhi; Expert, Union Public Service Commission, New Delhi.

Dr Sanjay Wadhwa was nominated by Vice-Chancellor, Baba Farid University of Health Sciences, Faridkot, as Dean of the Faculty of Physiotherapy for 1-year from 1 February 2006 to 31 January 2007; Editor, Section on Locomotor Disabilities, *Journal of Rehabilitation Council of India*; Associate Editor, *The Journal of Rehabilitation in Asia*; Member, Medical Board for Physically Handicapped, WUS Health Centre, University of Delhi (2005–06); Member, Inspection Team, Rehabilitation Council of India to Gyanodaya Association, District Surguja, Chhattisgarh; Nominated to the Governing Body, School of Rehabilitation Sciences, Aadi; Member, Expert Committee, Universities Grants Commission to assess and recommend international travel grants proposals, New Delhi; Member, NAMS Publications Advisory Committee; Reviewer, IJPM.

Dr S.L. Yadav was elected Vice-chairman, International Society of Prosthetics and Orthotics, India; Appointed UGC expert committee member to examine the proposal of Vels Institute of Science and Technology, Chennai.

Dr Gita Handa was elected Executive Committee member, Delhi Association of Rehabilitation medicine; Member, Scientific Committee, IAPMR Mid term CME and National Conference of DARM, Delhi; Assistant Editor, *Indian Journal of Physical Medicine and Rehabilitation*; Expert Member, Committee for purchase of Sports equipment at Sports Authority of India.

VISITING SCIENTISTS

Dr Nabil Mustapha, Ex-consultant, Physical Medicine and Rehabilitation, Queens Mary Hospital, London, UK, visited the department of PMR, AIIMS, New Delhi and delivered a talk on ' Botulinum Toxin in the management of Spasticity'; 6 December 2005.

9.30 Physiology

Professor and Head

R.L. Bijlani
(till 30 April 2005)

V. Mohan Kumar
(from 30 April 2005)

Professors

J. Sengupta
H.N. Mallick

R. Mathur
D. Ghosh

K.K. Deepak

Emeritus Professor

B.K. Anand

Additional Professors

S.C. Bhatia
(on deputation to BPKHS, Nepal)

S.C. Mahapatra

K.P. Kochhar

Associate Professors

Ratna Sharma

Nalin Mehta

Assistant Professors

Suman Jain
Sanjay Sood

Ashok Kumar Jaryal
Anjana Talwar

Raj Kumar Yadav

EDUCATION

Undergraduate, Postgraduate, Paramedical

The department provided about 400 hours of teaching to the first year MB,BS students, and about 60 hours of teaching to students of BSc Nursing and allied courses, besides conducting MSc (Physiology) and MD (Physiology) courses, and guiding PhD students.

Short- and long-term training

The department provided short-term training for 6 months (17 January to 16 July 2005) to three students from Biomedical Engineering, Dr B.R. Ambedkar National Institute of Technology (NIT), Jalandhar; for one month (26 May to 25 June 2006) to one student from Delhi College of Engineering, Delhi; and for one month (15 February to 14 March 2006) to one student from B.P. Koirala Institute of Health Sciences, Dharan, Nepal.

Continuing Medical Education

Lectures delivered

Dr R. Mathur

- 'Emotions and pain', Workshop on 'Psychological approaches to pain management', New Delhi; 21 January 2006.

Dr K.K. Deepak

- ‘Methodology of objective structured practical examination for assessment of practical skills’, Chandigarh Chapter of Association of Physiologists and Pharmacologists of India, CME on ‘Latest trends in medical education’, Government Medical College, Chandigarh; 20 August 2005.
- ‘Clinical physiology—its role in improving athletic performance’, Sports Medicine and Arthroscopy Workshop, Sir Ganga Ram Hospital, New Delhi; 19 March 2006.
- ‘Objective structured practical and clinical examination (OSPE/OSCE)’, ‘Autonomic function tests and autonomic dysfunction’, HM Patel Centre for Medical Care and Education; 6 February 2006.

Dr Nalin Mehta

- ‘Ethical issues in genetics research on humans’, 1st Hands-on Training Programme for Scientists (Medical/Non-medical) on ‘Diagnosis of genetic disorders using cytogenetics and molecular genetic methods’, sponsored by DBT, AIIMS; 16–30 September 2005.
- ‘Dietary, lifestyle and pharmacological management of diabetes’, CME Programme on ‘Recent advances in nutritional sciences with reference to human performance’, Defence Institute of Physiology and Allied Sciences, Delhi; 17–21 October 2005.

Dr A. Jaryal

- ‘Effects of prebiotics, probiotic nutraceuticals on immune functions’, CME Programme on ‘Recent advances in nutritional sciences with reference to human performance’, Defence Institute of Physiology and Allied Sciences, Delhi; 17–21 October 2005.

Dr R.K. Yadav

- ‘Body weight regulation and management of obesity-related disorders’, CME Programme on ‘Recent advances in nutritional sciences with reference to human performance’, Defence Institute of Physiology and Allied Sciences, Delhi; 17–21 October 2005.

National and International Conferences

Organized by the Department

- Dr V. Mohan Kumar and Dr H.N. Mallick organized the Second Interim Congress of World Federation of Sleep Research and Sleep Medicine Societies, New Delhi; 22–26 September 2005.
- Dr R. Mathur organized a session on ‘Pain’, Annual Conference of Association of Physiologists and Pharmacologists of India (APPICON, 2005), Pondicherry; 12–15 December 2005.
- Dr K.K. Deepak organized a National Symposium on ‘Impedance plethysmography in the measurement of autonomic function and hemodynamics (IPAH-2006)’, 17–18 March 2006 and a teleconferencing session on ‘Validation studies in impedance plethysmography’ between Sultan Qaboos University, Muscat, Oman and AIIMS, IPAH-2006; 18 March 2006.
- Dr Kamallesh K. Gulia organized a symposium on ‘Sleep-related penile erections: From neural circuitry to erectile dysfunctions’, Second Interim Congress of World Federation of Sleep Research and Sleep Medicine Societies (WFSRMS), New Delhi; 22–26 September 2005.

Lectures delivered

Dr V. Mohan Kumar

- 'Role of the preoptic area in sleep regulation', Sir Shriram Memorial Oration of National Academy of Medical Sciences, Mumbai; 30 April 2005.

Dr R. Mathur

- 'Pattern of social behaviour in rats exposed to chronic ELF magnetic field', XXVIIIth General Assembly of International Union of Radio Science (URSI), New Delhi; 22–29 October 2005.
- 'Clinical assessment of pain modulation status', Annual Conference of Association of Physiologists and Pharmacologists of India, (APPICON, 2005), Pondicherry; 12–15 December 2005.

Dr K.K. Deepak

- 'Science and technology for the advancement of sports: The Indian scenario', Sports Authority of India (SAI), 'National Seminar on Sports Medicine' under the theme 'Commonwealth Games 2010—Challenges to sport medicine'; 30 July 2005.
- 'Analysis of control systems in autonomic nervous system', XVII Annual Conference of Physiological Society of India (PSI), MR Medical College, Gulbarga; 1–3 December 2005.
- 'Autonomic computing', International Conference on Systemics Cybernetics and Informatics (ICSCI-2006) under the aegis of Pentagram Research Centre, Hyderabad; 04–08 January 2006.
- 'Autonomic function testing: Physiological and clinical application', Shri MP Shah Medical College, Jamnagar, IVth Annual conference of Association of Physiologists and Pharmacologists of India (Gujarat Chapter); 4th February 2006.
- 'Monitoring autonomic functions', National Seminar on 'Scientific validation and technical evaluation of ancient medical systems (SVTEAMS)', IIT, New Delhi; 10–11 February 2006.

Dr Ratna Sharma

- 'Strategies to reduce factors and promote determinants of mental well-being (including traditional practices such as meditation). What is the evidence for these?', Meeting of technical experts to discuss the concept of mental health promotion and prepare an outline of a background paper on the subject, SEARO, WHO, Delhi; 14–15 October 2005.

Dr Nalin Mehta

- 'Physiology and functional anatomy of the eye', ORBIS India; 23 May 2005.
- 'Ethical issues in the practice of oculoplasty', 16th Annual Conference of Oculoplastics Association of India, Postgraduate Institute of Medical Sciences and Research, Chandigarh, India; 1–2 October 2005.
- 'Bioethics in physiology education and research', 51st Annual Conference of the Association of Physiologists and Pharmacologists of India, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Pondicherry, India; 11–15 December 2005.

Dr Suman Jain

- 'Sucrose ingestion modulates magnetic field induced analgesia', XXVIIIth General assembly of International Union of RadioScience, New Delhi, India 23–29 October 2005.
- 'Neural basis of emotional component of pain', 51st Annual Conference of the Association of Physiologists and Pharmacologists of India, Pondicherry; 11–16 December 2005.

Dr A.K. Jaryal

- 'Blood pressure variability', Annual Conference of Physiologists and Pharmacologists of India (APPICON), JIPMER, Pondicherry; 11–15 December 2005.

Dr Kamalesh K Gulia

- 'The septum exerts dual control on sleep-related penile erections in rats', Young Scientists Colloquium at Meeting of Emerging Trends in Neurosciences and the Annual Meeting of the Indian Academy of Neurosciences, Bangalore; 11–14 December 2005.

RESEARCH

Funded Projects

Completed

1. Development and clinical evaluation of artificial intelligence-based biomedical instruments. (BARC project). K.K. Deepak. Funded by DST from 2004 to 2006. Funds: Rs 6,046,00.
2. Effect of yoga on pulmonary function, mast cell activation, and quality of life in bronchial asthma. K.K. Deepak. Funded by Central Council for Research in Yoga and Naturopathy from 2002 to 2006. Funds: Rs 12,39,000.

Ongoing

1. Motor responses to noxious/non-noxious stimuli in spinalised humans and rats: Role of electromagnetic stimulation in recovery. R. Mathur. Funded by DST, under Integrated Long-Term Programme of Cooperation in Science and Technology between India and Russia from 2006 to 2009. Funds: Rs 32,67,339.
2. Multicentric trial of integrated software for quantification of autonomic tone. K.K. Deepak. Funded by Department of Information Technology (DIT), Ministry of Communications and Information Technology from 2004 to 2007. Funds: Rs 28,33,000.
3. Development of ECG amplifier: an essential hardware for the autonomic function tests (heart rate variability). K.K. Deepak. Funded by DST from 2004 to 2006. Total Funding: Rs 17,26,269.20.
4. Yogic relaxation in the management of ulcerative colitis. K.K. Deepak. Funded by Central Council for Research in Yoga and Naturopathy (CCRYN) from 2003 to 2006. Funds: Rs 9,63,000.
5. Role of the warm receptors of the preoptic area in altering sleep. H.N. Mallick. Funded by DIPAS from 2004 to 2007. Funds: Rs 4,66,000.
6. Effect of (Ala^{8,13,18})-magainin II amide on human trophoblast cells *in vitro*. D. Ghosh. Funded by ICMR from 2003 to 2006. Funds: Rs 7,17,731.

7. Defining endometrial receptivity for blastocyst implantation using cDNA based array technology. D. Ghosh. Funded by DST from 2006 to 2009. Funds: Rs 44,48,700.
8. A randomized controlled trial on the efficacy of yogic intervention in premenstrual syndrome. Ratna Sharma. Funded by ICMR from 2003 to 2006. Funds: Rs 16,83,000.
9. The effect of stress-induced changes in theta and alpha bands during memory retrieval. Ratna Sharma. Funded by AIIMS from 2005 to 2006. Funds: Rs 40,000.
10. Correlation between cardiovascular autonomic function and indicators of myocardial ischaemia in patients presenting anginal symptoms. Ashok Jaryal. Funded by AIIMS from 2005 to 2007. Funds: Rs 50,000.
11. Effect of prolonged sucrose feeding on tonic pain and orosensory reward. Rashmi Mathur. Funded by AIIMS from 2005 to 2006. Funds: Rs 40,000.
12. Prepulse modulation of startle reflex by music. Sanjay Kumar Sood. Funded by AIIMS from 2005 to 2006. Funds: Rs 40,000.
13. The effect of smoking on stress induced changes in cognitive functions. Ratna Sharma. Funded by AIIMS from 2005 to 2006. Funds: Rs 40,000.

Departmental Projects

Completed

1. A psychophilosophical study: Application of astanga yoga as a tool in the treatment of psychosomatic disorders.

Ongoing

1. Comparative study of cold pressor responses by using two different temperatures.

Collaborative Projects

Completed

1. Effect of exposure to magnetic field on social behaviour and learning and memory in rats. (with Neurosciences Centre, Jiwaji University, Gwalior).
2. Comparison of indigenously developed impedance cardiography and the fick method for measurement of cardiac output. (with Cardiology).
3. Autonomic functions in fibromyalgia. (with Medicine).
4. Quantification of sympathetic functions in patients of chronic renal failure. (with Nephrology).
5. Clinical and autonomic functions study of childhood anxiety disorders. (with Psychiatry).
6. Study of pathophysiology of simple writer's cramp using neurophysiological methods. (with Neurology).

7. Comparative evaluation of masticatory efficiency of conventional device with implant tissue supported mandibular complete denture using spectrophotometry and EMG. (with Centre for Dental Education).
8. Autonomic status and leptin levels in serum and peritoneal fluid of patients with pelvic endometriosis. (with Obstetrics and Gynaecology).

Ongoing

1. Assessment of endogenous opioid system and muscle spasm in headache patients. (with Neurology, Psychiatry and Endocrinology).
2. Modified neuroendocrine method to estimate endogenous opioid levels in healthy volunteers. (with Endocrinology).
3. Role of dehydroepiandrosterone sulphate (DHEAS) as a neuroprotective agent in Parkinson's disease (PD). (with Neurology).
4. Bioeffects of magnetic field: Role of protein kinase C and cytochrome oxidase in adult rats. (with School of Environment Sciences, JNU and Department of Biosciences, Jamia Islamia).
5. Correlation between cardiovascular autonomic function and myocardial ischaemia. (with Cardiology).
6. Autonomic cardiovascular functions after myocardial infarction: Effect of short-term exercise training. (with Cardiology).
7. Autonomic functions and selected immune markers in inflammatory bowel disease: Role of yogic intervention. (with Gastroenterology)
8. Electro-encephalographic and sympathetic responses, to visual-cues with emotional and rational contents. (Atal Bihari Vajpayee Indian Institute of Information Technology and Management, Gwalior).

PUBLICATIONS

Journals

1. Ambarish V, Barde P, Vyas A, Deepak KK. Comparison between pre-prandial and post-prandial heart rate variability (HRV). *Indian J Physiol Pharmacol* 2005;**49**:436–42.
2. Bhattacharjee M., Mathur R. Antinociceptive effect of sucrose ingestion in the human. *Indian J Physiol Pharmacol* 2005;**49**:383–94.
3. Bijlani RL, Vempati RP, Yadav RK, Ray RB, Gupta V, Sharma R, *et al.* A brief but comprehensive lifestyle education program based on yoga reduces risk factors for cardiovascular disease and diabetes mellitus. *J Alternative Complementary Med* 2005;**11**: 267–74.
4. Bijlani RL. What is death? *New Approaches to Medicine and Health (NAMAH)* 2006;**13**: 48–59.
5. Datta T, Gupta V, Deepak KK, Pandey RM. Narrowing of the anterior chamber angle during Valsalva maneuver: A possible mechanism for angle closure. *Eur J Ophthalmol* 2006;**16**:81–91.
6. Datta S, Biswas NR, Saxena R, Deepak KK, Menon V, Garg SP, *et al.* Ocular and cardiovascular autonomic function in diabetic patients with varying severity of retinopathy. *Indian J Physiol Pharmacol* 2005;**49**:171–8.
7. Ghosh D. Paintal AS (1925–2004). *Indian J Physiol Pharmacol* 2005;**49**:247–50.

8. Ghosh D. Julius Axelrod (1912–2004). *Indian J Physiol Pharmacol* 2005;**49**:251–2.
9. Ghosh D. Folklores in medical sciences. *Indian J Physiol Pharmacol* 2005;**49**:375–7.
10. Gulia KK, Mallick HN, Kumar VM. Ambient temperature related sleep changes in rats neonatally treated with capsaicin. *Physiol Behav* 2005;**85**:414–18.
11. Gupta N, Khera S, Vempati RP, Sharma R, Bijlani RL. Effect of yoga based lifestyle intervention on state and trait anxiety. *Indian J Physiol Pharmacol* 2006;**50**:41–7.
12. Jaryal AK. Blood pressure variability. *Indian J Physiol Pharmacol* 2005;**49**:5 (Suppl.);34–5.
13. Khubchandani M, Jagannathan NR, Mallick HN, Mohan Kumar V. Functional MRI shows activation of the medial preoptic area during sleep. *Neuroimage* 2005;**26**:29–35.
14. Lalitkumar PGL, Sengupta J, Ghosh D. Effect of tumour necrosis factor α (TNF α) on protein synthesis by mouse preimplantation stage embryos *in vitro*. *Indian J Physiol Pharmacol* 2005;**49**:139–47.
15. Mahapatra APK, Mallick HN, Kumar VM. Sleep changes during chronic cold exposure showed that the homeostatic requirement of sleep is reduced in the medial preoptic area lesioned rats. *Indian J Physiol Pharmacol* 2005;**49**:411–21.
16. Mallick HN, Kumar VM. Gating of dorsal penile nerve inputs by norepinephrine at the medial preoptic area in rats. *Indian J Physiol Pharmacol* 2005;**49**:325–30.
17. Mena NB, Jain S, Sharma R, Mathur R, Nayar U. Amygdalar neuronal responses to peripheral nociceptive stimuli in rats. *Indian J Physiol Pharmacol* 2005;**50**:17–27.
18. Mehta N. Research using animals—an ethical dilemma. *Indian J Physiol Pharmacol* 2005;**49**:1–7.
19. Ravi-Shankar S, Yadav RK, Basu-Ray R, Bijlani RL, Baveja T, Jauhar N, *et al*. Serum lipid response to introducing ghee as a partial replacement for mustard oil in the diet of healthy young Indians. *Indian J Physiol Pharmacol* 2005;**49**:49–56.
20. Sengupta J, Dhawan L, Lalitkumar PGL, Ghosh D. Nitric oxide in blastocyst implantation in the rhesus monkey. *Reproduction* 2005;**130**:321–32.
21. Shalimar, Handa R, Deepak KK, Bhatia M, Aggarwal P, Pandey RM. Autonomic dysfunction in systemic lupus erythematosus. *Rheumatol Int* 2005;**20**:1–4.
22. Sood SK. Nobel prize in physiology or medicine 2005: Treating ulcers with antibiotics. *Indian J Physiol Pharmacol* 2006;**50**:91–92.
23. Srividya R, Mallick HN, Kumar VM. Changes in brain temperature and thermoregulation produced by destruction of medial septal neurons in rats. *Brain Res Bull* 2005;**66**:143–8.
24. Srividya R., Mallick HN, Kumar VM. The changes in thermal preference, sleep-wakefulness, body temperature and locomotor activity in the rats with medial septal lesion. *Behav Brain Res* 2005;**164**:147–55.
25. Tripathi M, Mukherjee S, Deepak KK, Padma V. A comparison of autonomic functions before and after epilepsy surgery. *Epilepsia* 2005;**46**:308–9.
26. Vetrivelan R, Mallick HN, Kumar VM. Sleep induction and temperature lowering by medial preoptic $\mu 1$ adrenergic receptors. *Physiol Behav* 2006;**87**:707–13.
27. Vetrivelan R, Mallick HN, Kumar VM. Tonic activity of $\mu 1$ adrenergic receptors of the medial preoptic area contributes towards increased sleep in rats. *Neuroscience* 2006;**139**: 1141–51.
28. Yadav RK, Ray RB, Vempati R, Bijlani RL. Effect of a comprehensive yoga-based lifestyle modification program on lipid peroxidation. *Indian J Physiol Pharmacol* 2005;**49**:358–62.

Abstracts

29. Barde P, Jindal GD, Yadav RK, Deepak KK. Non-invasive measurement of physiological variation of cardiac output after postural challenge using impedance cardiography. A Physiological validation study. *Indian J Physiol Pharmacol* 2005;**49**:73.

30. Barde P, Jindal GD, Singh R, Deepak KK. New method of electrode placement for determination of cardiac output using impedance cardiography. *Indian J Physiol Pharmacol* 2005;**49**:63–64.
31. Khadka R, Sharma M, Jaryal AK, Dash SC, Deepak KK. Cardiac autonomic drive is related to severity of disease in chronic renal failure. *Indian J Physiol Pharmacol* 2005; **49**:79.
32. Kumar U, Deepak KK. Cross sectional study to evaluate cardiovascular autonomic functions in systemic sclerosis in Asian Indians. *Ann Rheum Dis* 2005;**64**:292.
33. Madan K, Malik V, Narang R, Deepak KK. Effect of successful percutaneous coronary intervention in obstructive coronary artery disease on baroreflex sensitivity. *Indian J Physiol Pharmacol* 2005;**49**:78.
34. Sharma P, Makharia G, Deepak KK. Cardiac autonomic functions in patients with achalasia cardia: A pilot study. *Indian J Gastroenterol* 2005;**24**:20.
35. Sharma P, Makharia G, Deepak KK. Patients with inflammatory bowel disease have reduced vagal tone. *Indian J Gastroenterol* 2005;**24**:158.
36. Sharma P, Patil U, Mane V, Makharia G, Deepak KK. Heart rate variability in response to water intake: Correlation with gastric myoelectrical activity in patients with inflammatory bowel disease. *Indian J Physiol Pharmacol* 2005;**49**:79.
37. Vempati RP, Bijlani RL, Deepak KK. Effect of yoga on exercise induced bronchoconstriction and urinary prostaglandin D2 metabolite in bronchial asthma. *Allergy Clin Immunol Int* 2005; (Suppl 1):593.
38. Vetrivelan R, Mallick HN, Kumar VM. Effects of blockade of alpha-1adrenoceptors of medial preoptic area on sleep-wakefulness and body temperature. *Neurosci Res* 2005;**52S**:s159.
39. Vetrivelan R, Mallick HN, Kumar VM. Regulation of sleep-wakefulness and body temperature by the adrenergic fibers of the medial preoptic area. *Indian J Physiol Pharmacol* 2005;**49**:46.
40. Yadav RK, Lal S, Kriplani A, Vempati R. Serum leptin levels in pelvic endometriosis: An Indian experience. *Gynecol Endocrinol* 2006;**22** (Suppl. 1):142.
41. Yadav RK, Lal S, Kriplani A, Deepak KK. Cardiovascular autonomic function in pelvic endometriosis. *Indian J Physiol Pharmacol* 2005;**49**:79–80.

Chapters in books

1. Bhatia R, Gupta N, Tripathi M, Dureja GP, Bijlani RL, Mathur R. Status of central opioidergic system and muscle spasm in chronic tension type headache: Perspective role in management. In: Mathur R (ed). *Pain updated: Mechanisms and effects*. New Delhi: Anamaya Publishers; 2006:226–38.
2. Bhattacharjee M, Bhatia R, Gupta N, Mathur R. Endogenous opioid system: A novel method to assess the endogenous opioid system in healthy volunteers. In: Mathur R (ed). *Pain updated: Mechanisms and effects*. New Delhi: Anamaya Publishers; 2006:11–21.
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11. Mathur R, Tripathi M, Pal R, Gopinath TN. Pain assessment as a marker for Alzheimer’s disease. In: Mathur R (ed). *Pain updated: Mechanisms and effects*. New Delhi: Anamaya Publishers; 2006:139–46.
12. Mathur R, Panda S. Pain assessment in syndrome X patients. In: Mathur R (ed). *Pain updated: Mechanisms and effects*. New Delhi: Anamaya Publishers; 2006:147–52.
13. Rengarajan J, Dureja GP, Jayalakshmi TS, Gupta N, Mathur R. Endogenous opioids status in idiopathic trigeminal neuralgia patients: effect of cervical sympathetic blockade. In: Mathur R (ed). *Pain updated: Mechanisms and effects*. New Delhi: Anamaya Publishers; 2006:245–56.
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Books

1. Kumar VM, Mallick HN (eds). *2nd Interim Congress of the World Federation of Sleep Research and Sleep Medicine Societies-WFSRSMS*, Monduzzi Editore International Proceedings Division, Bologna, Italy; 2005:207.
2. Mathur R (ed). *Pain updated: Mechanisms and effects*. New Delhi: Anamaya Publishers; 2006.

PATIENT CARE

The Integral Health Clinic continued to provide yoga-based intervention for prevention and management of chronic diseases. Twenty-three courses, attended by 94 patients, were completed during the year. Autonomic function laboratory and vascular function laboratory provided diagnostic facility for referred patients. The laboratory provided routine test of autonomic reactivity along with autonomic tone quantification and non-invasive recording of gastric motility (electrogastrography, EGG). A total of

1041 persons were tested for autonomic function test this year, which included 892 patients.

Neurophysiology laboratory provided support facility for evaluation of pain modulation status in early detection of Alzheimer's disease, and in the treatment of trigeminal neuralgia and chronic headache to a 110 patients (30+20+60, respectively).

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr R.L. Bijlani was awarded Professor R.C. Shukla Oration Prize by the Lucknow Branch of APPI and Physiology Society, King George's Medical University, Lucknow.

Dr V. Mohan Kumar was appointed Member, Research Advisory Council of the DRDO-Bharathiar University Centre for Life Sciences, Coimbatore, Tamil Nadu; appointed Member, Scientific Advisory Committee, National Brain Research Centre, Department of Biotechnology, Government of India; was appointed Member, Board of Studies in Physiology, Banaras Hindu University, Varanasi.

Dr R. Mathur was elected Treasurer, Indian Society for Pain Research and Therapy (ISPRAT); appointed Member, Board of Studies, Department of Physiology, Aligarh Muslim University, Aligarh.

Dr K.K. Deepak was appointed Member, Advisory Board for popular physiology textbook 'Medical Physiology' by A.C. Guyton; nominated Member, Academic Council, Sports Authority of India, Netajee Subhash National Institute of Sports (NSNIS), Patiala; was appointed, Chairperson, Scientific Commission, Indian Federation of Sports Medicine (IFSM); appointed Executive Member, *Indian Medical Journal* (an official Journal of AIGPA); Resource faculty for 'National Workshop on Strategies for Strengthening Emotional and Mental Health in Professional Institutions/ Institutions of Higher Learning', National Institute of Health and Family Welfare (NIHFW), Munirka, New Delhi; Member, Project Evaluation Committee (PEC) for evaluation of extramurally funded projects (EMR) scheme of Morarji Desai National Institute of Yoga; Member, Sports Equipment Purchase Committee, Sports Authority of India (SAI), Jawaharlal Stadium, New Delhi; Member, Sub-committee (Instrumentation Development) to prepare white paper on 'Biomedical Engineering research status in India', Department of Science and Technology (DST), Government of India; Member, Advisory Committee, Central Board of Secondary Education (CBSE).

Dr H.N. Mallick was appointed Secretary General, Asian Sleep Research Society; General Secretary, Indian Society for Sleep Research; Finance Secretary, Association of Physiologists and Pharmacologists of India.

Dr Nalin Mehta was appointed Associate Editor, *Indian Journal of Physiology and Pharmacology*; was certified as an ICMR-WHO 'Surveyor' of Ethics Committees; appointed Member, Indian Federation of Sports Medicine (IFSM); was invited to present a progress report at the University of Toronto Joint Centre for Bioethics Workshop for Re-entry plans of MHSc (Bioethics) International Stream Students, held at the University of Kwa-Zulu Natal, Durban, South Africa; appointed Member, Global Priority Setting Research Network (GPSRN), University of Toronto Joint Centre for Bioethics, Toronto, Canada; Member, Ethics Committee, RML Hospital.

Dr Sanjay Sood represented INSA during the Council meeting of International Union of Physiological Sciences (IUPS) at San Diego, California, USA; appointed Associate Editor, *Indian Journal of Physiology and Pharmacology*.

Dr Sanjay Sood was appointed Member, Laboratory Resource Project International Union of Physiological Sciences.

Dr R. Vetrivelan was awarded R. Srinivasan Prize for the best paper presented by a postgraduate student during the 51st Annual Meeting of Association of Physiologists and Pharmacologists of India, held in Pondicherry, India; 11–16 December 2005.

The Department is running the Confocal Laser Scanning Microscopy as a centralized facility.

VISITING SCIENTISTS

1. Dr Deepak Shrivastava, University of California, USA visited the department and delivered a lecture on ‘Basic science and understanding sleep’ on 5 October 2006.
2. Professor Mriganka Sur, Sherman Fairchild Professor of Neuroscience and Massachusetts Institute of Technology visited the Department of Physiology and delivered the talk on ‘How brain wiring creates brain function?’ on 9 January 2006.
3. Professor Alexander Ya. Kaplan, Professor and Head of Juman Brain Research Group, Department of Human and Animal Physiology, Faculty of Biology, M.V. Lomonosov Moscow State University, Moscow, Russia visited the Department of Physiology and delivered the talk on ‘Brain-Computer Interface (BCI): Control of external devices by EEG signals’ on 13 January 2006.

9.31 Radiodiagnosis

Professor and Head

Sima Mukhopadhyay
(up to 31 October 2005)

Sushma Vashisht
(from 1 November 2005)

Professors

Arun Kumar Gupta

Deep Narayan Srivastava

Additional Professor

Raju Sharma

Associate Professors

Manpreet S. Gulati
(on leave)

Sanjay Thulkar
(IRCH)

Sanjay Sharma
(RPC)

Assistant Professors

Suman Bandhu
(on leave)
Ashu Seith

Shivanand Gamanagatti
(Trauma Centre)
Smriti Hari

Atin Kumar
(Trauma Centre)

EDUCATION

Undergraduate and Postgraduate

BSc (Hons) Medical Technology in Radiography: A batch of 7 students was admitted to the course in 2005–2006. This course is of 3 years' duration. A total of 15 students were enrolled in this course.

MD: There were 19 junior residents out of whom three were sponsored candidates.

Short-term training

Short-term training was imparted to 4 doctors from Afghanistan.

Continuing Medical Education

Lectures delivered

Dr Sushma Vashisht

- 'Imaging in single pulmonary nodule', North Zone Radiology Meet–2005, Indian Radiological and Imaging Association, Punjab and Chandigarh Branch, Patiala; 9–10 April 2005.
- 'Imaging in obstructive biliopathy', Imaging Fiesta 2006, IRIA, New Delhi; 18–19 March 2006.
- 'Imaging of the orbit', AIIMS–MAMC–PGI course series on Neuro-radiology, PGI, Chandigarh; 17–18 September 2005.

Dr Arun Kumar Gupta

- 'Paediatric abdomen', Resident Training Programme, IRIA National Chapter, New Delhi; 7–9 October 2005.

Dr Deep Narayan Srivastava

- 'Gastrointestinal bleeding', Resident Training Programme, IRIA National Chapter, New Delhi; 7–9 October 2005.

Dr Raju Sharma

- ‘Dose reduction in computed tomography’, Quality in Radiological Imaging and Radiation Safety of Patients and Staff, AIIMS; April 2005.
- ‘New frontiers in body MRI’, High Field MR Users Meeting, Mumbai; April 2005.
- ‘Imaging in colon cancer’, Ninth Advanced Course in Coloproctology, Association of Colorectal Surgeons of India, SGPGI, Lucknow; October 2005.
- ‘MR imaging of bone tumours’, East Delhi Radiology Association Conference, New Delhi; 29 January 2006.
- Film Reading Session, Imaging Fiesta 2006, Safdarjung Hospital, New Delhi; March 2006.

Dr Sanjay Thulkar

- ‘Breast imaging’, Resident training programme, organised by Indian Radiological and Imaging Association, RML Hospital, New Delhi; 7 October 2005.
- ‘Advances in breast imaging’, Update in Oncoimaging, Indian Radiological and Imaging Association, PGI, Chandigarh; 26 February 2006.

Dr Sanjay Sharma

- ‘Radiology of fungal chest infections’, Dr Rajiv Gandhi Cancer Centre and MSD Pharmaceuticals, Neemrana, Rajasthan; 21 January 2006.
- ‘Radio-frequency ablation of early breast cancer: Early experience’, Registry Meet of the Indian Society of Vascular and Interventional Radiology, PGI Chandigarh; May 2005.
- ‘Radiology of prostate’, Resident Training Programme, Delhi Chapter of IRIA, RML Hospital, New Delhi; 9 October 2006.
- ‘Neuro-imaging in neuro-ophthalmology’, Ocular Electro-diagnosis and Neuro-imaging, Shroff Eye Centre, Delhi, India Habitat Centre; 21 August 06.

Dr Ashu Seith

- Radiological issues in HIV/TB in CME HIV/AIDS and TB, AIIMS; Jan 2006.

National and International Conferences

Organized by the department

- 3rd Annual Conference of the Indian Society of Paediatric Radiology, AIIMS; 1–2 October 2005.
- Second National Conference of Radiological Technologists, Department of Radio-diagnosis and Imaging Centres, AIIMS; 14–15 October 2005.

Lectures delivered

Dr Sushma Vashisht

- ‘Imaging of the orbit’, 8th Annual Conference of Indian Society of Neuro-radiology, New Delhi; 18–19 November 2005.

Dr Arun Kumar Gupta

- ‘Cost-effective analysis of screening programme for hepatocellular carcinoma’, Research Methodology Workshop at C-MET, AIIMS organized by the National Neonatology Forum and supported by ICMR; 6–8 May 2005.
- ‘Study of the spectrum of leukodystrophies: Correlation of imaging, spectroscopic and biochemical features’, 43rd Annual Conference of Neuroradiology and NER Foundation Symposium; 21–27 May 2005.

- ‘Anorectal anomalies/intersex disorders: An overview’, 3rd Annual Conference of the Indian Society of Paediatric Radiology; AIIMS; 1–2 October 2005..
- ‘Screening patients of cirrhosis for hepatocellular carcinoma: Proposing an evidence-based practical protocol’, Plenary Session of the 46th Annual Conference of the Indian Society of Gastroenterology, ISGCON 2005, Visakhapatnam; 12 November 2005.
- ‘Imaging of tuberculosis in children’, Pedicon 2006, 43rd National Conference of Indian Academy of Pediatrics, New Delhi; 5–8 January 2006.
- ‘Role of genitography in the era of US and MRI in the evaluation of intersex children’, European Congress of Radiology (ECR) 2006, Vienna, Austria; 3–7 March 2006.

Dr Deep Narayan Srivastava

- ‘Radiation protection during fluoroscopy and angiography in paediatric radiology’, 3rd Annual Conference of the Indian society of Paediatric Radiology, New Delhi; October 2005.
- ‘Radiation protection during interventional procedures’, 2nd National Conference of Radiological Technologists, New Delhi; 14–15 October 2005.
- ‘Chemo and radio embolization in hepatocellular carcinoma’, 8th Indian Society of Vascular and Interventional Radiology Conference, Pune; 23–25 October 2005.

Dr Raju Sharma

- ‘Radiation protection in pediatric CT’, Third Annual Conference of Indian Society of Pediatric Radiology, New Delhi; October 2005.
- ‘Practical approach to imaging congenital CNS anomalies’, Eighth Annual Conference of Indian Society of Neuro-Radiology, New Delhi; 18–20 November 2005.

Dr Sanjay Thulkar

- ‘Benign breast diseases’, Protocol development workshop, Indian Clinical Epidemiological Network, AIIMS; 20 May 2005.

Dr Sanjay Sharma

- ‘Cross-sectional abdominal anatomy as seen on CT imaging’, National Workshop on PET/ CT, Indian College of Nuclear Medicine, AIIMS; 4 December 2006.
- ‘MR imaging of the muscles supporting the phallus: A clue to the true sex in an intersex child’, World Congress on Hypospadias and Intersex Disorders, International Society Hypospadias and Intersex Disorders, Istanbul, Turkey; 19 November 2006.
- ‘Imaging in neuro-ophthalmology’, Annual Conference of the Delhi Ophthalmic Society, India Habitat Centre, New Delhi; April 2006.
- ‘Orbital imaging’, Annual Conference of the Delhi Ophthalmic Society, India Habitat Centre, New Delhi; April 2006.

Dr Ashu Seith

- ‘Paediatric orbital masses’, 3rd Annual Conference of Indian Society of Paediatric Radiology, AIIMS; October 2005.

Dr Smriti Hari

- ‘Basics and advances in ultrasound’, 2nd National Conference of Radiological Technologists, New Delhi; 14–15 October 2005.

Dr Shivanand Gamanagatti

- 'Prenatal sonography in detection of cranio-spinal anomalies', 8th Annual Congress of Indian Society of Neuroradiology 2005, New Delhi, India; 18–20 November.

RESEARCH

Funded Projects

Completed

1. Dose reduction in CT while maintaining diagnostic confidence. Arun Kumar Gupta. International Atomic Energy Agency (IAEA) from 2002 to 2006. Funds: US \$ 4000.

Ongoing

1. Management of liver cancer using radionuclide methods with special emphasis on early diagnosis, loco regional therapy (intra-arterial) and internal dosimetry. Deep N. Srivastava. Funded by IAEA from 2001 to 2006. Funds: US\$ 40,000.
2. Role of radio-frequency ablation in early breast cancers. Sanjay Sharma. Funded by the Intramural Institute Research Grant of the AIIMS from 2005 to 2006. Funds: Rs 1 lakh.

Departmental Projects

Completed

1. MRCP evaluation of high CBD strictures
2. Role of MR imaging of the spine in neurologically normal children presenting with voiding dysfunction
3. Prevalence, diagnostic evaluation, natural course and management strategies of early hepatocellular carcinoma among patients, with cirrhosis of liver (PhD Radiodiagnosis)
4. Comparison of carbon dioxide angiography with conventional digital subtraction angiography in peripheral arterial occlusive diseases of lower limbs.

Ongoing

1. Pulmonary tuberculosis: CT evaluation in active and post-treatment phases with limited MR correlation
2. Chest tuberculosis in children: CT findings in active and post treatment cases
3. Breast cancer: Local tumour staging by MRI and its impact on therapeutic approach
4. Role of percutaneous vertebroplasty in management of painful vertebral lesions
5. Evaluation of the role of MDCT, CT angiography and bronchial artery embolization in the management of hemoptysis
6. Role of MRCP in the diagnostic work-up of portal biliopathy
7. Characterization of bone tumors with in-vivo proton MR spectroscopy aided by dynamic contrast-enhanced MRI
8. Role of MRI in planning of breast-conserving surgery for carcinoma breast
9. Role of MR and MR sialography in salivary gland diseases
10. Comparison of conventional and gadolinium BOPTA-enhanced MRCP in the evaluation of biliary enteric anastomosis
11. Preoperative evaluation of carcinoma of ovary with multidetector CT and its correlation with surgical findings
12. Role of directional vacuum assisted breast biopsies in patients with previously equivocal biopsy results
13. Imaging evaluation of intra-orbital masses causing proptosis
14. Imaging evaluation of locally advanced squamous cell carcinoma of oral cavity
15. Evaluation of tracheobronchial lesions by multidetector row CT
16. Role of MR arthrography in the assessment of glenohumeral instability

Collaborative Projects

Completed

1. Prospective evaluation of neurogenic bowel and bladder disorders in children with cerebral palsy (with Physical Medicine and Rehabilitation).
2. Magnetic resonance imaging study to compare changes in TM Joint following mandible advancement using twin block and Bionator appliances (with Dental Surgery).
3. Assessment of outcome of surgery for scoliosis (with Orthopedics).
4. Differentiation between benign and malignant hilar obstruction using laboratory and radiological investigations: A prospective study (with GI Surgery).
5. Assessment of latent manganese toxicity and development of intrapulmonary arterio-venous shunting as prognostic factors following surgery for biliary atresia (with Paediatric Surgery).
6. Dosimetric and therapeutic evaluation of transarterial Rhenium-188 in cases of inoperable liver cancer (with Nuclear Medicine).
7. Impact of pre-operative vascular evaluation by doppler ultrasound on early failure rate of AV fistula in haemodialysis patients (with Surgical Disciplines).
8. Abdominal infections in immuno-compromised hosts: Clinical, radiological and microbiological correlation with special reference to bowel wall thickness (with Haematology).
9. Bone mineral density in patients with sporadic idiopathic hypoparathyroidism and Assessment of nephrolithiasis among patients with sporadic idiopathic hypoparathyroidism (with Endocrinology).

Ongoing

1. Profile of micronutrient deficiency and hepatobiliary dysfunction in cystic fibrosis (with Paediatrics).
2. Prospective randomized double blind control trial of dexamethasone vs. albendazole on calcification as an outcome in 1–2 ring enhancing lesions in neurocysticercosis of children (with Paediatrics).
3. Study of radio-diagnostic services of AIIMS hospital and their utilization pattern so as to identify equipment, physical facilities and manpower for the diagnostic imaging services of hospitals of Coal India Ltd. Commensurating with their needs (with Hospital Administration).
4. Molecular genetic studies in patients with leukodystrophy (with Paediatrics).
5. Evaluation of uterine artery embolization in the management of uterine fibroid in comparison with medical and surgical treatment (with Obstetrics and Gynaecology).
6. Management of liver cancer using radionuclide methods with special emphasis on early diagnosis, locoregional therapy (intra-arterial) and internal dosimetry (with Nuclear Medicine).
7. Neoadjuvant chemotherapy in advanced carcinoma breast (with General Surgery).
8. Study of the effect of resistance muscle exercise on insulin sensitivity in non-obese type-II diabetic Asian Indians (with Medicine).
9. Role of growth hormone—Insulin-like growth factor-1 axis in abnormal body composition and insulin resistance in Asian Indians (with Medicine).
10. Comparative evaluation of ultrasonography and MRI in prenatal diagnosis of fetal anomalies (with Obstetrics and Gynaecology).
11. Comparative evaluation of MRI and arthroscopy in the diagnosis of meniscal tears in anterior cruciate ligament deficient knees (with Orthopaedics).
12. Evaluation of image-based treatment planning in radiotherapy (with Radiotherapy).
13. Role of neoadjuvant chemotherapy in management of patients with advanced ovarian cancer (with Medical Oncology).
14. MR spectroscopy and endorectal MR imaging in the diagnosis of early prostate cancers and its correlation with histopathological results of TRUS guide prostate biopsies and surgical specimens (with NMR).

15. Study of physical parameters and quality assurance in the gamma knife-based stereotactic radiosurgery with non-coplanar beam in the phantom (with Medical Physics).
16. Study of effectiveness of virtual simulation in external beam radiotherapy planning of carcinoma cervix (with Radiotherapy).
17. Metabolic characterization of soft tissue tumours and pathologic and radiological correlation with *in vivo* Magnetic Resonance Spectroscopy (MRS) (with Surgical Oncology and NMR).
18. Randomised comparison of ABVD with EVAP in newly diagnosed cases of Hodgkin's lymphoma (with Medical Oncology).
19. Role of three dimensional computed tomographic scanning in assessment of mandibular invasion and its utility in planning mandibular resection and reconstruction in oral cancer patients (with Surgical Oncology).
20. Evaluation of efficacy of radio-frequency ablation of primary tumour in early breast cancer (with Surgery).
21. Clinical and radiological evaluation of chest infections in patients with hematological malignancies presenting with febrile neutropenia (with Haematology).
22. To assess the utility of resistive index on Doppler ultrasound in predicting chronic allograft nephropathy (with Nephrology).
23. CT Guided celiac plexus block for the management of benign pain due to chronic pancreatitis: A comparative study using steroid and alcohol neurolysis (with Anaesthesia).
24. Relationship of serum TSH with thyroid vascularity assessed at operation (with Surgery).
25. Quantitative imaging study of breast cancer and its correlation with oxidative stress (with Medical Physics).
26. Study of structure and function of lung in patients with achalasia cardia (with Gastroenterology).
27. Prevalence of osteoporosis in patients with ankylosing spondylitis (with Medicine).
28. Role of ¹⁸F-FDG PET/CT in the evaluation of nodular pulmonary lesions and its comparison with CT scan findings (with Surgery).
29. Evaluation of ¹⁸F-FDG PET/CT and comparison with CT findings in patients with mediastinal lymphadenopathy due to tuberculosis and sarcoidosis (with Medicine).
30. Study of etiological risk factor profile in paediatric strokes (with Paediatrics).
31. Endothelial dysfunction in rheumatoid arthritis (with Medicine).
32. A survey on the prevalence of tuberculosis (with Medicine).
33. To study the therapeutic window in rheumatoid arthritis (with Medicine).

PUBLICATIONS

Journals

1. Gamangatti S, Sharma R, Hatimota P, Guleria R, Arvind S. Giant thymolipoma. *Am J Roentgenol* 2005;**185**:283–4.
2. Guglani B, Das CJ, Seith A, Tandon N, Loway BA. A deformed skull with enlarging hands and feet in a young female. *Br J Radiol* 2006;**79**: 84–6.
3. Hari S, Seith A, Srivastava DN, Makharia G, Pal S. Isolated tuberculosis of the pancreas diagnosed with needle aspiration: A case report and review of the literature. *Trop Gastroenterol* 2005;**26**:141–3.
4. Hazrah P, Parshad R, Bal S, Sharma R, Dinda A. A rapidly growing rectal endometrioma masquerading as a malignancy. *Int J Colorectal Dis* 2005. (Epub ahead of print).
5. Jain T, Sharma R, Prabhu S, Das CJ. Preoperative diagnosis of Meckel's diverticulum: A case report and review of literature. *Trop Gastroenterol* 2005;**26**:99–101.

6. Jain TP, Thulkar S, Saha S, Bakhshi S, Dominic J. Extensive pneumothorax, pneumomediastinum and surgical emphysema as complication of bleomycin therapy. *Pediatr Radiol* 2005;**35**:1227–9.
7. Kashyap R, Sharma LM, Gupta S, Saxena R, Srivastava DN. Deep vein thrombosis in a patient with severe haemophilia A. *Haemophilia* 2006;**12**:87–9.
8. Kaur J, Khandpur S, Seith A, Khanna N. Dapsone-induced eosinophilic pneumonitis in a leprosy patient. *Indian J Lepr* 2005;**77**:267–71.
9. Kumar A, Agarwala S, Srinivas M, Bajpai M, Bhatnagar V, Gupta DK, *et al.* Anorectal malformations and their impact on survival. *Indian J Pediatr* 2005;**72**:1039–42.
10. Kumar A, Bajpai M, Gupta AK. Double urethral obstruction in a neonate—case report. *Eur J Pediatric Surg* 2005;**15**:449–51.
11. Kumar A, Bal C, Srivastava DN, Thulkar SP, Sharma S, Acharya SK, *et al.* Management of multiple intrahepatic recurrences after radiofrequency ablation of hepatocellular carcinoma with rhenium-188-HDD-lipiodol. *Eur J Gastroenterol Hepatol* 2006;**18**:219–23.
12. Kumar A, Nadig M, Patra V, Srivastava DN, Verma K, Bal CS. Adrenal and renal metastases from follicular thyroid cancer. *Br J Radiol* 2005;**78**:1038–41.
13. Kumar A, Srivastava DN, Bal C. Management of post-surgical recurrence of Hepatocellular carcinoma with Rhenium 188-HDD labeled iodized oil. *J Vasc Interv Radiol* 2006;**17**:157–61.
14. Kumar P, Rehani MM, Kumar L, Sharma R, Bhatla N, Chaudhary R, *et al.*, Tumor marker CA-125 as an evaluator and response indicator in ovarian cancer: Its quantitative correlation with tumor volume. *Med Sci Monit* 2005;**11**:CR84–CR89.
15. Kumar P, Rehani MM, Kumar L, Sharma R, Choudhary R, Thulkar S, *et al.* How relevant is CA-125 tumour marker in cancer of ovary: A clinical study. *Obs and Gynae Today* 2005;**10**:468–71.
16. Kumar P, Singh G, Thulkar S, Seith A, Kapoor RS, Manwar SR. Radiation dose reduction in radiography by increased filtration: Experiments with chest and pelvic phantoms. *J Med Physics* 2005;**30**:272.
17. Maria A, Gupta AK, Aggarwal R, Sreenivas V, Paul VK, Deorari AK. Incidence of periventricular leucomalacia among a cohort of very low birth weight neonates (<1500 gm). *Indian Pediatr* 2005;**43**:210–16.
18. Pandey AK, Sharma R, Gupta AK, Sharma SK. Opportunity for dose reduction exists in chest CT-implication in PET-CT. *Indian J Nucl Med* 2005;**20**:101–2.
19. Priya G, Bhagat H, Pandia MP, Chaturvedi A, Seith A, Goswami R. Can propofol precipitate pancreatitis in patients with Cushing’s syndrome? *Acta Anaesthesiol Scand* 2005;**49**:1381–3.
20. Shankar S, Rathi OP, Chandrasekhar P, Seith A, Handa R. Clinical Images: Hypertrophic arthropathy in childhood Hodgkin’s disease. *Arthritis Rheum* 2005;**52**:2584.
21. Singh G, Kumar P, Parshad R, Seenu V, Thulkar S, Bandhu S, *et al.* Volume measurement of breast tumor with ultrasonography and its comparison with mammography and clinical methods. *J Med Physics* 2005;**30**:205.
22. Srivastava DN, Sharma S, Pal S, Thulkar S, Seith A, Bandhu S, *et al.* Transcatheter arterial embolization in the management of hemobilia. *Abdom Imaging* 2006 Jan 30 (Epub ahead of print).

Chapters in Books

1. Vashisht S, Sharma S. Imaging of the Orbit. In: Berry M, Sudha S, Chowdhury V, *et al* (eds). *Diagnostic radiology: Neuroradiology including head and neck imaging*. 2nd ed. New Delhi: Jaypee Brothers; 2006:437–57.
2. Gupta AK. Pediatric Radiology. In: Parthasarathy A, Nair MKC, Menon PSN, Shah RC, Shah NK, Sachdev HPS, *et al* (eds). *IAP textbook of paediatrics*. 3rd ed. New Delhi: Jaypee Brothers; 2006:1059–72.

3. Gupta AK, Gamanagatti S. Adolescent radiology. In: Bhave SY, Nair MKC, Parthasarathy A, Menon PSN, Greydanus DE (eds). *Bhave's textbook of adolescent medicine*: 1st ed. New Delhi: Jaypee Brothers; 2006:685–708.
4. Sharma R, Gamanagatti S. Body MR imaging. In: Jagannathan NR. *Biomedical magnetic resonance*. New Delhi: Jaypee Brothers, 2005.
5. Sharma R, Kandpal H. Imaging of neoplastic liver lesions and liver volume estimation. In: Chattopadhyay TK (ed). *Gastrointestinal surgery annual. Volume 12*. New Delhi: GI Surgery; 2005: 55–78.
6. Sharma S, Jain T, Thulkar S. Newer cross-sectional imaging techniques. In: Ophthalmology. In: Dada T, Mandal S (eds). *New investigations in Ophthalmology*. 1st ed. New Delhi: Jaypee Brothers; 2006:184–91.
7. Sharma S, Jain T, Thulkar S. Cross-sectional orbital imaging in various pathological conditions. In: Dada T, Mandal S (eds). *New investigations in Ophthalmology*. 1st ed. New Delhi: Jaypee Brothers; 2006:192–208.

PATIENT CARE

Radiological procedures

Details of investigations for the period April 2005 to March 2006.

Routine studies

OPD	1,13,493
Indoor	24,501
Casualty	96,587
Portable	23,691
Total	2,58,272

Special investigations

Contrast studies

Barium studies	3,205
Intravenous pyelography	1,907
Micturating cystourethrography (Adult+Paediatric)	1,650
Hysterosalpingography (HSG)	216
Operation theatre (OT) studies	74
Endoscopic retrograde cholangio-pancreatography (ERCP)	351
Other contrast studies: Sinogram, fistulogram, T-tube cholangiogram, etc.	754

Total **8,157**

Mammography **1,550**

Ultrasound:	Routine	17,014
	Emergency	14,591
	Doppler	2,851

Total **34,456**

CT

Body	8,570
Head	4,186

Total **12,756**

Vascular studies

Digital subtraction arteriography (DSA)	193
Venography	72

Total	265
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MRI	2,275
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Interventional Procedures

Ultrasound-guided	1,163
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CT-guided	265
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Vascular	224
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Total	1,652
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Grand Total	61,111
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Total of routine and special investigations	3,19,383
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New equipment

- 4 units of ultrasound color Doppler including 2 for New Imaging facility which were shifted to the Trauma Centre.
- 2 digital flat panel radiography units including 1 for New Imaging facility which was shifted to the Trauma Centre.
- 1 flat panel digital subtraction angiography (DSA) unit.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr Sushma Vashisht was awarded the 'Achanta Lakshmi pathi Oration' award for the year 2004–05 by the National Academy of Medical Sciences.

Dr D.N. Srivastava was elected Vice-President, Indian Society of Vascular and Interventional Radiology (2006–2007).

Dr Raju Sharma elected Member, National Academy of Medical Science; President, Delhi Chapter, the Indian Radiology and Imaging Association.

Dr Ashu Seith elected Executive Council Member, Delhi Chapter of Indian Radiology of Imaging Association.

Dr Sanjay Sharma was an external expert at the University Grants Commission, New Delhi, for the Committee for Approval of Travel Grant for attending Scientific Conferences in India and Abroad.

Dr K.S. Madhusudan, senior resident, won a consolation prize for his paper 'CO2 DSA in peripheral arterial occlusive disease in comparison with conventional iodinated contrast media' at the National Conference of IRIA, Chennai; 5–8 January 2006.

Dr Harsh Kandpal, senior resident, won the best poster award for 'MR spectrum of spinal dysraphism' at the National Conference of ISPR, New Delhi; 1–2 October 2005.

Dr Muneer Eesa, junior resident, won the best featured paper award for 'A low cost phantom for image guided interventions' at the 8th Annual Conference of ISVIR, Pune; 23–25 October 2005.

Dr Subramanian, senior resident, won the 2nd award for poster presentation 'Spectrum of MRI findings in CNS infections'.

9.32 Reproductive Biology

Professor and Head

Anand Kumar

Associate Professor

Narendra Nath Sarkar

Assistant Professors

Pradeep Kumar Chaturvedi

Ashutosh Halder

Scientist IV

Urmila Vij

EDUCATION

Undergraduate/Postgraduate training

PhD

Three

Short- and long-term training

Three postgraduate students for short-term training.

Long-term

One as Research Associate (Post-doctoral).

Short-term

- Short-term training was provided to 3 students.
- Brief visit of MSc students from the Gauhati University.

National and International Conferences

Organized by the department

- AIIMS Golden Jubilee International Symposium on Recent Advances in Reproductive Biology; 21 February 2006.

Lectures delivered

Professor Anand Kumar

- Professor Ramesh Prasad Oration by the Indian Academy of Paediatrics, Aligarh, Uttar Pradesh; 22 October 2005.
- 'Modulatory role of bacteria on ovarian steroidogenesis', AIIMS Golden Jubilee, International Symposium on 'Recent advances in reproductive biology', New Delhi; 21 February 2006.
- 'Bacterial modulation of granulosa cell steroidogenesis', ISSRF Karnal; 23–25 February 2006.
- 'Effect of an Ayurvedic phytoestrogen Ashokarishta in estrogen deficiency in mice and women', IIT, Delhi; 11 February 2006.

Dr A. Halder

- 'Molecular cytogenetics in clinical practice', SGP GIMS, Lucknow, ICMR Course; 16 April 2005.
- 'Reproductive health and environment', Mohan Dai Oswal Cancer Treatment and Research Hospital, Ludhiana; 16 October 2005.
- 'Newer biotechnology techniques to study chromosome', IET Biotechnology Institute, Alwar; 24 October 2005.

RESEARCH

Funded Projects

Ongoing

1. Chromosome aneuploidy and mosaicism in preimplantation embryo on mouse model. A Halder. Funded by ICMR SRF.
2. Chromosome aneuploidy and mosaicism in preimplantation embryo. A. Halder. Funded by AIIMS for 3 years. Funds: Rs 1.5 lakh.
3. Secretion of progesterone and expression of hypoxia inducible factor 1 α during hypoxia induced by cobalt chloride in MA10 cells. Anand Kumar. Funded by ICMR RA.
4. Effect of cryo-freezing on human spermatozoa: Sperm functions and ultrastructure study. P.K. Chaturvedi. Funded by AIIMS. Funds: 0.50 lakh.
5. Role of hypoxia on vascular endothelial growth factors secretion in MA10 Leydig cells. P.K. Chaturvedi. Funded by ICMR SRF.

Departmental Projects

Completed

1. Double-blind randomized study on polyherbal preparations of Ashokarista on postmenopausal status of women.
2. Evaluation of emergency contraception: A contraceptive intervention-approaching target with controversy and opposition.

Ongoing

1. Chromosome aneuploidy and mosaicism in preimplantation embryo
2. Role of hypoxia on progesterone and vascular endothelial growth factor secretions in MA-10 cells
3. Effect of phytoestrogen, genestein, on LNCAP cell line
4. Evaluation of emergency contraception: A contraceptive intervention-approaching target with controversy and opposition. (Review of literature).
5. Studies on the effect of antihormones on the metabolic biotransformation and interaction of oestrogen and progesterone in target organs.
6. Evaluation of prognostic tumour markers in hormone dependent tumours.
7. Evaluation of Nuva ring: A potential combined contraceptive vaginal device (Review of literature).
8. Regulation of granulosa cell steroidogenesis.
9. Evaluation of intracytoplasmic sperm injection: An assisted reproductive technique and its outcome to overcome infertility of a couple (Review of literature).

Collaborative Projects

Ongoing

1. Characterization of chromosomal anomalies in multiple myeloma patients using cytogenetics and FISH (with Medical Oncology, IRCH).

PUBLICATIONS

Journals

1. Halder A, Fauzdar A, Kabra M, Saxena A. Detection of 22q11.2 hemizygous deletion by interphase FISH in a patient with features of CATCH22 syndrome. *Indian Pediatr* 2005;**42**:1236–9.
2. Halder A, Fauzdar A, Kumar A. Serum Inhibin B and follicle-stimulating hormone levels as markers in the evaluation of azoospermic men: A comparison. *Andrologia* 2005;**37**:173–9.
3. Halder A, Halder S, Fauzdar A. A preliminary investigation on molecular basis for clinical aggressiveness in cervical carcinoma by comparative genomic hybridization and conventional fluorescent *in-situ* hybridization. *Indian J Med Res* 2005;**122**:434–6.
4. Halder A. Placental chimerism in early human pregnancy. *Indian J Hum Genet* 2005;**11**:84–8.
5. Jha A, Sharma SK, Tandon N, Lakshmy R, Kandhiravan T, Handa KK, *et al.* Thyroxine replacement therapy reverse sleep-disordered breathing in patients with primary hypothyroidism. *Sleep Med* 2006;**7**:55–61.
6. Kumar A, Halder A, Chaturvedi PK, Chiplunker A, Arora Ekta, Shruti, *et al.* Results of preclinical and clinical trials of Ashokarishta. *Indian J Physiol Pharmacol* 2005;**49**:92.
7. Reinsberg J, Christoffel S, Kumar A, Van der ven H. Escherichia coli derived factors modulate human granulosa cell steroidogenesis. *Acta Physiol Scand* 2005;**185**:303–12.
8. Sarkar NN, Sarkar R. Sexual assault on women: Its impact on her life and living in society. *Sexual Relationship Therapy* 2005;**20**:407–19.
9. Sarkar NN, Sarkar R. Sexual assault: A crime against women in the perspective of science, society and law. *Int Med J* 2006;**13**:31–6.
10. Sarkar NN. The combined contraceptive vaginal device (NuvaRing[®]): A comprehensive review. *Eur J Contraception Reprod Health Care* 2005;**10**:73–8.
11. Vij U, Kumar A, Mehra R, Kushal M, Mittal S, Sharma K. Mechanism of antiprogestin interaction with experimental animal and human target tissues. *Indian J Physiol Pharmacol* 2005;**49**:130.

PATIENT CARE AND OTHER SERVICES

- Andrological examinations
Semen examination: 293
Seminal Fructose: 64
ER and PR receptor assays: 45
- Male infertility (primary hypogonadism), reproductive genetic counseling-cum-management planning/ expert opinion was provided to cases of male infertility (~100 cases), female infertility (~20 cases), RSA (~20 cases), foetal malformation (~10 cases) and haematologic malignancy (~10 cases), microdeletion syndrome (8 cases), klinefelter syndrome (4 cases), etc.
- Standardization of newer markers (inhibin B) for gametogenesis.

Routine assays for LH, FSH, prolactin, T3, T4, TSH, testosterone, oestradiol, progesterone, alpha foeto-protein, prostate-specific antigen, beta-hCG, CA-125 and PSA in the blood samples of patients were carried out at the Central Radioimmunoassay facility.

Name of assay	Number
FSH	1,761
LH	1,375
Prolactin	1,465

T3	3,309
T4	4,098
TSH	7,891
Testosterone	810
Oestradiol	285
Progesterone	60
AFP	1,627
PSA	1,192
Beta-hCG	412
CA-125	711
Cortisol	6
Total	25,002

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor Anand Kumar delivered the Professor Ramesh Prasad Oration by the Indian Academy of Paediatrics (UP), Aligarh; 22 October 2005.

Dr A. Halder got Silver Medal for a paper presented at the Association of Obstetrics and Gynecology of Delhi Annual Conference, November 2005; conducted a field epidemiologic snap survey 'Reproductive effect of environmental pollution in men and women exposed to environmental pollutant in villages of Bathinda', Punjab; 6–9 October 2005.

VISITING SCIENTISTS

Professor C.V. Rao (USA); Dr Nasif Rahman (Finland); Professor Xiangdong Li (China); Dr Arif Siddiqui (Pakistan); visited the department.

9.33 Surgical Disciplines

Professor and Head

S.N. Mehta

Professors

M.C. Misra

Anurag Srivastava

Arvind Kumar

Additional Professors

S. Chumber

S. Guleria

R. Parshad

Associate Professors

V. Seenu

Sandeep Agarwal
(on leave)

Assistant Professors

V.K. Bansal

Anita Dhar

Biplab Mishra
(Trauma Centre)

Sushma
(Trauma Centre)

Amit Gupta
(Trauma Centre)

Subodh Kumar
(Trauma Centre)

Maneesh
(Trauma Centre)

EDUCATION

Short-term training

The department had four Senior Surgeons from India who came for training in laparoscopy and one surgeon for training in thoracic surgery.

Fifteen students from abroad (Germany, UK, Nigeria) came to the department for their elective posting in surgery.

Continuing Medical Education

Professor S.N. Mehta

- Convenor of the CME on 'Complications in surgery', Department of Surgical Disciplines and ASICON Surgical Education and Research Foundation, AIIMS; 26 March 2006.
- Professor S.N. Mehta was Convener and Dr Rajinder Parshad Secretary for the monthly meeting of Delhi State Chapter of the Association of Surgeons of India organized and hosted by the department, AIIMS; February 2006.

Professor M.C. Misra

- Organizing Chairman, AIIMS Golden Jubilee Celebrations on 'International minimal access surgery conference and live workshop' (AIIMS ENDOSURG 2006)', AIIMS; 10–12 March 2006.
- Organized Protocol Development Workshop 'Screening for prevalence of breast pain and Nodularity and validation of a new breast nodularity scale', AIIMS; 20th and 21st May 2005 under Indian Clinical Epidemiology Network (INCLIN).

Lectures delivered

The faculty of the department participated in and delivered 77 lectures in CME programme, symposia, national and international conferences during the year.

RESEARCH

Funded Projects

Ongoing

1. Protocol Development Workshop on 'Screening for prevention of breast pain and nodularity and validation of breast nodularity scale', M.C. Misra. Funded by Clinical Epidemiology Network (INCLEN) for 1.5 years. Funds: Rs 3.45 lakh.
2. Relationship between genetic polymorphism in drug metabolizing enzymes, CYP1A1 and GSTM1 and risk of developing oral pre-cancer and cancer among consumers of tobacco and chewing products. Anurag Srivastava. Funded by ICMR. Funds: Rs 1 crore 20 lakh.
3. To evaluate the efficacy and tolerability of tacrolimus in patients undergoing renal transplantation. S. Guleria. Funded by Panacea Biotec. Funds: Rs 6 lakh.
4. Adjuvant tamoxifen longer against shorter. An international multicentre randomized trial to define the optimal duration of tamoxifen in an adjuvant setting. Anurag Srivastava. Funded by Atlas Trial Office, Clinical Trial Services Unit, Radcliffe Infirmary, Oxford, UK for 4 years.
5. Impact of vas irrigation with methylene blue and diltiazem on fertility in mice. V. Seenu. Funded by AIIMS. Funds: Rs 40,000.
6. Role of MR spectroscopy in human breast cancer. V. Seenu. Funded by DST. Funds: Rs 20 lakh.
7. Prospective case control study to evaluate role of glutathione S transferase (GSTT1 and GSTM 1) gene deletion in breast carcinoma and its prognostic significance. V.K. Bansal. Funded by AIIMS. Funds: Rs 50,000.
8. Role of *H. pylori* in benign and malignant gallbladder disease. V.K. Bansal, Sushma. Funded by AIIMS for 2 years. Funds: Rs 60,000.

Departmental Projects

Completed

1. Detection and prevention of deep nervous thrombosis in lower limbs among patients undergoing major abdominal surgery.
2. Impact of pre-operative vascular evaluation by Doppler ultrasound on the early failure rate of arterio-venous fistulae in haemodialysis patients.
3. Role of Tc99m tetrofosmin scan in distinguishing chemo-sensitive from chemo-resistant breast cancer patients.
4. Laparoscopic and conventional incisional and ventral hernia repair: A randomized study.

5. Evaluation of quality of life after day care hernia surgery.
6. Ambulatory laparoscopic hernia repair: A feasibility study.
7. Evaluation of early outcomes and quality of life after day care conventional inguinal hernia repair.
8. Assessment of the efficacy of Tc-99m–tetrofosmin scinti-mammography in identifying locally advanced breast cancer sensitive to neo-adjuvant chemotherapy.
9. Designing of methylation target arrays for breast cancer.
10. Evaluation of RF ablation in the treatment of small primary tumour in breast cancer.
11. Role of centchroman in management of mastalgia and fibroadenoma.

Ongoing

1. Value of PET scan in treatment and staging of locally advanced carcinoma breast.
2. Evaluation of tracheobronchial lesions by multidetector row CT.
3. Role of *in vitro* MR spectroscopy in the evaluation of mediastinal lymphadenopathy.
4. Evaluation of 18-FDG CT-PET and comparison with CT findings in patients with mediastinal lymphadenopathy due to tuberculosis and sarcoidosis.
5. Role of 18-FDG CT-PET in the evaluation of patients with solitary pulmonary nodule.
6. Role of 18-FDG CT-PET in the evaluation of patients with mediastinal lymphadenopathy.
7. Evaluation of patients with thymoma using 18-FDG CT-PET scan and its co relation with histology.
8. Quality of life among patient with breast cancer reporting to tertiary care hospital, New Delhi.
9. Factors affecting incidence of early postoperative complications.
10. Dyslipidaemia and cardiovascular risk factors in renal transplant recipients.
11. Three port vs. four ports laparoscopic cholecystectomy: A prospective randomized controlled study.
12. Focused abdominal sonography in trauma (FAST) in patients with blunt trauma abdomen: A prospective study.
13. Total extraperitoneal hernia repair comparison of space creation by direct telescope vs. balloon dissection: A randomized controlled study.
14. Post-cholecystectomy symptoms following laparoscopic cholecystectomy.

15. Standardized mesh repair for inguinal hernia: A pilot study.
16. To study the feasibility of fast track thyroidectomy.
17. Post-operative surgical site infection in clean and clean contaminated operationsb-hCG expression inpatients with benign and malignant breast diseases.
18. Prospective study to evaluate the role of Helicobacter pylori in benign and malignant hepatobiliary disease.
19. To study and evaluation the problems associated with gall stone disease leading to post-cholecystectomy syndrome using upper gastrointestinal endoscopy.
20. Radical duct excision for nipple discharge (benign breast disease): Its long-term follow-up.
21. Role of centchroman in regression of mastalgia and regression of fibroadenoma and its correlation to histopathology and oestrogen and progesterone receptor.
22. Randomized controlled trial on centchroman in management of mastalgia and fibroadenoma.
23. Advanced sentinel lymph node evaluation in breast and head and neck cancers.
24. To study the burden of postoperative surgical site infections in clean and clean contaminated operations.
25. To evaluate the role of intra-abdominal pressure as a predictor of abdominal wound dehiscence.

Collaborative projects

Completed

1. Carbon dioxide DSA in peripheral arterial disease of lower limbs in comparison with conventional iodinated contrast media (with Radiology).

Ongoing

1. Development of 'Bloodless surgery' (Department of Clinical Engineering and Medical Physics at Cardiff University, UK).
2. Quality of life of live related donors (with Nephrology).
3. Molecular typing and detection of mupirocin and methicillin-resistant *Staph aureus* (with Microbiology).
4. To assess the value of biphosphonates in post-transplant bone disease (with Endocrinology and Nephrology).
5. Cytokine gene polymorphismin renal transplant patients (with Transplant Immunology and Immunogenetics).

6. Effect of renal transplantation on erectile dysfunction (with Urology).
7. CMV disease in transplantation (with Microbiology).
8. Evaluation of neo-adjuvant chemotherapy in locally advanced breast cancer (with Radiotherapy, Radiology and Pathology).
9. Outcome after laparoscopic cardiomyotomy: Early and late (with Gastroenterology).
10. Efficacy and feasibility of regional anaesthesia compared to general anaesthesia for totally extraperitoneal laparoscopic inguinal hernia repair (with Anaesthesiology).
11. Breast cancer: Local tumour staging by MRI and its impact on therapeutic approach (with Radiodiagnosis and Pathology).
12. Sentinel lymph node biopsy for locally advanced breast carcinoma after neo-adjuvant chemotherapy (with Nuclear Medicine, Pathology and Radiotherapy).
13. Advanced sentinel lymph node evaluation in breast and head and neck cancers (with Endocrinology, Pathology and Nuclear Medicine).
14. Prediction of axillary lymph node status using upfront (prior to neo-adjuvant chemotherapy) sentinel node biopsy in locally advanced breast cancer (with Nuclear Medicine).
15. Evaluation of the role of proton MR spectroscopy in the non-invasive detection, assessment of treatment response and tumor metabolism in breast cancer (with NMR).
16. Study of apoptotic, transcription and synaptic markers in ovariectomized rat hippocampus following estrogen and tamoxifen therapy (with Anatomy).
17. Evaluation of CO₂ angiogram in assessing peripheral arteries in chronic arterial occlusive disease (with Radiodiagnosis).
18. Evaluation of cell cycle regulatory molecules in breast cancer (with Anatomy).
19. Role of reflexology therapy in management of mastalgia: A randomized prospective study (with Biophysics).

PUBLICATIONS

Journals

1. Deorah S, Seenu V, Pradeep KK, Sharma S. Spontaneous appendiculo-cutaneous fistula—a rare complication of acute appendicitis. *Trop Gastroenterol* 2005;**26**:48–50.
2. Mahajan S, Mukhiya GK, Singh R, Tiwari SC, Kalra V, Guleria S, *et al.* Assessing suitability for renal donation: Can equations predicting glomerular filtration rate substitute for a reference method in the Indian population? *Nephron Clin Pract* 2005;**101**:c1128–c1133.
3. Misra MC, Imlitemsu. Drug treatment of haemorrhoids: Therapy in practice. *Drugs* 2005;**65**:1481–91.

4. Panigrahi A, Deka RM, Bhowmik D, Dash SC, Tiwari SC, Guleria S, Mehra NK. Functional assessment of immune markers of graft rejection: A comprehensive study in live related renal transplantation. *Clin Transpl* 2006;**20**:85–90.
5. Parshad R, Hazrah P, Kumar S, Gupta SD, Ray R, Bal S. Effect of preoperative short course famotidine on TILs and survival in breast cancer. *Indian J Cancer* 2005;**42**:185–90.
6. Parshad R, Kumar R, Hazrah P, Bal S. A randomized comparison of the early outcome of stapled and unstapled techniques of laparoscopic total extraperitoneal inguinal hernia repair. *JSLs* 2005;**9**:403–7.
7. Prasad HK, Singhal A, Mishra A, Shah NP, Katoch VM, Thakral SS, *et al.* Bovine tuberculosis in India: Potential basis for zoonosis. *Tuberculosis (Edinb)*. 2005;**85**:421–8.
8. Saha S, Dhar A, Karar AK. Mycetoma sans sinuses. *Indian J Dermatol Venereol Leprol* 2006;**72**:143–4.
9. Seenu V, Hafiz A. Routine prophylaxis is not necessary for no-scalpel vasectomy. *Int Urol Nephrol* 2005;**37**:763–5.
10. Seenu V, Pavan Kumar MN, Sharma U, Gupta SD, Mehta SN, Jagannathan NR. Potential of magnetic resonance spectroscopy to detect metastasis in axillary lymph nodes in breast cancer. *Magn Reson Imaging* 2005;**23**:1005–10.
11. Shukla S, Mirza S, Sharma G, Parshad R, Gupta SD, Ralhan R. Detection of RASSF1A and RAR? Hypermethylation in serum DNA from breast cancer patients. *Epigenetics* 2006;**1**:88–93.
12. Vikrant S, Agarwal SK, Gupta S, Bhowmik D, Tiwari SC, Dash SC, *et al.* ‘Prospective randomised control trial of isoniazid chemoprophylaxis during renal replacement therapy. *Transpl Infect Dis* 2005;**7**:99–108.

Abstracts

13. Guleria S, Aggarwal RK, Guleria R, Bhowmik D, Agarwal SK, Tiwari SC. The effect of renal transplantation on pulmonary function and respiratory muscle strength in patients with end stage renal disease. *Transplant Proc* 2005;**37**:1054–6.
14. Guleria S, Chahal R, Madaan S, Irving HC, Newstead CG, Pollard SG, *et al.* Ureteric Complications of renal transplantation: The impact of the double J stent and the anterior extravesical ureteroneocystostomy. *Transplant Proc* 2005;**37**:1054–6.
15. Singh G, Kumar P, Parshad R, Seenu V, Thulkar S, Bandhu S, *et al.* Volume measurement of breast tumor with ultrasonography and its comparison with mammography and clinical methods. *J Med Phys* 2005:205.
16. Singh S, Kumar P, Thulkar S, Bandhu S, Seith A, Parshad R, *et al.* Potential of color Doppler indices as an indicator of blood flow characteristics in locally advanced breast cancer during chemotherapy. *J Med Phys* 2005:272.

Chapter in books

1. Bassi K, Dhar A, Srivastava A. Surgeon’s role in the management of the benign breast diseases. In: Gupta RL (ed). *Recent advances in surgery Vol. 10*. New Delhi: Jaypee Brothers; 2006.
2. Mansel RE, Srivastava A. Breast cancer in the elderly. In: Pathy MSJ, Sinclair AJ, Morley JE (eds). *Principles and practice of geriatric medicine*. 4th ed. London: Wiley; 2006: Chapter 130.
3. Srivastava A. Benign breast disease—a neglected entity. In: Gupta RL (ed). *Recent advances in surgery Vol. 10*. New Delhi: Jaypee Brothers; 2006:175–202.

PATIENT CARE/FACILITIES AVAILABLE/COMMUNITY SERVICES

The department runs a general surgical OPD every day, a follow up clinic 4 days a week, breast cancer clinic twice a week and renal transplant clinic once a week. In these clinics patients are followed up and chemotherapy is given to Breast Cancer patients on day care basis.

The department is providing routine services in the field of Renal Transplantation, Simultaneous Kidney and Pancreas Transplantation, Laparoscopic and Thoracoscopic Surgery, Hepato-biliary and Gastrointestinal Surgery, Breast and Endocrine Surgery, Vascular Surgery, Surgical Oncology and a wide variety of other cancer surgery. The department has been actively engaged in developing 'Newer Strategies in the Management of Soft Tissue Sarcoma' in collaboration with Department of Radiotherapy. Brachytherapy has been routinely offered to the patients suffering from soft tissue Sarcoma. The department is also actively engaged in day care Colorectal Procedures and a Vascular Access Service. The Department of Surgical Disciplines provides acute traumatic and non-traumatic emergency care round the clock including patients with poly trauma. The department was actively involved in providing state of the art services to the 22 Bomb Blast Victims brought to AIIMS from Sarojini Nagar and Govind Puri on the 29 October 2006.

The Department of Surgical Disciplines also runs an Endoscopic service for surgical patients.

The Department of Surgery is actively engaged in community screening of pre-cancerous oral lesions in tobacco users and users of other products.

The department has been actively participating in dissemination of knowledge and newer technology by using the tele-medicine facility at the institute. Live Telecast covering the proceedings of live surgery during AIIMS ENDOSURG 2006 were simultaneously seen at the Government Medical College, Raipur.

The departmental faculty has been actively involved in creating public awareness about Breast Cancer, Minimal Invasive Surgery, Trauma and Transplantation by way of live Phone-in Television programmes on Doordarshan (DD News 'Total Health') and other electronic and print media.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor S.N. Mehta was awarded the P.C. Gupta Memorial Oration by the Association of Surgeons of Haryana at Post-Graduate Institute of Medical Sciences, Rohtak delivered the oration on 24th April 2005; was appointed by the Hon'ble Dehi High Court as a member of the Transplantation of Human Organs Act Review Committee under the Chairmanship of Secretary Health and Family Welfare, Government of India; continues to be Member, Steering Committee of Jai Prakash Narain Apex Trauma Centre; Member, National Advisory Board of Indian Society of Histocompatibility and Immunogenetics; Chairman, Committee of experts appointed by DGHS to advise regarding granting license to hospitals in Union Territories to perform kidney transplantation; invited member of Authorization Committee appointed by Ministry of Health, India.

Professor M.C. Misra was awarded Fellowship of the National Academy of Medical Sciences, India; awarded Fellowship of the Royal College of Physicians and Surgeons, Glasgow, UK; elected, Founder President of Indian Hernia Society during its Inaugural Conference; continues to be a member of the Ethics Committee of AIIMS.

Professor Arvind Kumar was awarded the Professor S.C. Misra Memorial Oration by the Department of Surgery at King George's Medical University, Lucknow.

Dr S. Guleria was awarded the G.D. Pande Memorial Oration by IMA Haldwani; delivered AIIMS Golden Jubilee Celebrations: Public Lecture on transplantation.

Dr V. Seenu delivered Dr A.K. Chary Endowment Oration at AP Chapter ASI.

The departmental faculty has been assisting Medical Council of India, National Board of Examination, various universities in India and abroad in various capacities as experts. The departmental faculty regularly gets request from State and National Consumer Disputes Redressal Commission for expert opinion.

VISITING SCIENTISTS

Professor B. Gayet and Professor Daniel Cherqui (France); Professor P. Berti and Dr G. Materazzi (Italy); Dr Subhash Kini, Professor Ajay Nehra and Dr Deepak Mittal (USA); Dr Steve Nixon, Dr Brian I. Rees, Dr Ravi Ramachandran, Dr Hemant Singhal and Dr Ajay Sharma (UK); Professor Hermann Nehoda (Austria); Dr Hyung Ho Kim (South Korea); Dr Subash Gautam (UAE).

9.34 Transplant Immunology and Immunogenetics

Professor and Head

N.K. Mehra

Associate Professor

D.K. Mitra

Scientists

Uma Kanga
Arundhati Panigrahi

Gurvinder Kaur

Sunil Kumar

EDUCATION

Short-term training

The department provided short-term training to junior residents of Pathology and Laboratory Medicine and senior residents (DM students) of the Department of Haematology. During the year, 20 students from various universities and institutions as well as doctors from hospitals in and around Delhi received 4–6 months' training in the laboratory techniques in HLA testing and other immunological investigations.

Long-term training

One doctor (Lt Col) from the Armed Forces Medical Services (AFMS) joined the department for 2 years' training in Transplant Immunology. Another Lt Col (Dr) from the AFMS joined for long-term training and was also registered for PhD degree.

Training to overseas doctors: One trainee from USA attended the 8-week training programme in the department.

Continuing Medical Education (CME)

The faculty of the department participated in and delivered several lectures in national and international conferences during the year. A quality control exercise for DNA typing of *HLA* genes is in progress at the national level. Training on various cell culture assays, including flowcytometry-based assays have been regularly given to students and visiting trainees. The faculty also delivered special lectures in various department of the institute (Biotechnology, Medical Oncology, Medicine) as part of the academic curriculum of these departments.

National and International Conferences

Organized by Department

- Annual Symposium on 'Immunotherapeutics and disease management: Recent advances', Co-sponsored by the Ranbaxy Science Foundation, New Delhi; 28 November 2005. Nobel Laureate Professor Rolf Zinkernagel was the Chief Guest of the symposium.
- 8th FIMSA/IIS Advanced course on 'Immunology with focus on clinical immunology', AIIMS; 1–4 March 2006.

RESEARCH

Funded Projects

Completed

1. Immunogenetics and Humoral profile of type-1 diabetes in Indian population (Indo-French study). N.K. Mehra, Uma Kanga. Funded by ICMR-INSERM from 2003 to 2006. Funds: Rs 24 lakh.
2. Molecular analysis of cytokine gene polymorphisms in leprosy. N.K. Mehra. Funded by ICMR from 2002 to 2005. Funds: Rs 26.3 lakh.
3. Evaluation of virus specific immune response in HIV-1 subtype C infected individual. N.K. Mehra. Funded by DBT from 2002 to 2005. Funds: Rs 15 lakh.

Ongoing

1. Monitoring T cell activation markers and cytokine production following allogenic renal transplantation. N.K. Mehra. Funded by ICMR for 3 years.
2. Programme support for Advanced Programme in Histocompatibility and Immunogenetics (PS-APHTI). N.K. Mehra. Funded by DBT from 2005 to 2008. Funds: Rs 163.43 lakh.
3. Molecular analysis of cytokine gene polymorphisms in leprosy. N.K. Mehra. Funded by ICMR from 2002 to 2005. Funds: 26.3 lakh.
4. Genomic and molecular studies on the immunopathogenesis of bronchial asthma. D.K. Mitra. Funded by DBT from 2004 to 2007. Funds: Rs 37 lakh.
5. Study of reduction of duration of ATT with immunomodulator (MW) of immunological parameters. D.K. Mitra. Funded by DBT from 2004 to 2007. Funds: Rs 40 lakh.

PUBLICATIONS

Journals

1. Guleria S, Aggarwal S, Bansal VK, Varma MC, Kashyap L, Tandon N, *et al.* The first successful simultaneous pancreas-kidney transplant in India. *Natl Med J India* 2005;**18**:18–19.
2. Kanga U, Tandon N, Marwaha RK, Khanna R, Bhattacharya B, Singh S, *et al.* Immunogenetic association and thyroid autoantibodies in juvenile autoimmune thyroiditis in North India. *Clin Endocrinol* 2006;**64**:573–9.
3. Kumar R, Prem S, Mahapatra M, Seth T, Chowdhary DR, Mishra P, *et al.* Fludarabine, cyclophosphamide and horse anti thymocyte globulin conditioning regimen for allogenic peripheral blood stem cell transplantation performed in non-HEPA filter rooms for multiply transfused patients with severe aplastic anemia. *Bone Marrow Transplant* 2006;**37**:745–9.
4. Mehra NK. Histocompatibility antigens. In: *Nature encyclopedia of life sciences*. London: Nature Publishing Group. <http://www.els.net/npg.els.0004014>, P1-10, 2005.
5. Mitra DK, Sharma SK, Dinda AK, Bindra MS, Madan B, Ghosh B. Polarized helper T cells in tubercular pleural effusion: phenotypic identity and selective recruitment. *Eur J Immunol* 2005;**35**:2367–75.
6. Mitra DK, Sharma SK. Recent advances in immunology of tuberculosis. *Recent Adv Immunol* 2005;121–38.

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9. Kanga U, Tandon N, Kumar N, Marwaha RK, Khanna R, *et al.* Immunogenetic association and thyroid autoantibodies in juvenile autoimmune thyroiditis. *Tissue Antigens* 2005;**66**:459.
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11. Kumar S, Kaur G, Kumar N, Rapphap CC, Seth S, Mehra NK. Molecular analysis of HLA-B5 CREG and related alleles in influencing susceptibility to Takayasu Aortoarteritis. *Tissue Antigens* 2005;**66**:468.
12. Panigrahi A, Bharti AC, Gupta N, Bhowmik D, Dash SC, Tiwari SC, *et al.* Curcumin (Diferuloylmethane as an Adjuvant Immunosuppressant with Cyclosporine: An *in vitro* study in live related renal transplantation. *Tissue Antigens* 2005;**66**:508.

Chapter in Books

1. Kaur G, Mehra NK. Histocompatibility testing in hematopoietic stem cell transplantation. In: Kumar L (ed). *Advances in bone marrow transplantation: Progress in Haematology, Oncology in India*. Advanced Research Foundation. New York: Printed by the Advanced Research Foundation;2005:193–221.
2. Mehra NK, Singh P, Vajpayee M, Kaur G. Immunomodulatory genes and HIV infection. In: Mehra NK, Sood OP (eds). *Symposium on HIV and TB: Co-infection*. New Delhi: Ranbaxy Science Foundation; 2005:3–5.
3. Mehra NK. HIV-Tuberculosis coinfection: Societal burden. In: Mehra NK, Sharma SK, Sood OP (eds). *HIV and tuberculosis: Co-infection*. New Delhi: Ranbaxy Science Foundation; 2005:3–5.

PATIENT CARE

Laboratory services

Transplantation

HLA matching	Recipients	Donors	Total
Renal transplant patients	225	255	480
Bone marrow transplant patients			
Leukemia	80	325	405
Aplastic anemia	35	90	125
Thalassaemia	30	100	130
Others	50	100	150
Total	415	870	1290

HLA-DNA matching	150	155	305
Cross-match test			
Serology	600		
Flowcytometry	70		
Panel reactive antibody (PRA) screening	400		
Flow PRA	50		
ELISA PRA	150		
Diagnostics			
Chimerism studies in BMT	250		
Immunophenotyping of leukemia patients	254		

During the year, 350 requests for search of unrelated HLA-matched donor for bone marrow transplantation (BMT) were received from the 'Asian Indian Donor Marrow Registry'. These included 150 from USA, 80 from Europe, 45 from various Asian countries and 75 from India.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor N.K. Mehra delivered the Mrs G.P. Talwar Oration of the Association of Clinical Biochemists of India, Patna; was invited to the NIH Expert Group Meeting of Type 1 Diabetes Genetic Consortium; was 'Guest of Honour' at the National Symposium on Biotechnology, Anantpur; 'Advisor' for Gujarat State Biotechnology Mission (GSBTM) for their Healthcare Summit on Biotechnology, Gandhinagar; Member, ICMR Expert Group for formulating National Guidelines on Stem cell Research; Member, INSERM-ICMR joint working group to promote Indo-French collaboration; ICMR Special Review Committee on North-East Projects; Member, S.S. Bhatnagar Award Selection Committee; Member, Jury for Ranbaxy Science Foundation Awards; Member, DST Technology Development Board Project Monitoring Committee; Member, Scientific Advisory Committee, Talwar Research Foundation; continues to be Council Member of the International Union of Immunological Societies (IUIS); Vice President of the Federation of Immunological Societies of Asia-Oceania (FIMSA); Councillor for International Histocompatibility Advisory Council and of the Australasian and South East Asian tissue Typing Association (ASEATTA); Member, DBT Task Force, Stem cell Research and Regenerative Medicine; Trustee, Immunology Foundation India; Member, DBT Task Force on Modern Biology; Member, Joint Scientific Advisory Committee, JALMA Institute for Leprosy and other Mycobacterial Diseases, Agra and Tuberculosis Research Center, Chennai; Institute of Cytology and Preventive Oncology (ICPO), New Delhi; and National Institute of Research in Reproductive Health (NIRRH), Mumbai; Member, Research Council, Indian Institute of Chemical Biology (IICB), Kolkata; Member, Indo-French technical association; Member, ICMR Task Force on Immunology, Diabetes, Molecular Cardiology; Member, Several projects review committees of ICMR projects; Member, Expert-cum-monitoring committee on MW Research of the DBT; is on the Editorial Board of: *Tissue antigens*, *Modern Rheumatology*, *International Journal of Human Genetics* and *Journal of Clinical Immunology*; Member, Ethical, legal and social implications (ELSI) Committee of the Type 1 Diabetes Genetics consortium (T1DGC) of the NIH, Washington, USA.

Dr Uma Kanga continues to serve as Councillor for the Australasian and South East Asian Tissue Typing Association (ASEATTA).

Dr Arundhati Panigrahi received the best poster presentation award at the Annual Conference of the Indian Society of Organ Transplantation, held in Jaipur, September 2005.

VISITING SCIENTISTS

Professor K.V. Johny (Kuwait); Dr Tricia Price (Australia); Professor Edward Kaplan (Mayo clinic, USA); Nobel Laureate Professor Rolf Zinkernagel (Switzerland); Professor Frans Claas (Netherlands); Professor Abul Abbas (USA); Dr Jose Villadangous (Australia); Professor Rakesh Kumara (USA); Professor Takeshi Tsubata (Japan); Professor Yoshinori Fukui (Japan); Professor Nicholas King (Australia); Dr Sophie Caillat Zucman (France); Professor Ram Raj Singh (USA); Professor T. Nakayama (Japan).

9.35 Urology

Professor and Head

N.P. Gupta

Professors

A.K. Hemal

P.N. Dogra

Associate Professors

Amlesh Seth

Monish Aron

(resigned on 25 February 2006)

Assistant Professor

Rajeev Kumar

EDUCATION

The department imparted lectures for the undergraduates and nursing students. The postgraduate education is continuing and 10 postgraduates are under training.

The department had observers and postgraduate students in Urology from abroad and various parts of India to observe and learn Endourology, Laparoscopy and Microsurgery in Urology.

The faculty of the department continues to be examiners for NBE and MCh Urology in various universities and Inspector for the Medical Council of India and National Board for recognition of standard of examination and facilities for Urology postgraduate courses.

Continuing Medical Education

Professor N.P. Gupta

- Holmium Laser Workshop at PGIMER, Chandigarh; 8–9 April 2005
- Botox Injection in Urology at AIIMS; 27 November 2005

Professor A.K. Hemal

- Co-organizer International Conference on Minimal Access Surgery Workshop, AIIMS, New Delhi; 10–12 March 2006.
- Collaborative Workshop of Kuala Lumpur Hospital and Vattikuti Urology Institute, Henry Ford Hospital, Detroit; 13–31 March 2006.
- Grand-round on 'Laparoscopy in Uro-Oncology'; Vattikuti Urology Institute, Henry Ford Hospital, Detroit, USA; 22 February 2006.
- Urology Fair Singapore 2006—conducted live demonstration of laparoscopic radical nephrectomy and delivered guest lectures, Singapore; 16–19 February 2006.
- Conducted live demonstration of laparoscopic radical prostatectomy, participated in Cadaveric workshop and delivered guest lectures; Thai Urological Association, King Chulalongkorn Memorial Hospital, Patumwan, Bangkok, Thailand; 9–10 February 2006.

- Conducted live demonstrations of laparoscopic urology for Adrenal, Kidney and Cancer Prostate and delivered guest lectures on 'Robotic urologic surgery', 1st Update in Urologic Laparoscopy, Kuwait University, Kuwait; 14–15 May 2005.
- Invited guest faculty in 23rd World Congress on Endourology, Amsterdam, The Netherlands (Chaired sessions and delivered lectures beside various presentations); 23–26 August 2005.
- Invited guest faculty in 27th Annual Congress of the Taiwan Urological Association at Kaoshiung, Taiwan. (Delivered key note address); 27–28 August 2005.
- Participated in Annual Meeting of the American Urological Association, at San Antonio, Texas, USA (Chaired sessions and delivered lecture beside various presentations); 21–26 May 2005.
- Performed live demonstration of repair of uretero-vaginal fistula in Continued Medical Education program organized on Aegis of North Zone Chapter of Urology Society of India in Puspanjali Hospital, Gurgaon; 18 December 2005.
- Live demonstration of laparoscopic nephrectomy and delivered guest lecture in Annual Conference of the Association of Surgeons of India (ASICON 2005) and SAARC Surgeons Congress at SMS. Medical College and Hospital, Jaipur; 25–30 December 2005.
- Participated in the debate on Man vs. Machine and in CMEs on Endourology, Laparoscopy, Pediatric and reconstructive urology beside several scientific papers presented by coauthors at the Annual conference of Urology Society of India, Varanasi; 1–3 February 2006.
- Invited guest faculty, Urology workshop, Live demonstrations of laparoscopic urologic surgery and guest lectures, Hyderabad; 25–26 February 2006
- Invited guest faculty to demonstrate live surgery, and to chair the session, in International conference on Minimal Access Surgery Workshop, AIIMS; 10 and 12 Marh 2006.

Dr Amlesh Seth

- 'Urodynamic studies in Females', Workshop-cum-CME on Female Urology, North Zone Chapter Urology Society of India, Gurgaon; 18 December 2005.
- 'Urological Complications in General Surgery', Annual CME of Delhi State Chapter of Association of Surgeons of India, AIIMS; 26 March 2006.

Dr Rajeev Kumar

- 'Free radicals and carcinoma prostate-free radical vision', IMA-NDB, New Delhi; 15 May 2005.
- 'Testosterone: Physiology and pathology: Testosterone in men', IMA-Mid Town Branch and Delhi Andrology Society, New Delhi; 24 July 2005.
- 'Varicocele surgery: Current concepts and pre-ART', Fertilvision 2005, New Delhi; December 2005.

National and International Conferences

Lectures delivered

Professor N.P. Gupta

- 'Emerging role of laparoscopic and robotic in Asia', UAA Conference, Bali, Indonesia; 5–6 July 2005.
- 'Advances in management of BPH', CME Programme of the Allahabad Urological Association; 4 September 2005.
- 'Advances in surgical treatment of BPH', Annual Conference of West Zone-USI, Gwalior; 28–30 October 2005.
- 'Management of male infertility', CME Programme on Male Reproduction, AIIMS.
- 'Advances in management of BPH', Conference of Asian Society of Transplant and SIUT, Karachi; 30 November–2 December 2005.
- 'Advances in management of BPH', SAARC Conference, Dhaka; 5–6 December 2005.
- 'Vapour-resection of prostate', Indian Section SIU, Mumbai; 6–8 January 2006.
- 'Lasers in Urology', CME Programme, PSRI Hospital; 16 January 2006.
- 'Ileal conduit diversion', USICON, Varanasi; 2–5 February 2006.
- 'Medical management of BPH', National Academy of Nephrology; 11 February 2006.
- 'Vapour resection of prostate', Urology Fair, Singapore; 16–19 February 2006.
- 'Androgen deficiency in ageing male', International Conference of Reproductive Biology, AIIMS; 21 February 2006.

Professor A.K. Hemal

- 'Recent advances and future trends in urology', South Asian Conference and CME on Synergy in Healthcare, Paro, Bhutan; 15–19 November 2005.
- 'Current trends in cancer', XXII MAMC International Surgery Update 2005, Maulana Azad Medical College, Delhi; 25 September–01 October 2005.
- 'Oncology update', Indian Medical Association, East Delhi Branch, New Delhi; 7 August 2005.
- 'Radical prostatectomy functions and oncological outcomes', In Uro-oncology Update 2005, Indian Medical Association, Delhi; 12 November 2005.
- 'Laparoscopic urologic surgery' in Conference on Minimal Access Surgery, Indian Medical Association, East Delhi Branch; 4 December 2005.
- 'Robotics in genito-urinary surgery', Annual Meeting of National Academy of Medical Sciences, Ahmedabad; 17 December 2005.
- 'Emerging role of robotics in surgery', XVI Annual Conference of Assam State Chapter of Association of Surgeons of India (ASACON 05), Assam Medical College and Hospital, Dibrugarh, Assam; 28–30 October 2005.

Dr Rajeev Kumar

- 'Approach to a male with refractory sperm count problem', Andrology Workshop on Varicocele Surgery. International Conference on 'Male reproduction and infertility: MRDG and ICMR', Bangalore; 18 September 2005.
- 'Laparoscopy: Complications and prevention', Annual Conference, North Zone USI, Srinagar; September 2005.
- 'Recent advances in ED: Andrology sub-specialty meeting', Annual Conference, Urology Society of India, Varanasi; February 2006.
- 'Are we overdoing varicocelectomies?', Debate: Annual Conference, Urology Society of India, Varanasi; February 2006.

RESEARCH

Funded Projects

Ongoing

1. Genomics in male infertility: ICMR Task Force Project. Funded by ICMR, Department of Anatomy, New Delhi for 3 years (2004–06).

Departmental Projects

Ongoing

1. Renal cell carcinoma—evaluation of laparoscopic radical nephrectomy, nephron sparing surgery and long term follow up.
2. Evaluation of various types of intussusception techniques of microsurgical vasoepididymostomy.
3. Understanding the health seeking behaviour of infertile men.
4. Evaluation of laparoscopy in the management of carcinoma bladder.
5. Effect of stone and pelvicalyceal system configuration on the morbidity and relook rates with PCNL and its impact on training.
6. Development and validation of a stratification system to grade the degree of difficulty of PCNL.
7. Evaluation of TRUS and TRUS guided biopsy for early diagnosis of carcinoma prostate.
8. Evaluation of holmium laser core through urethrotomy in the management of obliterative strictures of the urethra.
9. Evaluation of TUVRP and Holmium laser prostatectomy for BPH.

Collaborative Projects

Ongoing

1. Mitochondrial genes and Y chromosome deletions in male infertility (with Anatomy).
2. Three dimensional chemical shift imaging and diffusion weighted imaging using proton MRS in the diagnosis of carcinoma prostate (with NMR).
3. Stone analysis using X-ray diffraction studies (with Biophysics).
4. Prospective randomized study of radical cystectomy versus concurrent chemo-radio-therapy in muscle invasive cancer of urinary bladder (with Radiotherapy).
5. Molecular epidemiology of prostate cancer: Polymorphosis in hormone-related and prostatic cancer candidate. (with Punjab University Chandigarh and PGI, Chandigarh).
6. Characterization of testing specific sperm associated antigen 9 (SPAG9) gene expression and humoral immune response in various human cancers. (with National Institute of Immunology, New Delhi and Safdarjung Hospital, New Delhi).
7. Her2/neu over expression and gene amplification in transitional cell carcinoma of urinary bladder

PUBLICATIONS

Journals

1. Agrawal MS, Aron M, Goel R. Hemiresection of the prostate: Short-term randomized comparison with standard transurethral resection. *J Endourol* 2005;**19**:868–72.
2. Aron M, Gill IS. Renal tumor ablation. *Curr Opin Urol* 2005;**15**:298–305.
3. Aron M, Goel R, Dash SC, Gupta NP. Antegrade endopyelotomy in pelvic kidney. *Int Urol Nephrol* 2005;**37**:13–15.
4. Aron M, Yadav R, Goel R, Hemal AK, Gupta NP. Percutaneous nephrolithotomy for complete staghorn calculi in preschool children. *J Endourol* 2005;**19**:968–72.
5. Aron M, Yadav R, Goel R, Kolla SB, Gautam G, Hemal AK, *et al.* Multi-tract percutaneous nephrolithotomy for large complete staghorn calculi. *Urol Int* 2005;**75**:327–32.

6. Bhandari A, Hemal A, Menon M. Instrumentation, sterilization of Robot. *Indian J Urol* 2005; **21**: 83.
7. Bhandari A, McIntire L, Kaul SA, Hemal AK, Peabody JO, Menon M. Perioperative complications of robotic radical prostatectomy after the learning curve. *J Urol* 2005; **174**:915–18.
8. Challacombe B, Patriciu A, Glass J, Aron M, Jarrett T, Kim F, *et al.* A randomized controlled trial of human versus robotic and telerobotic access to the kidney as the first step in percutaneous nephrolithotomy. *Comput Aided Surg* 2005; **10**:165–71.
9. Dada R, Gupta NP, Kucheria K. Cytogenetic and molecular analysis of male infertility: Y chromosome deletion during nonobstructive azoospermia and severe oligozoospermia. *Cell Biochem Biophys* 2006; **44**:171–7.
10. Dasgupta P, Hemal A, Rose K, Guy's, St. Thomas' Robotics Group. Robotic urology in the UK: Establishing a programme and emerging role. *BJU Int* 2005; **95**:723–4.
11. Desai MM, Aron M, Gill IS. Laparoscopic partial nephrectomy versus laparoscopic cryoablation for the small renal tumor. *Urology* 2005; **66** (Suppl. 5): 23–8.
12. Dogra PN, Biswas NR, Ravi AK, Mani K, Kumar V. Comparative evaluation of prostina and terazosin in the treatment of benign prostatic hyperplasia. *J Indian Med Assoc* 2005; **103**:108–10, 112.
13. Dogra PN, Tandon S, Ansari MS, Anupama, Chopra P. Suture foreign body granuloma masquerading as renal neoplasm. *Int Urol Nephrol* 2005; **37**:27–9.
14. Gautam G, Kumar R, Gupta NP. Factors predicting the patency of two-stitch invagination Vasoepididymal anastomosis for idiopathic obstruction. *Indian J Urol* 2005; **21**:112–15.
15. Goel R, Aron M, Kesarwani PK, Dogra PN, Hemal AK, Gupta NP. Percutaneous antegrade removal of impacted upper-ureteral calculi: Still the treatment of choice in developing countries. *J Endourol* 2005; **19**:54–7.
16. Goel R, Yadav R, Gupta NP, Aron M. Laparoscopic assisted percutaneous nephrolithotomy (PCNL) in ectopic kidneys: Two different techniques. *Int Urol Nephrol* 2006; **38**:75–8.
17. Gupta N, Sivaramakrishna, Kumar R, Dogra PN, Seth A. Comparison of standard transurethral resection, transurethral vapour resection and holmium laser enucleation of the prostate for managing benign prostatic hyperplasia of >40 g. *BJU Int* 2006; **97**:85–9.
18. Gupta NP, Ansari MS, Dass SC. Transrectal ultrasound guided biopsy for detecting early prostate cancer: An Indian experience. *Indian J Cancer* 2005; **42**:151–4.
19. Gupta NP, Ansari MS, Kesarvani P, Kapoor A, Mukhopadhyay S. Role of computed tomography with no contrast medium enhancement in predicting the outcome of extracorporeal shock wave lithotripsy for urinary calculi. *BJU Int* 2005; **95**:1285–8.
20. Gupta NP, Gautam G. Laparoscopic nephrectomy for benign non-functioning kidneys. *J MAS* 2005; **1**:149–54.
21. Gupta NP, Goel R, Hemal AK, Dogra PN, Seth A, Aron M, *et al.* Radical cystectomy in septuagenarian patients with bladder cancer. *Int Urol Nephrol* 2004; **36**:353–8.
22. Gupta NP, Goel R, Hemal AK, Kumar R, Ansari MS. Retroperitoneoscopic decortication of symptomatic renal cysts. *J Endourol* 2005; **19**:831–3.
23. Gupta NP, Kumar R, Tandon S. Simultaneous laparoscopic adrenalectomy for pheochromocytoma and dismembered pyeloplasty for uretero-pelvic junction obstruction. *J Laparoendosc Adv Surg Tech A* 2005; **15**:405–7.
24. Gupta NP. Retroperitoneoscopic management of intractable chyluria. *Indian J Urol* 2005; **21**:45–7.
25. Hatimota P, Vashist S, Aggarwal K, Kapoor A, Gupta NP. Spectrum of US and CT findings in renal neoplasms with pathologic correlation. *Indian J Radiol Imag* 2005; **15**:117–25.
26. Hemal AK, Bhandari A, Tewari A, Menon M. The window sign: An aid in laparoscopic and robotic radical prostatectomy. *Int Urol Nephrol* 2005; **37**:73–7.

27. Hemal AK, Kumar R. Laparoscopy in urology. *JAMS* 2005; **4**:147.
28. Kaul S, Bhandari A, Hemal A, Savera A, Shrivastava A, Menon M. Robotic radical prostatectomy with preservation of the prostatic fascia: A feasibility study. *Urology* 2005;**66**:1261–5.
29. Kumar A, Kumar R, Gupta NP. Comparison of NMP22 Bladder check test and urine cytology for the detection of recurrent bladder cancer. *Jpn J Clin Oncol* 2006;**36**:172–5. Epub 2006 Mar 6.
30. Kumar R, Gautam G, Gupta NP, Aron M, Dada R, Kucheria K, *et al*. Role of testicular fine-needle aspiration cytology in infertile men with clinically obstructive azoospermia. *Natl Med J India* 2006;**19**:18–20.
31. Kumar R, Gautam G, Gupta NP. Early patency rates after the two-suture invagination technique of vaso-epididymal anastomosis for idiopathic obstruction. *BJU Int* 2006;**97**:575–7.
32. Kumar R, Hemal AK, Menon M. Robotic renal and adrenal surgery: Present and future. *BJU Int* 2005;**96**:244–9.
33. Kumar R, Hemal AK. Emerging role of robotics in urology. *J Min Access Surg* 2005;**1**:202–210.
34. Kumar R, Shah R. Varicocele and male infertility: Current status. *J Obstet Gynecol India* 2005; **55**:505–516.
35. Kumar R, Thulkar S, Kumar V, Jagannathan NR, Gupta NP. Contribution of investigations to the diagnosis of bilateral vas aplasia. *ANZ J Surg* 2005;**75**:807–9.
36. Kumar R, Yadav R. Adolescent varicocele repair. *Indian J Urol* 2006;**22**:84.
37. Kumar R, Yadav R. Autopsy prostate cancer: Pre- and post-PSA era. *Indian J Urol* 2006;**22**:82–83.
38. Kumar R, Yadav R. Little or no residual prostate cancer at radical prostatectomy. *Indian J Urol* 2006;**22**:83.
39. Menon M, Kaul S, Bhandari A, Shrivastava A, Tewari A, Hemal A. Potency following robotic radical prostatectomy: A questionnaire based analysis of outcomes after conventional nerve sparing and prostatic fascia sparing techniques. *J Urol* 2005;**174**:2291–6a.
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41. Moinzadeh A, Gill IS, Rubenstein M, Ukimura O, Aron M, Spaliviero M, *et al*. Potassium-titanyl-phosphate laser laparoscopic partial nephrectomy without hilar clamping in the survival calf model. *J Urol* 2005;**174**:1110–14.
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43. Sarle R, Tewari A, Hemal AK, Menon M. Robotic-assisted anatomic radical prostatectomy: Technical difficulties due to a large median lobe. *Urol Int* 2005;**74**:92–4.
44. Shah NL, Hemal AK, Menon M. Robot-assisted radical cystectomy and urinary diversion. *Curr Urol Rep* 2005;**6**:122–5.
45. Shah NL, Hemal AK, Mani M. Robotic-assisted Laparoscopic surgery in urology: A historical perspective. *Indian J Urol* 2005; **21**:79.
46. Sharma JB, Seth A, Mittal S. Transvaginal repair of a vesico-vaginal fistula using a mobilized vaginal flap to form the bladder base: A case report. *Arch Gynaecol Obstet* 2006; **273**:378–80.
47. Sivaramakrishna B, Gupta NP, Wadhwa P, Hemal AK, Dogra PN, Seth A, *et al*. Pattern of metastases in renal cell carcinoma: A single institution study. *Indian J Cancer* 2005;**42**:173–7.
48. Tewari A, Bhandari A, Hemal, Menon M. Robotic radical prostatectomy—a minimally invasive therapy for prostate cancer: Results of initial 530 cases. *Indian J Urol* 2005;**21**:93.
49. Wadhwa P, Hemal AK. Case report: Transmesocolic laparoscopic reconstruction of ureteropelvic junction obstruction in pelvic kidney associated with extrarenal calices. *J Endourol* 2006;**20**:188–90.

50. Yadav R, Kumar R, Hemal AK. Laparoscopy in the management of stone disease of urinary tract. *J Min Access Surg* 2005;**1**:173–80.

Abstracts

51. Gupta NP, Gautam G, Hemal AK, Dogra PN, Seth A, Aron M, *et al.* Retroperitoneoscopic nephrectomy for management of benign non functioning kidneys: An outcome analysis based on experience with 392 cases in a 6-year period. *J Urol* 2005; **173** (Suppl.): A1184, 321.
52. Gupta NP, Wadhwa P, Aron M, Hemal AK, Dogra PN, Seth A, *et al.* Pediatric shock wave lithotripsy: size matters. *J Urol* 2005;**173** (Suppl.): A798, 216.
53. Hemal AK, Kolla SB, Wadhwa P, Gupta NP, Kumar R. Laparoscopic radical cystoprostatectomy and ileal conduit reconstruction. *J Endourol* 2005;**19** (Suppl. 1): MP29–MP17, A146.
54. Hemal AK, Kolla SB, Wadhwa P, Kumar R. Laparoscopic radical cystoprostatectomy and ileal conduit reconstruction: Technique. *J Endourol* 2005;**19** (Suppl. 1): V17–02, A259.
55. Wadhwa P, Hemal AK, Gupta NP, Kolla SB, Kumar R, Yadav R. Laparoscopic extended pelvic lymphadenectomy for bladder cancer: Technique. *J Endourol* 2005;**19** (Suppl. 1): V17–04, A260.
56. Wadhwa P, Hemal AK, Kumar R, Kolla SB, Nayyar R. Technique of laparoscopic radical prostatectomy replicating the VIP technique: Is it a simpler method? *J Endourol* 2005;**19** (Supp 1): V02–10, A218

Chapters in Books

1. Fumo MJ, Hemal AK, Menon M. Robotic assisted laparoscopic radical prostatectomy. In: Naito S, Hirao Y, Terachi T (eds). *Recent Advances in Endourology 7. Endourological Management of Urogenital Carcinoma*; 2006:175–92.
2. Hemal AK, Menon M. Robot–assisted (Da Vinci) urologic surgery: An emerging frontier. In: Kumon H, Murai M., Baba S (eds). *Recent advances in endourology 6. Endouro-oncology* 2005; 27–38.
3. Hemal AK, Menon M. Robot-assisted radical cystectomy and urinary diversion in bladder cancer. In: Naito S, Hirao Y, Terachi T (eds). *Recent advances in endourology, 7. Endourological Management of Urogenital Carcinoma*; 2006:119–28.
4. Menon M, Fumo MJ, Hemal AK. Robotic Radical Prostatectomy: Surgical Technique. In: Jean JMCH, de la Rosette, Gill IS. *Laparoscopic urologic surgery in malignancies*. Springer; 2006:163–74.
5. Menon M, Hemal AK. The VIP approach to the treatment of localized cancer of prostate—Robotic radical prostatectomy. In: Cummings KB (ed). *Prostate cancer: Advances and controversies*. 1st ed. Marcel Dekker; 2005:80–92.

COMMUNITY SERVICE

Professor N.P. Gupta published a book entitled ‘All about prostate gland’ for awareness of prostatic diseases for public. He delivered a public lecture on ‘Prostate Gland’ in a CME Programme organized by National Human Rights Commission and Help Age India on 23 March 2006. He delivered a lecture on ‘Kidney stone’ for School Health Education Programme organized by Department of Nephrology, 26 October 2005. Professor Gupta participated in a Public Lecture on ‘World Kidney Day’ on 9 March 2006. Hosp

Professor A.K. Hemal participated in the programme on Kidney Diseases for school children, held on 23 March 2006; Participated in programme of All India Radio; Given talk on Cancer Prostate in various news channels on 29 April 2005; Performed First Robotic Radical Prostatectomy for Cancer prostate in India on 29 April 2005.

Dr Amlesh Seth presented talk show in general public health on ‘Diseases of the prostate’ on Doordarshan on 25 October 2005; Invited Expert on Doordarshan Health Programme on Diseases of the prostate gland on 17 October 2005; Invited Expert on health talk related to bladder and testicular cancers on Zee TV on 13 and 20 November 2005; Part of the health team visiting Leh from July 18–22 2005 as a part of Mission Ashoka.

PATIENT CARE

O.P.D and specialty clinics

New cases	11,212
Old cases	22,191

Surgical procedures

Open	298
Endourology	813
Lower tract	453
Upper tract	360
Percutaneous renal surgery	223
Ureterorenoscopy	137
Microsurgery	75
Laparoscopic Surgery	132
Minor OT	
Cystoscopy	1,879
Minor Cases	3,592

Extracorporeal Shock Wave Lithotripsy (ESWL)

New cases	375
Re-do cases	544

Urodynamic procedures

Uroflowmetry	3,074
Cystometrogram	327

Ultrasound procedures

Diagnostic	53
Interventional	183

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor N.P. Gupta was conferred the Dr B.C. Roy National Award for Eminent Medical Teacher; received UICC-ICRETT Fellowship for ‘Robotics in Urology’ at Henry Ford Hospital, USA; invited as Dr Virender Desai Visiting Professorship at MPUH, Nadiad, 17–19 March 2006; President-Elect, Urological Society of India.

Professor A.K. Hemal, Visiting Professor Hospital Kuala Lumpur, Malaysia, Visiting Professor to Vattikuti Urology Institute, Henry Ford Hospital, Detroit; During stay participated in collaborative workshop (Robotic operations performed for Urolithiasis; Cancer Prostate, Kidney and Bladder; Female Urology; Renal Transplantation, Kidney disease, etc.) of K L Hospital and Vattikuti Urology Institute

Urology, 13–31 March 2006), and participated as invited International faculty in New frontiers in Urologic Surgery, International conference on Robotic Urologic Surgery (24–25 March 2006) in Kuala Lumpur, Malaysia. Rashtriya Rattan Award and Gold Medal along with Certificate of Medical excellence on 18 December 2005; Invited Guest Editor of special issue on ‘Robotic Urologic Surgery’ of World Journal of Urology; Invited Guest Editor for Special issue on laparoscopy: Journal of Min Access Surg; December 2005.

Dr P.N. Dogra, President of North Zone Chapter of USI for the year 2005; Treasurer of Delhi Andrology Society.

Dr Amlesh Seth awarded ICRETT Fellowship of UICC for ‘Nerve sparing RPLND for testicular tumours’, MSKCC, New York, USA.

Dr Monish Aron availed the prestigious Endourology Society Fellowship from July 2005 to January 2006 at the Cleveland Clinic, USA, for training in Advanced Laparoscopic and Robotic Urology.

Dr Rajeev Kumar Chandigarh Best Video Prize, Urology Society of India, Annual Conference, Varanasi, February 2006; MIUC Fellowship, Urology Society of India, Annual Conference, Varanasi, February 2006; Chairperson: CME programme: IT for Surgeons: Virtual Reality and Robotics: MAX Healthcare and ASICON Education, New Delhi, 29 May 2005; Convenor: Progress session: Annual conference, North Zone USI, September 2005, Srinagar; Invited Guest Editor: Special issue on Laparoscopy: *Journal of Min Access Surg*; December 2005.

10.1 Cardiothoracic Sciences Centre

Chief

P. Venugopal

CARDIOTHORACIC AND VASCULAR SURGERY

Professor and Head

P. Venugopal

Professors

A.Sampath Kumar

Balram Airan

Additional Professors

U.K.Chowdhury

S.K. Choudhary

A.K. Bisoi

Assistant Professors

Milind Hote

Sachin Talwar

V. Devagourou

CARDIOLOGY

Professor and Head

K.S. Reddy

Professors

V.K. Bahl

Anita Saxena

S.S. Kothari

Balram Bhargava

K.C. Goswami

Additional Professors

R. Juneja

D. Prabhakaran

R. Narang

S. Ramamurthy

Associate Professors

S. Mishra

S. Seth

Rakesh Yadav

N. Naik

Assistant Professors

G. Karthikeyan

S. Singh

S. Ramakrishnan

Ambuj Roy

S. Anandraja

CARDIAC ANAESTHESIA

Professor and Head

Usha Kiran

Professor

Sandeep Chauhan

Associate Professors

Neeti Makhija

Poonam Malhotra

Minati Choudhary
Vishwas Mallik

Assistant Professors

Shambhu Nath Das

Parag Gharde

CARDIAC RADIOLOGY

Professor and Head

Sanjiv Sharma

Assistant Professors

Gurpreet Singh Gulati

Priya Jagia

BLOOD TRANSFUSION SERVICES (CARDIAC NEURO CENTRE)

Senior Chief Medical Officer

Rama Bhasin

Chief Medical Officer

Anjali Hazarika

Senior Technical Officer

Kalpana Misra

CARDIAC BIOCHEMISTRY

Associate Professor

R. Lakshmy

CARDIAC PATHOLOGY

Professor

Ruma Ray

CARDIAC NUCLEAR MEDICINE

Assistant Professor

Chetan D. Patel

EDUCATION

Cardiothoracic and Vascular Surgery

Professor P. Venugopal and department of CTVS team visited Indira Gandhi Medical College Shimla, to train medical and paramedical staff.

Following videos from the centre have been accepted and posted by Cardiothoracic Surgery Network for viewing by users:

- Repair of Ebstein's anomaly
- Repair of total anomalous pulmonary venous connection
- Bentall operation with aortic homograft
- Homograft valve banking (with cryopreservation)
- Transatrial and transpulmonary closure of VSD
- Closed mitral valvotomy (CMV)

- Mitral valve replacement and tricuspid valve repair (transeptal approach)
- Myocardial revascularization (CABG)
- Repair of atrio ventricular septal defect
- Excision of left atrial myxoma

Short- and long-term training

The following have undergone short-term training in the department:

- Cardiac surgeons: 2 from Indira Gandhi Medical College, Shimla; 1 from Medical College Hospital Thiruvananthapuram, Kerala and 1 from Calicut medical College, Calicut, Kerala.
- 8 staffs nurses and 2 two technicians from Indira Gandhi Medical College, Shimla.
- 1 perfusionist from L.S.L. Super Speciality Centre, PGIMS, Rohtak.
- 1 perfusionist from Sher-I-Kashmir Institute of Medical Science, Soura, Srinagar.
- 2 perfusionists from Medtronic's Bakken Education Centre, Mumbai.
- 4 physiotherapists from Jamia Hamdard University, New Delhi.

Cardiac Anaesthesia

DM Cardiac Anaesthesia

Two more candidates were selected for postdoctoral training in the programme. At present, nine candidates are pursuing the course with ICU training as well. The first DM candidate passed the examination successfully in July 2005. Three of the nine DM students are sponsored candidates, two from the Army.

Postgraduate training

Six postgraduate students from the Department of General Anaesthesia, AIIMS were posted for a period of 2 months each for training in cardiac anaesthesia from 1 April 2005 to 31 March 2006.

Short-term superspeciality training

Five faculty members from various medical colleges underwent short-training in cardiac anaesthesia. Three postgraduate students from LHMC, New Delhi also underwent training

Cardiac Biochemistry

Two PhD students are registered in the department.

Cardiac Nuclear Medicine

Three postgraduates from the Department of nuclear Medicine were trained in Nuclear Cardiology on rotational basis. The department faculty delivered 10 lectures for postgraduate students and were moderators in 10 Journal Club/Seminars.

Continuing Medical Education

Cardiothoracic and Vascular Surgery

Professor A. Sampath Kumar conducted valve surgery workshops at Pune (21 August 2005), Coimbatore (3–4 December 2005) and Chennai (10–11 December 2005).

Professor Balram Airan organized CME on Stem Cell Therapy at AIIMS, New Delhi as a part of the Golden Jubilee Celebration and presented a video demonstration on 'Stem cells isolation, enumeration, characterization, viability, freezing techniques of stem cells and its clinical application'; 26–27 November 2005.

Cardiology

Dr D. Prabhakaran

- ‘Surgical treatment for ischaemic heart failure (STICH)’, Indian Investigators Meeting; July 2005.
- WHO-sponsored Workshop on ‘Sensitization of media on the burden of CVD; July 2005.
- Workshop on the ‘Diagnoses and management of acute coronary syndrome: Indian guidelines’; August 2005.
- WHO and Government of India supported Annual Sentinel Surveillance Workshop; 2005.
- The AIIMS Golden Jubilee Cardiology Symposium; February 2006.
- National Network for NCD Prevention and Control, New Delhi; 16 February 2006.

Cardiac Anaesthesia

A ‘Heart valve course’ was organized on 9–11 February 2006. Dr Carpentier and an Echocardiography team from France were the invitees. The department provided anaesthesia for the live workshop.

National and International Conferences

Cardiothoracic and Vascular Surgery

Lectures delivered

Professor Balram Airan

- ‘Cellular cardiomyoplasty—a clinical study’, 12th Congress of the European Society for Organ Transplantation, Geneva, Switzerland; 15–19 October 2005.
- ‘Legal and ethical issues in organ transplantation’, South Asian Conference ‘CME on synergy in healthcare’, Bhutan; 15–19 November 2005.
- ‘From replacement to restoration: Role of transplantation and stem cell therapy’, International Symposium on ‘Cardiovascular diseases, stroke and diabetes’, AIIMS, New Delhi; 17–18 February 2006.
- ‘Total atrial correction of tetralogy of Fallot: No outflow patch technique’, 42nd Annual Meeting for the Society of Thoracic Surgeons (STS), Chicago, Illinois; 30 January 2005–1 February 2006.

Dr A.K. Bisoi

- ‘Current status and future of Cardiac Surgery in India’, South Asian Conference ‘CME on Synergy in healthcare’, Bhutan; 15–19 November 2005.
- ‘Surgical management and the current status of cellular cardio-myoplasty in heart failure’, Hyderabad, Andhra Pradesh; 12 March 2006.
- ‘Challenges to make world class institute’, IIM, Ahmedabad, Andhra Pradesh; 3 April 2006.
- ‘Stem cell therapy in patient with myocardial infarction’, All India Institute of Medical Sciences, New Delhi.
- ‘Knowledge of millennium summit on biotechnology and nano-technology’ ASSOCHAM, New Delhi; 27 March 2006.

Dr Sachin Talwar

- ‘Rheumatic heart disease—indications for surgery’, CME on ‘Pediatric cardiology and congenital cardiac surgery’, Indraprastha Apollo Hospitals, New Delhi; 28 August 2005.

Cardiac Anaesthesia

Dr Usha Kiran

- ‘Recent advances in paediatric cardiac anaesthesia’, Kolkata; December 2005.
- ‘Pathophysiology of multivalvular heart disease’, CME, Pune; 23 February 2006.

Dr Sandeep Chauhan

- ‘Extracorporeal membrane oxygenation’, IACTA Conference, Pune; 25 February 2006.

Dr Poonam Malhotra

- ‘Heparin-induced thrombocytopenia’, IACTA Conference, Pune; 24 February 2006.
- ‘Heparin resistance and heparin-induced thrombocytopenia’, Update in Cardiac Anaesthesia, Chennai; 18–19 November 2005.

Cardiac Radiology

Dr Sanjiv Sharma

- ‘Endovascular treatment of aortic aneurysm and dissections—planning, technique and issues’, Dr S.N. Medical College, Jaipur, Rajasthan; 24–25 September 2005.
- ‘Interventional Radiology in India’, TIFAC-CORE in Interventional Radiology under Mission REACH Programme of TIFAC, DST, Wardha, Nagpur; 23–24 December 2005.
- ‘Interpretation of catheter angiography’ and ‘Color Doppler, CT in peripheral vessel imaging’, 58th Annual Congress of Indian Radiological and Imaging Association, Agra; 22–25 January 2005.
- ‘Endovascular management of type B aortic dissection’, Seminar on Aortic Aneurysm: Surgical and Endovascular Therapy at Christian Medical College, Vellore; 20 February 2006.

Dr Gurpreet Singh Gulati

- ‘Cardiovascular MRI—applications in congenital heart disease’, Department of Cardiology, All India Institute of Medical Sciences, New Delhi; 25 July 2005.
- ‘Interventional angiography for pseudoaneurysm’, National Conference on Pancreatic Diseases, New Delhi; 6–7 August 2005.
- ‘MRI for heart failure and myocardial viability’, Biennial Conference of the Nuclear Cardiological Society of India, Chandigarh; 23 October 2005.
- ‘Stem Cell therapy in peripheral vascular disease’, CME on Stem Cell Therapy, New Delhi; 26–27 November 2005.

Dr Priya Jagia

- ‘Role of chest radiograph in cardiac imaging’, Annual Radiology CME, Indian Association of Radiology, Delhi; October 2005.
- ‘CT and MR in cardiac imaging’, Annual Radiology CME, Indian Association of Radiology, Delhi; October 2005.
- ‘Cath lab diagnostic and interventional procedures’, Annual Radiology Technologists Meet, AIIMS; November 2005.
- ‘Contrast media in CT examination’, National Workshop on PET-CT, Indian College of Nuclear Medicine at Department of Nuclear Medicine, AIIMS; 3–4 December 2005.

RESEARCH

Cardiothoracic and Vascular Surgery

Departmental Projects

1. Long-term follow on patients who have undergone transatrial repair of Tetralogy of Fallot.
2. Ventricular function in patients operated for total cavopulmonary connection.

Collaborative Projects

1. A prototype of the aortic valve design patented by AIIMS has been produced by DMSRDE, Kanpur using silicon rubber.

Cardiology

Funded Projects

1. Surgical treatment for ischaemic heart diseases (STICH). Funded by NIH.
2. Establishment of sentinel surveillance system for CVD in Indian industrial population.
3. Indian migrant study funded by the Wellcome Trust

Departmental Projects

1. Autonomic cardiovascular functions after myocardial infarction: Effect of short-term exercise training.
2. Gender differences in knowledge, attitudes and practices related to diabetes and hypertension in an urban population.
3. Behavioural and psychosocial determinant of overweight and obesity, in urban India school students.

Collaborative Projects

1. Foetal origins of chronic diseases
2. Community-based intervention to reduce ACS mortality at Trichur
3. A randomized trial of blood pressure lowering and glucose control in individuals with type II diabetes

Cardiac Anaesthesia

Funded Projects

Completed

1. Biochemical correlates of chronic headache and its modulation by relaxation therapy (meditation). U. Kiran. Funded by DST.

Ongoing

1. Modulation of endothelin-1 in coronary artery bypass grafting patients imparted with preoperative relaxation therapy. Minati Choudhury. Funded by AIIMS.
2. Auditing of early goal directed therapy in cardiac surgical patients. Funded by AIIMS.

Departmental Projects

Completed

1. Evaluation of intranasal midazolam, ketamine and their mixture as premedication and its relation with BIS in children with Tetralogy of fallot undergoing intracardiac repair.
2. A comparison of epsilon amino caproic acid and tranexamic acid in adult cardiac surgery.
3. Evaluation of epsilon amino caproic acid (EACA) and autologous blood (AB) as blood conservation strategies in patients undergoing cardiac surgery.
4. Glucose, insulin and potassium (GIK) for myocardial protection during cardiac surgery: An evaluation using cardiac Troponin I (cTnl) as a serological marker.

5. Efficacy of nitroglycerin inhalation in reducing pulmonary arterial hypertension in children with congenital heart disease.
6. Presence of common chronic infections and their association with atherosclerotic coronary artery disease in patients coming for coronary artery bypass grafting (CABG).
7. Effects of haemodilution on outcome. Following modified Blalock–Taussig shunt operation in children with cyanotic congenital heart disease.
8. Effects of combined conventional ultrafiltration and a simplified modified ultrafiltration in adult cardiac surgery.
9. Myocardial function in children undergoing cardiac surgery: A comparison between conventional and conventional plus modified ultrafiltration.
10. Emerging myocardial injury markers following coronary artery bypass grafting with or without CPB.
11. To evaluate the use of TENS for chest tube removal following cardiac surgery.

Ongoing

1. Effect of cardiac epidural sufentanil and bupivacaine in paediatric patients undergoing cardiac surgery.
2. Comparison of effects of conventional ultrafiltration (CUF) and modified ultrafiltration (MUF).
3. A comparison of analgesic efficacy of fentanyl and sufentanil during chest tube removal after cardiac surgery.
4. Comparison of mixed venous and central venous oxygenation in cardiac surgical patients.
5. Comparison of haemodynamic changes during off pump coronary artery bypass using fentanyl and sufentanil.
6. Effect of caudal sufentanil and bupivacaine in paediatric patients undergoing cardiac surgery.

Cardiac Radiology

Funded Projects

Completed

1. Accuracy of multislice computed tomography compared to angiography for the detection and estimation of coronary artery disease.
2. Usefulness of carotid intimal-medial thickness as a marker of disease activity in Takayasu's arteritis.
3. Assessment of ventricular function and pulmonary regurgitation by MRI, in patients operated with total correction procedure in 'Tetralogy of Fallot'.
4. Characterization of left atrium and pulmonary vein morphology using multidimensional computed tomography.
5. To compare the effect of somatostatin and nitroglycerin infusion with somatostatin monotherapy in control of acute variceal bleeding and prevention of early rebleeding among patients with liver cirrhosis.

Ongoing

1. To compare the long-term outcomes of balloon angioplasty alone versus stent placement in the treatment of Budd–Chiari Syndrome.
2. Avoiding unnecessary radiation dose to the patient during interventional radiological procedures. Funded by the International Atomic Energy Agency.
3. MRI for evaluation of outcomes of intracoronary stem cell injection in patients with dilated cardiomyopathy. Funded by AIIMS under the Stem Cell Research Programme.

4. Ultrasound evaluation of carotid intimo-medial thickness in patients with rheumatoid arthritis.
5. To assess the role of 18-FDG CT-PET scan in diagnosis, monitoring disease activity and response to therapy of primary systemic necrotising vasculitis.

Cardiac Biochemistry

Funded Projects

Ongoing

1. Relation of APOA-V gene variants to serial changes in childhood body mass index and coronary artery disease risk factors in young adulthood. R. Lakshmy. Funded by ICMR for 2 years (2005–2007). Funds Rs 35 lakh.
2. Phenotypic characterization of diabetes in a young Delhi cohort: association with low birth weight. R. Lakshmy. Funded by ICMR for 1 year (2005–2006). Funds: Rs 15 lakh.
3. LDL particle heterogeneity and its association with other established risk factors for CHD in an Indian industrial population: Role of CETP gene. R. Lakshmy. Funded by ICMR for 2 years (2005–2007). Funds: Rs 8 lakh.
4. C667T and A1298C mutation in methylene tetra hydrofolate gene in patients with myocardial infarction in comparison with healthy controls. R. Lakshmy. Funded by ICMR for 3 years (2002–2005). Funds: Rs 20,000.
5. Sentinel Health Monitoring Centers in India: Risk Factor Surveillance for Non-communicable Diseases. Dr R. Lakshmy (ICMR–WHO study Lab Coordinator). Funded by WHO for 1 year (2005–2006). Funds: Rs 90,000.

Collaborative Projects

1. Effect of consumption of iron and Vitamin-A fortified lozenges on the Iron status of children aged 3–6 years in Rural Haryana, North India (with Centre for Community Medicine).
2. Role of Homocysteine in coronary artery disease: Genetic and epigenetic studies (with Cardiology and Institute of Genomics and Integrated Biology).
3. Recovery and stability of routine chemistry analytes from filter paper (with Laboratory Medicine).
4. ADVANCE-A factorial randomized trial of blood pressure lowering with fixed low dose perindopril–indapamide combination and intensive glucose control with a modified release gliclazide based regimen for the prevention of vascular disease among high-risk individuals with type 2 diabetes (with Endocrinology and Cardiology).
5. Rural-urban migration: Effects on obesity and diabetes in Indians (with Cardiology and University of Bristol).
6. Prevalence of obesity and associated diseases amongst children in 5–18 years of age in the National Capital territory of Delhi (with Human Nutrition Unit).
7. Emerging biochemical markers of myocardial injury following coronary artery bypass grafting (CABG) with or without cardiopulmonary bypass (CPB) (with Cardiac Anesthesia).

Cardiac Pathology

Funded Projects

1. Histopathological evaluation of aortic aneurysma and aortic dissections with special reference to collagen type IV. Funded by AIIMS for 1 year (2005–2006). Funds: Rs 50,000.

Collaborative Projects

1. Histopathological study of aorta and pulmonary artery in congenital heart diseases (with Cardiothoracic Surgery)

2. Histological study of remnant long saphenous veins before aorto coronary bypass grafting (with Cardiothoracic Surgery).
3. Histopathological evaluation of endomyocardial biopsies following intracoronary infusion of autologous bone marrow stem cells with therapeutic implications.

Cardiac Nuclear Medicine

Funded Project

Ongoing

1. Role of radionuclide techniques in diagnosis of early dementia. Funded by International Atomic Energy Agency for 3 years (2003–2006). Funds: US\$ 8000 for 2005–2006.

Collaborative Projects

Completed

1. Comparison of MRI, First pass angiocardiology and ECHO in assessment of right ventricular function in post-op total correction for TOF. (with Nuclear Medicine, CTVS and Cardiac Radiology)
2. Evaluation of left ventricular function in post MVR patients. Comparison with ECHO. (with Nuclear Medicine and CTVS).
3. Feasibility and additive value of rest left ventricular ejection fraction in ECG-gated thallium-201 myocardial SPECT. Comparison with left ventricular rejection fraction on radionuclide equilibrium ventriculography at rest.

Ongoing

1. Evaluation of cardiac function in patients receiving anthracycline therapy by 1st pass study and equilibrium radionuclide ventriculography. (with Medical Oncology and Nuclear Medicine).
2. Role of F-18 FDG in acute rheumatic heart disease (with Nuclear Medicine and Cardiology).
3. Usefulness of Tc99m—MAA lung perfusion imaging in patients post BD Glenn and TCPC. (with Nuclear Medicine and CTVS).
4. Correlation between cardiovascular autonomic function and indicators of myocardial ischaemia in patients presenting anginal symptoms. (with Physiology, Nuclear Medicine and Cardiology).
5. F-18 FDG in detecting ‘metabolic signature of ischemia’. Comparison with perfusion SPECT (with Nuclear Medicine and Cardiology).

PUBLICATIONS

Cardiothoracic and Vascular Surgery

Journals

1. Aggarwal NK, Kale SC, Sahu M, Talwar S, Kumar AS. Mitral valve annuloplasty in dilated cardiomyopathy: Anaesthetic management. *J Anaesth Clin Pharmacol* 2005;**21**:341–6.
2. Choudhary SK, Talwar S, Airan B, Mohapatra R, Juneja R, Kothari SS, Saxena A, Venugopal P. A new technique of percutaneously adjustable pulmonary artery banding. *J Thorac Cardiovasc Surg* 2006;**131**:621–4.
3. Choudhary SK, Talwar S, Venugopal P. Severe mitral regurgitation after percutaneous transmitral Commissurotomy: Underestimated subvalvular disease. *J Thorac Cardiovasc Surg* 2006;**131**:927.
4. Chowdhury UK, Airan B, Subramaniam G, Kothari SS, Saxena A, Singh R, *et al.* Specific issues after extracardiac Fontan operation at mid-term follow up. Systemic ventricular function, growth potential, arrhythmia and thromboembolism. *Ann Thorac Surg* 2005;**80**: 665–72.
5. Chowdhury UK, Airan B, Talwar S, Singh R, Kothari SS, Saxena A, *et al.* One and one-half ventricular repair: Results and concerns. *Ann Thorac Surg* 2005;**80**:2293–300.

6. Chowdhury UK, Kumar AS, Airan B, Mittal DK, Subramaniam KG, Prakash R, *et al.* Mitral valve replacement with and without chordal preservation in a rheumatic population: Serial echocardiographic assessment of left ventricular size and function. *Ann Thorac Surg* 2005;**79**:1926–33.
7. Chowdhury UK, Subramaniam G, Kothari SS, Airan B, Venugopal P. Congestive heart failure in unoperated tetralogy of Fallot: Can hypoxia be a cause? *Indian Heart J* 2005;**57**:65–7.
8. Chowdhury UK, Subramaniam GK, Kumar AS, Airan B, Singh R, Talwar S, *et al.* Pericardiectomy for constrictive pericarditis: A clinical, echocardiographic and hemodynamic evaluation of two surgical techniques. *Ann Thorac Surg* 2006;**81**:522–30.
9. Dogra S, Sabu R, John B, Saji N, Narayana H, Olive A, *et al.* Sternal wound complications: Prevention is better than cure. *Indian J Thorac Cardiovasc Surg* 2005;**21**:29–33.
10. Kumar AS, Mishra S, Dorjey M, Morup T, Motup T, Ali R. Cardiac surgery at high altitude. *Natl Med J India* 2005;**18**:137–8.
11. Kumar AS, Talwar S, Mohapatra R, Saxena A, Singh R. Aortic valve replacement with the pulmonary autograft—mid-term results. *Ann Thorac Surg* 2005;**80**:488–94.
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13. Kumar AS. Heart strings. *Indian J Thorac Cardiovasc Surg* 2005;**21**:115–16.
14. Kumar AS. Concatenation. *Indian J Thorac Cardiovasc Surg* 2005;**21**:131.
15. Kumar AS. Mitral annular calcification. *Asian Cardiovasc Thorac Annals* 2005;**13**:100.
16. Kumar AS. The genius. *Indian J Thorac Cardiovasc Surg* 2005;**21**:1.
17. Kumar AS. The Ross operation in rheumatic valve disease. *Cir Cardiovasc* 2005;**12**:121–2.
18. Kumar AS. Third option. *Ann Thorac Surg* 2005;**79**:1092.
19. Talwar S, Jayant Kumar HV, Sharma G, Kumar AS. Quadriavalvular rheumatic heart disease. *Int J Cardiol* 2005;**106**:117–18.
20. Talwar S, Mohapatra R, Kumar AS. Mitral valve replacement with a bioprosthesis: Prevention of suture entanglement. *Heart, Lung, Circulation* 2006;**15**:48–9.
21. Talwar S, Pradeep KK, Gulati GS. Right Coronary ostial transection during aortic valve replacement: Technique of Reconstruction. *Indian J Thorac Cardiovasc Surg* 2005;**21**:277–8.
22. Talwar S, Rajesh MR, Subramaniam A, Saxena A, Kumar AS. Mitral valve repair in children with rheumatic heart disease. *J Thorac Cardiovasc Surg* 2005;**129**:875–9.
23. Talwar S, Saikrishna C, Saxena A, Kumar AS. Aortic valve repair for rheumatic aortic valve disease. *Ann Thorac Surg* 2005;**79**:1921–5.
24. Talwar S, Subramaniam G, Subramanian A, Kothari SS, Kumar AS. Sewing needle in the Heart. *Asian Cardiovasc Thorac Ann* 2006;**14**:63–5.

Cardiology Journals

1. Anandraja S, Kothari SS, Bahl VK. Management of valvular heart disease during pregnancy. *Indian Heart J* 2005;**57**:101–8.
2. Anandraja S, Kothari SS, Nath R. Fungal ball blocking the aortic valve. *Echocardiography* 2006;**23**:164.
3. Anandraja S, Kothari SS, Nath R. Fungal ball blocking the aortic valve. *Echocardiography* 2006;**23**:164.
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5. Balasundaram RP, Karthikeyan G, Kothari SS, Talwar KK, Venugopal P. Fibrinolytic treatment for recurrent left sided prosthetic valve thrombosis. *Heart* 2005;**91**:821–2.
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14. Chowdhury UK, Airan B, Talwar KK, Kothari SS, Saxena A, Singh R, *et al.* One and one-half ventricle repair: Results and concerns. *Ann Thorac Surg* 2005;**80**:2293–300.
15. Chowdhury UK, Kothari SS, Airan B, Subramanian KG, Venugopal P. Right pulmonary artery to left atrium communication. *Ann Thorac Surg* 2005;**80**:365–70.
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Cardiac Anaesthesia

Journals

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Cardiac Radiology

Journals

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Cardiac Biochemistry

Journals

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Cardiac Pathology

Journals

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2. Bisoi AK, Rajesh MR, Talwar S, Chauhan S, Ray R, Venugopal P. Mitral stenosis after Duran ring annuloplasty for non-rheumatic mitral regurgitation—a foreign body response? *Heart Lung Circ* 2006;**15**:189–90.
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Cardiac Nuclear Medicine

Journals

1. Barai S, Patel CD, Malhotra A, Bandopadhyaya GP, Kumar R, Dhanapathi H. Use of atropine in patients with recent myocardial infarction during exercise myocardial perfusion study. *Int J Cardiovasc Imaging* 2005;**21**:413–92.
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5. Singhal T, Naveen K, Tripathi M, Bal CS, Patel C, Kumar R, *et al.* False-negative 18FDG-PET findings in soft tissue mass suspicious for liposarcoma. *Indian J Nucl Med* 2005;**20**:118.

PATIENT CARE

Cardiothoracic and Vascular Surgery

Open heart surgery	2578
Close heart surgery	870
Total operations	3448
Stem cell transplant	3

29,208 patients attended the outpatient department of Cardiothoracic and Vascular Surgery.

Cardiac Anaesthesia

The department provides patient care in 7 operation theatres, 3 cardiothoracic surgical intensive care units, as well as intensive and resuscitative care in the cardiology critical care units.

Monitored anaesthesia and resuscitative support is given by the department for routine and emergency patients in coronary care unit, pediatric ICU, post-operative ICU and catheterization laboratory by providing basic and advanced life support services.

Anaesthesia provided for

Major cardiac and vascular surgery	3448
Invasive procedures in catheterization laboratory	116
Monitored anaesthesia care in catheterization laboratory and operation theatre	478
Resuscitative calls in catheterization Laboratory, CCU and Paediatric CCU	460
Stem cell therapy in catheterization laboratory for cerebral palsy patients	38

Cardiac Radiology

Total cineangiography	6068
Cine fluoroscopy	5983
Vascular catheter procedures	798
Ultrasound	2081
CT	1034
MRI	379
<i>Routine X-rays for CTVS and Cardiology</i>	
OPD	19,725
Ward	22,710
Portable	42,543

Blood Transfusion Services (Cardiothoracic and Neurosciences Centre)*Blood units collected*

Total number of blood units collected	18,242
Replacement donors	16,266
Voluntary donors	
in the department	88
through blood mobiles	1255
Blood received from IRCS	131
Blood received from Blood Bank, AIIMS	143
Blood received from other hospitals	359

Blood units issued

Total number of blood units issued	18,335
to CTVS/NS	14,926
to Blood Bank, Main hospital	1592
to IRCS	4
to other hospitals	1182
HIV/HBsAg/HCV/VDRL positive units discarded	631

Laboratory procedures

Total blood grouping (ABO)	75,195
Number of Rh grouping	38,711
Number of cross-matching done	75,411

Infection markers tested

HIV	23,740
HBV	23,274
HCV	23,291
VDRL	19,602
CMV	152
HBV (confirmatory test)	816
Total	90,875

Blood components

Fresh frozen plasma (FFP)	15,530
Platelet rich plasma (PRP)	198

Platelet concentrate	12,823
Recovered plasma	934
Cryoprecipitate	361
Packed red blood cells	15,891
Total	45,737

Special Procedures

Therapeutic plasmapheresis	5
Single donor plateletpheresis	15

Cardiac Biochemistry

The cardiac biochemistry laboratory is externally validated by BIRMINGHAM, UK through quality control programmes for clinical chemistry. Investigations being carried out in the department for inpatients and outpatients are:

Name of the investigation	Number of samples/year
<i>Clinical Chemistry</i>	
Glucose (fasting, postprandial/ random)	69,450
Urea	43,200
Creatinine	43,200
Calcium	35,000
Phosphorus	35,000
Total/direct/indirect bilirubin	30,000
Total Protein	32,000
Albumin	32,000
AST	30,000
ALT	30,000
Alkaline phosphatase	30,000
Amylase	4500
<i>Haemogram</i>	
Haemoglobin	29,000
PCV	27,000
Red blood corpuscles	12,000
Reticulocytes	12,000
Platelets	12,000
WBC	34,000
WBC-differential	34,000
<i>Coagulation</i>	
PT	29,000
APTT	12,000
FDP	90
Protein C	10
Protein S	10
Fibrinogen	700
<i>Cardiac enzymes</i>	
CK	8000
CK-MB	3500

LDH	7500
<i>Lipid Profile</i>	
Cholesterol-total	32,000
Cholesterol-HDL	22,000
Cholesterol-LDL	22,000
Cholesterol-VLDL	22,000
Triglycerides	24,000
<i>Specialised investigations</i>	
Digoxin	2500
Cyclosporine	55
Thyroid hormones: T ₃ , T ₄ , TSH	7500
ASLO	5000
CRP	5000
Homocystiene	1000
Lipoprotein(a)	25
Apo(a)	25
Apo(b)	25
RA factor	1000
Catecholamines (plasma and urine)	100
VMA (urine)	200
Glycosylated haemoglobin	25

Facilities in terms of equipments available

- Fully automated chemistry analyzers (C×5 delta from Beckmann and Konelab)
- Coagulometers (ACL 100 and Diagnostica Stago)
- Cell counters
- Thermal cycler
- Gel documentation system
- HPLC
- Automated ELISA system

Cardiac Pathology

Total number of specimens/slides

Specimens	
Routine	157 cases
Research	136 cases
Slides coated	
Poly-L-lysine	10,900 slides

Immunohistochemistry

For Department of Pathology	631 slides
Collagen IV	14 slides

Others

HE	307 slides
Unstained	184 slides
Special stains	72 slides
Urgent processing	2 cases

Cardiac Nuclear Medicine

The department is equipped with a dual head SPECT gamma camera catering to patients referred for cardiac studies from CN centre and other departments of the hospital. Both thallium and tetrofosmin-gated SPECT myocardial perfusion studies are performed. The department also performs MUGA studies for assessment of left ventricular function in CAD patients referred from the centre and from IRCH for cardiac evaluation in patients receiving chemotherapy.

Total number of patients investigated from 1 April 2005 to 31 March 2006

Stress thallium	1151
Stress tetrofosmin	356
MUGA study	1439
Lung perfusion study	88
Total	3034

AWARD, HONOURS AND SIGNIFICANT EVENTS

Cardiothoracic and Vascular Surgery

Professor P. Venugopal was invited to attend the selection and academic committee meeting at PGIMER, Chandigarh; 11–14 December 2005.

Professor A. Sampath Kumar delivered the distinguished Alumni oration at the Golden Jubilee Celebrations at Bangalore Medical College, Bangalore; was elected to the executive council of the Asian Society for Cardiovascular Surgery; conducted the first ‘Heart valve course’ with Professor Alain Carpentier; 9–10 February 2006; was invited to attend the first Asian Master programme, Bangkok, Thailand; 16–19 February 2006.

Dr Sachin Talwar was awarded Young Investigators award for the best paper ‘A new technique of percutaneously adjustable pulmonary artery banding’ at the annual meeting of the Pediatric Cardiac Society of India, Hyderabad; 15–17 July 2005; visited Children’s Memorial Hospital, Chicago, US as an observer in Pediatric Cardiac Surgery between June–July 2005.

Cardiology

Professor K.C. Goswami received the First CSI Fellowship (2005) at the Annual Meeting of CSI, Mumbai; December 2005.

Cardiac Anaesthesia

Dr Usha Kiran continues to be Vice President of PRAN (Parkinson’s Related Diseases Awareness Disorders).

Dr Poonam Malhotra continues to be executive member of Indian Association of Cardiothoracic Anaesthesiologists.

Dr Sandeep Chauhan continues to be member of Review Board of *Annals of Cardiac Anaesthesia*.

Dr Minati Chaudhary received Kop's Award Certificate for the best superspecialty paper at the Annual Conference of Anaesthesia and first prize for poster presentation, Kolkata.

Cardiac Radiology

Dr Sanjiv Sharma was Visiting Professor at the 10th Radiological Meeting of Jiangsu Province, China and Clinical Medical College, Southeast University, Nanjing, China, 10–25 August 2005; Expert for a High Level Technical Committee for the procurement of State-of-Art- equipment for the NEIGRIHMS, Shilong; External Technical Expert, Technical Committee meeting at PGI, Chandigarh for procurement of a DSA system.

Dr Gurpreet Singh Gulati was Derek Harwood International Fellow of the Radiological Society of North America for the Year 2006; Fellow at the Division of Cardiovascular Imaging, Department of Radiology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA.

Cardiac Nuclear Medicine

Dr Chetan D. Patel was awarded 1-month UICC fellowship in Positron Emission Tomography at Department of Nuclear Medicine, University of Pennsylvania, Philadelphia, USA.

Significant events

Cardiac Anaesthesia

The department helped start the Department of Cardiac Anaesthesia at Shimla Medical College in December 2005 and gave anaesthesia for stem cell therapy for 38 patients of cerebral palsy.

VISITING SCIENTISTS

Cardiothoracic and Vascular Surgery

1. Dr V. Jeevanandam, Professor and Chief, Cardiac Surgery, University of Chicago, delivered a lecture on 'Heart Failure and Surgical Alternatives' on 28 February 2006.
2. Professor Alain Carpentier, a renowned surgeon in heart valve surgery conducted a two-day heart valve programme on 9–10 February 2006. He delivered three lectures, several interactive sessions and live surgery demonstration on Mitral Valve Repair. He also delivered the second Professor N. Gopinath Oration on 10 February 2006.

Cardiac Anaesthesia

1. Dr Dharinder from California, USA delivered a talk on OPCAB Anaesthesia in January 2006.

10.2 Centre for Behavioural Sciences

[NATIONAL DRUG DEPENDENCE TREATMENT CENTRE (NDDTC) AND DEPARTMENT OF PSYCHIATRY]

Professor and Chief

Rajat Ray
(Psychiatry and NDDTC)

Professors

B.M. Tripathi (NDDTC)	Raka Jain (NDDTC)	Manju Mehta (Psychiatry)
Pratap Sharan (Psychiatry)	R.K. Chadda (Psychiatry)	S.K. Khandelwal (Psychiatry) (abroad on assignment)

Additional Professors

Rakesh Lal (NDDTC)	Meera Vaswani (NDDTC)
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Associate Professors

Anju Dhawan (NDDTC)	Rajesh Sagar (Psychiatry)	Renuka Jena (Psychiatry)
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Assistant Professors

N. Kaw (NDDTC)	Sonali Jhanjee (NDDTC)	Atul Ambekar (NDDTC)
Nand Kumar (Psychiatry)		Mamta Sood (Psychiatry)

NDDTC and Psychiatry

EDUCATION

Undergraduate

During their posting in the Department of Psychiatry, undergraduates are posted for a day in the Centre.

Teaching

24 hours	3rd Semester
14 hours	6th Semester
6 hours	8th Semester

Clinical Posting

20 days	4–5th Semester
40 days	6–8th Semester

BSc Nursing

38 hours in both the Semesters

Speech and Hearing

20 hours August–April

Postgraduate

Residents doing MD (Psychiatry) are posted for 6 months during their entire course duration to the NDDTC.

PhD and Postgraduate teaching

The following are the conjoint activities of the Department of Psychiatry and the Centre

- Journal discussion
- Seminar
- Case conference
- Tutorials

NDDTC

Continuing Medical Education

National Workshop

‘Managing alcohol abuse in primary care settings’; May 2005.

Training Courses

Training of trainers

- Programme for doctors on ‘Substance use disorders’, Manipur, coordinated by NDDTC, AIIMS; May 2005.
- Programme for doctors on ‘Substance use disorders’, NIMHANS, Bangalore, coordinated by NDDTC, AIIMS; June 2005.
- Programme for doctors on ‘Substance use disorders’, NDDTC; September 2005.
- Programme for doctors on ‘Substance use disorders’, Assam, coordinated by NDDTC, AIIMS; October 2005.

Refresher courses

- ‘Substance use disorders’, NDDTC; October 2005, November 2005, December 2005.
- ‘Substance use disorders’, IPGMER Calcutta, coordinated by NDDTC; October 2005.

All the faculty of the NDDTC took lectures during these training programmes.

Symposium

‘Drug abuse among youth’, NDDTC; 15 April 2005.

Lectures delivered

- Participating as faculty in the training programme in ‘Psychiatry for general practitioners’, GB Pant Hospital, New Delhi under Ministry of Health and Family Welfare, Government of India (Dr Rajat Ray and Dr Anju Dhawan)
- ‘Management of post-traumatic stress disorder’, talk delivered in CME, Srinagar; 13–15 May 2005 (Dr Rakesh Lal and others)
- Public symposium on ‘Assessment of alcohol abuse in central water commission’; 25 November 2005 (Dr Rakesh Lal and others)
- Public symposium on ‘Assessment of alcohol abuse’, NTPC, Dadri; 3 January 2006 (Dr Rakesh Lal and others)
- Substance abuse awareness programme for students from JSS College of Nursing, Mysore; 28 February 2006 (Dr Rakesh Lal)

National and International Conferences

National Conferences

Dr Rajat Ray

- Participated and gave a talk in the National Seminar on 'Narcotic drug and psychotropic substances', Government of NCT Delhi and High Court of Delhi; 25–26 March 2006.

Dr Raka Jain

- 'Drunken driving', Workshop on 'Road rage: A study of aggressive behaviour and intervention strategies', Department of Psychiatry, AIIMS; 4 May 2005.
- 'Role of laboratory in primary health care', Workshop on 'Managing alcohol abuse in primary care setting: A study of aggressive behaviour and intervention strategies', NDDTC, AIIMS; 17–18 June 2005.

Dr Rakesh Lal

- 'Drugs for treatment of alcohol dependence', Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow; 3 April 2005.
- 'Pharmacological management of alcohol abuse', Bombay Psychiatric Society, Mumbai; 4 December 2005.

International Conferences

Dr Raka Jain

- 'Comparison of the effects of nitric oxide synthase inhibitors in nicotine dependent rats', Satellite Meeting of 2005 NIDA International Forum: Linking Drug Abuse and HIV/AIDS in conjunction with 67th Annual Scientific meeting of College on Problem of Drug Dependence (CPDD), Orlando, Florida, USA; 17–23 June 2005.
- Participated in Indo-US partnership workshop on 'Drug abuse and HIV/AIDS in northeast region of India', New Delhi; 27–29 October 2005.

Ms Anita Chopra

- 'How prevalent is smoking and nicotine dependence (DSMIII-R) in Jodhpur district, India', Fourth World Assembly on Tobacco Counters Health, Delhi; 5–9 December 2005.
- 'Drinking practices in Thrissur district, Kerala, India', 31st Annual Alcohol Epidemiology Conference, Kettil Brunn Society in Riverside, California, United States; 30 May to 3 June 2005.

Mr H.K Sharma

- 'Socio-cultural perspective of alcohol use among traditional folk artist of Delhi, India', 31st Annual Alcohol Epidemiology Conference, Kettil Brunn Society in Riverside, California, United States; 30 May to 3 June 2005.

RESEARCH

Funded Projects

Ongoing

1. Oral substitution treatment with buprenorphine. Anju Dhawan. Funded by United Nations Office on Drugs and Crime, Regional Office for South Asia, New Delhi from November 2005 ongoing. Funds: Rs 9 lakh.

2. A phase-2 clinical study to evaluate the safety and efficacy of ESD-27 in patients of chronic primary insomnia. Rakesh Lal. Funded by Himalaya Drug Company from 2005 ongoing. Funds: Rs 3 lakh.

Completed

1. Role of nitric oxide synthase inhibitors in modifying nicotine withdrawals in rats. Raka Jain. Funded by CSIR from December 2001 to March 2005. Funds: Rs 11,33,729.

Departmental Projects

Ongoing

1. Effect of nitric oxide synthase inhibitor 7-NI on sensitization to the operant decrement produced by naloxone in morphine-treated rats.
2. Workplace intervention for management of alcohol abuse.

Completed

1. Effect of nitric oxide synthase inhibitor to the operant decrement produced by naloxone in morphine-treated rats.
2. Role of sweet tasting solutions in modifying the opioid withdrawals in rats.

Collaborative Projects

Ongoing

1. Creation of a database on drug abuse and HIV/AIDS (with Biostatistics, Medicine and Computer Facility).

Completed

1. Design and development of clinical and biochemical parameters for transdermal drug delivery system (with Biomedical Engineering).
2. Design and development of polymeric material and their application in haemodialysis (with Nephrology).

PUBLICATIONS

Journals

1. Jain R, Varghese, ST. Diagnostic usefulness of liver function tests in alcohol and opioid dependent patients. *Addictive Disorders and their Treatment* 2005;**4**:117–20.
2. Prasad HRY, Khaitan BK, Ramam R, Sharma VK, Pandhi RK, Agarwal S, *et al.* Diagnostic and clinical features of pentazocine-induced ulcers. *Int J Dermatol* 2005;**44**:910–15.
3. Rao R, Dhawan A, Sapra N. Opioid maintenance therapy with slow release oral morphine (SROM): Experience from India. *J Substance Use* 2005;**10**:259–61.
4. Vaswani M, Ballakoor K, Ray R, Dube S. Alcoholism, a pilot study of tolerance in patients of alcohol dependence: Indian Data. *Clin Exp Res* 2005; **29**:69.
5. Vaswani M, Rao R. Biochemical diagnosis of alcohol dependence. *Indian J Med Sci* 2005;**10**:423–30.

Books

1. Lal R (ed). *Substance abuse disorder: Manual for physicians*. New Delhi: National Drug Dependence Treatment Centre, AIIMS; 2005.

Chapters in Books

1. Dhawan A, Kumar A. Long-term treatment of opioid dependence syndrome. In: Lal R (ed). *Substance abuse disorder: Manual for physicians*. New Delhi: National Drug Dependence Treatment Centre, AIIMS; 2005:77–85.
2. Dhawan A, Balhara YS, Mohan I. Adolescent substance abuse. In: Lal R (ed). *Substance abuse disorder: Manual for physicians*. New Delhi: National Drug Dependence Treatment Centre, AIIMS; 2005:174–80.
3. Dhawan A, Balhara YS. Inhalant Abuse. In: Pal H (ed). *Case book on substance use disorder: Manual for physicians*. New Delhi: National Drug Dependence Treatment Centre, AIIMS; 2005:62–65.
4. Jain R. Role of laboratory services. In: Lal R (ed). *Substance abuse disorder: Manual for physicians*. New Delhi: National Drug Dependence Treatment Centre, AIIMS; 2005:127–37.
5. Sharma HK. Community-based treatment of substance use disorder. In: Lal R (ed). *Substance abuse disorder: Manual for physicians*. New Delhi: National Drug Dependence Treatment Centre, AIIMS; 2005:95–103.
6. Ray R, Mondal A. Treatment principles and issues in management of substance use disorder: An overview. In: Lal R (ed). *Substance abuse disorder: Manual for physicians*. New Delhi: National Drug Dependence Treatment Centre, AIIMS; 2005:52–64.
7. Ray R, Jain R, Mongia, M, Kumar R. Substance abuse in young people: Biological considerations. In: Malhotra S (ed). *Mental disorders in children and adolescents: Need and strategies for intervention*. New Delhi: CBS Publishers; 2005:82–7.

PATIENT CARE

General Information

1.	Total beds	50
2.	General ward	50
3.	Private ward	Nil
4.	OPD attendance (NDDTC and Trilokpuri community)	32,739 21,401
5.	Admission	1,151

Attendance at OPD and specialty clinics

	New Cases	Old Cases	Total
General OPD	7,397	25,342	32,739
Specialty clinics			
Tobacco use cessation clinic	128	339	467
Adolescent clinic	20	37	57
Dual diagnosis clinic	40	184	224
Total	7,585	25,902	33,487
Trilokpuri Community Clinic	126	21,276	21,402

Laboratory investigations for patient care

Total number of drugs of abuse screened in urine samples 19,793

Drug	Number
Morphine	2448
Codeine	2448
Buprenorphine	2448
Detropropoxyphene	2448
Pentazocine	92
Naltrexone	49
Pheniramine (Avil)	2448
Nitrazepam	2448
Diazepam	2448
Chlordiazepoxide	2448
Canabinoids	68
Biochemical investigations	10000
Hematological investigations	4000
HIV screening	450

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr Rajat Ray became a member of the Executive Council, National Institute of Social Defence, Ministry of Social Justice and Empowerment, Government of India; Member of global expert group to develop worldwide network of Addiction Training Resource Centres, UNODC, Vienna and UCLA, USA; Member, Global Expert Group—Technical Guideline Development Group to develop pharmacological intervention for Opiate Dependence, WHO, Geneva; participated in the first India–China Bilateral meeting on ‘Narcotic drugs and psychotropic substances’, New Delhi; 14–16 January 2006; Member, Inter-ministerial group to review Schedules of NDPS Rules 1985, Government of India.

Dr Raka Jain was awarded WHO/NIDA/CPDD International travelling Fellowship award for participating and presenting paper in Satellite meeting of 2005 NIDA International Forum: Linking Drug Abuse and HIV/AIDS in conjunction with 67th Annual Scientific meeting of College on Problem of Drug Dependence (CPDD), Orlando, Florida, USA; Manuscript reviewer for *Neuroscience Letters* since 2005.

Dr Rakesh Lal was awarded WHO Fellowship on ‘Training of counselling on Drug Users’, Department of Mental Health, Ministry of Public Health, Thailand. 26 September 26–10 October 2005; Resource person for training of trainers conducted by Assam Medical College, Dibrugarh; 23–25 October 2005; appointed Selection Committee member for Postgraduate courses in the Central Institute of Psychiatry, 2005–2006.

Dr Meera Vaswani chaired three scientific sessions on ‘Addiction Psychiatry’ in American Psychiatry Association meeting held in Atlanta, May 2005; nominated as Indian Collaborator for WHO/ISBRA Phase II Clinical Trials for State/ Trait markers of Alcoholism.

Mr H.K. Sharma, Senior Research Officer, was awarded Fogarty Fellowship in HIV/AIDS Sciences, University of California, Los Angeles from 27 April 2005 to 20 July 2005.

Dr Rajat Ray and other faculty of the centre (NDDTC)

- planned and carried out the major activities on Control of Substance Use projects supported by the WHO (India) as its biennium (2004–2005) activities.
- planned and refined the National Drug Abuse Control Programme being carried out by the Ministry of Health and Family Welfare, Government of India.

VISITING SCIENTISTS

Dr Ratna Sarkar, Associate Professor of Psychiatry and Behaviour Sciences, Albert Einstein College of Medicine, New York, USA, Senior Research Scientist, Hillside Hospital, New York Consultant Psychiatrist, Director, Psychopharmacology Lab, North Shore-Long Island health System, New York, USA visited the department and delivered a talk on ‘Drug dependency, learning and memory and the developing brain’, New Delhi; October 2005.

A multi-member delegation from China at the NDDTC Centre interacted with the Faculty and Staff of the Centre.

Psychiatry

Continuing Medical Education

Workshops organized by the department

1. Suicide prevention strategies in education set-up; May 2005
2. Workshop on ‘Road rage: A study of aggressive behaviour and intervention strategies’; May 2005
3. Psychological approaches to pain management; January 2006
4. Training workshop in child psychiatry; January 2006

Lectures delivered

- Participated as faculty in the Training Programme in Psychiatry for General Practitioners, organised at GB Pant Hospital, New Delhi under Ministry of Health and Family Welfare, Government of India (Dr Rajat Ray, Dr R.K. Chadda and Dr Rajesh Sagar)
- Delivered a lecture on ‘Transcultural psychiatry’, Department of Anthropology, University of Delhi, December 2005 (Dr R.K. Chadda)

National and International Conferences

National Conferences

Dr Manju Mehta

- 'Depression in chronic pain patients', Indian Association for Physiology and Pharmacology, Pondicherry; December 2005.
- 'Psychological correlates of headache in children', Indian Association of Child and Adolescent Mental Health Conference, Lucknow; November 2005.
- 'Management of specific learning disability', Conference organized by the Indian Association of Child and Adolescent Mental Health, Lucknow, November 2005.

Dr Rajesh Sagar

- International Symposium on 'Cardiovascular diseases, stroke and diabetes', New Delhi; February 2006.

International Conferences

Dr Rajesh Sagar

- Presented the Country Progress Report at the Annual Consortium Meeting on World Mental Health (WMH) survey in Amsterdam, Netherlands, organized by WHO, Harvard University, University of Michigan and NIMH; July 2005.
- Symposium, 2nd International Mental Health and Cultural psychiatry Conference-Sydney, Australia; November 2005

RESEARCH

Funded Projects

Ongoing

1. Risk factors of substance use and abuse in offspring of substance abuse patients. Manju Mehta. Funded by ICMR (October 2004 to October 2006). Funds: Rs 6,00,000.
2. Road rage: A study of aggressive behaviour. Manju Mehta. Funded by Ministry of Health and Family Welfare (May 2005 to May 2007). Funds: Rs 10,0000.
3. A multi-centre, double blind, randomized, placebo-controlled, parallel group, flexible dose titration, and add-on study of mecamlamine in the treatment of major depressive disorder with subjects who are partial responders to citalopram therapy. Rajesh Sagar. Funded by Targacept (USA) (2005-ongoing). Funds: Rs 4,00,000.
4. A phase III, randomized, placebo-controlled, double-blind trial evaluating the safety and efficacy of sublingual asenapine vs. olanzapine and placebo in in-patients with an acute mania episode. Rajesh Sagar. Funded by Pfizer (2005-ongoing). Funds: Rs 5,00,000.
5. International collaboration with WHO (Geneva) and Harvard Medical School for study on World Mental Health Survey. Rajesh Sagar. Funded by WHO India (2002-2005). Funds: Rs 15,00,000.

Completed

1. Epidemiology of mental disorders: Longitudinal study (multicentric study, 11 centres). Rajesh Sagar. Funded by WHO (2002–2005). Funds: Rs 15,40,850.
2. Disability associated with mental disorders: Their nature and evaluation (multicentric study, 3 centres). Rajesh Sagar. Funded by WHO (2002–2005). Funds: Rs 9,56,000.

Collaborative projects

Completed

A prospective study in Indian women: How pregnancy and epilepsy interact to produce psychosocial and mental health morbidity (with Neurology).

PUBLICATIONS

Journals

1. Malhotra AK, Singh J, Chadda RK. Mental health problems following disaster: Management in primary care settings. *Indian J Pract Doctor* 2005;**2**:27–33.
2. Painuly N, Sharan P, Mattoo SK. Relationship of anger and anger attacks with depression: A brief review. *Eur Arch Psychiatry Clin Neurosci* 2005;**255**:215–22.
3. Pradhan BT, Sharan P, Avasthi A. Comorbid dissociative, anxiety and bipolar disorders: A case report. *J Pakistan Psychiatry Society* 2005;**2**:49–51.
4. Mari JJ, Bressan RA, Almeida-Filho N, Gerolin J, Sharan P, Saxena S. Mental health research in Brazil: Policies, infrastructure, financing and human resources. *Revue Saude Publica* 2006;**40**:161–9.
5. Saxena S, Quinn, K, Sharan P, Naresh B, Yuantao-Hao, Power M. Cross-linguistic equivalence of WHOQOL-100: A study from North India. *Qual Life Res* 2005;**14**:891–7.
6. Saxena S, Paraje G, Sharan P, Karam G, Sadana R. The 10/90 Divide in Mental Health Research: Trends over a 10-Year Period. *Br J Psychiatry* 2006;188:81–2.
7. Singh J, Mattoo SK, Sharan P, Basu D. Quality of life and its correlates in patients of dual diagnosis of bipolar affective disorder and substance dependence. *Bipolar Disord* 2005;**7**:187–91.
8. Singh V, Sagar R, Mehta M, Singh S. Somatic complaints and psychopathology in children and adolescents. *Indian J Behav Sci* 2005;**14** & **15**:45–51.
9. Singh S, Shivaprakash S, Balan S, Sagar R. Cyclothymia: A soft bipolar illness. *Indian J Behav Sci* 2005;**14** & **15**: 68–71.
10. Singh S, Singh V, Varghese ST, Sagar R. Lithium toxicity: Role of early interventions. *Indian J Behavioural Sciences*, 2005;**14** & **15**:72–5.
11. Sagar R, Varghese ST, Balhara YP. Dysphagia due to olanzepine, an antipsychotic medication. *Indian J Gastroenterol* 2005;**24**:37–8

12. Sagar R, Varghese ST, Balhara YP. Olanzapine induced double incontinence. *Indian J Med Sci* 2005;**59**:163–4
13. Varghese ST, Sagar R, Jhanjee S. Chronic renal failure and electroconvulsive therapy. *Indian J Med Sci* 2006;**60**:114–15.

Chapters in Books

1. Mehta M, Dutta R. Play Therapy in management of headache in children. In: Sharma KN, Bhattacharya N (eds). *Pain update 2005*. Indian Society for Pain Research and Therapy; 2005:147–50.
2. Mehta M. Cognitive behaviour therapy in the management of headache. In: Rashmi Mathur (ed). *Pain updated: Mechanisms and effects*. New Delhi: Anshan and Anamaya Publishers; 2006:239–44.
3. Sagar R, Mohan I. Cannabis intoxication with psychosis. In: Pal H (ed). *Case book substance use disorders: A physicians' manual*. New Delhi: NDDTC, AIIMS, 2005.

Books (Technical [Professional] Assistance/Editor)

1. World Health Organization. *Atlas 2005: Mapping mental health resources in the world*. Geneva: WHO, 2005. (Dr P. Sharan)
2. World Health Organization. *Child atlas 2005: Mapping mental health resources in the world*. Geneva: WHO, 2005. (Dr P. Sharan)
3. Malhotra S, Sharan P, Gupta N, Malhotra A, Gill S (eds). *Mental disorders in children and adolescents: Needs and services*. New Delhi: National Book Trust; 2005.

PATIENT CARE

	New cases	Old cases	Total
General OPD	1,429	–	1,429
<i>Specialty Clinic</i>			
Child Guidance	458	272	730
Walk in Clinic	14,116	23,947	38,063
De-Addiction Clinic	172	989	1,161
Total	16,175	25,208	41,383

Inpatient admissions 435

Laboratory investigations

Serum lithium levels 300

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr Manju Mehta was elected President, Indian Society for Pain Research and Therapy (ISPRAT); was invited as Guest of Honour to Child Guidance Clinic, RAK College on the occasion of 50th Anniversary celebrations.

Dr R.K. Chadda was selected as Member, Expert Group for developing OSCEs for DNB (Psychiatry), National Board of Examinations, New Delhi.

Dr Rajesh Sagar was appointed Assistant editor, *Journal of Indian Association for Child and Adolescent Mental Health* (www.jiacam.org); received Fellowship of International Institute of Child and Adolescent Mental Health (UK)-2005

The department also provided psychosocial support to affected earthquake victims in Kashmir, November 2005 by sending faculty members (Dr R.K. Chadda, Dr N. Kaw) and social workers (Mr Deepk Yadav, Mr Bhram Prakash) for two weeks to Kashmir.

10.3 Centre for Dental Education and Research

Chief

Hari Prakash
(till 30 September 2005)

Naseem Shah
(from 30 September 2005)

Professor

O.P. Kharbanda
(from September 2005)

Additional Professor

Ritu Duggal
(from July 2005)

Associate Professors

Ajoy Roychoudhury

Veena Jain

Assistant Professors

Ongkila Bhutia

Vijay Prakash Mathur
(from 28 September 2005)

Ajay Logani
(from 28 September 2005)

EDUCATION

Continuing Medical Education

The Centre organized the 'National Consensus workshop on Oral Health Promotion and Tobacco Cessation' on the occasion of World No Tobacco Day 2005. The faculty also participated in meeting on oral health in Ageing Societies: Integration of oral health and general health, Kobe Japan, organized by World Health Organization, 93rd Annual FDI World Dental Congress at Montréal, Canada, Third International Women's Leadership Conference at Montreal, Canada, and Global Task force for Children's Oral health and 8th World Congress for Preventive Dentistry, Liverpool. The division of Conservative Dentistry and Endodontics in collaboration with International College of Dentists organized a Continuing Education Programme (CME) on 'Problem Solving in Endodontics'. The faculty participated in the curriculum revision workshop for Diploma in Health Education, conducted by Central Health Education Bureau, Directorate of Health Services, Government of India.

Undergraduate

The Centre conducted the teaching programme of MB,BS undergraduate students during their clinical posting in VIIIth Semester.

Postgraduate

At present, the Centre is conducting postgraduate degree programmes in Orthodontics, Prosthodontics and Conservative Dentistry and Endodontics.

Short-term Training

3 sponsored candidates from Afghanistan and one WHO candidate from Sri Lanka have undergone short-term training varying from 3 to 6 months in the Centre.

RESEARCH

Completed

1. National Oral Health Care Programme: Pilot Project in the State of Maharashtra, Punjab, North-Eastern states, Kerala and Delhi.

Ongoing

1. National Oral Health Care Programme: Project in collaboration with the Directorate General of Health Services and Ministry of Health and Family Welfare.
2. A hospital-based study on progressive and regressive changes in oral precancerous lesions in North Indian population. Ajoy Roychoudhury. Funded by ICMR Fellowship Project.
3. Deletion of apoptosis in human periodontal ligament during orthodontic tooth movement. Ritu Duggal. Funded by ICMR.

PUBLICATIONS

Journals

1. Batra P, Duggal R, Parkash H. Managing morphologically atypical impacted teeth orthodontically. *J Clin Pediatr Dent* 2005;**29**:105–11.
2. Batra P, Duggal R, Parkash H. Non-syndromic multiple supernumerary teeth transmitted as an autosomal dominant trait. *J Oral Pathol Med* 2005;**34**:621–5.
3. Batra P, Kharbanda OP, Duggal R, Parkash H. Alkaline phosphatase activity in gingival crevicular fluid during canine retraction. *Orthod Craniofac Res* 2006;**9**:44–51.
4. Batra P, Duggal R, Parkash H. Functional occlusion in orthodontics. *J Indian Orthod Soc* 2005;**38**:80–90.
5. Jena AK, Duggal R, Parkash H. Orthopedic and orthodontic effects of twin-block appliance. *J Clin Pediatr Dent* 2005;**29**:225–30.
6. Jena AK, Duggal R, Mathur V P. Class-III malocclusion: Genetics or environment? A twins study. *J Indian Soc Pedod Prev Dent* 2005;**23**:27–30
7. Jena AK, Kharbanda OP. Asenfeld-Rieger syndrome: Report on dental and craniofacial findings. *J Clin Pediatr Dent* 2005;**30**:83–8.
8. Jain V, Gupta R, Parkash H. Prosthodontic rehabilitation in Papillion–Lefevre syndrome: A case report. *J Indian Soc Pedod Prev Dent* 2005;**23**:96–8.
9. Jain V, Gupta R, Duggal R, Parkash H. Restoration of traumatized teeth by interdisciplinary approach: Report of three cases. *J Indian Soc Pedod Prev Dent* 2005;**23**:193–7.
10. Low E, Zoellner H, Kharbanda OP, Darendeliev MA. Expression of mRNA for osteoprotegerin and receptor activator of nuclear factor kappa beta ligand (RANKL) during root resorption induced by the application of heavy orthodontic forces on rat molars. *Am J Orthod Dentofacial Orthop* 2005; **128**:497–503.

11. Nallegowda M, Mathur VP, Singh U, Khanna M, Sachdev G, Yadav SL, *et al.* Oral Health Status in Indian Children with Cerebral Palsy: A Pilot study. *Indian J Physical Med Rehabil* 2005;**16**:1–4.
12. Kapoor P, Kharbanda OP. t-PA and PA I -2 in gingival crevicular fluid during orthodontic tooth movement in adults. *Aust Orthod J* 2005;**2**:151–2.
13. Roychoudhury A, Batra P. The use of orthopaedic distractor for facial asymmetry correction. *J Clin Pediatr Dent* 2005;**29**:99–104.
14. Rex T, Kharbanda OP, Petocz P, Darendeliev MA. Physical properties of root cementum: Part 6. A comparative quantitative analysis of the mineral composition of human premolar cementum after the application of orthodontic forces. *Am J Orthod Dentofacial Orthop* 2006;**129**:358–67.

Abstracts

15. Nallegowda M, Singh U, Khanna M, Mathur VP. Oral Health Status in Indian Children with Cerebral Palsy: A Pilot study. *Am J Physical Med Rehabil* 2005;**84**: 231.
16. Parkash H, Mathur VP, Duggal R. Oral health promotion activities in India: A challenge. *Community Dent Health* 2005;**22**:292.

Books

1. Parkash H, Duggal R, Mathur VP. *National Consensus Workshop for Oral Health Promotion and Tobacco Cessation: Background and working document* as an outcome of the Workshop. May 2005.

Chapters in Books

1. Shah N. Oral and dental diseases. In: *Burden of disease in India*. New Delhi: National Commission on Macroeconomics and Health, Ministry of Health and Family Welfare, Government of India, 2005:275–98.

PATIENT CARE

Special laboratory facilities

The Centre continues to provide radiovisiographic facility as a dental chair side facility to diagnose and plan treatment.

The Center provides the following advanced treatment procedures.

1. Management of craniofacial trauma
2. Facial aesthetic surgery
3. Maxillofacial pathology treatment
4. Cleft lip and palate repair
5. Distraction osteogenesis
6. Temporo-mandibular joint surgery
7. Dental implants
8. Trigeminal neuralgia
9. Removable and fixed orthodontics
10. Dento-facial orthopedics and cleft and plate orthodontics
11. Root canal treatment and advanced restorative procedures

12. Ethic restorations and bleaching of teeth
13. Complete dentures, partial dentures, crown and bridge
14. Maxillofacial prosthesis
15. Implant supported prosthesis
16. Space maintainers

Community services/camps

The faculty of the Centre is continuing to work on 'National Oral Health Care Programme'. The Centre conducted an oral health camp at AIIMS Rotary Midtown Hospital, Trilokpuri; 7 April 2005 on the occasion of World Health Day. The Centre also conducted training programmes for health workers at RHTC Najafgarh and Oral Health Training workshop for the staff and officers of the Administrative Block, AIIMS.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor Naseem Shah was Member Expert, Ministry of Human Resource Development for selection of candidates for Commonwealth Fellowship 2005; UGC expert committee to grant Deemed University status to various institutions and to finalize the fee structure; Member, Postgraduate Board of Studies, Maharshi Dayanand University, Rohtak, Haryana; Member, Advisory Board, Saveetha Dental College, a Deemed University; Project Director, National Oral Health Care Programme, Ministry of Health and Family Welfare, Government of India.

Professor Kharbanda was invited by the University of Sydney as Visiting Professor in November 2005; was an expert on Faculty Selection Committee, King George's Dental University, Lucknow and Punjab University, Chandigarh; invited by ICMR as subject expert to review research projects and also to give inputs for research in Oral Health for the 11th Plan of Government of India; served the Dental Council of India as Inspector and also the Government of India in the same capacity; invited as Guest Faculty at the 5th Conference of the Indian Cleft Lip and Palate association meeting, 3rd World Edgewise Orthodontic Conference and at the College of Dental Surgery, Davengere; Member, International Editorial Board of *American Journal of Orthodontics and Dentofacial Orthopaedics* and *British Journal of Orthodontics*; Associate Editor, *Journal of Clinical Paediatric Dentistry* (USA); Reviewer for *Am J Orthodontics and Orthopedics*, *Australian Orthodontic Journal* and *Journal of Orthodontics* (British); continues as Consultant Editor, *Journal of Indian Orthodontic Society*.

Dr Ritu Duggal was invited Guest speaker at 3rd International Women's Leadership Conference, Montreal, Canada; 24–27 August 2005; invited Guest speaker at World Congress on Preventive Dentistry; 7–10 September 2005; appointed Inspector by Dental Council of India to conduct inspection to start BDS/MDS courses at various dental colleges in India.

Dr Ajoy Roychoudhury was awarded the TC White Visiting Scholarship by the Royal College of Physicians and Surgeons, Glasgow; awarded Fellowship of the Indian Board of Oral and Maxillofacial Surgeons of India; appointed Inspector by the Dental Council of India to conduct inspection to start BDS/MDS courses of various dental colleges in India.

Dr Veena Jain was appointed Inspector by the Dental Council of India to conduct the inspection of Santosh Dental College and Hospital, Ghaziabad; delivered guest lecture on 'Prosthodontics rehabilitation of mutilated dentition', CDE, Pondicherry.

The construction work for the establishment of Centre for Dental Education and Research at AIIMS is nearing completion and the Centre is expected to start functioning very soon.

VISITING SCIENTISTS

Professor Ravi Nanda, Chairman of Orthodontics, University of Connecticut, Professor Peter Mossey, University of Dundee, Dundee, Scotland and Dr David L. Baker and Dr Pamela Baker, DDS visited the Department and participated in the Postgraduate teaching programme.

10.4 Dr B.R. Ambedkar Institute Rotary Cancer Hospital

Professor and Chief

Vinod Kochupillai
(Medical Oncology)

Professors

G.K. Rath
(Radiation Oncology)
Vinod Raina
(Medical Oncology)
Lovleen Bijlani
(Medical Oncology)

P.K. Julka
(Radiation Oncology)
Subhash Chander
(Radiation Oncology)
B.K. Mohanti
(Medical Oncology)

N.K. Shukla
(Surgical Oncology)
Rajive Kumar
(Laboratory Oncology)
Lalit Kumar
(Medical Oncology)

Associate Professors

Sidhartha Satpathy
(Hospital Administration)
Sushma Bhatnagar
(Anaesthesiology)

S.V.S. Deo
(Surgical Oncology)
Atul Sharma
(Medical Oncology)

Sanjay Thulkar
(Radiodiagnosis)

Assistant Professors

Pratik Kumar
(Medical Physics)
Seema Mishra
(Anaesthesiology)
Sushmita Pathy
(Radiation Oncology)

Sameer Bakhshi
(Medical Oncology)
Suman Bhaskar
(Radiation Oncology)
Ritu Gupta
(Laboratory Oncology)

Paresh Jain
(Laboratory Oncology)
D.N. Sharma
(Radiation Oncology)

EDUCATION

Anaesthesiology

The following activities are conducted:

- IRCH seminars every Monday and Thursday
- Journal Club and Radiology conference every Saturday

Laboratory Oncology

- Department provides training to students of MD Pathology and Paediatrics
- Combined clinicopathological discussions are held with the Department of Paediatrics

Medical Oncology

Undergraduate

The department participated in the undergraduate teaching programme.

Postgraduate

Medical Oncology is running a DM programme under which there are 8 regular and 2 sponsored students.

PhD training

Three students are undergoing PhD training.

Short-term/Long-term training

- One doctor from the Ministry of Defence, New Delhi has joined the department as long-term trainee for a period of 2 years from 30 December 2005.
- The department has been regularly training postgraduate students (DM) from the Department of Haematology for 3–4 weeks' in Bone marrow/Stem cell transplantation.

Short-term training (Clinical): 5 students

Short-term training (Laboratory): 7 students

Medical Physics

Undergraduate and Postgraduate training

The Medical Physics unit has actively participated in imparting education in the field of radiation protection, radiation physics and quality in radiological imaging to students doing MD Radiology, MB,BS, BSc (Hons) Nursing and BSc (Hons) Radiography. In addition, the unit has 2 PhD students.

The faculty and staff participated in Unit's and Dr B.R Ambedkar IRCH Seminars.

Short-term training

The Unit imparted short-term training to 3 radiologists (one from Delhi and two from Maharashtra) and one Medical Physicist (from Dehradun) in radiation safety and quality in Diagnostic Medical Physics course.

Radiation Oncology

Involved in undergraduate, postgraduate and BSc Nursing teaching programmes.

Short-term training and Continuing Medical Education

- Short-term training was given to 4 MD (RT) students from SGPGI, Lucknow; March 2006, 7 students from Kolkata and 3 from Madurai.

Radiodiagnosis

Undergraduate and postgraduate teaching activities are combined with the main Radiodiagnosis Department.

Surgical Oncology

Undergraduate

The faculty were involved in undergraduate teaching by giving didactic lectures and participating in and moderating seminars on topics in oncology.

Postgraduate

The faculty were involved in teaching and training of 6 surgical oncology senior residents, DM medical oncology residents, MD radiotherapy junior residents by giving didactic lectures, moderating seminars, journal clubs, etc. and clinical teaching during ward rounds and in special cancer clinics of IRCH. The faculty also acted as co-guides and co-supervisors in theses of students in DM medical oncology, MD radiation oncology and PhD of different departments of IRCH and AIIMS.

Paraclinical

The faculty were involved in the teaching of BSc nursing students.

Short- and long-term training

- One surgical specialist from Tripura received 6 months training and one from Bangalore completed 2 months' training in the department.

Continuing Medical Education

Anesthesiology

- Organized 5th Foundation Course on Palliative Care for medical practitioners and nursing staff treating cancer patients in and around Delhi; 16–17 February 2006.
- Lectures for nursing staff deputed at IRCH from all over the country for undergoing advanced courses in Oncology.

Medical Oncology

- Organized a meeting on stem cell therapy on the occasion of IRCH Foundation Day and 'AIIMS Golden Jubilee year'; 26–27 November 2005.

Medical Physics

- Organized a Symposium on 'Quality in radiological imaging and radiation safety of patients and staff'; 16 April 2005.

Department arranged following CME programmes

National and International Conferences

Lectures delivered

Anaesthesiology

Dr Sushma Bhatnagar

- 'End of life issue in cancer patients for national conference on ageing and dying—Relevance of Indian perspectives to end of life care', Kharagpur; October 2005.
- 'Anaesthetic management of head and neck cancer', 3rd West Zone and 10th Rajasthan State Branch of the Indian Society of Anaesthesiologists Conference, Jaipur; October 2005.
- 'Pain management in cancer patients', ACADIMA-2005, Ludhiana; October 2005.
'Cancer pain management', 5th Cancer Foundation Course on Pain and Palliative Care, Delhi; February 2006.

Dr Seema Mishra

- 'Symptom management for palliation', 5th Foundation Course on Pain and Palliative Care, Delhi; 16–17 February 2006.

Laboratory Oncology

Dr Rajive Kumar

- 'Diagnostic aspects of multiple myeloma', National Hematology Update V, Department of Haematology, AIIMS; February 2006.

Medical Oncology

Dr Vinod Kochupillai

- ‘Science of breath’ at Indian Medical Association, Jalandhar, Ludhiana and Amritsar; 15–20 July 2005 and Indian Medical Association, Gujarat; 21–25 November 2005.
- ‘Cancer prevention’ at International Foundation of Natural Health and Yoga, Indian National Science Academy, New Delhi; 9 April 2005 and Reserve Bank of India, New Delhi; 14 September 2005.
- ‘Diet and health life style for prevention and control of cancer’, Regional Workshop, JIPMER, Pondicherry; 23 October 2005.
- Conducted an in-house training programme on ‘Latest advancement in treatment of cancer and aids’ for the medical officers of Indian Ordnance Factories health service, Dehradun organized at AIIMS; 25 October 2005.
- ‘Diet and health life style for prevention and control of cancer’, DGHS, Mumbai; 10 December 2005.
- ‘Expanding paradigms: Science, consciousness and spirituality’, Bhagwan Mahavir Hospital and Heart Institute, Rohini, Delhi; 1 October 2005.
- ‘Health and spirituality’, Institute of Hematology, Mumbai; 5 October 2005, BARC, Powai, Mumbai; 6 October 2005 and Jaipur Golden Hospital, New Delhi; 8 October 2005.
- ‘Sudarshankriya’, Conference on ‘Spirituality lifestyle and health’, Adhyatma Sadhna Kendra, New Delhi; 3 December 2005, Ahmedabad Management Association, Ahmedabad; 22 January 2006 and South Delhi Senior Citizen’s Forum, New Delhi; 1 October 2005.
- Conducted a session on ‘Art of living with special reference to Sudarshan Kriya’, Programme on ‘The culture of breath’, organized by His Holiness The Dalai Lama, New Delhi; 26 November 2005.
- ‘Health and spirituality’, National seminar on ‘Scientific validation and Technical Evaluation of Ancient Medical Systems (SVTEAMS)’, DST, IIT, New Delhi; 10–11 February 2006.
- ‘Science of breath’, Health Worlds Asia Congress, 2005, Singapore; 11–13 November 2005.
- ‘Effect of Sudarshan Kriya and Pranayam on immune status, quality of life and chemotherapy side-effects in cancer patients’, Annual Meeting of the American Psychosomatic Society, Colorado, USA; 1–4 March 2006.

Dr Lalit Kumar

- ‘The role of chemotherapy/radiotherapy/endocrine/gene therapy in bone metastasis from breast carcinoma’, AO Spine India Chapter Summer Seminar, India Habitat Centre, New Delhi; 5 May 2005.
- ‘BMT in leukemias and myeloma—Indian perspective’, Indo-Australian Haemato-Oncology Update, Bangalore; 25 October 2005.
- ‘Current status of myeloma management’, CME on Stem Cell Transplantation at Army Hospital (R&R), New Delhi; 18 September 2005.
- ‘Haemopoietic stem cell transplantation—Current trends’, Seminar on Stem Cell Biology, Punjab University, Chandigarh; 19 August 2005.
- ‘Febrile neutropenia: Indoor treatment’, CME in Haematology at AIIMS, API –Delhi State Chapter; 3 September 2005
- ‘Chemotherapy in the management of GTD’, Practical Gynaecologic Oncology CME cum Workshop, Lady Harding Medical College, Delhi; 3 September 2005.
- ‘Basics and application of stem cell research’, 1st Hands-on Training Programme for Scientists on ‘Diagnosis of genetic disorders using cytogenetics and molecular genetics methods’, Department of Anatomy, AIIMS; 27 September 2005.

- ‘Chemotherapy for ovarian cancer: Future potential for new and existing drugs’, CME, Apollo Hospitals, New Delhi; 8 October 2005.
- ‘Stem cell transplantation’, Medicine Update 2005, Bhopal; 16 October 2005.
- ‘Neoadjuvant chemotherapy versus primary surgery in ovarian cancer’, Thai Gynaecological Cancer Society Meeting, Cha-am, Thailand; 13 August 2005.
- ‘Multiple myeloma: Therapeutic algorithm’, National Haematology Update –V, AIIMS; 25 February 2006.
- ‘Role of stem cell transplantation in the management of malignancies’, Wet Workshop on ‘Recent advances in diagnosis of genetic disorders’, Department of Anatomy, AIIMS; 3 March 2006
- ‘Cancer care in next two decades’, ‘Science Day’, Institute of Cytology and Preventive Oncology (ICMR), NOIDA, 28 February 2006.

Dr Sameer Bakhshi

- ‘Issues in childhood leukemia/lymphoma’, Regional Pediatric Workshop, Uttar Pradesh Health Systems Development Project, Meerut; 27 May 2005.
- ‘Current scenario of malignancies in India’, Academia 2005: 39th Annual National Academic Conference of Indian Medical Association, Ludhiana; 21 October 2005.
- ‘Recent advances in therapy of non-lymphoblastic pediatric lymphoma’, International Symposium on Pediatric Malignancies, AIIMS; 31 December 2005.
- ‘Role of filgrastim in paediatric malignancies’, Seminar on ‘Emerging trends in the management of neutropenia’, Hotel Oberoi, New Delhi; 4 March 2006.
- ‘Delayed intensification in ALL’, National Consultative on ‘Diagnosis and management of childhood ALL’, MIG Club, Mumbai; 25–26 March 2006.

Medical Physics

Dr Pratik Kumar

- ‘Radiation protection in paediatric radiography’, Proceedings of 3rd Annual Conference of Indian Society of Paediatric Radiology, New Delhi; 1–2 October 2005.
- ‘Quality assurance in diagnostic imaging’, Proceedings of the 2nd National Conference of Radiologic Technologists’, New Delhi; 14–15 October 2005.
- ‘Radiation doses in interventional radiology’, Symposium on ‘Quality in radiological imaging and radiation safety of patients and staff’, AIIMS, 16 April 2005.
- ‘Integrated quality approach in imaging: What lies beyond testing of machines?’, International Conference on Medical Physics and Radiation Safety, AMPICON-2005, Chennai.

Dr Anil Kumar Pandey

- ‘Film processor quality assurance programme and its cost-effectiveness’, Symposium on ‘Quality in radiological imaging and radiation safety of patients and staff (SQRI 2005)’, AIIMS; 16 April 2005.

Radiation Oncology

Dr G.K. Rath

- ‘Recent trends in radiation oncology for management of gynecological cancers’, Quarterly Meeting, Obstetrics and Gynecological Society of Northern India, Ludhiana; 22 January 2006.
- ‘Overview of childhood cancer’, Kanpur; February 2006.
- ‘Recent advances in management of cancer’, Agra; 2006.

- 'Modern radiotherapy management of cancers of uterus and cervix', BMCON II, Jaipur; March 2006.
- 'Role of radiotherapy in breast cancer', BCF-India, Hyderabad; March 2006.
- 'Role of RT in brain metastases', CME on Brain Metastases, Mumbai; July 2005.
- 'Development of radiotherapy in India', Jullundhar; June 2005.
- 'Recent advances in radiotherapy', CME on Cancer, Kota; May 2005.
- 'Intraoperative brachytherapy', Trivandrum; April 2005.
- 'IMRT in lung cancer: Newer technique of RT', Chandigarh; April 2005.
- 'Recent advances in multimodality management of head and neck cancer', DMA-Oncovision 2005, New Delhi; August 2005.
- 'Recent trends in the management of carcinoma of oesophagus', CME GI Malignancies, Srinagar; November 2005.
- 'Radiotherapy practice in India: A perspective', Mumbai; November 2005.
- 'Role of RT in breast cancer: Recent concepts', Manipal; August 2005.
- 'Burden of cancer: Introduction. Cancer control strategies in India', New Delhi; February 2006.
- 'Treatment guidelines for buccal mucosa cancer and CML', ICMR, New Delhi; October 2005.

Dr P.K. Julka

- 'Follicular lymphoma', Goa; 19 June 2005.
- 'Recent trends in gliomas', International Lymphoma Day; 15 September 2005.
- 'Carcinoma ovary'; 16 September 2005.
- 'Lung cancer (NSCLC)'; 30 September 2005.
- 'Immunotherapy of cancer', AIIMS; 28 November 2005.
- 'Ethyol symposium'; 2 December 2005.
- 'Recent Advances in Radiation Oncology and SRT and IRMT', PGIMER, Chandigarh; 16–17 April 2005.
- 'Molecular biology of gliomas'; 7 September 2005.
- 'Head and neck carcinoma'; 1 October 2005.
- 'IMRT in Breast Carcinoma'; 20 November 2005.
- 'Concurrent Chemotherapy and Radiotherapy in Head and Neck'; 1 December 2005.
- 'Targeted therapy in breast cancer'; 11 December 2005.

Dr D.N. Sharma

- 'Understanding cancer: From age-old concept to recent advances', DMA-Oncovision 2005, New Delhi; August 2005.
- 'Role of radiotherapy in bone sarcomas', RR hospital, New Delhi; April 2005.
- 'Role of IMRT in cervical cancer', CI 2006, Hyderabad; February 2006.
- 'Role of RT in carcinoma of gall bladder', CME on 'Gallbladder cancer', Patna; May 2005.
- 'Prioritizing research agenda for cancer control strategies: Need-based perspective', New Delhi; February 2006.

Dr Suman Bhaskar

- 'Palliative RT in pediatric patients', IAPC, Chennai, February 2006.

Dr R.C. Joshi (Sr Medical Physicist)

- Comparison of Contra-Lateral Breast Dose by Various Tangential Field Techniques in Carcinoma Breast Irradiation, ASTRO 47th Annual Meeting 2005, Denver, Colorado, USA, October 2005.

Dr T. Ganesh (Sr Medical Physicist)

- ‘Image-based brachytherapy’, Seminar on Advances in brachytherapy, Divisions of Radiotherapy and Radiation Physics, Regional Cancer Centre, Trivandrum; 24 April 2006.
- ‘Simulator vs. CT-based treatment planning in brachytherapy’ Technical workshop on simulator and brachytherapy, Regional Cancer Centre, Indira Gandhi Institute of Medical Sciences, Patna; 10 September 2005.
- ‘3D-conformal radiotherapy: Practical aspects’, XIth North Zone AROI Conference, Regional Cancer Centre, Indira Gandhi Medical College, Shimla; 15–16 October 2005.
- ‘Treatment planning in HDR intracavitary brachytherapy: Comparison of critical organ doses as estimated by orthogonal radiographs-based planning versus image based planning’, 47th Annual Meeting of American Association of Physicists in Medicine, Seattle; 25–28 July 2005.
- ‘A study on the reproducibility of tangential breast fields using online electronic portal images’, 47th Annual Meeting of American Association of Physicists in Medicine, Seattle; 25–28 July 2005.

Mr V. Subramani (Medical Physicist)

- ‘Overview of IMRT: AIIMS Experience’, WNTRO 2006; January 2006.
- PET-CT based treatment planning, WNTRO 2006, January 2006

Mr R Prabhakar (Medical Physicist)

- ‘Isocentric shift in tangential field breast irradiation for three different breath-hold conditions and its impact on surrounding critical structures’, ECC013, Paris, The European Cancer Conference; October–November 2005.

Radiodiagnosis

Dr Sanjay Thulkar

- ‘Benign breast diseases’, Protocol Development Workshop, Indian Clinical Epidemiological Network, AIIMS; 20 May 2005.
- ‘Breast imaging’ delivered by Dr Sanjay Thulkar at Resident training programme organised by Indian Radiological and Imaging Association at RML Hospital, New Delhi; 7 October 2005
- ‘Advances in breast imaging’ delivered by Dr Sanjay Thulkar at CME ‘Update in Oncoimaging’ organized by Indian Radiological and Imaging Association at PGI, Chandigarh; 26 February 2006

Surgical Oncology

Dr N.K. Shukla

- ‘Surgical management of liver metastasis’, CME programme, Delhi Chapter of the Association of Surgeons of India, Action Medical Institute, New Delhi; 28 August 2005.

Dr S.V.S. Deo

- ‘Oncoplastic Surgery for Breast Cancer’, CME Oncology Update, East Delhi IMA and Fortis Health Care; 7 August 2005.
- ‘IOHDR IRCH-AIIMS experience’, CME Programme, Delhi Medical Association, Onco-Vision 2005, New Delhi; 14 August 2005.
- ‘Recent concepts and Management of Breast Cancer’, CME of Golden jubilee celebrations and Oncology Update of Indian Railways Cancer Hospital, Varanasi; 28 May 2005.
- ‘Surgical Management of Colorectal cancers’, CME on GI cancers, Sher E Kashmir Institute of Medical Sciences, Srinagar; 7 November 2005.

- ‘Skin sparing mastectomy’, CME on Breast Diseases, Delhi Chapter of Association of Surgeons of India, Surgicon 2005, Safdurjung Hospital, New Delhi, 11–13 November 2005.
- ‘Recent advances in surgical oncology’, CME, IMA Kota, Rajasthan; 25 March 2006.
- ‘Surgery for breast cancer’—a video workshop, CME–Seminar and Workshop in Oncology (Breast and Cervical Cancer), B. Barooah Institute of Cancer, Guwahati, 19–21 January 2006.
- ‘Audit of breast cancer management’, 3rd International Breast Conference of Tata Memorial Hospital and WCI, TMH, Mumbai; 30 September–2 October 2005.
- ‘Evidence-based medicine/guidelines: Does it make difference? – Rectal cancer’, Symposium of the Association of Surgeons of India Conference (ASICON), Jaipur; 25–30 December 2005.
- ‘Breast conservation therapy’, Symposium on Breast Cancer, Association of Surgeons of India Conference (ASICON), Jaipur; 25–30 December 2005.
- ‘Breast conservation therapy’, ‘Breast oncoplasty surgery’ and ‘Sentinal lymph node biopsy’, Seminar and Workshop in Oncology (Breast and Cervical cancer), B. Barooah Institute of Cancer, Guwahati; 19–21 January 2006.
- ‘Strategies for managing axilla in developing countries: Analysis of 750 ALNDs and 250 SLNBs’, 5th European Breast Cancer Conference, Nice, France; 21–25 March 2006.
- ‘IORT in solid tumours’, Delhi Oncology Group Meeting, R&R Army Hospital, New Delhi; July 2005.

RESEARCH

Funded Projects

Anaesthesiology

Completed

1. Efficacy and safety of a mixture of midazolam, ketamine and atropine for sedation during therapeutic and diagnostic procedures in children with malignancy: A randomized study of oral versus intramuscular route. Sushma Bhatnagar. Funded by Terry Fox Foundation. Funds: Rs 2 lakh.

Medical Oncology

Completed

1. Effect of breathing techniques: Sudarshan Kriya in normal individuals and those with cancer in remission. Vinod Kochupillai. Funded by Central Council of Research in Yoga and Naturopathy for five years. Funds: Rs 23,00,000.
2. To assess the efficacy and adverse effects of thalidomide and prednisolone in hormone refractory prostate carcinoma. Atul Sharma. Funded by Terry Fox Foundation for one year. Funds: Rs 1,00,000.
3. Gemcitabine and oxaliplatin (gemox) in advanced/unresectable adenocarcinoma of gall bladder: An open-label phase II study protocol 0401. Atul Sharma. Funds: Nil.
4. Population-based screening programme for cancer of the cervix, breast and oral cavity. Tulika Seth. Funded by WHO for one year. Funds: Rs 8,71,000.
5. Common cancers: Perceptions of community and determinants of community behaviour in Delhi. Tulika Seth. Funded by Terry Fox Foundation for one year. Funds: Rs 2,00,000.

Ongoing

1. Expansion of adult human bone marrow and cord blood stem cells for reconstituting marrow and for reprogramming into hepatocytes. Lalit Kumar, Vinod Kochupillai. Funded by ICMR for three years. Funds: Rs 23,52,400.

2. Resistance to Imatinib Ph-positive Indian leukemia patients: Molecular mechanism. Lalit Kumar. Funded by Terry Fox Foundation for one year. Funds: Rs 2,00,000.
3. Randomized study comparing upfront surgery followed by chemotherapy versus upfront chemotherapy followed by interval debulking surgery in previously untreated epithelial ovarian cancer stage III C and stage IV (pleural effusion only). Lalit Kumar. Funded by Dabur India (partial support) for three years. Funds: Drug given free.
4. An open, non-comparative study to evaluate the safety of recombinant human interferon alpha-2a (Intermax alpha™ inj) in the treatment of chronic myelogenous leukemia in Indian patients. Lalit Kumar. Funded by LG Chemicals for two years. Funds: Rs 1,80,000 (Drugs given free).
5. An *in vitro* study of antiproliferative and apoptotic effects of gefitinib on lung cancer cell lines. Vinod Kochupillai. Funded by NATCO Pharma for one year. Funds: Rs 4,42,900.
6. Antioxidant as adjunct to chemotherapy of lung cancer: In vitro study. Vinod Kochupillai. Funded by Reddy's Laboratory for one year. Funds: Rs 2,06,000.
7. Invitro expansion and establishment of human fetal liver hematopoietic stem cellline. Vinod Kochupillai. Funded by DBT for two years. Funds: Rs 65.00 lakh.
8. Evaluation of Thermal Camera to detect pre-cancerous lesions or cancer in early stages and to study the effect of Pranayam and Sudershan Kriya (Breathing processes) in reversing pre-cancers lesions. Vinod Kochupillai. Funded by DST for three years. Funds: Rs 21,34,800.
9. Role of imatinib (gleevec) in the treatment of chronic myelogenous leukaemia (CML). Lalit Kumar, Vinod Kochupillai. Funded by GIPAP for one year (2003–04). Funds: Free drugs given.
10. Grastim mobilized peripheral blood progenitor cell transplantation (allogeneic or autologous): A multicentric study. Lalit Kumar. Funded by Dr Reddy's Lab for 2 years (2006–2008). Funds: Rs 8 lakh.
11. Elucidation of molecular mechanism causing or favouring resistance to STI-571 in Philadelphia chromosome positive Indian Leukemic patients. Lalit Kumar. Funded by Terry Fox Foundation for 2003–2005. Funds: Rs 2,57,000.
12. Treatment and characterization of acute lymphoblastic leukaemia in children, Adolescents and Young adults. Sameer Bakhshi. Funded by International Network of Cancer Treatment and Research and Sir Ratan Tata Trust for three years. Funds: Rs 12 lakh/year.
13. Training in low cost screening methods for medical health workers: A pilot study. Tulika Seth. Funded by Terry Fox Foundation for one year. Funds: Rs 2,00,000.
14. Assessment of the effect of planned intervention on awareness, perception and attitude regarding common cancers in Delhi: A community based longitudinal study. Tulika Seth. Funded by Cancer Foundation for one year. Funds: Rs 2 lakh.
15. Identification of BCL-6 and BCL-2 proteins by immunohistochemistry in non-Hodgkin's lymphoma and their correlation with clinical features, laboratory parameters and response to therapy. Atul Sharma. Funds: Rs 70,000.

Radiation Oncology

Completed

1. A phase III study of gemcitabine plus paclitaxel versus paclitaxel in patients with unresectable, locally recurrent or metastatic breast cancer. P.K. Julka. Funded by Eli-Lilly.
2. A phase III study of alimta vs docetaxel in patients with locally advanced or metastatic non-small cell lung cancer (NSCLC) who were previously treated with chemotherapy. P.K. Julka. Funded by Eli-Lilly.

3. A randomized, double-blind, placebo-controlled, phase 2 study of oral recombinant human lactoferrin (rhLF) monotherapy in patients with locally advanced or metastatic non-small cell lung cancer (NSCLC) who have failed 1st or 2nd line chemotherapy. P.K. Julka. Funded by Reliance.

Ongoing

1. A randomized double blind placebo controlled phase II study of oral recombinant human lactoferrin (rhLF) in combination with carboplatin and paclitaxel chemotherapy in patients with locally advanced and/or metastatic non-small cell lung cancer (NSCLC). P.K. Julka. Funded by Reliance.
2. A Multicentric Phase III randomized trial comparing doxorubicin and Cyclophosphamide followed by Docetaxel (AC—t) with Doxorubicin and Cyclophosphamide followed by Docetaxel and Trastuzumab (Herceptin) (AC—TH) and with Docetaxel, Carboplatin and Trastuzumab (TCH) in the Adjuvant treatment of node positive and high risk node negative patients with operable Breast cancer containing the HER2 alteration – BCIRG Trial. P.K. Julka. Funded by Aventis.
3. A randomized, double-blind, parallel-group, multicentre, phase III study comparing the efficacy and tolerability of fulvestrant (FASLODEX™ 500 mg with fulvestrant (FASLODEX™ 250 mg in postmenopausal women with oestrogen receptor positive advanced breast cancer progressing or relapsing after previous endocrine therapy. P.K. Julka. Funded by Quintiles.
4. A Phase 3 randomized, double-blind study of oral CCI-779 administered in combination with Letrozole vs. Letrozole alone as first-line hormonal therapy in postmenopausal women with locally advanced or metastatic breast cancer. P.K. Julka. Funded by Quintiles.
5. A multicentric, open label, phase III clinical trial to evaluate the safety and efficacy of interleukin-2 in patients with metastatic renal cell carcinoma followed up to 6 months for survival. P.K. Julka. Funded by Siro.
6. Modification of number of fractions per week in head and neck cancer- aspects of radiobiology applicable in clinical radiotherapy. B.K. Mohanti. Funded by IAEA.
7. A multicentre study of short course of palliative radiotherapy of one weeks duration for advanced and incurable head and neck cancers. (IAEA-CRP-PAL). B.K. Mohanti. Funded by IAEA.
8. A prospective randomized trial of amifostine given subcutaneously during RT in head and neck cancer patients. D.N. Sharma. Funded by AIIMS.

Surgical Oncology

Ongoing

1. Bone marrow Micrometastases detection in Breast Cancer patients using Monoclonal antibodies against pan cytokeratin – Incidence and clinical correlation. S.V.S. Deo. Funded by Terry Fox Foundation, Canada for two years. Funds: Rs 100,000.

Departmental Projects

Anaesthesiology

Completed

1. A comparative double-blind study of oral granisetron versus oral ondansetron for PONV in MRM surgeries.
2. Comparative double blind study of different concentrations of intraoperative oxygen on PONV in breast surgeries.
3. Prevention of pain on propofol injection: A comparative, randomized, double-blind study between lignocaine, pethidine, dexamethasone and placebo.

Ongoing

1. Effect of pre-emptive oral gabapentin for post-operative pain at rest and on movement after modified radical mastectomies.
2. Comparative study of prophylactic administration of tramadol, pethidine, ketamine and placebo on postoperative shivering.
3. Comparison of different anaesthetic techniques for intracavitary radiotherapy for carcinoma cervix.
4. Effect of gender on pain perception and analgesic requirement in patients undergoing exploratory laparotomy and surgery for carcinoma esophagus: A randomized control trial.

Medical Oncology

Completed

1. Serial changes in bone marrow micro vessel density and myelofibrosis in patients with chronic myeloid leukemia chronic phase treated on Imatinib and correlation with cytogenetics.
2. To assess the efficacy of melphalan and dexamethasone in contrast to melphalan and prednisone as first line therapy in multiple myeloma patients who are not candidates for autologous transplant.
3. Analysis of demographic, clinical profile, treatment modalities and their outcome in patients with non-small cell lung cancer attending cancer clinic at IRCH, AIIMS.
4. Evaluation of viability and clonogenic potential of cryopreserved bone marrow and peripheral blood stem cells, stored at -80°C over prolonged period of time.

Ongoing

1. Randomized comparison of ABVD with EVAP in newly diagnosed cases of Hodgkin's lymphoma-protocol.
2. Role of arsenic trioxide with ascorbic acid in treatment of multiple myeloma: A pilot study.
3. Evaluation of pulmonary infiltrates in febrile neutropenia and to assess the predictive value of Galactomannan in diagnosis of Invasive Pulmonary Aspergillosis.
4. To compare the efficacy of oral antibiotics (amoxycillin clavulanate + levofloxacin) with that of intravenous antibiotics (ceftriaxone + amikacin) in low risk febrile neutropenia.
5. Prevalence of Helicobacter pylori infection in gastric malignancies at IRCH, AIIMS.
6. To study the effect of Sudarshan kriya and Pranayam in patients with breast cancer in terms of tolerance to chemotherapy, immune status and quality of life.
7. Measurement of plasma imatinib levels by HPLC method (high performance liquid chromatography) in patients of chronic myeloid leukemia (chronic phase) and comparison of plasma imatinib levels in patients of imatinib responders and imatinib non-responders (an observational study).
8. To assess the response and toxicity of combination therapy; imatinib + ARA-C (low dose) in imatinib non-responder pH+CML CP patients: A pilot study.
9. Analysis of locally advanced breast cancer at IRCH from 1995 to 2004 (10 years).
10. Alpha interferon versus low dose thalidomide as maintenance therapy following autologous stem cell transplant in patients with multiple myeloma: A randomized study.
11. Role of maintenance therapy in advanced ovarian cancer: A randomized study.
12. A randomized trial of combination therapy of paclitaxel and epirubicin vs single agent therapy of oral etoposide in recurrent platinum resistant/refractory ovarian cancer.
13. Imatinib plus low-dose cytosine arabinoside in patients of chronic myeloid leukaemia: Chronic phase.
14. Comparison of efficacy of oral antibiotics (amoxicillin clavulanate + ofloxacin) with that of intravenous antibiotics (ceftriaxone + amikacin) in low-risk febrile neutropenia in children.

Medical Physics

1. Development of protocol for quality control of ultrasonography.
2. Development of document scanner based dosimetry methods for Gafchromic films.
3. Breast cancer volume assessment by ultrasonography and mammography.
4. Use of EDR-2 Kodak portal film for dosimetry in high and low energy gamma and x-radiation.
5. Impact of illuminance of view boxes on the interpretation of chest radiographs and mammography.
6. Reducing radiation dose in chest radiography using additional filters.
7. Dose reduction approaches in head CT examination.

Radiation Oncology

Completed

1. Oral pilocarpine in head and neck cancer patients undergoing radiotherapy.

Ongoing

1. Prognostic Value of Epidermal Growth Factor Receptors in Carcinoma of breast.
2. BRCA-I gene mutations in Indian Breast Cancer patients and its significance.
3. Computerised patient database management system.
4. Development of DICOM-RT software for interfacing the treatment planning system with treatment machines.
5. Software tool for comparison of portal images with digitally reconstructed radiograph.
6. Concurrent chemoradiotherapy with or without subcutaneous administration of amifostine in cervical cancer: A randomized study.

Radiodiagnosis

Completed

1. Carbon dioxide digital subtraction angiography in peripheral arterial occlusive disease of lower limb in comparison with conventional iodinated contrast media.

Ongoing

1. Preoperative evaluation of carcinoma of ovary with multidetector CT and its correlation with surgical findings.
2. Role of directional vacuum assisted breast biopsies in patients with previously equivocal biopsy results.

Surgical Oncology

Completed

1. A prospective randomized trial comparing neoadjuvant versus no neoadjuvant chemotherapy in operable locally advanced breast cancer (T4b, N0-2, M0).

Ongoing

1. Functional assessment of oral cancer patients after radical surgery and radiotherapy.
2. Sentinel lymph node biopsy in locally advanced breast cancer patients.
3. A prospective study comparing histopathologic versus biomarker assessment of surgical margins in Operable Oral cancer patients.
4. Oncoplastic breast surgery: Prospective evaluation of patient profile and outcome .

Collaborative research

Completed/Ongoing

1. Role of Minimally invasive guided therapy in treatment of focal liver neoplasms (with Anaesthesiology and Radiodiagnosis).
2. Evaluation of Sm 153 EDTMP in bone palliation (with Anaesthesiology and Nuclear Medicine).
3. Role of Minimally invasive guided therapy in treatment of focal breast neoplasms (with Anaesthesiology and General Surgery).
4. Role of Minimally invasive guided therapy in treatment of focal bone neoplasms (with Anaesthesiology and Orthopaedics).
5. Concomitant chemoradiation in advanced/unresectable head and neck cancer (with Medical Oncology, Radiation Oncology, and ENT).
6. Oxaliplatin as first line therapy in advanced or metastatic colorectal cancer (with Medical Oncology, Radiation Oncology and Surgical Oncology).
7. Concomitant chemoradiation as adjuvant therapy in gastric cancer (with Medical Oncology, Radiation Oncology and Surgical Oncology).
8. Role of Thalidomide in relapsed/refractory multiple myeloma patients (with Medical Oncology and Pharmacology).
9. Role of thalidomide in hormone refractory prostate cancer patients (with Medical Oncology, Pharmacology and Urology).
10. Randomized study of Concomitant Chemoradiation versus Radiotherapy alone for Advanced and/or Unresectable Squamous Cell Carcinoma of Oropharynx and Nasopharynx (with Medical Oncology, Radiation Oncology, and ENT).
11. Identification of BCL-6 and BCL-2 proteins by Immunohistochemistry in diffuse large B cell non Hodgkin's lymphoma and its correlation with clinical features, response to therapy and prognosis (with Medical Oncology and Pathology).
12. Expansion of adult human bone marrow and cord blood stem cells for reconstituting marrow and for reprogramming into hepatocytes (with Medical Oncology and NII, New Delhi).
13. Comparison of efficacy of oral antibiotics (amoxycillin clavulanate and levofloxacin) with that of intravenous antibiotics (ceftriaxone and amikacin) in low risk febrile neutropenia (with Medical Oncology and Microbiology).
14. Assessment of cardiac function among patients of non-Hodgkin's lymphoma and ovarian cancer receiving doxorubicin based chemotherapy (with Medical Oncology and Nuclear Medicine).
15. Role of CAT scan in patients of epithelial ovarian cancer receiving neoadjuvant chemotherapy (with Medical Oncology and Radiodiagnosis).
16. Autologous BM derived mononuclear cells for the treatment of retinitis pigmentosa (with Medical Oncology, Ophthalmology and Dr R.P. Centre).
17. Serial skin biopsy in chronic myeloid leukemia (CML) patients on imatinib mesylate-protocol (with Medical Oncology and Pathology).
18. Characterization of chromosomal anomalies in multiple myeloma patients using cytogenetics and fluorescence in situ hybridization technique (FISH) (with Medical Oncology and Reproductive Biology).
19. Study of her2-neu and p-53 expression in osteosarcoma by immunohistochemical methods (with Medical Oncology and Pathology).
20. Whole body MRI for detection of skeletal metastases in pediatric patients on small cell neoplasms: Comparison with skeletal scintigraphy and FDG PET CT (with Medical Oncology, Radiology and Nuclear Medicine).
21. Role of imaging in diagnosis of orbital tumors (with Medical Oncology, Radiology and Ophthalmology).

22. Pilot study of high dose chemotherapy in recurrent/ refractory squamous cell carcinoma of head and neck region- protocol (with Medical Oncology, Radiation Oncology and ENT).
23. Serial skin biopsy in chronic myeloid leukemia (CML) patients on imatinib mesylate- protocol (with Medical Oncology and Pathology).
24. Avoiding unnecessary radiation doses to the patient during interventional radiological procedures (with Medical physics Unit, IRCH, Radiodiagnosis and Cardiac radiology).
25. Dose reduction in CT while, maintaining diagnostic confidence (with Medical Physics Unit and Radiology).
26. Study of radiation exposure to patients and operating room personnel during percutaneous nephrolithotomy (with Medical Physics and Urology).
27. Quantitative imaging study of breast cancer and its correlation with oxidative stress (with Medical Physics Unit, Radiodiagnosis and Pharmacology)
28. Radiation dosimetry and development of new TLD phosphor (with Medical Physics Unit and Department of Physics, University of Delhi)
29. Diagnostic potential of localized in vivo proton MRS of Breast Carcinoma (with Radiation Oncology, NMR).
30. Pre Operative Short course RT (25 Gy/ 5 Fr) followed by Surgery for rectal cancer (with Surgical Oncology and Radiation Oncology).
31. Study of angiogenesis and proliferative markers in oral squamous cell carcinoma, Intra-mural project (with Pathology and Radiation Oncology).
32. Radiation Induced chromosomal aberration analysis and their use as biodosimetry (with Nuclear Medicine and Radiation Oncology).
33. Radiofrequency ablation in metastatic liver tumors (with Radiodiagnosis and Radiation Oncology).
34. A multinational, multicenter open label active controlled randomized parallel group dose finding study to evaluate the efficacy and safety of two doses of AP 12009 in adult patients with recurrent high grade glioma, administered intratumorally as continuous high flow microfusion over a 7 day period every other week (with Neurosurgery and Radiation Oncology).
35. A phase II randomized, double-blind, placebo controlled, multicentre comparative study of ZD1839 250 mg or 500 mg (Iressa™) given either continuously or concomitantly with cisplatin plus Radiotherapy for the treatment of patients with previously untreated unresected Late Stage III/IV Non-metastatic Head and Neck Squamous Cell Carcinoma. (with Radiation Oncology and ENT).
36. An open-label Phase 2 Study of Oral recombinant human Lactoferrin (rhLF) monotherapy in patients with advanced or metastatic Renal Cell Carcinoma (RCC) (with Radiation Oncology and Urology).
37. Study of survival and Quality of life for muscle invasive bladder cancer with concurrent chemoradiotherapy (with Radiation oncology and Urology).
38. HDR intraluminal Radiotherapy in Advanced carcinoma of Oesophagus. (with Radiation Oncology and Surgical Oncology).
39. Effectiveness of virtual simulation in radiotherapy planning of carcinoma cervix. (with Radiation Oncology and Radiodiagnosis).
40. A centrally randomized, open multi-center study evaluating the efficacy and safety of combination therapy with Intermax alpha™ and vinblastine versus vinblastine monotherapy in patients with Advanced Renal Cell Carcinoma (with Radiation Oncology and Urology).
41. A randomized, controlled, open label study to evaluate the efficacy and safety of Herceptin® (trastuzumab) in combination with the oral aromatase inhibitor Arimidex® (anastrozole) compared with Arimidex® alone as first and second line treatment administered to postmenopausal, hormone receptor positive (ER+ve and/or PR+ve) patients with HER2 overexpressing metastatic breast cancer. (with Radiation Oncology and Surgery).

42. A phase two study of sequential neoadjuvant Gemcitabine plus Doxorubicin and Gemcitabine plus Cisplatin in large T2 (>3cm) and locally advanced (T3, T4, or N2) operable breast cancer (with Radiation Oncology and Surgery).
43. Study of physical parameters and quality assurance in gamma knife based stereotactic radiosurgery with non-coplanar beam in the phantom (with Medical Physics, Neurosurgery and Radiodiagnosis).
44. Evaluation of image based treatment planning in radiotherapy (with Radiodiagnosis and Radiotherapy).
45. MR Spectroscopy and endorectal MR imaging in the diagnosis of early prostate cancers and its correlation with histopathological results of TRUS guide prostate biopsies and surgical specimens (with Radiodiagnosis and NMR).
46. Study of effectiveness of virtual simulation in external beam radiotherapy planning of carcinoma cervix (with Radiodiagnosis and Radiotherapy).
47. Metabolic characterization of soft tissue tumours and pathologic and radiological correlation with in vivo Magnetic Resonance Spectroscopy (MRS) (with Radiodiagnosis, Surgical Oncology and NMR).
48. Randomized comparison of ABVD with EVAP in newly diagnosed cases of Hodgkin's lymphoma (with Radiodiagnosis and Medical Oncology).
49. Role of three-dimensional computed tomographic scanning in assessment of mandibular invasion and its utility in planning mandibular resection and reconstruction in oral cancer patients (with Radiodiagnosis and Surgical Oncology).
50. Evaluation of efficacy of radio-frequency ablation of primary tumour in early breast cancer (with Radiodiagnosis and Surgery).
51. Nutritional risk factors in oesophageal cancer: A case-control study (with Surgical Oncology, Gastroenterology and Human Nutrition).
52. Adjuvant tamoxifen long against short (ATLAS): Multicentre international trial, Oxford, UK (with Surgical oncology and Medical oncology).
53. Cell cycle regulatory proteins WAF-e and p 16 in human esophageal cancer (with Surgical oncology, Biochemistry and Pathology).
54. Multicentric national programme on evaluation and validation of molecular markers in oral cancer: A cross-sectional study (with Surgical Oncology and Biochemistry).
55. To evaluate microsatellite instabilities in different chromosomes in Indian female breast cancer patients (with Surgical Oncology and Biosciences, Jamila Milia Islamia, New Delhi).
56. Role of CT Scan and MRI in the evaluation of locally advanced oral cancer (with Surgical Oncology, Radiodiagnosis and NMR).
57. Molecular evaluation of p21 WAF -1 gene in Indian female breast cancer patients (with Surgical oncology and Bio Sciences, Jamia Milia Islamia.).
58. Molecular basis of tobacco associated oral carcinogenesis (with Biochemistry and Surgical Oncology).
59. Methylation and expression of FHIT Gene in Indian female breast cancer patients (with Surgical Oncology and Bio Sciences, Jamia Milia Islamia).

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Journals

1. Anand M, Ghara N, Kumar R, Singh S, Sengar M, Panikar N, *et al.* Myeloperoxidase cytochemical negativity: An unexpected but intrinsic property of blasts of all phases of chronic myeloid leukemia. *Ann Hematol* 2005;**84**:767-70.

2. Anand M, Kumar R, Thavaraj V, Ghara N. Correctly recognizing leukemic cells in bone marrow in infants: Importance of good training in hematological morphology. *Indian J Pathol Microbiol* 2005;**48**:420–21.
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9. Bahl A, Sharma DN, Sridhar PS. Hand-foot syndrome following capecitabine. *Indian J Med Paediatr Oncol* 2005;**26**:62.
10. Bakhshi S, Joenje H, Schindler D, Oostra A, Mohamed AN, Madgy D, *et al*. A case report of a patient with microcephaly, facial dysmorphism, mitomycin-c-sensitive lymphocytes, and susceptibility to lymphoma. *Cancer Genet Cytogenet* 2006;**164**:168–71.
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Chapters in Books/Monographs

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PATIENT CARE

Total bed strength	200
Current	106
General	106
Private	Nil
Medical oncology	23
Radiation oncology	32
Surgical oncology	20
Day care	22
Minor OT	6
ICU	3
Total	106
Total OPD attendance	70,783
New cases	13,276
Old cases	57,507
Total admissions	19,699
Regular	2,720
Short (day care)	16,979

Description of various OPD/ Clinics

No.	Name of the OPD/clinic	New cases	Old cases	Total
1.	Bone and soft tissue	294	840	1134
2.	Breast cancer	518	3878	4396
3.	Chemotherapy evaluation	2736	21,633	24,369
4.	Gastrointestinal	448	1032	1480
5.	Gynecology 'A'	272	987	1259
6.	Gynecology 'B'	528	1337	1865
7.	Head and Neck Oncology-A	210	1067	1277
8.	Head and Neck Oncology-B	1511	3940	5451
9.	Lymphoma Leukemia	1120	11,341	12,461
10.	Pediatric surgery	106	1784	1864
11.	Pain	1564	2754	4318
12.	Radiotherapy evaluation	3315	3148	6463
13.	Urology malignant	228	1198	1426
14.	Surgical oncology	348	2327	2675
15.	Ophthalmic tumour	78	267	345
	TOTAL	13,276	57,507	70,783

Anaesthesiology

The facilities available include

1. ICU facilities for postoperative patients.
2. Pain and Palliative Care Clinic is run twice a week in addition to the anaesthesiology related work.
3. Home support to patients with advanced malignancies by NGOs and keeping monthly meeting with them to know follow-up reports
4. Providing critical care to patients of Radiotherapy, Medical Oncology and Surgical Oncology.
5. Facility for pediatric radiotherapy.
6. Anaesthesia for minor pediatric oncology procedures like bone marrow biopsy, central line insertion, bone marrow harvesting and others
7. Facility for pediatric radiological procedures under anaesthesia, radiofrequency ablation for liver, lung, and breast carcinoma

Laboratory Oncology

Haemogram (Hb, TLC, Platelets)	34,634
Peripheral blood smear	4,373
Bone marrow aspirate and touch preparation	3,031
Cytochemistry	823
Serum protein electrophoresis	1,459
Immunofixation	27
Urine electrophoresis	31
Densitometry	958
Immunocytochemistry	111
Flowcytometry	58
Lymph node imprint and fine needle aspiration in leukaemias	135
CSF and pleural fluid cytospin	38

Medical Oncology***Clinical services***

New Cases (CTE+LL)	3,858
Old Cases (CTE+LL)	32,974
Total	36,830

Total chemotherapy in day-care	16,979
OPD chemotherapy	6,350
Admissions	
Ward	417
Day care	15,824
Total	16,241
OPD procedure	3,210

Diagnostic and therapeutic procedures

Bone marrow biopsy	1,241
Bone marrow aspiration	785
Lumbar Puncture	74
Peripherally inserted central line catheter	25
Pleural tapping	120
Abdominal tapping	235
Intrathecal methoxerate	583
Tru cut biopsy	1
Skin biopsy	16
Cerebral spinal fluid for cytology	78
Catherization 50	
Hick Man's catheter	1
Ryle's tube insertion	1

Other supportive services

Dressings	496
Suture removal	61

Laboratory services

Haemogram	11,643
PBSC harvest (allogenic and autologous)	108
Single donor platelets	640
Cytogenetics 350	
Cryopreservation of PBSC	105
Infusion of stem cell transplantation	87
Mononuclear cell count	109
Viability of stem cells	87
CD34 count of stem cells	99
Polymerase chain reaction	19
Granulocyte harvest	7
Storage of PBSC at 4 °C	5

Bone Marrow Transplant

Regular haemopoietic stem cell transplantation programme is available in the department. In the year 2005 between January and December, 20 autologous peripheral blood stem cell and 10 allogeneic bone marrow/blood stem cell transplants have been performed. Regular BMT clinic is being conducted every Friday between 9.30 am and 1.00 pm.

Initiation of new facility

Medical Oncology has established an infrastructure for tissue banking. As soon as staff is approved and recruited, it will become operational.

Community oncology services

Cancer awareness and screening camp (Delhi)	10
Awareness talk at school, colleges and community	18
Training programme for health workers of NGOs	12
Training programme for medical officers	2
Cancer awareness camps (outside Delhi)	2

Medical Physics

Medical Physics Unit looks after patient care activities in IRCH and AIIMS in terms of radiation related activities. MPU carries out blood-bag irradiation before blood transfusion to patients undergoing bone marrow transplantation. This unit also performs the irradiator's periodic calibration and maintenance. MPU carries out quality assurance tests of imaging machines, which include X-ray units, mammography, ultrasonography, spiral CT and film processors. Other important contributions are radiation protection survey for benefit of staff and general public and patient's radiation dose measurement in medical imaging for optimization. This optimization assumes significance due to the caveat that radiation in imaging should be used judiciously.

No. of blood bags irradiated	1842
Quality Assurance tests done on X-ray machines	1489
QA test done on film processor at room no. 10 (X-ray)	274
QA test done on film processor at room no. 46 (US, Mammo)	236
Radiation output measurements in X-ray units	182
No. of experiments on CT scan and US	88
Patient dose measurement by EDR-2 and Gafchromic films	102
No. of experiments with filtration in x-ray	43
Radiation protection survey of X-ray installation	3
No. of experiments done on film viewing conditions	60
Advice in inadvertent exposure in pregnancy	2

Radiodiagnosis

Facility of X-rays, Portable X-rays, Ultrasound, Digital Mammography with the facility of Stereotactic Guided Biopsy, and Whole Body Multi Slice Spiral CT Scanner.

Analysis of patient care activities

S. No.	Name of Procedure	Number
1	X-rays	8488
2	Ultrasound	2305
3	CT scan	3900
4	Mammography	393
5	IVP	6
6	Interventional Procedures	413

Radiotherapy

Departmental Statistics

Total cases on radiotherapy	63,196
Total fields on radiotherapy	1,50,669
Cases on brachytherapy	728
Treatment planning and simulations	4,305
2D and 3D distribution	586
Compensators	396
Shielding blocks, immobilization devices, moulds	876
Radiation Review clinic	9,658
Number of cases on chemotherapy	13,230
Number of injections	48,176
Intra-operative high-dose brachytherapy	2
Radio frequency ablation (RFA)	32

Surgical Oncology

Facilities available

Minor Operation Theatre

Diagnostic and minor therapeutic procedures including lymph node biopsy, punch/ trucut biopsy, excision of skin/oral tumours, soft tissue tumours, feeding jejunostomy, colostomy, insertion of Hickman's catheter / chemo ports for long-term Chemotherapy are available in the Minor OT.

Endoscopy services (diagnostic and therapeutic)

- *Diagnostic Endoscopy:* Fibre optic upper G.I. endoscopy, side viewing duodenoscopy, Colonoscopy, Sigmoidoscopy, Bronchoscopy, Cystoscopy, Nasopharyngo laryngoscopy and laparoscopy.
- *Therapeutic Endoscopy:* Stricture dilatation, Intra luminal Radiotherapy, Stenting and Percutaneous Endoscopic Gastrostomy.

Major cancer operation theatre

- Facilities available for all major cancer surgeries including radical resection and reconstruction of tumours involving head and Neck, GI tract, Breast, Bone and Soft tissue, Gynaecological malignancies and Thoracic tumours. Advanced reconstructive surgical procedures including microvascular free tissue transfer are also available.
- Advanced state of art technologies like LASERS, CUSA, Harmonic Scalpel and Intra Operative Radiotherapy are also available.

Minor operations and endoscopic procedures performed	2811
Major cancer operations performed	495

Community service

Professor G.K. Rath delivered public lecture on cancer at Ghaziabad, UP; published article on cancer in Hindustan Times; contributed to the Health Education Programme, Government of NCT of Delhi; delivered an oration on 'Multimodality management of head and neck cancer', DMA-Oncovision 2005, New Delhi, August 2005.

Professor P.K. Julka published an Article on Colorectal Cancer in Delhi in *The Times of India*; CME on Role of Chemotherapy and Radiotherapy in Gynae Tumours, MAMC, 6 August 2005; Task Force Meeting, Ministry of Health under NCCP, New Delhi, 27 October 2005; Live show on Oral Cancer on DD News, 6 November 2005; Live show on Cancer Awareness on Channel 7, 7 November 2005; Panelist on Pediatric Tumor, 1 December 2005; Total Health Live Programme on Brain tumour on DD News, 5 February 2005.

Professor N.K. Shukla participated in a Doordarshan programme 'Total Health' on Oral cancers on 6 November 2005. It was live phone in programme for community education in the field of oral cancers.

Dr B.K. Mohanti worked on assignment from 21 March 2004 to 21 March 2006 as Senior Consultant and Head of Radiotherapy at National Oncology Center, Royal Hospital, Muscat under Ministry of health, Oman; organised a CME 'Radiotherapy for cancer care in Oman' at Royal Hospital, Muscat, 28–29 April 2005.

Dr D.N. Sharma participated in a Live Show on Delhi Doordarshan (DD News) on Bone Tumors, November 2005.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor Vinod Kochupillai was conferred Ranbaxy Research Award for the year 2004 in the field of 'Medical Sciences-Clinical Research'; selected for Dr J.C. Bose Research Award by UGC; was appointed Member, Ethics Committee, Institute of Clinical Research (India), New Delhi (ICRI); nominated as 'Expert Member: Advisory Panel – 2005' in the discipline of Medical Oncology, National Academy of Medical Sciences (India), New Delhi; Coordinator: Medical Oncology Group of Task Force to formulate the strategy for cancer control in India during the 11th Five Year Plan constituted by the Govt. of India, Ministry of Health and Family Welfare in 2005; Organized an International Conference on 'Expanding Paradigms: Science, Consciousness and Spirituality' on 24–25 February 2006 at Siri Fort Auditorium, New Delhi.

Professor G.K. Rath was President, Association of Radiation Oncologist of India; received outstanding service award by 'The Cancer Foundation'; delivered D. K. Gosavi Memorial Oration Award, Miraj; is Chairman of the sub group of Ministry of Information Technology, Govt. of India to review the progress of the Jai Vigyan project, Science and Technology on 'development and deployment of 6 MV medical linear accelerator; Monitoring Committee of the project on screening for Cancers in Himachal Pradesh, Shimla; Member, Governing Bodies of two Regional Cancer Centres (Bikaner, Allahabad); Standing Committee on Radiotherapy Development Programme, Ministry of Health and FW, Government of India; Core Committee Member of projects under the North East Initiative of Indian Council of Medical Research; Member, Steering Committee of Ministry of Information Technology, Govt of India for the National Programme for the Development of indigenously developed integrated medical linear accelerator system for cancer therapy (Phase-I); Committee of ICMR on assessment of burden of

non-communicable disease; Project Review Committee on Working Group of Medical Electronics, Ministry of Communication and Information Technology, Government of India; Project Review Committee, Oncology - Indian Council of Medical Research, New Delhi; Board of Studies of the JLN Medical College, Aligarh Muslim University, Aligarh; Steering Committee of project 'Development of radiation field analyser' by Variable Energy Cyclotron Centre, Kolkata (Nominated by Ministry of Health and Family Welfare, Government of India); Safety Review Committee for Application of Radiation (SARCAR) of the Atomic Energy Regulatory Board, Government of India; Inspection team, Ministry of Health and Family Welfare, Govt. of India to carry out inspection of cancer Hospital, Agartala for the purpose of financial assistance under oncology wing development Scheme of the National Cancer Control Programme (NCCP); Member, Scientific Advisory Committee of three Institutes (a) Gujrat Cancer and Research Institute Ahmedabad, (b) Institute of Pathology and (c) Institute of Cytology and Preventive Oncology, ICMR; Invited by Ministry of Health and Family Welfare, Government of Tripura to prepare a road map for expansion of cancer management facility in Tripura; Member, Expert Group on Indo German Project on Oncology of ICMR; Standing Selection Committee of Selection of Faculty post of North East Indra Gandhi Regional Institute of Health and Medical Sciences. (NEIGRIHMS), Shillong; Member, Technical joint meeting on IMRT at GCRI, Ahmedabad; Member, Executive Committee, Indian Society of Oncology; Member, Board of Studies of Himachal Pradesh University, Shimla; Member, Selection of Assistant Professor (Oncology), Delhi Govt. of NCT, Health and Family Welfare Department; Scientific Advisory Committee, 24th Annual Convention of Indian Association of Cancer Research and International Symposium on Human Papilloma Virus and Cervical Cancer organized by ICPO New Delhi; is Advisory Editor of *Journal of Cancer Research and Therapeutics* and *Journal Academy of Hospital Administration*; Member, Editorial Board, *Indian Journal of Chest Disease and Allied Sciences* and *Indian Journal of Cancer*; Consulting Editor, *Journal of Cancer Research and Therapeutics* and *Clinical Oncology*.

Professor P.K. Julka is Vice president, Indian College of Radiation Oncology; Member, DNB specialty Board for Curriculum for Radiotherapy and Oncology; Member, Project Review Committee, ICMR, New Delhi; Member, Expert committee, Commonwealth Fellowship Selection; Member, Advisory Committee on Breast Cancer Investigator Meeting; Member, ICON meeting on Breast Cancer cervix Protocol Meeting; Member, Book selection committee, NML, New Delhi; Member, Task Force ICMR, New Delhi; Member, Expert committee of Linear Accelerator, Ministry of Health and Family Welfare, Nirman Bhavan, New Delhi; Coordinator of BCIRG trial on breast cancer video conference; Inspector of MCI for MD and DNB (RT); Member, Advisory Board Meeting on Breast Cancer; Member of expert committee senior research associate selection of CSIR; Member, Executive Committee New Delhi branch, IMA; Expert for Core Technical Committee meeting, PGIMER, Chandigarh; Expert for Procurement of TLD for Department of Radiotherapy, PGIMER; Member, Investigator Meeting on Breast Cancer, Trivandrum; Expert for Commonwealth Scholarship; Awarded IMA NDB Oration on Breast Cancer—from Bench to Bed Side, 14 August 2005; Expert, Selection of Lecturer and Reader in RT, Aligarh Medical College, 21 August 2005; Inspection at Doon Hospital, Dehradun under NCCP, 24 August 2005; Member, Editorial Board, *Journal of Cancer Research and Therapeutics*.

Professor N.K. Shukla received the 'Rastriya Rattan Award and Gold Medal' and 'Certificate of Medical Excellence' by International Study Circle, a forum of intellectuals, New Delhi, 18 December 2005; nominated executive member, Cancer foundation for 2005–2006; re-elected President, Indian Ostomy Society for 2005–06; invited to 5th International Conference of Head and Neck Oncology organized by RGCRC, New Delhi, 18–19 March 2006.

Dr Lalit Kumar is Editor, Indian Journal of Medical and Paediatric Oncology; Member, Research Advisory Committee of Cancer Institute, Adyar, Chennai; Reviewer for the *The National Medical Journal of India* and *Indian Journal of Cancer*; Reviewer for projects submitted to the Department of Science & Technology and ICMR.

Dr S.V.S. Deo was reviewer for Nature Oncology and World Journal of Surgical Oncology; was elected Medical Advisor, Indian Ostomy Society; co-author of the paper 'In vivo Proton Magnetic resonance Spectroscopic evaluation and histopathological correlation for characterization of soft tissue sarcomas' which won the best scientific presentation Award during the International Sarcoma meeting (SMS) held in Stuttgart , Germany (June 15–17,2005).

Dr Pratik Kumar was nominated as referee for Nature Clinical Practice Oncology, Nature Publishing Group, UK; invited by IAEA, Vienna to participate in research co-ordination meeting at Bangkok for an international project 'To evaluate quantitatively and promote patient dose reduction approaches in interventional radiology', 12–16 December 2005; Reviewer for Journal of Medical Physics; is Secretary, UP-Delhi Chapter of Association of Medical Physicists of India (AMPI); Member, Electromedical Equipment Sectional Committee, BIS, New Delhi and Member, Editorial Board, Journal of Medical Physics, AMPI.

Dr Sameer Bakshi was Faculty for National Training Project, Practical Pediatric Oncology, PHO Chapter of IAP, King George's Medical University, Lucknow; 12–13 November 2005; Expert Panelist for Consensus Expert Group Meeting on Pediatric Malignancies, AIIMS; 29 December 2005.

Dr DN Sharma is a member of the review committee of *Journal of Postgraduate Medicine*, *Indian Journal of Cancer*, *Journal of Indian Association of Pediatric Surgeons*, *Indian Journal of Medical Sciences* and *Indian Journal of Medical and Pediatric Oncology*.

Dr Suman Bhasker won a prize for presenting paper on Palliative RT in pediatric patients, IAPC, Chennai, February 2006.

Dr Ritu Gupta was awarded the Kunti Devi Mehrotra award 2005 for best published research work in India, by the Indian Association of Pathologists and Microbiologists.

Dr Anil Kumar Pandey was invited as an IAEA expert to write a report representing usage of radiological procedures by medical professionals other than radiologists, cardiologists, radiation oncologists, and nuclear medicine specialists; invited as an expert to perform Acceptance testing of the new single head upgradable SPECT gamma camera at Nuclear medicine center, Regional cancer center, Indira Gandhi Medical College, Shimla 171001, Himachal Pradesh.

Dr Tarun and Dr Monica represented the department in the Onco-Quiz held at Dehradun, in February 2006 and won the best prize.

The unit of anesthesiology organized the 5th Foundation Course on Palliative Care on 16–17 February 2006 for Medical Practitioners and Nursing Staff treating Cancer patients in and around Delhi.

The department of Radiation Oncology organized a workshop on Newer Techniques in Radiation Oncology in January 2006 (WNTRO 2006).

VISITING SCIENTISTS

1. Dr Michael Minton, Director at Sir Michal Sobell House, Churchill Hospital UK visited IRCH and delivered a lecture on 'Neuropathic management of cancer pain'
2. Dr Moonroo, Consultant Oncologist, Palliative care from London visited IRCH and delivered a lecture on 'Paediatric Palliative care'.
3. Dr Bill Dodge delivered a talk on 'Bone marrow Transplantation' at the AIIMS.
4. Dr Arvind Kumar, New Jersey, delivered a talk on 'Chronic lymphocytic leukemia: Current management' in November 2005.
5. MD Anderson Cancer Center team visited IRCH in December, 2005; team included Dr Jeffrey N. Myers, Dr Erich M. Sturgis, Dr Ann Gillenwater, Dr Jan S. Lewin and Dr Randal S. Weber, MD, Chairman and Professor, Head and Neck Surgery, MDACC, Houston delivered a talk on 'Multidisciplinary Care of head and Neck Cancer Patients'.
6. Professor John Mendelsohn, Director MDACC visited IRCH on 15 December 2005 and delivered a talk on 'EGF Receptors in Cancer: Progress and lessons learned'.
7. Professor Lorenzo Cohen from MDACC visited AIIMS on 15 December 2005 and delivered a talk on 'The role of integrative methods in cancer care'.
8. Dr AMN Syed from LBMMC, Long Beach, USA, visited the Radiotherapy department and performed various brachytherapy procedures
9. Dr Aswath Narayan from MSKCC, USA, visited the Radiotherapy department and demonstrated various IMRT procedures.

ADMINISTRATION

Administrative Chief	Professor Vinod Kochupillai
Assistant Administrative Officer	Shri R. Simon
Total Staff of Dr B.R. Ambedkar IRCH:	
Faculty	23
Group A and B	38
Technical Staff	46
Nursing Staff	78
Resident Staff (SR, JR, RO etc)	69
Ministerial Staff	25
Group D Staff	99
Total	378

FINANCE

Accounts Officer	Shri C.L. Raina
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STORES

Assistant Stores Officer	Shri Narender Kumar
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10.5 Neurosciences Centre

NEUROSURGERY

Professor and Head

Veer Singh Mehta
(resigned in January 2006)

Ashok Kumar Mahapatra
(from April 2006)

Professor

Bhawani Shankar Sharma

Emeritus Professors

P.N. Tandon

A.K. Banerji

Additonal Professor

Sandeep Vaishya
(resigned in February 2006)

Associate Professors

Shashank Sharad Kale

Poodipedi Sharad Chandra

Ashish Suri Aditya Gupta

Assistant Professors

Manmohan Singh

Rajinder Kumar

Manish Singh Sharma

Sumit Singh
(Trauma Centre)

Deepak Gupta
(Trauma Centre)

(Gamma Knife)
Deepak Agrawal
(Trauma Centre)

Gurudutta Satyarthee
(Trauma Centre)

NEUROLOGY

Professor and Head

Madhuri Behari

Professors

Kameshwar Prasad

M.V. Padma

Associate Professors

M. Tripathi
Achal Srivastava

Sumit Singh

Vinay Goyal

Assistant Professors

Garima Shukla

Rohit Bhatia

Mamta Bhushan Singh

NEUROANAESTHESIOLOGY

Professor and Head

Hari Hara Dash

Professor

Parmod K. Bithal

Additonal Professor
Arvind Chaturvedi (on leave)

Associate Professor
Rajendra Singh Chouhan

Mihir Prasad Pandia

Assistant Professors
Girija Prasad Rath

Hemanshu Prabhakar

NEURORADIOLOGY
Professor and Head
N.K. Mishra

Additonal Professor
Shailesh B. Gaikwad

Assistant Professor
Ajay Garg

NEUROPATHOLOGY LABORATORY
Professor
Chitra Sarkar

Associate Professor
M.C. Sharma

Assistant Professor
Vaishali Suri

EDUCATION

Neurosurgery

Undergraduate/postgraduate teaching

The departmental faculty participated in undergraduate teaching in the form of scheduled lectures and seminars. There is continuous postgraduate teaching of MCh junior and senior residents. The academic programme consists of weekly journal club meetings, seminars, morbidity/mortality meetings, neurological case discussions, neuroradiology and neuropathology meetings.

Short-term training

The department offered short-term training (2–8 weeks) to five neurosurgical trainees from various parts of India. The training included clinical observership and training in the Experimental Microneurosurgery Laboratory.

Long-term training

The department has continuous postgraduate teaching of MCh junior and senior residents. MCh course includes three years (after MS General Surgery) and five years (after MB,BS).

Neurology

Actively involved in all teaching programs of undergraduate, postgraduate and postdoctoral (DM) students. This includes guidance for preparation and presentation of seminars, journal clubs and clinical combined rounds of the department.

Neuroanaesthesiology

Postgraduate teaching

- Eight MD Anaesthesiology students (7 from Anaesthesiology department, AIIMS and one from Lady Hardinge Medical College) and two DA students from Lady Hardinge Medical College came for training in neuroanaesthesiology.
- Ten DM Neuroanaesthesiology students and 13 non-academic Senior Residents were part of the department at various times during the year.
- Nine Senior Residents (5 from Department of Anaesthesiology, AIIMS and 4 from BRAIRCH) received training for three months each as a part of interdepartmental rotation on mutual exchange basis.
- Thrice a week Seminars, Journal club and case presentations organized as a part of departmental teaching programme.
- Eight CME lectures (01 international + 07 national) delivered by faculty members and eleven (01 international + 10 national) research papers presented by senior residents and faculty members in conferences. Three symposia attended by the faculty.

Neuroradiology

Undergraduate/postgraduate teaching

The faculty of the department took 10 didactic lectures as part of undergraduate teaching.

The DM Neuroradiology course started in July 2001. Three candidates are registered for this course at present.

Short-term training

Six doctors attended short-term training (6 months) in the department during the year. 6 postgraduate students registered for MD (Radiology) received training for two months each on rotation basis. 3 BSc (Radiography) students received training for one month each on rotation basis.

Neuropathology Laboratory

There was no change in the undergraduate and postgraduate teaching programmes.

Short- and long-term training

- One doctor from Army Hospital completed his 2-year training in Neuropathology in October 2005.
- The Indian College of Pathologists (ICP) has recognized the centre for a Postgraduate Certificate Course in Neuropathology starting July 2006.

Continuing Medical Education

Neurosurgery

Organized by the Department

- 16th Sarveshwari Memorial Oration, 10 February 2006. Professor Roberto Heros, Miami, Florida, USA was the Orator.

- 8th Microneurosurgery workshop, 10–12 February 2006.
- 27th Annual conference of association for Critical Care Medicine, AIIMS, December 2005.
- Professor B.S. Sharma was CME Co-ordinator of 54th Annual conference of NSI held at Vishakhapatnam December 2005.

Lectures delivered

The departmental faculty participated in large number of CME and Updates during the year under review.

Professor A.K. Mahapatra

- ‘Gene therapy in recurrent glioma’, ACTREC, Mumbai; 14–15 February 2005,
- ‘Nosocomial infection in neurosurgery. A 25-year experience at AIIMS’, Annual meeting of DNA, VIMHANS, Delhi; February 2005..
- ‘Changing concept of nosocomial infection in neurosurgery’, Sir Ganga Ram Hospital; April 2005.
- ‘ISPN CME’ 13th Annual Conference of ISPN, Delhi; November 2005.
- 15th Annual Neurotrauma Conference at Kolkata; August 2005.
- 9th Annual Conference of Skull Base Surgery Society of India, Cochin; November 2005.
- 8th Annual Conference of Delhi Neurological Association; February 2006.

Professor B.S. Sharma

- ‘Treatment strategy in the management of giant pituitary adenomas’, 17th Annual Meeting of North American Skull Base Society, Phoenix, USA; February 2006.
- ‘Giant Pituitary Adenoma’, 54th Annual Conference of NSI, Vishakhapatnam; December 2005.
- ‘Trigeminal neuromas’, 7th Annual Conference of Skull Base Surgery Society of India; October 2005.
- Guest lecture, International Neurosurgery Conference, Muscat, Oman; March 2006.

Dr A. Suri

- ‘Image-guided spinal instrumentation’, ASSI Meeting, Delhi; February 2006.
- ‘Transcavernous anterior transpetrosal approach’, Annual Conference of the Skull Base Surgery Society of India, Cochin; November 2005.
- ‘CVJ anomaly’ and ‘Paediatric intracranial cysts-endoscopic treatment’, International CME and Annual Conference of Paediatric Neurosurgery, VIMHANS, New Delhi.

Dr Aditya Gupta

- ‘Role of neurosurgeon in paediatric epilepsy’, Conference of Indian Society of Paediatric Radiology, New Delhi; 2 October 2005.
- ‘Surgical clipping of intracranial aneurysms’, Conference of Indian Society of Neuroradiology, New Delhi; 20 November 2005.
- ‘Neurosurgeon’s perspective on epilepsy’, Conference of Indian Society of Neuroradiology, New Delhi; 20 November 2005.

Dr Manmohan Singh

- ‘Image-guided brain biopsies: AIIMS experience’, National Conference of Indian Society of Paediatric Neurosurgery, New Delhi; October 2005.
- ‘Paediatric head injuries’, Annual Conference of National Association of Critical Care Medicine, New Delhi; December 2005.

- ‘Childhood Vermian tumors: Experience at AIIMS’, International Conference of Asian Congress of Neurological Surgeons, Mumbai; January 2006.

Dr Deepak Kumar Gupta

- ‘Paediatric head injuries’, 26th Annual conference of Indian Society of Critical care and Disaster Medicine, AIIMS; 18–19 December 2004.
- ‘ICU care of head injury patients’, 27th Annual conference of Indian Society of Critical care and Disaster Medicine, AIIMS; 16–17 December 2005.

Dr Sumit Sinha

- ‘Head Injury in the elderly-AIIMS experience’, 14th Annual Conference of Neurotrauma Society of India, Kolkata; August 2005.

Neurology

Organized by the department

- Movement Disorders Society’s Visiting Professor Programme, New Delhi; 12–13 January 2006.
- First National Conference on ‘Evidence-based neurosciences’ and Workshop on ‘Stroke research methodology and critical appraisal’, AIIMS; 12–15 November 2005.
- Symposium on ‘Current concepts in the management of headache with special reference to botulinum toxin’; January 2006.

Lectures delivered

- ‘Parkinson’s disease’, Neurosciences Update, Sant Parmanand Hospital, New Delhi.
- ‘Management of acute flaccid paralysis’, CME, Neurological Society of India, Vishakhapatnam; December 2005.
- ‘Cell-based therapy and beyond in Parkinson’s disease’, Symposium at Neurological Society of India, Vishakhapatnam; December 2005.
- ‘COMT inhibitors in Parkinson’s disease’, CME, Delhi Neurological Association; April 2005.
- ‘Management of early Parkinson’s disease’, Symposium, Delhi Neurological Association Annual Meeting, Delhi; February 2005.
- Workshop on ‘Use of botulinum toxin in neurology’, Sri Rama Chandra Medical College, Chennai; July 2005.
- ‘Role of rehabilitation following stroke’, International Symposium Cardiovascular Disease, Diabetes and Stroke, AIIMS; February 2006.
- ‘Brain attack scenario in India: An overview’, IMA, New Delhi Branch; February 2006.
- ‘Stem cell transplantation’, IMA College of General Practitioners, Kanpur; December 2005.
- ‘Journal club in neuroscience: An evidence-based approach’, National Conference on Evidence-based Neuroscience, Delhi; November 2005.
- ‘Headaches’, Annual Conference of Delhi Ophthalmologic Society; April 2005.
- ‘Management of headaches’, HS Mittal Memorial CME, Meerut; April 2005.
- ‘Symposium on stroke’, UP Chapter of APICON, Dehradun; May 2005.
- ‘Concept of ischemic penumbra and management’, DMA Chapter of IMA, Delhi; February 2006.
- First Indo-US Symposium on ‘Pediatric interventions and stem cell therapies’, Varanasi; February 2006.
- ‘Cardio-embolic strokes and the Indian scenario’, First Indian Association of Stroke Annual Meet and the First Asian Stroke Congress, Chennai; January 2006.
- ‘Interventional therapies and current treatment strategies in acute ischaemic stroke’, International

Update on Diabetes, Stroke and Cardiovascular Disorders, Delhi; February 2006.

- 'Management of Parkinson's disease', Association of Physicians of India, Bihar Chapter, Motihari, Bihar; November 2005.
- 'Management of Parkinson's disease', CME, Indian Medical Association, Muzzafarpur; January 2006.
- 'Management of acute ischaemic stroke', CME of API UP Chapter, Jhansi; October 2005.
- 'Management of dementia', CME of API UP Chapter, Jhansi; October 2005.
- 'Valproate in partial epilepsy', CME, Delhi Neurological Association; April 2005.
- 'Approach to a patient with peripheral neuropathy', CME of IMA East Delhi; May 2005.
- 'Stem cell therapy in muscular dystrophies', CME on Stem Cell Therapy, AIIMS; 26–27 November 2005.
- 'Stem cell therapy in amyotrophic lateral sclerosis', CME on Stem Cell Therapy, AIIMS; 26–27 November 2005.
- 'Management of headache and cerebral palsy with special reference to botulinum toxin', CME, Department of Neurology, GSVM Medical college, Kanpur; March 2006.
- 'Acute flaccid paralysis illustrative case presentations', CME, Neurological society of India, Vizag; December 2005.
- 'Management of diabetic neuropathy', CME, Department of Neurology, GB Pant hospital; September 2005.
- 'Neuro-ophthalmology: Approach to Diplopia and Visual loss', CME-XI Neurosciences Update, Sant parmanand Hospital, New Delhi; 5 June 2005.
- 'Management of status epilepticus', Annual day, Jodhpur Neurological association; 15 June 2005.
- 'Management of adult and child spasticity', Delhi Health Scheme, Kadkadooma, New Delhi; 22 June 2005.
- 'Management of stroke', Indian Medical Association (South Delhi Branch), GK-I, New Delhi; 17 August 2005.
- 'Botulinum Toxin', Visiting Professor Programme, MDS, Department of Neurology, AIIMS; 11–12 January 2006.
- 'Spasmodic dysphonia', Phonocon Update 2006, 2nd Annual Conference of the association of the phonosurgeons of India, Department of ENT, AIIMS; 5 February 2006
- 'Management of stroke', Indian Medical Association, Delhi chapter meeting, India International center, New Delhi; 26 February 2006.
- 'Spasmodic dysphonia: AIIMS experience', Delhi Neurological Society Meeting, AIIMS; 4 March 2006.
- 'Neurological examination', Department of Medicine, AIIMS; 5 March 2006.
- 'Epilepsy: Management strategies', CME, Delhi Medical Association and Central Railways Hospital, New Delhi; 4 December 2005.
- CME on 'Sleep disorders', LRS Institute of Tuberculosis and Respiratory Diseases; 3 September 2005
- 'Stem cell therapy in muscular dystrophies', CME on Stem Cell Therapy, AIIMS; 26–27 November 2005.
- 'Medical management of spontaneous intracerebral hemorrhage', Indo-US Symposium on Cerebrovascular Disorders, India Habitat Centre, New Delhi; 12–14 December 2005.
- Public Lecture on Stroke, AIIMS Golden Jubilee Public Lecture Series; 17 March 2006.

Neuroanaesthesiology

Organized by the department

- Scientific meeting, India Habitat Centre, New Delhi; March 2006.

Lectures delivered

- Eight CME lectures (1 international and 7 national) delivered by faculty members.

Neuroradiology

The department faculty participated and delivered 20 lectures in various symposia/CMEs/national and international conferences during April 2005–March 2006.

Neuropathology Laboratory

Organized by the department

- Dr MC Sharma organized the Quarterly meeting of Delhi Chapter of Indian Association of Pathologists and Microbiologists (IAPM) at AIIMS, August 2005.

Lectures delivered

Professor Chitra Sarkar

- ‘Pathology of CNS tumors’, CME, Institute of Neurological Sciences, Guwahati; 1 October 2005.
- ‘Interpretation of stereotactic biopsies’, CME, Association of Neuroscientists of Eastern India, Guwahati; 21–23 October 2005.
- ‘Medulloblastomas: Recent concepts’, Invited lecture, Nizam’s Institute of Medical Sciences, Hyderabad; February 2006.

Dr M.C. Sharma

- Conducted Clinicopathological Conference (CPC) in Department of Medicine, AIIMS; August 2005; Annual CME of Association of Physicians of India, New Delhi, October 2005 and National Hematology Update, AIIMS; February 2006.
- ‘Molecular classification of glial tumours’, IRCH, AIIMS; April 2005.
- ‘Role of histochemistry and electron microscopy in non-dystrophic childhood muscle diseases’, Quarterly Meeting of Delhi Chapter of IAPM, New Delhi; August 2005.
- ‘Chordoid glioma: A recently described entity’, Monthly Meeting of Delhi Neurological Association, AIIMS; March 2006.

RESEARCH

Neurosurgery

Funded Projects

1. Non-invasive optical fibre probe near infra-red spectroscopy (NIRS) for assessing brain activity. V.S. Mehta. Funded by DST from July 2004–December 2005. Funds: 40–50 lakh.
2. Randomized double-blind placebo-controlled, multicentric, dose estimation study to evaluate the safety and preliminary efficiency of recombinant factor VIIa (Novo-Seven/Nia Stase) in subjects with brain contusion. V.S. Mehta. Funded by Novo Nordisk for 9 months. Funds: 3.67 lakhs.
3. AP12009-G004 in recurrent grade III-IV glioma-A multinational and multicentric double blind randomized trial. A.K. Mahapatra. Funded by Antisense Pharma-Germany from December 2003 to June 2006. Funds: Rs 30 lakh.
4. International Muticentric Multinational Trial: CRASH-2

Departmental Projects

1. Spontaneous cerebellar hematoma.
2. Transcranial Doppler in diffuse axonal injury.
3. Poor grade subarachnoid hemorrhage.
4. Solitary vertebral lesions.
5. Factors affecting postoperative seizures.
6. ICP monitoring in traumatic brain injuries
7. Post-traumatic intradiploic pseudomeningoceles
8. Split cord malformations
9. Terminal myelocystoceles
10. Retrospective analysis of diffuse axonal injury and evaluation of factors influencing outcome in DAI
11. Acute thalamic involvement in severe head injury: An autopsy study with histopathological correlation

Collaborative Projects

1. A study of IL-13 and IL-4 receptors in primary meningeal tumours (with Biochemistry).

Neurology

Funded Projects

Ongoing

1. Molecular genetics of PD with special ref. to PARKIN mutation in YOPD. Madhuri Behari. Funded by ICMR for 3 years (2002–05). Funds: Rs 26.01 lakh.
2. A longitudinal study to estimate proportion of patients with dementia and cognitive decline in PD, its clinical correlates with special reference of Apo E alleles. Madhuri Behari. Funded by ICMR for 5 years (2002–07). Funds: Rs 26.6 lakh.
3. Impact of nutritional strategies and multiple anti-oxidant therapy in progression and management of Parkinson's disease. Madhuri Behari. Funded by ICMR for 2 years (2004–06). Funds: Rs 4.1 lakh.
4. Molecular study on mitochondrial dysfunction in Parkinson's disease. Madhuri Behari. Funded by ICMR for 2 years (2004–06). Funds: Rs 12.7 lakh.
5. Thrombolysis with intravenous rt-PA for acute ischaemic stroke: the third International Stroke Trial. (IST-3). Kameshwar Prasad. Funded by DBT.
6. Open-Label Randomized Controlled Trial of Ayush 56 as an Add-On Drug in Intractable Partial Epilepsy. M.V. Padma. Funded by Ministry of Health and Family Welfare for one year. Funds: 6 lakh.
7. Stroke Risk Factors and Subtypes In High Altitudes: A Prospective Study in Ladakh. M.V. Padma. Funded by Ministry of Health and Family Welfare for three years. Funds: Rs 25 lakh.
8. An Open Label, Randomized, Parallel Group, Multicenter Study To Evaluate the Efficacy and Safety of Enoxaparin Versus Unfractionated Heparin in the prevention of Venous Thromboembolism In Patients Following Acute Ischemic Stroke. The PREVAIL study. M.V. Padma. Funded by Aventus Pharma for two years. Funds: Rs 12 lakh.
9. Molecular and clinical correlation of Inherited ataxias in Indian Population. A K. Srivastava. Funded by DBT. Funds: Rs 1.15 Crore.

Departmental Projects

1. Stem cell therapy in acute ischemic stroke.
2. Autologous intra-arterial infusion of bone marrow stem cells (BMCs) for static encephalopathy.
3. Stem cell therapy in ALS.

4. Stem cell therapy in static encephalopathy.
5. Heparin in DVT prophylaxis after stroke: the PREVAIL study.
6. A study of post-stroke epilepsy.
7. Public awareness of stroke in rural and urban population and in stroke patients.
8. Non-epileptic seizure in urban and rural population.
9. Sleep-related disorders in patients with tubercular meningitis – a prospective clinical, a actigraphic and polysomnographic study.
10. Psychiatric co-morbidity in patients with intractable epilepsy.
11. Reliability and validity of an OSCE-based test for ran-ordering level of competence in neurology
12. Autonomic function test in myasthenia gravis.
13. Change in intra cerebral hematoma with time: A CT-based study.
14. Autonomic dysfunction in Wilson’s disease: A clinico-electrophysiological correlation.
15. Prevalence of atherothrombotic risk factors in first-degree relatives and spouses of stroke patients.
16. Indicators of postural instability in Parkinson’s disease.
17. Lipid abnormalities in intracranial hemorrhage and ischemic stroke-a case control study.

Neuroanaesthesiology

Departmental Projects

Completed

1. Anaesthesia management and surgical outcome comparison between coiling versus clipping for cerebral aneurysm surgery.
2. Comparison of Clonidine and Metoprolol premedication on Propofol consumption guided by Bispectral index.
3. Perioperative complications following transsphenoidal hypophysectomy.
4. Planning of early emergence in neurosurgical patients: A comparison of low-dose anaesthetics.

Ongoing

1. ICU management of Gullain–Barre syndrome: A retrospective study.
2. Transcranial Doppler ultrasonographic study of cerebral haemodynamics, autoregulation and carbon dioxide reactivity in patients with supratentorial tumours.
3. Respiratory care of myasthenic crisis in neuro-intensive care unit: Evaluation of outcome and adverse events.

Neuroradiology

1. Changes in cerebral haemodynamics measured by MRI perfusion: Pre- and Post-carotid stenting.

Neuropathology Laboratory

Funded Projects

Ongoing

1. Myopathic disorders: A comparative clinico-pathological and *in vitro* proton magnetic resonance spectroscopy (MRS) study on muscle biopsies. Chitra Sarkar. Funded by ICMR for three years (2004–2007). Funds: Rs 6 lakh (approx).
2. Ligand based selection from combinatorial libraries for generating recombinant antibodies to the placental (oncofoetal) isoenzymes of alkaline phosphatase: Characterization and validation in clinical cancer. Chitra Sarkar. Funded by DBT for three years (2005–2008). Funds: Rs 25 lakh (approx).
3. Clinical correlation of quantitative analysis and immunohistochemical localization of VEGF and HCG in the serum and placenta at different gestational ages in normal and PIH cases. Chitra Sarkar.

Funded by CSIR for three years (2004–2007). Funds: Rs 12 lakh (approx).

4. Role of renin-angiotensin system in the pathogenesis of muscular dystrophy. M.C. Sharma. Funded by AIIMS for one year (2005–2006). Funds: Rs 75000.

Departmental Projects

Completed

1. Angiogenic patterns in high-grade astrocytic tumours and correlation with proliferative markers.
2. Pilocytic astrocytomas: Tumour regulatory gene protein expression and correlation with histopathological spectrum.

Ongoing

1. Primary and secondary glioblastomas: A study of EGFR amplification using real time PCR.
2. GBMs with long term survival – Role of cell cycle regulatory genes.
3. Paediatric astrocytic tumors – Study of cyclin dependent kinases and their inhibitors
4. Comparative study of diagnostic efficacy of Stereotactic, ultrasound guided and image guided biopsies in lesions of CNS.
5. Protein aggregating myopathy: A clinicopathological and immunohistochemical study
6. Mitochondrial myopathy: A clinicopathological and ultrastructural study
7. Congenital myopathies: Clinicopathological and ultrastructural evaluation
8. Expression of major histocompatibility complex (MHC-I and II) and cell adhesion molecules in idiopathic inflammatory myopathies
9. Comparative evaluation of expression of dystrophin, utrophin and n-NOS in muscle and skin biopsy of patients with dystrophinopathies.

Collaborative Projects

Completed

1. Study of hypothalamic lesions in head injury (with Neurosurgery).
2. Overexpression of IL-4 and IL-13 receptors in meningiomas (with Biochemistry).
3. Study of the function of mitochondria in apoptosis and human disease (with Biochemistry).
4. A multi-national multi-centric open-labelled active controlled randomized parallel group dose finding study to evaluate the efficacy of two doses of AP-12009 in adult patients with recurrent high-grade glioma administered intract-tumorili as continuous high flow micro perfusion over 7 days period every other week (with Neurosurgery).

Ongoing

1. Expression of tumour suppressor gene HIC-1 in human glial tumours and cell lines (with Biochemistry).
2. Altered DNA sequences in gliomas: Characterization of changes and context sequences with reference to tumour type (with Biochemistry).
3. Characterization of the properties of an amplified region of DNA in primary meningeal tumours (with Biochemistry).
4. Prevalence of alteration at microsatellite loci in 1p and 19q in primary human gliomas (with Biochemistry).
5. Invasive versus non-invasive meningiomas: Comparative study of proliferation index, and expression of VEGF, p53 and cathepsin (with Neurosurgery).
6. Mismatch repair genes (Hmlh1 and Hmlh2) in glial tumours (with Biochemistry).
7. Clinicopathological study of Bcl-2 and Bcl-6 expression in Non-Hodgkin lymphoma (with IRCH).

PUBLICATIONS

Neurosurgery

Journals

1. Agrawal D, Cochrane DD. Traumatic retroclival epidural hematoma: A pediatric entity? *Childs Nerv Syst* 2006 Epub 2006 Mar 21.
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5. Agrawal D, Gupta A, Mehta VS. Role of shunt surgery in pediatric tubercular meningitis with hydrocephalus. *Indian Pediatr* 2005;**42**:245–50.
6. Agrawal D, Hussain N. Decompressive craniectomy in cerebral toxoplasmosis. *Eur J Clin Microbiol Infect Dis* 2005;**24**:772–3.
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Neuroanaesthesiology

Journals

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2. Bithal PK, Rath GP. Interventional neuroradiology for carotico-cavernous fistula: A retrospective analysis and anaesthetic implications. *J Anaesth Clin Pharmacol* 2005;**21**:175–8.
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Neuroradiology

Journals

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2. Deb P, Sarkar C, Garg A, Singh VP, Kale SS, Sharma MC. Intracranial gliofibroma mimicking a meningioma: A case report and review of literature. *Clin Neurol Neurosurg* 2006;**108**:178–86.
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2. Gaikwad SB, Mishra NK. Endovascular management of carotid: Cavernous fistula. In: Berry M, Suri S, Chaudhary V, Mishra NK (eds). *Neuroradiology, head and neck imaging*. New Delhi: Jaypee Brothers; 2005:186–99.
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Neuropathology Laboratory

Journals

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overview, histoprostnastic perspective and significance of neoangiogenesis. *Histopathology* 2005;**46**:481–9.

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24. Sharma S, Sarkar C, Gaikwad S, Suri A, Sharma MC. Primary neurocytoma of the spinal cord: A case report and review of literature. *J Neurooncol* 2005;**74**:47–52.
25. Sridhar E, Sharma MC, Sarkar C, Singh S, Das T. Desmin-related myopathy: Report of a rare case. *Neurol India* 2005;**53**:229–31.

Chapters in books

1. Sarkar C, Mannan R, Ghara N, Sharma MC. Pathology of movement disorders. In: Mehrotra TN, Bhattacharya KB (eds). *Parkinson’s disease and movement disorders*. New Delhi: Jaypee Brothers; 2005:51–65.
2. Sarkar C, Sharma S. CNS Shunt infections. In: Chakravarthy A, Chatterjee S (eds). *Neurology in neurosurgical practice*. Kolkata: JANEI; 2005:126–132.

PATIENT CARE

Neurosurgery

Clinical Workload

Total number of admissions	4283
Total number of operations	3546

OPD

New cases	11,995
Old cases	22,464
Total	34,459

Neurology

Total OPD old and new patients	53,470
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Procedures done in EMG/EEG lab

EP	215
EPS	2,224
STVEEG	232
LTVVEEG	61
SLEEP	61

PAPER DIGITAL EEG	2,018
ECG	863
QST	159
MAGSTIM	0

Community Services/Camps

The department of Neurology organized the following patient awareness programmes:

Parkinson's Disease	April 2005
Epilepsy	November 2005
Headache	August 2005
Brain Storm	December 2005

The faculty members routinely give talks on radio and television on neurological disorders like migraine, Parkinson's Disease, Epilepsy, Stroke, Myasthenia gravis, Muscle disorders etc.

Neuroanaesthesiology

Perioperative anaesthetic care

- Anaesthetic management of a total of 3029 operations (2062 routine and 967 emergency) was performed.
- Anaesthetic management for 312 neuroradiological procedures (218 diagnostic and 94 therapeutic) was performed.

Neuro Intensive Care Unit

Intensive care of more than 3086 patients (including neurosurgical, trauma victims and critically ill neurologic patients) was performed.

Pain Clinic

A total of 839 patients (152 New and 687 Old) were seen in the OPD; 174 of them were treated with nerve blocks in the operation theater.

Neuroradiology

Procedures	Number
Digital Subtraction Angiography	736
CT Emergency	3018
Routine	4005
Ultrasound 781	
MR (Gamma Knife and X-Knife)	459
Plain X-rays OPD/indoor	9501
Pvt. Case reporting	4349
Interventional procedures	105
Total	22,954

Neuropathology Laboratory

Neuropathology Surgical Specimens	2864
Frozen Sections	340
Diagnostic Immunohistochemistry	2245
Electron Microscopy	
Specimens received	1203
Specimens processed for EM	650

Muscle biopsies	
Number received	645
Muscle enzyme histochemistry	1754
Muscle immunohistochemistry	2180
Myelin stain	125

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Neurosurgery

Professor A.K. Mahapatra was awarded Travelling Fellowship of 'PAN ARAB NEUROSURGERY' PAJN Award 2005 to attend World Congress of Neurological Surgery in Morocco 2005; Secretary, Skull Base Surgery Society of India (2003–2005); Member of Drug Controller of India to study medical devices; President Elect, Neurotrauma Society of India (2005–2006); Member, Editorial Board and Geographic Editor-South East Asia of *Child's Nervous System*; Member, Editorial Board *Pan Arab Journal of Neurosurgery*, *Neurology India* and *Journal of Clinical Neurosciences*

Professor B.S. Sharma was elected Secretary, Neurological Society of India, December 2005; Treasurer, Skull Base Society of India; Convenor, Continuing medical education, Neurological Society of India (NSI) 2005; Executive member, NSI for 2005.

Dr P.S. Chandra was awarded the National Epifellow foundation at the AES, Washington DC, December 2005; awarded and attended the Penry Minifellowship programme from 11–17 March (Wake Forest University, Winston Salem, NC) <http://www.minifellow.net/>; Fellowship in Epilepsy surgery at the UCLA seizure disorder center, Los Angeles.

Dr Deepak Agrawal won the Gold medal for best paper presented at the annual conference of ISSICON 2006, New Delhi, March 2006.

Dr Deepak Gupta was awarded the J.B. Modi best paper award and Suresh Kare Indoco best poster award at 14th Annual conference of Neurotrauma society of India, Kolkata, India, 19–21 August 2005; Best paper award at 6th Annual Skull Base Conference, Cochin: 21–23 October 2005; Best paper award at 16th Annual Indian society of pediatric neurosurgery conference, New Delhi (4–7 November 2005); WFNS international traveling fellowship 3rd south Asian Neurological Surgery Conference, Karachi, Pakistan, 15–19 March 2005; DST and WFNS international travelling fellowship 13th World Congress of Neurological Surgery, Marrakech, Morocco, 19–24 June 2005; CSIR and INSA international travelling fellowship 33rd Annual conference of the International Society of Pediatric Neurosurgery, 11–14 September 2005, Vancouver BC, Canada; Best Paper Award and Travelling Fellowship European society of Pediatric Neurosurgery conf at Martinique, France; 6–10 March 2006; Member, Editorial Board, *Pediatric neurosurgery*, *Childs nervous system* and *Pan Arab Journal of Neurosurgery*; Assistant regional editor, *Childs Nervous System (Asian subcontinent)*.

Neurology

Dr M. Behari was Member, Executive committee, Asian Oceanian Section of Movement Disorders Society; awarded Fellow of the National Academy of Medical Sciences, India; Member, Executive council of NIMHANS, Bangalore; Member, Integrated Long Term Programme of Cooperation in Science and Technology between Russia and India; Task Force Member, Research on Stem Cells formed by the Department of Biotechnology, Government of India; nominated as National Coordinator and Member,

Steering committee on REGAIN Parkinson's study group, Paris; MCI inspector for starting DM courses in other universities.

Dr K. Prasad nominated Editor of the Edinburgh-based *Cochrane Stroke Review Group*; Member, Editorial Board, *Practical Neurology*; nominated National Coordinator in India for International Stroke Trial-3 (IST-3) being coordinated by the Neurosciences Trial Unit, University of Edinburgh, UK.

Dr Sumit Singh was awarded fellowship by World Congress of Neurology to attend the XVIII world congress of neurology held at Sydney Australia, 2005.

Dr Vinay Goyal was re-elected as Joint Secretary, Tropical Neurology Section, Indian Academy of Neurology, at IAN annual meeting September 2005, Jaipur.

Dr Achal Srivastava received Asian Fellowship Award to attend 16th International Conference of Parkinson's Disease and Related Disorders at Berlin, Germany 2005; received Young Investigator Award at CAG Triplet Repeat Disorder Research Conference, Massachusetts, USA; 2005.

Dr Garima Shukla was awarded Best Poster presentation award at the 7th Annual Conference of the Indian Epilepsy Society and Indian Epilepsy Association, Jaipur; September 2005; Associate Member, American Association of Electrodiagnostic and Neuromuscular Medicine; Membership of the Indian Sleep Disorders Association.

Dr Rohit Bhatia was awarded travel fellowship by World Congress of Neurology to attend the XVIII world congress of neurology held at Sydney Australia from 5–11 November 2005.

Neuroanaesthesiology

Professor H.H. Dash delivered Professor BR Sharma oration, held in Delhi October 2006.

Neuroradiology

Professor N.K. Mishra represented ISNR at the XVIII Symposium Neuroradiologicum, at the Adelaide convention centre, Adelaide, Australia, 19–24 March 2006; President, Indian Society of Neuroradiology; Organized the 8th Annual Congress of Indian Society of Neuroradiology, 18–20 November 2005, New Delhi.

Neuropathology Laboratory

Dr Chitra Sarkar was elected, Executive Member, Neurological Society of India, 2005–2008; nominated as Member, Advisory Committee of the Centre for Research and Development in Medical Sciences and Technology at IIT, Kharagpur; Member, National Advisory Committee of the XXVI Annual Conference of Indian Association of Biomedical Scientists; Member, Research Advisory Committee of the National Brain Research Centre; continues as Member of Scientific Advisory Committee and Academic Committee, National Brain Research Centre (NBRC), Manesar; Institute body and Governing body of Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Thiruvananthapuram; Technical Development Committee, SCTIMST, Thiruvananthapuram; Executive Member of Delhi Neurological Association (DNA)

Dr Prabal Deb won the best paper award for 'Role of CD34 expression in glioneuronal lesions associated with intractable epilepsy.' at the Annual Conference of Neurological Society of India, Vishakhapatnam, December 2005.

VISITING SCIENTISTS

Neurosurgery

1. Professor Roberto Heros, Miami, Florida, USA.
2. Professor RN Bhattacharya, SCTIMST, Tiruvanthapuram, Kerala.
3. Professor S Nair, SCTIMST, Tiruvanthapuram, Kerala.
4. Professor S. Mahapatra, Biotechnology, Florida, USA.
5. Professor J Brotchi, President WFNS, Brussels, Belgium.

Neuroanaesthesiology

1. Professor Nitin Shah from USA visited the department and delivered a lecture.

Neuropathology Laboratory

1. Professor Francesco Scaravilli of Institute of Neurology, University of London, UK visited India as Archivist of International Society of Neuropathologists to evaluate the practice of Neuropathology in AIIMS, New Delhi, 9–12 March 2006. He delivered two lectures entitled on ‘Neuropathology of HIV/AIDS’ and ‘Neuropathology of epilepsy’.

10.6 Dr Rajendra Prasad Centre for Ophthalmic Sciences

Professor and Chief

Supriyo Ghose

Professors

Raj Vardhan Azad
Subhash M. Betharia
Yog Raj Sharma
Ramanjit Sihota

Rasik Behari Vajpayee
Sat Paul Garg
Atul Kumar
Gita Satpathy

Vimla Menon
Anita Panda
Pradeep Sharma
Jeewan Singh Titiyal
(Ocular Microbiology)

Radhika Tandon

Sudarshan Khokhar

Medical Superintendent

Shakti Kumar Gupta

Additional Professors

Mahesh Chandra

Dilip R. Shende
(Ocular Anaesthesiology)

Nihar Ranjan Biswas
(Ocular Pharmacology,
up to 23 September 2005)

G.V.S. Murthy

Sanjeev Kumar Gupta
(Community Ophthalmology)
up to 23 September 2005)

Mandeep Singh Bajaj
(Community Ophthalmology,

Rajpal

Niranjan Nayak
(Ocular Microbiology)

Associate Professors

Seema Sen
(Ocular Pathology)
Sanjay Kumar Arya
(Hospital Administration,
up to 1 July 2005)
Neelam Pushker

Sanjay Sharma
(Ocular Radiology)
Namrata Sharma

Seema Kashyap
(Ocular Pathology)
Pradeep Venkatesh

Tanuj Dada

Assistant Professors

Praveen Vashist
(Community Ophthalmology)
Viney Gupta
M. Vanathi
Medha R.
(Ocular Biochemistry)

T. Velpandian
(Ocular Pharmacology)
Rohit Saxena
Rajesh Sinha
Renu Sinha
(Ocular Anaesthesiology)

Jasbir Kaur
(Ocular Biochemistry)
Tushar Agarwal
Bhavna Chawla

EDUCATION

Undergraduates	Postgraduates	Paraclinical	Scientists/ Pool Officers/ Sr Research Associates
MB,BS 55	MD 23 passed PhD 6 <i>Senior Residents</i> Ophthalmology 25 Ocular anaesthesia 6 Radiodiagnosis 1 Medical Officer 1 (Casualty-cum-Eye Bank)	BSc (Hons) Ophthalmology course 29 (8 students passed)	Scientists/ Pool Officers 7

Short- and long-term training

Seventy-six ophthalmologists from various parts of the country including 2 WHO fellows and 16 in training of trainers programme (ECCE/ IOL) were trained in different fields of specialization.

Continuing Medical Education

During the year the centre organized the following conferences/seminars/workshops:

Lions 'Manpower and management' Workshop	4-9 April 2005
National Workshop on Phacoemulsification	27-28 April 2005
Review meeting of INDEYE Project team from Aravind Eye Hospital, Pondicherry	10-12 May 2005
Lions 'Manpower and management' Workshop	8-13 August 2005
National Workshop on Glaucoma	2-3 September 2005
National Workshop on Cornea and Refractive Surgery	28-29 September 2005
Workshop on Descemet's stripping	21-22 December 2005
Workshop on automated Endothelial Keratoplasty 'DSAEK'	21-22 December 2005
ISOP-1st Annual Meet	25 March 2006

The faculty of the centre participated in various scientific forums, delivered 131 lectures including keynote addresses, and chaired 71 scientific sessions.

RESEARCH

Funded Projects

Completed

1. Phenotypic and molecular characterization of ocular isolates of coagulase-negative staphylococci: Implications in colonization and virulence. Niranjana Nayak. Funded by ICMR from 1 January 2002 to 30 April 2005. Funds: Rs 8,48,205.
2. Evaluation of topical cyclosporin A in prevention of corneal graft rejection. R.B. Vajpayee. Funded by ICMR from April 2002 to May 2005. Funds: Rs 6 lakh.

Ongoing

1. Evaluation of the role of retinal P-glycoprotein drug transporters in the ocular disposition of drugs. T. Velpandian. Funded by AIIMS from 2005 to 2007. Funds: Rs 96,000.

2. Evaluation of the bio-disposition of xanthophylls in Indian donor eyes and detection of their content in commonly available fruits and vegetables. T. Velpandian. Funded by DST from 2006 to 2009. Funds: Rs 8 lakh.
3. Evaluation of the anti-cataract activity of herbal isolates and their topical ocular formulations. T. Velpandian. Funded by Dey's Pharmaceuticals from 2005 to 2007. Funds: Rs 4 lakh.
4. Evaluation of calcium dobesilate for various ocular conditions. T. Velpandian. Funded by Ozone Pharmaceuticals from 2006 to 2009. Funded by Rs 2.5 lakh.
5. Role of radio-frequency ablation in early breast cancers. Sanjay Sharma. Funded by AIIMS from 2005 to 2006. Funds: Rs 1 lakh.
6. Novel molecular diagnostic for eye disease and low vision enhancement devices (CSIR-NMTLI multicentric project). Gita Satpathy. Funded by CSIR from 1 April 2003 to 30 November 2006. Funds: Rs 30 lakh.
7. Standardization of antifungal susceptibility testing for filamentous fungi and characterization of drug sensitive and drug resistant fungal isolate in mycotic keratitis. N. Nayak. Funded by ICMR from February 2005 to 30 January 2007. Funds: Rs 5,40,132.
8. Retinoblastoma protein (pRB) expression in human eyes and ocular tumours. Seema Sen. Funded by AIIMS from 2005 to 2006. Funds: Rs 50,000.
9. Evaluation of waveform characteristics and visual acuity in infantile nystagmus and the changes induced by its management. Pradeep Sharma. Funded by ICMR from January 2005 onwards. Funds: Rs 3 lakh (approx).
10. Ultrasound biomicroscopic study in primary angle closure glaucoma families. Ramanjit Sihota. Funded by ICMR from January 2004 onwards. Funds: Rs 2,79,720.
11. Study on the prevalence, therapeutic options and outcome measures of amblyopia. Rohit Saxena. Funded by DST from June 2005 onwards. Funds: Rs 17.3 Lakh.
12. Evaluation of various parameters for early detection of ethambutol-induced optic neuropathy and correlating them with serum levels of ethambutol. Rohit Saxena. Funded by AIIMS from June 2005 onwards. Funds: Rs 46,000.
13. Amniotic membrane transplantation in acute ocular burns: A randomized controlled clinical trial. Radhika Tandon. Funded by ICMR from September 2003 to December 2006. Funds: Rs 6 lakh.

Departmental Projects

Completed

1. Evaluation of clinical and ultrasound biomicroscopic features of eyes with closed globe injury with glaucoma
2. UBM characterization of eyelid mass lesions
3. Evaluation of mitomycin-C application in conjunctival mucosal graft beds in the reconstruction of contracted socket
4. Whole globe retrieval versus corneo-scleral button excision—a prospective comparative study for development of strategies to increase donor cornea procurement
5. Outcome of optical penetrating keratoplasty in bilaterally blind patients
6. Role of carbon dioxide angiography in the evaluation of peripheral arterio-occlusive disease of lower limbs
7. DLK versus PK for keratoconus
8. Conj. graft versus AMT for the management of pterygium
9. Tear substance P in diabetic patients
10. Drug trial for dry eye patients: A randomized comparative study
11. CCI for corneal astigmatism

12. PCR for fungal ulcer
13. Retinal nerve fibre analysis in normal individuals and optic neuritis cases
14. Acupuncture in degenerative myopia cases
15. Role of apoptosis in corneal healing
16. Amniotic membrane transplant with trabeculectomy in high-risk cases
17. Amniotic membrane transplant in non-healing corneal ulcers
18. Clear corneal incisions for correction of preoperative astigmatism in phacoemulsification
19. Comparison of 5.2 and 3.5 incisions for temporal suture less phacoemulsification
20. Comparative evaluation of oral angiography by scanning laser ophthalmoscope and digital camera
21. OCT hole form factor as a predictor of surgical outcome in ICG stained ILM peeling in the treatment of full thickness macular holes
22. Evaluation of optical coherence tomography guided laser photocoagulation in diabetic macular oedema
23. Scleral buckling versus pars plana vitrectomy, in patients with rhegmatogenous retinal detachment in phakic eyes, which are not complicated by proliferative vitreoretinopathy grade C or greater (PCR study)
24. Ofloxacin levels in vitreous of PPV
25. RD surgery versus parsplana vitrectoy in phakic eye
26. OCT in management in diabetic macular oedema
27. Comparative evaluation of visual performance of aspheric three-silicone lens and acrylic hyderophotic single-piece lens
28. Comparative evaluation of bimanual microincision phacoemulsification and conventional phacoemulsification
29. Outcome of optical penetrating keratoplasty in bilaterally blind patients
30. Correlation of VEP with clinical features and severity of ventriculomegaly in hydrocephalus
31. Evaluation of ptosis correction by levator plication through conjunctival approach
32. Comparison of full-time and part time occlusion in moderate amblyopia
33. Correlation of eyelid tumors by ultrasound biomicroscopy along with histopathological correlation
34. Juvenile glaucoma evaluation
35. Evaluation of augmented Anderson procedure in infantile nystagmus
36. Optical coherence tomographic evaluation of uveitic macular oedema
37. Optical coherence tomographic evaluation of patients with choroidal neovascular membrane secondary to ARMD following TTT and PDT
38. Diabetic retinopathy awareness and visual function assessment in patients with diabetes retinopathy
39. Epidemiological study on ocular trauma in urban slum population of Delhi
40. Determination of quality of life and awareness of retinopathy among diabetic retinopathy patients

Ongoing

1. To evaluate demographic profile clinical and microbiological spectrum of donor corneas
2. Imaging evaluation of intra-orbital masses causing proptosis
3. Ulcerative eyelid lesions—role of impression cytology and clinicopathological correlation
4. Comparison of standard microbiological techniques with PCR in infectious keratitis (fungal)
5. Comparison of standard microbiological techniques with PCR in infectious keratitis (bacterial)
6. Prevalence of trachoma in rural population of India
7. Usefulness of gatifloxacin in donor eye treatment
8. Evaluation of ocular toxicity of festival colours during the celebration of Holi
9. Development of animal models for diabetic retinopathy and evaluation of novel angiostatic factors

10. Development of a poly-herbal formulation for dry eye
11. Development of topical estrogen or androgen receptor modulator for postmenopausal dry eye using computer-aided drug design
12. Evaluation of the transcorneal penetration of stereo-isomers of epinephrine
13. The role of percutaneous vertebroplasty in management of painful vertebral lesions
14. Evaluation of the role of MDCT, CT angiography and bronchial artery embolization in the management of haemoptysis
15. Role of directional vacuum assisted biopsy in patients with previously equivocal biopsies for breast masses suspicious for cancer
16. Imaging evaluation of intra-orbital masses causing proptosis
17. Imaging evaluation of locally advanced squamous cell carcinoma of oral cavity
18. Drug trial for dry eye patients: A randomized comparative study
19. Role of auto serum in management of dry eye
20. Role of cyclosporine in management of dry eye
21. Temporal SICS
22. Endothelial evaluation after SICS (both phaco and manual)
23. ALTK
24. PCR for bacterial ulcer
25. Factors affecting visual outcome in pediatric cataracts
26. Evaluation of visual outcomes in bilateral congenital cataract
27. Clinical comparison of matrix frequency doubling technology perimetry, standard automated perimetry and scanning laser polarimetry in primary open angle glaucoma.
28. A Prospective clinical trial comparing transpupillary thermotherapy and PDT in treatment of occult subfoveal choroidal neovascularization in age-related macular degeneration with moderate visual loss (d'6/18)
29. Comparative evaluation of indocyanine green (ICG)-enhanced inner limiting membrane (ILM) peeling in diffuse diabetic macular edema: A prospective randomized study
30. Prospective randomized evaluation of triamcinolone, trypan blue and conventional induction of posterior vitreous detachment during pars plana vitrectomy
31. Prospective randomized comparative trial of triamcinolone acetamide and ICG assisted internal limiting membrane peeling in macular hole surgery
32. Evaluation of autologous bone marrow stem cell transplant in idiopathic macular hole surgery
33. Vitreous levels of gatifloxacin after systemic administration in inflamed and non-inflamed eyes
34. Evaluation of combination therapy of PDT and intravitreal triamcinolone in wet ARMD
35. ICG assisted ILM peeling in macular hole: Role of OCT
36. Surgical outcomes: Diabetic vitrectomy haemorrhage
37. Triamcinolone-assisted macular hole surgery
38. Triamcinolone versus ICG-assisted macular hole surgery
39. Prevalence of vitamin A deficiency in children and nursing mothers correlated with corneal pathology a hospital-based study
40. Evaluation of visual status and corneal topography in simple congenital ptosis and its changes after surgery
41. Ulcerative eyelid lesions—role of impression cytology and clinicopathological correlation
42. Evaluation of modified levator plication as compared to levator resection for correction of congenital ptosis
43. Imaging evaluation of intra-orbital masses causing proptosis

44. Evaluation of plasma levels of chemotherapeutic agents in responding and resistant cases of retinoblastoma
45. Intravitreal drug level assay in retinoblastoma patients undergoing chemoreduction
46. Efficacy of chemotherapy on adding cyclosporine to our four-drug regimen in the management of retinoblastoma
47. Comparison of polymerase chain reaction and standard microbiological techniques in fungal corneal ulcer
48. Comparison of 3.2 mm and 5.2 mm sutureless temporal corneal incisions in phacoemulsification
49. A study of evaluate various parameters for early detection of ethambutol-induced optic neuropathy
50. Comparative study of single muscle surgery versus two-muscle surgery in exotropia
51. Nerve fibre layer analysis in amblyopia
52. Effect of acupuncture on waveform characteristics and visual acuity in idiopathic infantile nystagmus
53. Evaluation of stereopsis in patients with strabismus
54. Evaluation of convergence exercises in cases with convergences insufficiency
55. Evaluation of optic nerve head topography in normal and glaucoma patients using optical coherence tomography
56. Prospective evaluation of trabeculectomy bleb characteristics using ultrasound biomicroscopy and anterior segment fluorescein angiography
57. Assessment of RFNL using scanning laser polarimeter and optical coherence tomography in POAG
58. Long-term changes in HRT and visual fields in primary adult glaucoma patients
59. A multicentre, randomized, double-masked, controlled study to evaluate the safety and efficacy of an intravitreal flucinolone acetonide implant (International Study)
60. IndEYE study: Epidemiological evaluation of age-related macular degeneration in the Indian population (International Study)
61. Ruboxystaurin mesylate study in diabetic macular edema (International study)
62. AdREM (retinal measurement) substudy of ADVANCE study (International study)
63. Cyclosporine in high-risk keratoplasty
64. Evaluation of posterior capsular opacification in CeeOn 911A silicone intraocular lens
65. Topical cyclosporine to prevent recurrence of graft rejection
66. FDA, USA TRIAL A 21-day, pilot, multicentre, investigator-masked, randomized, parallel comparison of the safety and efficacy of gatifloxacin 0.3% ophthalmic solution compared with ciprofloxacin 0.3% ophthalmic solution in patients with acute bacterial ulcers
67. Comparative evaluation of safety and efficacy of different methods of posterior subtenon injection in uveitis
68. Evaluation of prevalence and clinical characteristics of ocular manifestations of HIV patients
69. Evaluation of different methods of colour vision testing
70. Evaluation of the safety and efficacy of LASIK suction ring in inducing PVD in diabetic macular oedema
71. Evaluation of safety and efficacy of preoperative intravitreal steroid injection in patients undergoing surgery for complicated cataract
72. Study of intraocular pressure changes following silicone oil injection in patients undergoing vitreo-retinal surgery
73. Epidemiological study on pterygium in rural population
74. An integrated predictive model for evidence-based eye care
75. Rapid assessment of trachoma in a previous hyper endemic rural area of North India
76. Assessment of validity of vision screening of schoolchildren

Collaborative Projects

Completed

1. Prognostic markers in retinoblastoma: An immunohistochemical study (with Paediatric Oncology and IRCH).
2. Dosimetric and therapeutic evaluation of transarterial Rhenium-188 in cases of inoperable liver cancer (with Nuclear medicine).
3. Impact of pre-operative vascular evaluation by Doppler ultrasound on early failure rate of AV fistula in haemodialysis patients (with Surgical Disciplines).
4. Abdominal infections in immunocompromised hosts: Clinical, radiological and microbiological correlation with special reference to bowel wall thickness (with Haematology).
5. National Surveillance Unit has been established at the Community Ophthalmology Department, R.P. Centre, under the National Programme for Control of Blindness.

Ongoing

1. An open-labelled, prospective study to evaluate the efficacy and safety of ReliNethra (an autologous bio-engineered composite limbal epithelial graft) (with Reliance).
2. Validation of algorithms proposed by NACO for syndromic management of urethral and vaginal discharge in a tertiary care centre in northern India (ICMR) (with Dermatology and Venereology).
3. Radio-frequency ablation of small breast tumours (with Surgical Disciplines).
4. Clinical and radiological evaluation of chest infections in patients with hematological malignancies presenting with febrile neutropenia (with Haematology).
5. To assess the utility of resistive index on Doppler ultrasound in predicting chronic allograft nephropathy (with Nephrology).
6. Determination of plasma levels of morphine and its metabolites and correlation with its pharmacodynamics (with Anesthesia, BRAIRCH, AIIMS).
7. Evaluation of vitreous humor as a marker fluid in the autopsy drug level analysis (with Forensic Science Laboratory, New Delhi).
8. Development and optimization of lipid nanoparticles (with Department of Phamaceutics, Jamia Hamdard).
9. Prediction of the levels of imatinib mesylate in patients with CML (with BRAIRCH, AIIMS).
10. Estimation of rifampicin in the bronchoalveolar lavage fluid (with Medicine).
11. Therapeutic drug monitoring of rifampicin in the patients undergoing haemodialysis (with Nephrology).
12. Open-label, randomized trial to evaluate the efficiency of Ayush-56 as an add-on drug in intractable partial epilepsy (with Neurology, AIIMS and CCRAS New Delhi, Department of AYUSH, Ministry of Health and Family Welfare, Government of India).
13. Genetic study of post-polar cataract (with Genetics).
14. Limbal stem cell culture establishment and standardization of limbal stem cells culture technique according to standard international norms in (with Biochemistry).
15. Outcome of optical penetrating keratoplasty in bilaterally blind patients (with Psychiatry).
16. ADVANCE (Action in Diabetes and Vascular Disease), Retinal measurements study (International Study) (with Endocrinology).
17. Epidemiology of age-related eye disease-in India-INDEYE (with London School of Hygiene and Tropical Medicine).
18. Situational analysis of human resource and eye care infrastructure for childhood blindness, refractive errors and low vision in India (with ORBIS International).

19. Sentinel Surveillance Unit has been established at the R.P. Centre, AIIMS (with National Programme for Control of Blindness).
20. LCIF sight first supported 'Manpowers and Management Development' to Project (with Lions Club International Foundation).
21. Operational research project to estimate work capacities of human resources for Vision 2020 in India (with Vision 2020 India).

PUBLICATIONS

Journals

1. Alka R, Pal N, Vohra R, Mandal S, Azad RV. Subretinal dislocation of the crystalline lens: Unusual complication of phacoemulsification. *J Cataract Refract Surg* 2005;**31**:1843–4.
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7. Bajaj MS, Pushker N, Konkal V, Chaturvedi A. Oral simvastatin as a therapy for eyelid xanthelasma. *Br J Ophthalmol* 2005;**89**:639–40.
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10. Bajaj MS, Pushker N, Singh KK, Chandra M, Ghose S. Evaluation of amniotic membrane grafting in the reconstruction of contracted socket. *Ophthal Plast Reconstr Surg* 2006;**22**:116–20.
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PATIENT CARE**Hospital services**

	New cases	Old cases	Total
General O.P.D.	1,11,107	1,17,155	2,28,262
Emergency	46,892	–	46,892
Total	1,57,999	1,17,155	2,75,154

Specialty clinics

Cornea	5,399	8,301	13,700
Lens	596	328	924
Uvea	780	1,514	2,294
Contact lens	772	750	1,522
Glaucoma	2,782	7,121	9,903
Ophthalmoplasty	3,094	1,494	4,588
Paediatric. Ophthalmology	921	388	1,309
Trauma	976	892	1,868
Retina	3,239	2,354	5,593
Neuro-ophthalmology	1,422	872	2,294
Medical ophthalmology	1,415	1,940	3,355
Vitreo-retinal	2,316	1,422	3,738
Ocular surface disorder and refractive corneal surgery	57	82	139
Orthoptic	5,473	31,425	36,898
Squint	5,765	33,842	39,607
Refraction	–	53,192	53,192
Total	35,007	1,45,917	1,80,924

Grand total	1,93,006	2,63,072	4,56,078
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Operations

1. Major	15,244
2. Day	3,852
Total major	19,096
3. Minor	4,949
Total operations	24,045

Indoor admissions

1. General ward	16,416
2. Casualty	1,485
3. Private ward	1,092
4. Short admissions	3,219
5. Day care admissions	4,103
Total	26,315
Average Bed Occupancy Ratio	85%

Investigative laboratories

Tests	Number
Fluorescein angiography + ICG	6,763
Ultrasonography	18,876
EOG	92
ECG	3,362
PRP	5,127
Focimetry	8,180
Applanation tonometry	14,597
Goldmann perimetry	2,294
Low vision aid	2,161
Automated perimetry	4,565
ERG	1,057
EUA	185
VER	4,894
Keratometry	33,621
Colour Vision	1,899
Ultrasonic Pachymetry	3,248
Non Contact Tonometry	20,848
Indirect Ophthalmoscopy	4,987
Nd-Yag Laser	1,516
PDT	378
TTT	54
Auto refraction	35,052
Axial Length	16,058
Excimer workup (Lasik)	
Lasik (operated) eyes	341
Lasik (un-operated) eyes	270
PTK (operated) eyes	40
PTK (un-operated) eyes	21
Phakic IOL (operated) eyes	34
Phakic IOL (un-operated) eyes	40
Refraction	60,217
Contact lenses (Old + New)	2,085
Fundus photography	3,515
Laser interferometry	1,481
VNG	155
OCT	4,512
Retina camera (Ret. CAM)	310
Cornea service laboratory	6,172
Ocular Radiology	
X-rays	12,081
DCG	16

Ocular Microbiology

Specimens processed	12,791
Bacterial culture sensitivity	8,882
Fungal culture	2,178
Cytology	578
Viral antigen detection	186
<i>Chlamydia</i> antigen	379
<i>Chlamydia</i> tissue culture	339
PCR (<i>Chlamydia</i>)	31
PCR (corneal ulcer and endoophthalmitis)	92
PCR (HSV)	18
Conjunctivitis	10
<i>Chlamydia</i> serology	98

Ocular Pathology

Total investigations	34,019
Blood (TLC, DLC, PBS, ESR, BT/CT)	14,416
Urine	7,523
Histopathology, Cytopathology and Research	12,080

Ocular Biochemistry (Clinical Chemistry)

Total samples	12,142
Indoor	9,160
Outdoor	2,982

Ocular Pharmacology and Pharmacy

Eye drop vials dispensed	52,446
MK Media vials	500

Eye Bank

Donor eyes received	991
Surgery performed	486
Unsuitable for clinical transplantation	339
Preserved and experimental	166

Community Ophthalmology*Eye care services in slums*

Number of slums covered for comprehensive eye care services	10
Number of attendees at OPDs in slum clinics	7,924
Number of refractions carried out in OPDs in slum clinics	2,882

Reach-in Programme

Adult screening camps organized	20
Patients examined	6,429

Patients operated at R.P. Centre	1,500
Follow up camps organized	20
Follow up patients examined	1,360*
Paediatric screening camps organized	1
Children examined	90
Children operated at R.P. Centre	16

School Eye Screening Programme

Schools covered	19
Teachers trained	22
Students examined	2,998

* This figure also includes patients who have been operated in the previous year.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Professor S. Ghose: Expert Member, Technical Specification Committee under NPCB for various ophthalmic equipments being procured under NPCB by DGHS, 2005–06; Expert Member for Medical Board at IIT Delhi, June 2005; Guest Faculty, International CME on Pediatric Ophthalmology at H.V. Desai Eye Hospital, Pune in collaboration with ORBIS International, September 2005; Member, Expert Advisory Panels and Committees of WHO, October 2005; Received the highest grade for the paper ‘Uveal melanoma in Asian-Indian patients: A diagnostic dilemma’ presented in the Annual meeting programme of American Acad. of Ophthalmol. (AAO), Chicago, USA, October 2005; Chief Discussant, Delhi Ophthalmol. Society, Mini Symposium on Oculoplasty mid-term Conf. ‘Ophthalmology: Today and Tomorrow’, India Habitat Centre, New Delhi, November 2005; Invited by the Ophthalmol. Society of West Bengal, Kolkata to be the Chief Guest of the Scientific programme of their Society, November 2005; Expert Member, IGIMS, Patna Selection Committee for the posts of Faculty in the Department of Ophthalmology at IGIMS Patna, April 2005 and December 2005; Member, Expert Committee at the central level to prepare guidelines for states regarding examination of children admitted to blind school and treatment of those who can be restored vision by DGHS; Member, Dean’s Committee constituted for review and revision of the guidelines for evaluation of thesis for PhD degree at AIIMS. Invited as Guest Speaker in the Transformational initiatives for Medical education, Indo-US symposium at AIIMS, New Delhi, March 2006. Continued to be: (i) Honorary. Advisor (Ophthalmology) in the Ministry of Health and Family Welfare; (ii) Member of the Expert Committee on Ophthalmology at the Central Council for Research in Ayurveda and Siddha, New Delhi. (iii) Expert Member of the Technical Advisory Group for projects submitted, Ministry of Social Justice and Empowerment, GOI, New Delhi.

Professor Rajvardhan Azad: Awarded Silver Jubilee Research Award by Medical Council of India for original and outstanding work in the field of Medical and Allied Sciences done in India, July 2005; Member, Reviewers Committee, Indian Council of Medical Research (ICMR), August 2005; Achievements Award for Contribution to International Research in Ophthalmology by American Academy of Ophthalmology in its annual meeting held in Chicago, USA, October 2005; Invited as Guest Speaker in Symposium on Retinopathy of Prematurity in Asia Pacific Academy of Ophthalmology Kuala Lumpur, Malaysia, 2005; Member and MCI representative Fee Fixation Committee for Private Medical Colleges, Bihar, 2005; MCI Inspector for continuing postgraduate seats in ophthalmology in Himalayan Institute of Medical Sciences, Dehradun, 2005; Member, Visudyne National Advisory Board India and invited as Moderator and Speaker during Board’s meeting, Mauritius, December 2005. Continued to be: (i) Member,

Staff Council, AIIMS (ii) Member, Deans Committee, AIIMS; Honorary Advisor/ Consultant to Armed Forces Medical Services in Ophthalmology.

Professor R.B. Vajpayee: Awarded Achievement Award, Annual Meeting of the American Academy of Ophthalmology, Chicago 2005. Continued to be: (i) International Associate, Royal Australian College of Ophthalmologists (ii) International Member, American Academy of Ophthalmology (iii) International Member, American Society of Cataract and Refractive Surgery (iv) Member, Pediatric Keratoplasty Association (v) Member, Ophthalmic Research Association (vi) Member, Presidential advisory group of Delhi (vii) Ophthalmological Society (viii) Member, National Advisory Board of the journal *Ophthalmology Today* (ix) Reviewer: *Journal of Cataract and Refractive Surgery*, *Indian Journal of Ophthalmology*, *Graefe's Archives for Clinical and Experimental Ophthalmology*, *Clinical and Experimental Ophthalmology*, *American Journal of Ophthalmology*, *British Journal of Ophthalmology*, *IOVS*, *Eye* and *Ophthalmology*.

Professor Atul Kumar: Awarded DMA Medical Teacher award by Delhi Medical Association 2005.

Professor Pradeep Sharma: Awarded West Bengal Ophthalmic Society Oration Guest lecture at Asansol, November 2005; continued to be: (i) Editorial Consultant, *Indian Journal of Strabismus* and *Pediatric Ophthalmology*.

Professor Ramanjit Sihota: Reviewer: *Indian Journal of Ophthalmology* 2005, *Ophthalmic Epidemiology* 2005, *Archives of Ophthalmology* 2005; *Ophthalmic and Physiological Optics* 2005; continued to be Member, Glaucoma Advisory Council, ICMR.

Professor J.S. Titiyal: Awarded Distinguished Resource Teacher of the Society by Delhi Ophthalmological Society, New Delhi, April 2005; Member, Expert Committee, Indira Gandhi Open University (IGNOU) BSc Ophthalmic Techniques course at IGNOU New Delhi, 2004–2005; Reviewer Proceedings of AIOS, 2005; continued to be: (i) Chief Editor of *DOS Times*, a bulletin of Delhi Ophthalmological Society, 2003–2005, (ii) Reviewer: *Indian Journal of Ophthalmology* and *The National Medical Journal of India*. (iii) Editorial Board Member, *Delhi Journal of Ophthalmology*, (iv) Editorial Board Member, *Journal of Uttaranchal Ophthalmological Society*.

Professor Radhika Tandon: Appointed as adjunct faculty member, CMET, AIIMS September 2005; continued to be: (i) Elected Chairperson of North Zone of Eye Bank Association of India (ii) Member, Core group for introduction of OSCE style examination by the National Board of Examination.

Professor S. Khokhar: Awarded Certificate of Academic Excellence by Delhi Ophthalmological Society for the year 2004–2005; Elected as Library officer for the Delhi Ophthalmic Society for 2 years from March 2005.

Dr G.V.S. Murthy: Member, Operational Research Advisory Group of Vision 2020 India, 2005; Member, WHO Global Monitoring Committee of implementation of vision 2020 Initiative, 2005; continued to be: (i) Reviewer, *Indian Journal of Ophthalmology*, *International Ophthalmology* and *The National Medical Journal of India* (ii) Reviewer's panel of *British Journal of Ophthalmology* (iii) Reviewer's panel of *Lancet* (iv) President, Indian Alumni Group of ICEH, London (v) Member, Academic Resources Advisory Committee of the National Programme for Control of Blindness (vi) Member, Editorial Board of NPCB Bulletin (vii) Member, Editorial Board of the *Journal of Community Eye Health* (Indian

Edition) (viii) Secretary, Eye Care Initiative, a forum for public health Ophthalmologists in India (ix) Member, Editorial Committee of the *Journal of Ophthalmology-UP* (x) Member of INDIACLEN.

Dr Sanjeev K. Gupta: continued to be: (i) Treasurer Eye Care Initiative, a Forum for public health Ophthalmologists in India ii) Member of INDIACLEN.

Dr Rajpal: continued to be: (i) Chief Coordinator, National Board of Examinations. (ii) Executive Member, Ocular Trauma Society of India.

Dr Seema Sen: Member, International Society of Ocular Oncology.

Dr Pradeep Venkatesh: Reviewer: *IOVS* 2005, *Neuro-Ophthalmology* 2005, *Medical Science Monitor*, 2005; Biography selected for inclusion in *Marquis Who's Who in the World 2005* and in *Medicine and Healthcare 2005*.

Dr Tanuj Dada: Awarded the Best Poster Award for the paper 'Anterior segment changes after laser iridotomy using ultrasound biomicroscopy' by Delhi Ophthalmological Society, April 2005; Awarded Certificate of academic excellence by Delhi Ophthalmological Society, April 2005.

Dr Namrata Sharma: Awarded Achievement Award, Annual Meeting of the American Academy of Ophthalmology, Chicago 2005; Awarded Rohit Om Prakash Oration Award by Punjab Ophthalmological Society, December 2005; International Member American Academy of Ophthalmology; International Member American Academy of Cataract and Refractive Surgery; Member Pediatric Keratoplasty Association; Reviewer: *Clinical and Experimental Ophthalmology*, *American Journal of Ophthalmology*, *Eye* and *Ophthalmology*.

Dr T. Velpandian: Awarded the best presentation award in the 3rd North Zone Conference, Indian Pharmacological Society, April 2005.

Dr Jasbir Kaur: Expert Observer, National Seminar on Integrated Medicine (Ayurveda and Siddha) Scope and Challenges under WHO Biennium 2004–2005, New Delhi, May 2005; continued to be: Expert Member, Task Force, Central Council for Research in Ayurveda and Siddha (Department of AYUSH, Ministry of Health and Family Welfare, Govt. of India), New Delhi.

Dr Tushar Agarwal: Awarded Indian National Science Academy (INSA) Medal for young scientists for the year 2004; Reviewer, *American Journal of Ophthalmology* 2004. *Archives of Ophthalmology* 2005.

Dr Rajesh Sinha: Awarded Dr Krishna Sohan Singh Trophy for the Best Clinical Talk for the year 2004–2005 by Delhi Ophthalmological Society during Annual Meeting, April 2005; Awarded Certificate of Appreciation as Distinguished Resource Teachers of the Society for the year 2004–2005 by Delhi Ophthalmological Society Annual Meeting, April 2005.

Significant Events

Dr R.P. Centre is actively collaborating with ORBIS International and Vision 2020: 'The Right to Sight'. Chief, Dr R.P. Centre continues to be active Vice President of Vision 2020: 'The Right to

Sight'-India. The Centre has taken giant strides in improving the quality of services delivered to patients.

The Centre is providing eye care services to an urban slum population, including eye OPD, provision of subsidized spectacles, free surgery and investigations.

Some of the new facilities introduced at the Centre are: Implantation of artificial cornea (Keratoprosthesis), stem cell transplantation, phakic intraocular lens for patients of high myopia and Epi-Lasik surgery. Bioanalytical laboratory has been established with sophisticated instruments such as high performance liquid chromatography.

Dr R.P. Centre pharmacy has introduced tropicamide and ciprofloxacin topical eye formulations for the investigational and therapeutic purposes to the patients free of cost.

National Eye Donation Awareness Fortnight held from 25 August to 8 September 2005.

VISITING SCIENTISTS

1. Mr Adam Zayan, Senior Vice President and Medical Director of the ORBIS International, New York.
2. Dr Akash Patnaik from USA.
3. Mr Antony NJ, Area Representative, Sight Savers International, Bhopal.
4. Professor Astrid Fletcher from the London School of Hygiene and Tropical Medicine.
5. Dr Bill Newman, UK.
6. Professor Christopher Liu, Brighton UK.
7. Ms Cui Tongtong, Doctor, National Guiding Committee for Blindness Prevention, Beijing Tongren Hospital, China.
8. Ms Du Keling, Deputy Director-General, Yunnan Provincial Bureau of Health, China.
9. Dr Jason Woody, Executive Director and Chief Executive Officer, Central Florida Lions Eye Bank, USA.
10. Mr Jeremy Hughes, Trustee, Sight Savers International, UK.
11. Ms Jia Dandan, Officer General Division, Department of Medical Administration, Ministry of Health, People's Republic of China.
12. Ms Kebinuer Maimaiti, Deputy Director, Department of Medical Administration, Xinjiang Autonomous Region Bureau of Health, China.
13. Dr Lerry Benjamin, UK.
14. Mr Lin Shijie, Director of Red Cross Hospital of Yunnan Province, China.
15. Mr Long Fei from ORBIS China Office, Senior Program Manager, Team Leader, China.
16. Professor Maraini Giovanni from the University of Parma, Italy.
17. Mr Prasannakumar PN, Area Representative, Sight Savers International, Jodhpur.
18. Dr Satish Chaudhary, UK.
19. Ms Sun Jingjing from ORBIS China Office PR and Information Manager, China.
20. Mr Zhang Yong Zhong, Deputy Director, Xinjiang Autonomous Region Bureau of Health, China.
21. Dr Geeta Vemuganti, Director Ophthalmic Pathology Services, LVPEI, Hyderabad.
22. Dr Krishna Kumar, Pathologist, Sankara Netralaya, Chennai.
23. Professor Narsing Rao, Doheny Eye Institute, California.

11.1 B.B. Dikshit Library

Professor-in-Charge

Rani Kumar

Chief Librarian

R.P. Kumar

Librarians

Pupinder Kumari
(up to 31.10.2005)

Banwari Lal

EDUCATION

Continuing Medical Education

- A medical delegation of 6 faculty members from Al-Amiri Hospital, State of Kuwait, visited the library on 7 April 2005.
- Twelve librarians from WHO Country Office, WHO-SEARO, New Delhi, visited the library on 21 April 2005.
- Sixty students from Mira Model School, Janak Puri, New Delhi, visited the library on 23 November 2005 to observe its working.

TIMINGS AND MEMBERSHIP

The library is kept open round the clock on all days of the week including Sundays and holidays. It has 2300 regular members and an average of 725 readers visit the library every day.

SERVICES

The library continued to extend the following services to the users. These services have been modernized, updated and strengthened.

Book alert service

This is a monthly listing of new books, monographs and pamphlets added to the library.

Periodical alert service

This is a fortnightly listing of new periodicals received in the library during the previous fortnight.

Bibliographies on demand

The staff of the library compiles bibliographies on various topics as and when demanded by the readers.

Interlibrary loan services

Interlibrary loan services with several local libraries are being maintained to help users to procure documents that are not available in the library.

Reprographic services

The library has four machines to meet the demands of the readers. During the year, 1,57,192 pages were xeroxed on payment basis as a service to the readers.

CD-ROM printout services

During the year, 4,785 computer printouts containing abstracts of articles were made available to the readers on a payment basis.

Book bank

The Book Bank has 62 students (undergraduates and interns) as its members. It has 2,486 books which are issued on a long-term basis to the students.

Microforms section

The library is equipped with two microfilm readers and one microfilm/microfiche reader-cum-printer. The library has 1,627 microforms in its collection.

Audiovisual section

The library has four colour television sets and four video cassette recorders. The number of video cassettes available in the library is 314. It also has four audio cassettes playback decks and 125 audio cassettes. The number of floppy diskettes is 262.

CD-based service

The library has different databases on CD-ROM, i.e MEDLINE, POPLINE, ONCO DISC and LISA, etc. Different encyclopaedias and dictionaries have also been acquired on CD-ROM. The number of CD-ROMs is presently 550.

CD-NET

A CD-NET workstation has been operational in the library since January 1993. At a time, 18 users can search different databases loaded in a CD-NET tower. The library is among the few in the country to have such a facility. Printing facility is also available.

Library automation

The library has a ALPHA Digital Personal Workstation DPW 433 AU with 16 terminals, one laser printer, one line printer and three local dot matrix printers. Housekeeping operations of the library (viz. acquisition, cataloguing, serial control and circulation) have been automated. The library is using a commercially available software package named LIBSYS.

Computerized thesis search

About 5,059 theses received so far in the library can be retrieved through a computer search. Information about each thesis such as author, title, department, guide's name, co-guides and other bibliographical details have been fed into the computer.

Online journals

The library received 196 online journals for the current year, made available to it by the publishers along with the print versions of the journal.

OPAC (Online Public Access Catalogue)

All the records from 1985 onwards can be retrieved through the Online Public Access Catalogue (OPAC). The searchable databases (through OPAC) include theses, video cassettes, audio cassettes and compact discs. Six online public access terminals are placed in the lobby at the entrance of the library where users can search bibliographic databases and find specific information online. Information about journals and recent arrivals can also be retrieved through OPAC.

Multimedia

The library has two multimedia sets. Few multimedia titles are also available.

E-mail

The library actively participates in DELNET (Developing Library Network). An e-mail modem has been provided by DELNET for communicating with others libraries. Besides this, the library also has an e-mail connection provided by the Institute.

Internet

The internet facility is available in the library from 10.00 am to 10.00 pm from Monday to Friday and till 8.30 pm on Saturdays. Eighteen nodes are available to the users.

New additions

The library added 630 new books to its collection and now has a 69,573 books. Also 1,944 bound volumes of journals and 427 pamphlets/reports were added to the collection. The total number of bound volumes of journals and reports/pamphlets increased to 64,539 and 16,495, respectively. The library annually subscribes to 451 journals in various fields of health sciences, 196 of them are also received online along with their printed version. 25 journals subscribed to on behalf of the National Drug Dependence Treatment Centre, are also being received.

New ventures

1. A documentation centre containing the publications of the faculty was set up.
2. A Hindi books section comprising of books published mainly in the health sciences was set up and 98 titles were added.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr R.P. Kumar was nominated as the Member of the Advisory Committee of the Silver Jubilee Convention of the Medical Library Association of India (MLAI-2005); coopted as a Member of Delhi Library Board (Governing Body of Delhi Public Library) for 3 years (2005–2008). He continued as Secretary of the Medical Library Association of India (MLAI) for 1 year (2005–2006); also as Chief Editor of *MLAI News*, a quarterly publication of the Medical Library Association of India; was invited by the Indian Institute of Technology, Roorkee, to deliver a valedictory address to the participants of a workshop on 18 August 2005; invited to deliver a keynote address and to act as the Director of the seminar on 'Medical publishing in India: Trends and prospects', Medical Library Association of India, Delhi Book Fair, Pragati Maidan, New Delhi on 28 August 2005. He attended the 9th International Congress on Medical Librarianship, Salvador, Bahia-Brazil, from 20 to 23 September 2005; presented two papers and coordinated a scientific session; attended the Silver Jubilee Conference of the Medical Library Association of India, NIMHANS, Bangalore and Chaired a scientific session from 7 to 9 November 2005; attended 3rd International Conference on 'Innovative application of information technology for developing the world', Kathmandu, Nepal from 10 to 12 December 2005, and presented a poster on 'Virtual digital libraries'; was invited as Chief Guest by Delhi Public Library, Delhi, to distribute the annual awards on 19 December 2005; invited to deliver a keynote address by the Post Graduate Institute of Medical Education and Research, Chandigarh during the one-day seminar on 'Recent trends in medical librarianship on 10 February 2006.

11.2 Cafeteria

Chairman

Deputy Director (Administration)

Faculty-in-charge

O.P. Kharbanda

Accounts Officer

N.K. Bajaj (from 28 January 2006)

General Manager

S.K. Kaushik

Deputy General Manager

K.K. Sharma

AIMS AND OBJECTIVES

The AIIMS Cafeteria, established in 1972, provides wholesome food at reasonable prices to AIIMS employees. In 1983, it was registered with the Director of Canteen, Department of Personnel and Training, Government of India. In October 1991, the Cafeteria was taken over by the Institute and since then all employees are treated at par with AIIMS employees. Since then, the Cafeteria is being run on a No Profit, No Loss basis, without any financial assistance from the Institute.

MANAGEMENT COMMITTEE

A managing committee constituted by Director, AIIMS takes policy decisions pertaining to the Cafeteria. The following are the current members of the committee:

1.	Deputy Director, Administration	Chairperson
2.	Dr S. Rastogi	Member
3.	Dr V.K. Paul	Member
4.	Dr Bir Singh	Member
5.	Shri Mayank Sharma, Sr F.A.	Member
6.	Shri R.G. Garg, F.A.	Member
7.	Shri Rajesh Kumar, S.E.	Member
8.	Shri N.K. Bajaj, A.O.	Member
9.	Smt Preeti Ahluwalia, W.O.	Special invitee
10.	Smt Rekha Sharma, Chief Dietician	Member
11.	Representative of RDA	Member
12.	Representative of Officers Association	Member
13.	Representative of Nurses Union	Member
14.	Representative of Karamchhari Union	Member
15.	Representative of FAIMS	Member

16	Dr O.P. Kharbanda	Member Secretary
17.	Shri S.K. Kaushik, General Manager, Cafe	Member

Shri R.C. Sharma, Accounts Officer, Cafeteria, was relieved from the service of the Institute, w.e.f. 28 January 2006. In his place, Shri N.K. Bajaj, Accounts Officer has been nominated by the Director as Accounts Officer, Cafe

SERVICE FACILITIES

The Cafeteria runs 6 units to provide services to about 9000 employees of AIIMS. These are:

1. Main Cafeteria (24-hour service) situated near Jawahar Lal Nehru Auditorium
2. Main Operation Theatre Cafeteria situated on the 9th floor of the main hospital
3. CNC Cafeteria situated on the 2nd floor of the Centre
4. Dr R.P.C. O.T. Cafeteria situated on the 5th Floor of the Centre
5. Casualty Extension Counter situated in the main casualty.
6. Faculty Room Cafeteria situated near the Main Cafeteria

In addition, the Cafeteria provides services to the Director, Deputy Director, Medical Superintendent, Dean and Faculty Members for their day-to-day as well as special requirements for important meetings.

STAFF STRENGTH

Eighty-nine employees (regular/ad hoc/temporary) are on the rolls of the Cafeteria Department. Catering services are provided for official meetings, conferences and symposia held at AIIMS.

ANNUAL TURNOVER

The total turnover of the Cafeteria Department is approximately Rs 1 crore 34 lakh.

DEVELOPMENT ACTIVITIES

Several changes were brought about in the Cafeteria Department during the year under review.

Main OT Cafeteria

Ambience

Several improvements were made to the ambience at the MOT Cafeteria, resulting in manifold increase of users. Overall, the faculty members appreciated the facilities provided here.

Extended facility at MOT Cafeteria

- Services were enhanced up to 7 p.m.
- Microwave facility provided
- Cold and hot display counter provided
- Sandwich griller and food bane marry provided
- New items added in the daily menu along with 'Thali lunch' facility.

New food items introduced

Low calorie/low cholesterol eatables such as *idli/dosa* were introduced.

FUTURE PLANS

There is a proposal for complete renovation of the Cafeteria, to be equipped with the latest technology to maintain more healthy and hygienic conditions in the Cafeteria Department. A detailed working

proposal has been prepared after several meetings, and a professional architect has been hired. The proposal is for complete renovation with addition of a floor on the existing Cafe.

New Development

Main Operation Theatre Extension Counter on the 9th floor has been refurnished with facilities for lunch and other eatables available up to 7 pm.

11.3 Central Workshop

Faculty Coordinator

T.P. Singh

Officer-in-Charge

S.K. Kamboj

Technical Officers

Rajiv Rastogi

Kalu Ram

The Central Workshop has been mainly engaged in the repair and maintenance of instruments used for medical education, scientific research and hospital services during the period mentioned above. In spite of increased load of above-mentioned activities, it has also continued to cater for fabrication and design of new instruments. It has the following sections:

1. Electronics Section
2. Electrical and Refrigeration Section
3. Mechanical Section
4. Glass Blowing Section
5. Carpentry Section
6. Painting Section

Fabrication and guidance

The Central Workshop has been able to continue to help in the research activities of the institute with modifications of instruments and fabrications of useful gadgets. It has been possible in many cases to design and fabricate some of the items which were previously imported from abroad by the departments with locally available components using the know how in the Central Workshop. A total of 102 jobs of fabrication were carried out. The Central Workshop also provides support for the repair and maintenance of various new instruments developed by the Central Workshop. The Central Workshop has fabricated the following specialized pieces of equipment for various departments:

1. Valve dilators from 19 mm to 26 mm (Cardiothoracic and Vascular Surgery)
2. Biopsy punches for paraffin blocks (Pathology)
3. Valve ringing dye sets from 19 mm to 31 mm (Cardiothoracic and Vascular Surgery)
4. Laparoscopic attachment (Obstetrics and Gynaecology)
5. Heavy duty trolley (Cardiothoracic and Vascular Surgery)

Repair and Maintenance

The Central Workshop has been carrying out the repair and maintenance of all types of biomedical equipment which include electro-surgical unit, ECG machine, PUVA, UV spectrophotometer, electronic weighing machine, audiometer, ultrasound therapy unit, OT light, tissue processor, cold centrifuge, light source, microscope, suction machine, spares of OT table and surgical equipment installed in

various departments, double distillation unit, alcohol distillation glass apparatus, glass moulds and other sophisticated scientific glass instruments.

The Central Workshop has been taking repair and painting jobs for all hospital furnitures such as patient beds, patient lockers, IV stand, instrument trolleys, fowler beds, etc. In the year 2005–2006 Central Workshop has attended a total number of 8,075 repair jobs.

A total of 8,177 jobs were done on repair and fabrication during the period mentioned above.

11.4 K.L. Wig Centre for Medical Education and Technology

Professor-in-Charge

Kusum Verma

Rita Sood (from 18.9.2005)

Coordinator

O.P. Kharbanda (from 18.9.2005)

Educationist

B.V. Adkoli

Education Media Generalist

Yogesh Kumar

Educational Graphic Designer

Sunita Gadde (up to 2.12.2005)

EDUCATION

As a part of the MSc Nursing programme launched by the College of Nursing, 20 lectures were arranged by CMET on 'Educational technology'.

Continuing Medical Education

CMET organized two in-house workshops on 'Enrich your presentation' for junior and senior residents of AIIMS. Two workshops were held on 'Information retrieval in health sciences using internet' for the faculty, scientists and resident doctors. Two workshops were held on 'Digital photography' and 'How to write a paper' for the faculty, resident doctors and scientists of AIIMS.

Mr Yogesh Kumar made presentations during CME on 'Information technology for surgeons' organized by Max Health Care Institute and Jeewan Mala Hospitals at India Habitat Centre.

Mr Yogesh Kumar and Dr B.V. Adkoli made a presentation on 'Wonder of Word and Power of PowerPoint' at Industrial Toxicology Research Centre, Lucknow, UP.

National and International Conferences

1. Dr Rita Sood was a Panelist for the panel discussion on 'Entry points for teaching of ethics and psychosocial issues in medical education', Regional meeting on 'Psychosocial issues and ethics in medical education', Bangkok; 6-8 June 2005.
2. Dr Rita Sood and Dr B.V. Adkoli participated in the South Asian Conference of postgraduate medical education held at Colombo, Sri Lanka, from 1 to 3 August 2005. Dr Sood also made a presentation on 'Teaching of professionalism and ethics in postgraduate medical education', and was Moderator for the panel discussion on 'Sub-specialization'. Dr B.V. Adkoli was a Panelist for a panel discussion on 'Brain-drain'.
3. Dr Rita Sood and Dr B.V. Adkoli were invited as faculty to the FAIMER Regional Institute at CMC, Ludhiana, for two workshops held during September 2005 and January 2006.

4. Dr Rita Sood was invited for a consultation meeting held at Negombo, Sri Lanka (19–25 September 2005), on ‘Undergraduate medical and pharmacy education’, and made a presentation on ‘Undergraduate medical education at AIIMS’.
5. CMET faculty collaborated with other departments and professional associations in organizing workshops related to educational technology. CMET team conducted sessions on ‘Information technology CME for doctors’, during a pre-conference CME organized by the Association of Phonosurgeons of India (PHONOCON-2006).
6. CMET collaborated with the department of surgery during the International Minimal Access Surgery Conference (AIIMS ENDOSURG-2006) held at AIIMS on 10–12 March 2006. Four half-day workshops were organized by CMET team on ‘Information retrieval in health sciences through internet’, ‘Enrich your presentation’, ‘Tips and tricks for digital photography’ and ‘Edit and record digital video’.

Publications

1. Sood R. Training in professionalism and ethics in postgraduate medical education. In: *Proceedings of the South Asian Conference on Postgraduate Medical Education*. The Post-graduate Institute of Medicine, Colombo, Sri Lanka; 1–3 August 2005:135–6.
2. Adkoli BV, Jayawickramarajah PT. Brain-drain or brain-gain? Indian dilemma. In: *Proceedings of the South Asian Conference on Postgraduate Medical Education*. The Post-graduate Institute of Medicine, Colombo, Sri Lanka; 1–3 August 2005:69–75.
3. Adkoli BV. Migration of health workers: Perspectives from Bangladesh, India, Nepal, Pakistan and Sri Lanka. *Regional Health Forum* 2006;**10**:49–58.

MEDIA PRODUCTION

Type Of Media Produced <i>Quantity</i>	Number of requisitions	
Clinical photography	484	2,247
X-ray, specimen, gels, etc.	512	6,984
Photographic prints (black and white, and colour)	463	7,135
Scanning of images	564	10,498
Video recording, editing (non-linear) including tape to CD conversion	298	298
Designing/printing of large format posters	837	837
Book binding, paper cutting and offset printing	34	6,10,000 approx.

CMET also provided photographic and audio coverage to all orations, major events; venue with on-screen presentation facility was extended to departments on specific request.

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr Rita Sood was Temporary Advisor during the WHO-SEAR/WPR meeting on ‘Psychosocial issues and ethics in medical education’ at Bangkok in June 2005; awarded FAIMER Institute Fellowship 2005 at FAIMER Institute, Philadelphia, USA in 2005; nominated as Executive Committee Member of South

East Asian Regional Association for Medical Education, and Member, Association for the Study of Medical Education (ASME) and South East Asian Network for Postgraduate Medical Education.

Dr Kalpana Luthra was awarded FAIMER Fellowship at the Regional FAIMER Institute at CMC, Ludhiana.

Significant Events

CMET provided publicity posters and photographic coverage to all activities and events related to the Golden Jubilee Celebrations of AIIMS.

CMET played major role in organizing Poster Exhibitions during various events such as CME on ‘Stem cell’ organized by the Department of Medical Oncology, IRCH; World AIDS Day, organized by the Centre for Community Medicine.

Publicity material including treatment plan and health education posters on ‘Bird flu’ in English and Hindi were prepared for display in various places at AIIMS.

CMET provided audio-visual projection facilities for candidates during the Standing Selection Committee meeting of AIIMS.

VISITING SCIENTISTS

1. Dr William Burdick, Assistant Vice President, ECFMG, and Co-Director, Foundation for Advancement in International Medical Education and Research (FAIMER), Philadelphia, USA.

11.5 Computer Facility

Deputy Director and Head

R.S. Tyagi

Systems Analyst

S. Kailash

S.N. Ragu Kumar

Satish Prasad

Senior Programmers

Sushil Kumar Meher
V.K. Jindal

Sanjay Gupta
S.P. Singh

Vinay Pande

Programmer

Hari Shankar

EDUCATION

Postgraduate

Teaching sessions on computer programming, covering the theoretical and practical aspects were conducted for postgraduate students of Biotechnology, Biophysics and College of Nursing. Bioinformatics classes for students of the Department of Biotechnology were also conducted. Training was provided to Armed Force officers deputed to study Medical Informatics. This training is for a period of two years.

Undergraduate

A three-month course on the basics of computers, internet, Windows applications, computer-aided learning, database and biostatistics was given to the BSc (Hons) final year nursing students of AIIMS. A computer course for BSc Nursing (Post-certificate) students was also conducted during the year.

Continuing Medical Education

Staff members participated in and delivered lectures at continuing medical education programmes, symposia, international and national conferences during the year. They also guided software projects of students of Computer Applications (BCA, BE, BTech, MCA and MCM) from different engineering colleges in and outside Delhi. Lectures of faculty members of AIIMS for medical colleges/hospitals all over the country were organized through videoconferencing.

- The first workshop on 'Effective information retrieval using internet in health sciences', coordinated and conducted by S.N. Ragu Kumar in association with CMET during 10–11 August 2005, was attended by 30 faculty members and scientists of AIIMS.
- The second workshop on 'Effective information retrieval using internet in health sciences', coordinated and conducted by S.N. Ragu Kumar in association with CMET during 1–2 September 2005, was attended by more than 30 faculty members, scientists and resident doctors of AIIMS.
- S.N. Ragu Kumar jointly coordinated as IT advisor to a pre-conference CME for doctors along with CMET and Association of Phonosurgeons of India.
- S. Kailash and S.N. Ragu Kumar, as experts, were on the Panel discussion entitled 'IT for ENT Surgeons' held as part of IT for doctors CME during 3 February 2006 at AIIMS.
- Dr R.S. Tyagi was nominated by the Vice-Chancellor of JNU as Vice-Chancellor's nominee for the Technical and Purchase Committees of the University.

National and International Conferences

- The following workshops were conducted by Dr R.S. Tyagi as a member/ leader of the UNODC–ROSA project ‘Software development for the database in drug and HIV/AIDS’:
 - Dhaka, Bangladesh; 15–18 April 2005
 - Male, Maldives; 12–13 June 2006
 - Colombo, Sri Lanka; 15–16 June 2005
 - Dhaka, Bangladesh; 25–28 December 2005
- Dr R.S. Tyagi was invited to deliver talks on the following:
 - 92nd Indian Science Congress, Nirma University of Science and Technology, Ahmedabad; 6 January 2005
 - ‘Value addition by IT in health care and impact of globalization on services’, CTO Forum, Mumbai; 4–5 March 2005.
 - ‘Medical informatics and telemedicine’, Indian Association of Medical Informatics, Punjab Branch; 24 March 2005.
- Dr R.S. Tyagi was nominated, Member of the National Task Force for Telemedicine, Ministry of Health, Government of India.
- Mr S.N. Ragu Kumar attended the 40th Annual National Convention of Computer Society of India, Hyderabad; 9–12 November 2005.
- Mr S.N. Ragu Kumar and Mr S.K. Meher attended the Cyber Security Seminar, US-CERT-In, New Delhi, India; 21–22 April 2005.
- Mr S.K. Meher attended the 1st International Conference on ‘Emerging applications on IT (EAIT20006), Computer Society of India, Kolkata Chapter, Kolkata; 10–11 March 2006.
- Mr S.N. Ragu Kumar present a case study on ‘Networking at AIIMS’, at the International School on ‘Wireless technologies’, Italy; 6–24 February 2006 and attended workshop at the International Centre for Theoretical Physics, Trieste, Italy.
- Mr Sushil Kumar Meher organized a tutorial on ‘Telehealth: A new road to healthcare’ during the AACC-2005, Third International Conference on ‘Innovative applications for the developing world’, Conference held at B.P. Koirala Memorial Cancer Hospital, Bharatpur, Chitwan, Nepal; 9 December 2005.

International

- S.N. Ragu Kumar, India and Giovanni Repici, Italy. Jointly presented case study on ‘Economic analysis of implementing ICT and wireless technologies at health care institution’, at the ‘Round table on North-South and South-South cooperation in ICT for development’, *Kastler Lecture Hall, AGH*, at ICTP, Trieste, Italy; 23 February 2006.
- ‘A study of fractal figures by L-systems using turtle graphics for designing a simple L-system parser’. S.N. Mishra, S.K. Meher, S. Mishra. In the Third International Conference on ‘Innovative applications for the developing world’, AACC2005, Kathmandu, Nepal. Published in proceedings by Imperial College Press, London; December 2005.
- ‘ICT in health informatics—key-issues, concerns, emerging technologies and future outlook in India’. S. Gupta, S.K. Meher. Presented at the AACC2005, Kathmandu, Nepal. Published in proceedings by Imperial College Press, London; December 2005.
- ‘Virtual digital libraries: An advanced methods and technologies’. R.P. Kumar, S.K. Meher. Presented at AACC2005, Kathmandu, Nepal. Published in proceedings by Imperial College Press, London; December 2005.
- ‘Re-engineering of workflow outpatient department through electronic patient record implementation resulting in service improvement—at high patient volumes’. S.K. Meher, R.S. Tyagi. Presented in

the EDBT 2006 Workshop in Information Integration in Health care (IIHA), Munich; 26–31 March 2006.

- ‘Electronic health records for PEP HIV/AIDS health care workers in AIIMS, New Delhi, India’. S.K. Meher, A. Biswas. Published in proceeding of 23rd Annual Conference and Exhibition, ‘HC2006: Health informatics making the difference’, Harrogate, England; 20–22 March 2006.

National

- Telemedicine at AIIMS, S. Kailash. Presented at 4th Biannual Conference of Indian Association for Medical Informatics, Sri Guru Ram Dass Institute of Medical Sciences, Vallah, Amristar; 1–2 October 2005.
- Telemedicine in Trauma Care, R.K. Pathni, S. Kailash, Vijeytha Sinha. Presented at Indo-US Emergency Summit 2005, AIIMS; 21–23 October 2005.
- Information Technology in Health: Telemedicine. S. Kailash. Pre-conference CME on ‘IT and media’, organized by The Association of Phonosurgeons of India; 3 February 2006.
- Hospital Information System. S.K. Meher. Pre-conference CME on ‘IT and media’, organized by The Association of Phonosurgeons of India; 3 February 2006.
- ‘Hospital Information System and Management Information Systems Implementation at Hospitals’. S.N. Ragu Kumar. Invited lecture at the National Training Programme for State Government Health System Doctors, organized by the Academy of Hospital Administration, NCR, Delhi; November 2005.
- ‘Information retrieval for ENT surgeons through Internet’, S.N. Ragu Kumar. Lecture during pre-conference CME on ‘IT and media’, organized by The Association of Phonosurgeons of India; 3rd February 2006.

PATIENT CARE

Software development

Design, development and implementation of computerized pathology reporting system over LAN for the entry of histopathology, cytopathology and autopsy reports at AIIMS. The LAN has 12 nodes at various locations in the department of Pathology. The system has been integrated with the e-mail system of AIIMS and demonstrated the possibility of reporting through e-mail on intranet.

Several software for patient care, have been developed and implemented successfully for the departments such as GE, Obstetrics and Gynaecology, Neurosurgery OT and Nuclear Medicine.

SERVICES

Software development of the AIIMS Administration Section continued and various modules were maintained.

The Research Section is fully automated and running successfully.

1. Administration:

- Research project management
- Recruitment management
- Project employee management
- Project employee EHS management
- Research fellowship management

2. Accounts
 - Payroll and tax management
 - Grand register
 - Cashbook
 - Ledger
 - TA/DA reimbursement
 - Balance-sheet
3. Store
 - Requisition
 - Supply order
 - Financial Transaction

Mr S.K. Meher coordinated and conducted the computerized online counselling twice for PG/MD/MS/ MDS for the year 2005–2006.

Mr S.N. Ragu Kumar with CMET, jointly coordinated and conducted computerized network-based online presentation system for Standing Selection Committee, AIIMS, organizing over 400 powerpoint presentation during September 2005.

Demonstration on the Government of India tender information system www.tenders.gov.in was done by Mr S.N. Ragu Kumar to the senior officials and Faculty-in-Charges of AIIMS at the Boardroom, AIIMS and the same was implemented at AIIMS.

Presentation and demonstration of web-enabled human resource information system was done by Mr S.N. Ragu Kumar and team to senior officers of AIIMS for the evaluation of in-house developed system for the same.

Central facilities maintained by computer facility

A facility for telemedicine was inaugurated by the Union Health Minister of India on 10 May 2005.

Number of telemedicine consultations done during 2005–2006	130
Number of telemedicine CME's done during 2005–2006	30
Number of online conferences done during 2005–2006	2

A week's training was given on the use of telemedicine to PMO personnel for the use of the telemedicine in the PMO office.

Live workshops were shown through video conferencing between AIIMS, New York, JLNM, Raipur and France.

The new-look AIIMS official website, developed in-house by computer facility was inaugurated by the Union Health Minister of India on 10 May 2005.

A new website for the Hostel Section, as part of the AIIMS official website, developed in-house by Computer Facility along with Department of Pathology, was inaugurated by Dean, AIIMS during the first week of May 2005.

The OPA system developed by NIC hosted through the internet by computer facility of AIIMS was inaugurated the Union Health Minister of India on 10 May 2005.

Remote access internet facility for the faculty on the campus-wide telephone network 24x7x365 days continued.

The websites of www.aiims.edu, www.aiims.ac.in are being maintained in-house by the department.

Creation and maintenance of users' accounts was done for 539 aiims.ac.in domain users.

The total no of visitors to the AIIMS websites were 12,05,880 during the year 2005–2006.

Maintenance of Web Server, Proxy Server, Messaging server is done 24x7x365 round the year.

Software modules for the website are developed in house and these include:

Modules developed	Number of web pages
Conference and workshop modules for various departments such as Current trends in epilepsy, Prenatal diagnosis and therapy, National CME in Obstetrics and Gynaecology, AIIMS Golden Jubilee Symposium on Paediatric malignances, etc.	107
Maintenance of current events including examination sections, notices, etc.	109
Tenders and notices module	2844
Hospital OPD schedules	30
Academics related pages	1308
Departmental web module pages maintained and new ones designed and developed	265
Total number of web pages under various modules designed, developed and maintained	4,740
Other activities	
Total number of new internet connections provided to faculty members during the year	128
Total number of computer network nodes maintained for internet access	995
Total number of users visiting the computer facility, for using medical and educational information access	31,500

Maintaining central facilities such as e-mail facility, medical and educational information access facility, laser printing and scanning, consultancy for software and hardware.

11.6 Electron Microscope Facility (Department of Anatomy)

Officer-in-Charge

Shashi Wadhwa

Associate Professor

Taposh K. Das

Assistant Professor

T.C. Nag

Senior Technical Officer

S.C.P. Sharma

Technical Officer

Rajesh Pathania

Manjeet Singh Bathla
(deceased, 30 September 2005)

EDUCATION

- A training programme on SEM and TEM was conducted for 15 MTech (Nanotechnology) and MSc (Nanoscience) students of Amity Institute of Nanotechnology, Amity Campus, Noida; 20–25 February 2006.
- Twelve MBiotech students of the Department of Biotechnology, AIIMS were given two weeks' training; 16–31 August 2005.

Continuing Medical Education

The 21st National Training Programme in Electron Microscopy for Scientific Investigators was held during 7–26 November 2005. The training programme was conducted in two parts:

- *Basic course* (7–19 November 2005)
Sixteen Scientific Investigators, selected from 44 applicants from various parts of the country participated in this course. The course consisted of two weeks' hand-on training on various techniques of biological sample preparation and operation of SEM and TEM for viewing self-prepared samples.
- *Advanced course* (21–26 November 2005)
Ten Scientific Investigators, selected from 44 applicants, from various parts of the country took part in this course. The course consisted of hands-on training-cum-demonstration of special techniques in electron microscopy, viz. Microwave technique for sample preparation, Immunoelectron microscopy, Cryo-electron microscopy, Stereology and image analysis, and Digital imaging in electron microscopy.

In all, 17 lectures were delivered by Professor Shashi Wadhwa, Dr Taposh K. Das and Dr T.C. Nag for the participants of the above two courses.

A Summer Training Course in Electron Microscopy for Technical Personnel was held for 6 weeks from 16 May to 30 June 2005. Three technicians from the Bhabha Atomic Research Centre, Mumbai;

G.B. Pant University, Pantnagar, Uttaranchal and Birbal Sahni Institute of Paleobotany, Lucknow, were trained in sample processing, microtomy, CPD, sputter coating, TEM and SEM viewing, photography and routine maintenance.

RESEARCH

Funded Projects

Ongoing

1. Role of free radical scavengers and the effect of antioxidants on their levels in patients with ankylosing spondylitis—to investigate the possible role of antioxidants as therapeutic agents in ankylosing spondylitis. Taposh K. Das. Funded by ICMR for 2 years (2005–2006). Funds: Rs 14.23 lakh.
2. Localization of markers of oxidative phosphorylation in the ageing human retina. T.C. Nag. Funded by AIIMS for 2 years (2005–2007). Funds: 1 lakh.

Departmental Projects

Completed

1. Ultrastructural changes in the ageing human retina
2. Histopathological changes in the retina in systemic lupus erythematosus
3. Retinal changes in a victim of accidental head injury—an electron microscope and immunohistochemical study

Ongoing

1. Müller cell changes in the ageing human retina.

Collaborative Projects

Ongoing

1. Effects of certain plant extracts on experimentally induced myocardial infarction in rat (Pharmacology).
2. Immuno-electron microscopic localization of prospective virulent genes in *M. tuberculosis* H37Rv and knockout strains in different stress conditions (Biotechnology).

Completed

1. Arsenic-induced hepatotoxicity in experimental rat. Morphological and biochemical investigations (Forensic Medicine).
2. Estimation of sialic acid—glycosaminoglycans in patients of ankylosing spondylitis: Development of a possible new diagnostic test (Orthopaedics).

PUBLICATIONS

1. Parida AK, Mitra B, Das AB, Das TK, Mohanty P. High salinity reduces the content of a highly abundant 23-kDa protein of the mangrove *Bruguiera parviflora*. *Planta* 2005;**221**:135–40.
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PATIENT CARE

Special laboratory facilities

During the year, special laboratory facilities provided for research and patient care are as follows:

Facility	Users (n)	Specimen analysed
Transmission electron microscope	414	2,227
Scanning electron microscope	257	1,082
Immuno-electron microscope	27	96

AWARDS, HONOURS AND SIGNIFICANT EVENTS

Dr T.C. Nag received the IBRO Travel Grant Award and participated in the 28 Annual Meetings of the Japan Neuroscience Society held at Yokohama from 26–28 July 2005. He became the Member of the National Academy of Sciences, Allahabad and Foreign Member of the Japan Neuroscience Society.

Professor Shashi Wadhwa and **Dr T.C. Nag** attended the 23rd Annual Meeting of the Indian Academy of Neuroscience held at NIMHANS, Bangalore; 11–14 December 2005.

The E.M. Facility has acquired a new Elemental Analysis System (EDS system), to attach to the existing SEM for performing elemental quantitation in a biological sample. The system can be used for

various applications in forensic sciences, diagnostic pathology and toxicity studies. The EDS is operational and available for use.

VISITING SCIENTISTS

The Officer-in-Charge, Electron Microscope Laboratory of Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, Uttaranchal, visited the Electron Microscope Facility, AIIMS, on 18 January 2006, to familiarize and understand the various aspects of functioning, maintenance and provision of EM services to users.

11.7 Experimental Animal Facility

Professor-in-Charge

D.N. Rao

Senior Veterinary Officer

P.K. Yadav

During the year 2005–2006, animals were maintained in this facility. The various activities of this unit are categorized as follows.

Small Animal Facility

The following small animals have been maintained through out the year 2005–2006:

Rats	1,635
Mice (outbred)	1,992
Rabbits	216
Guinea pigs	47

A total of 2,884 small animals (rats, mice, rabbits and guinea pigs) were supplied to various departments of the Institute and considerable numbers of animals were also sold to other institutions in and outside, Delhi, i.e. rats–177, mice–156, rabbits–89.

Large Animal Facility

This facility housed 17 sheep for research work conducted by the Microbiology Department.

Purchase of Laboratory Animals

The Experimental Animal Facility has purchased 250 rats and 100 guinea pigs from Laboratory Animal Resource Section, Division of Animal Genetics, Indian Veterinary Research Institute, Izatnagar, Bareilly (UP), for the breeding programme.

Ten hamsters were purchased by the Department of Laboratory Medicine from Disease Free Small Animal House, Haryana Agriculture University, Hisar (Haryana) for research programme.

Experimental Surgery

Seventy-three surgical procedures and radiological investigations were performed by various departments of the Institute. These include Department of Surgery, Biomedical Engineering, Neurosurgery, Paediatric Surgery.

Services provided

A departmental wing has been operational for maintaining the animals belonging to Departments of Microbiology, Biomedical Engineering, Biochemistry, Biotechnology, Paediatric Surgery, Reproductive Biology, Anatomy, Psychiatry, Pathology and Laboratory Medicine. This facility housed experimental animals—rabbits–257, hamsters–10, mice–5,462 and rats–253 belonging to the above departments.

The Experimental Animal Facility provided laboratory facilities to various investigators: vacuum drying of sera, microscope facility and storage of serum samples.

Educational Programme

Dr P.K. Yadav, Shri Nand Lal, Technical Assistant (Laboratory), Shri R.J. Kamble, Laboratory Technician and Shri Tomar Manjeet Kumar, Laboratory Technician gave orientation lecture to the students of BSc Nursing.

Shri Manoj Gosain, Laboratory Attendant and Shri Jasbir, Laboratory Attendant gave demonstration to the students of BSc Nursing.

Dr P.K. Yadav participated in the National Symposium on 'Alternative teaching and research methods to animal experimentation in Veterinary Surgery', IVRI, Izatnagar; 9–11 November 2005.

Dr P.K. Yadav attended a conference on 'Harlan Continuing Education Conference' at Andheri (East), Mumbai; 16–17 January 2006.

Dr P.K. Yadav delivered lectures as guest faculty on 'Training programmes in areas of animal welfare', conducted by National Institute of Animal Welfare (a subordinate office of Ministry of Environment and Forests), Village Sikhri, Ballabgarh, Faridabad, NCR of Delhi; 20–21 March 2006.

11.8 Hostel Section

Superintendent of Hostels

T.D. Dogra
(up to 30 November 2005)

G.K. Rath
(from 30 November 2005)

Deputy Superintendent of Hostels

S. Datta Gupta

S.S. Kale

Rajpal
(up to 27 January 2006)

J.S Titiyal
(from 27 January 2006)

Minati Choudhary

Meena Aggarwal

Bhupinder Paul
(from 11 November 2005)

Senior Warden, Hostels

K. Dhaka

The AIIMS hostels have a capacity of 1133 single-rooms, 170 rooms for married personnel, 420 rooms for nurses and nursing students. These are spread over different hostels and residences in the AIIMS Main Campus, Masjid Moth, Ayurvigyan Nagar, Faculty Transit Accommodation Hostel and Ballabgarh, Dayalpur, Chansa villages.

GENTS HOSTELS

S.No.	H.No.	Location	Single	Double/Three/ Four seater	Guest	Total capacity
1.	I (Charak)	Main campus	63	2		67
2.	II (Jivak)	Main campus	57		1	58
3.	III (Sushruta)	Main campus	71	5	1	82
4.	IV (Madhava)	Main campus	53	7		67
5.	V (Nagarjuna)	Main campus	54	5		64
6.	VI (Vagbhatta)	Main campus	71	7		85
7.	VII (Ashwini)	Main campus	110	2	1	115
8.	VIII (Bharadwaj)	Main campus	108	1	1	111
9.	RPC I (Dhanwantri)	Main campus	72		1	73
10.	MMRDH (single)	Masjid Moth campus	144		6	150
Total						872

LADIES HOSTELS

1.	IX (Saraswati)	Main campus	62	16+0+3	1	107
2.	X (Parvati)	Main campus	91	2+2+1	1	106
3.	RPC-II (Laxmi)	Main campus	26	13	1	48
Total						261

MARRIED QUARTERS

1.	F-Type (married)	Ansari Nagar (West)	9	18
2.	MMRDH (married)	Masjid Moth campus	42	42
3.	Ayurvigyan Nagar (married)		80	80
4.	Faculty Transit (married)	Ayurvigyan Nagar	30	30
			Total	170

NURSES HOSTEL

1.	New nurses Students	Masjid Moth double seater	256	256
2.	Staff	Masjid Moth	82x2	164
			Total	420
			Grand Total	1723

SIGNIFICANT EVENTS

- The Hostel Section web pages on the AIIMS website was launched in May 2005. The web pages provide an overview of the hostels and facilities available.
- The Old Nurses' Hostel has been nearly vacated and the residents have shifted to the Masjid Moth New Nurses Hostel. The entire Nurses' Hostel is now under the Hostel Section and its charge has been handed over to the Superintendent, Hostels, by the Medical Superintendent.
- A State Bank of India ATM Facility has been opened just outside the gate of the Gents' Hostels.
- The Hostel Section has plans for computerization of data. Four computers have been purchased for this purpose.
- The old guest rooms have been renovated and in some, attached bathrooms have been added. The hostels now have fully furnished (two beds, sofa/chair, study table, wooden almirah, dressing tables) 14 guest rooms in 10 hostels. This will be of help to the residents of the hostels.
- The Guest Room charges have consequently been raised to Rs 100 per day.
- A counselling facility is available for students in the hostels.
- The Dinning Halls in the Ladies' Hostel (No. 9) and in the Nurses' Hostel have been renovated.
- With a view to improving services, the Pot-Fund of the students has been enhanced.
- Parking space has been cemented in the Gents' Hostels.
- A Meeting Room has been made at the Ground Floor of Masjid Moth New Nurses' Hostel.

- A new allotment procedure has been initiated in the Nurses' Hostel both for the rooms and the Guest Rooms.
- Trees, hedges and fruit plants have been planted in the Gents' and Ladies' Hostels and park benches have been provided in the lawns of the Ladies' Hostels.

FUTURE PLANS

1. Construction of a new hostel for resident doctors with modern amenities to accommodate 1000 students and residents.
2. Vehicle parking enclosure in Masjid Moth Residents Doctors' Hostel.
3. The hostel quadrangle will be enclosed and there will be provision for four gates.
4. Modification of the window grills for fixing desert coolers in the Masjid Moth Residents Doctors' Hostel.
5. Enclosure for shops and a store will be constructed in the Gents' Hostel.

11.9 Primate Research Facility

Professor-in-Charge

V. Mohan Kumar

Senior Veterinary Officer

P.K. Yadav

The Primate Research Facility (PRF) maintained a colony of primates for research purposes. The PRF also handled all the work connected with the Institute's Ethics Committee for the use of animals in research, and also of the Animal Facility Management Committee.

CENSUS REPORT

Total number of monkeys at PRF on 1 April 2005	97
Number of deaths (due to old age) during the year	12
Born in the colony	5
Total number of monkeys on 31 March 2006	90

BREEDING (in cage and open run)

Breeding of monkeys were carried out. A total of 16 female were left in the open run for mating. Additional 11 monkeys were mated by the cage breeding. Out of 27 female monkeys, 14 have conceived and the pregnancies are in progress.

REHABILITATION FACILITY

A programme for the rehabilitation of monkeys has been going on. All monkeys, which were used for a period of three years of experiment, were rehabilitated in an open run. In addition to these, the old monkeys were also put in this open run.

EDUCATIONAL PROGRAMME

Dr P.K. Yadav, Senior Veterinary Officer, EAF (who is also looking after the PRF), Shri Sita Ram, Technical Assistant and Mr K.C. Lal, Technical Assistant, PRF, gave briefing to the participants of the National Institute of Animal welfare at Village Sikhri, Ballabhgarh, Faridabad, Haryana.

CLINICAL PROCEDURES CONDUCTED

Blood samples collected	182
Physical examination, testing for TB and weight	43
Chest X-ray	43
Mating	27
Rectal palpation	27
Haematology	91
Blood chemistry	91
Parasitology (stool examination)	118

12.1 Finance Division

Sr. Financial Advisor

Sh. Mayank Sharma

Financial Advisor

Sh. R.G. Garg

F. & C.A.O.

Mrs. Basanti Dalal

Sh. S.P. Mahla

Accounts Officers

Sh. S.K. Gulati

Sh. Sunil Kumar Kedia

Sh. R.K. Juneja

Sh. Krishan Gopal

Sh. N.K. Bajaj

Sh. R.C. Sharma

(Upto 15.1.06 AN)

Sh. C.L. Raina

Sh. O.P. Saini

Sh. P.K. Sharma

(Upto 25.3.06 AN)

The Finance Division of the Institute handles the 'Plan and 'Non-Plan' budget of the Institute and also administers day to day financial matters, internal audit, payment of salaries to Faculty and Staff, payment of bills, pension and G.P.F. in respect of the employees of the Institute including the Superspecialities/ Centres and Research Projects.

The Division is headed by Senior Financial Advisor, assisted by a Financial Advisor, F&CAO's and Accounts Officers.

All matters relating to finance are administered by the above team with the help of other staff members.

**FIGURES OF ACTUAL EXPENDITURE FOR THE YEAR 2004-2005 AND 2005-2006
(UNAUDITED) AND FINAL BUDGET ESTIMATES FOR 2005-2006 & BUDGET ESTIMATES
FOR 2006-2007 IN RESPECT OF
ALL INDIA INSTITUTE OF MEDICAL SCIENCES, NEW DELHI.**

(RS.IN LAKHS)

HEAD/SUB HEAD	ACTUAL EXPENDITURE 2004-2005				SANCTIONED 2005-2006 BUDGET ESTIMATES 2006-2007	
	PLAN	NON-PLAN	PLAN	NON-PLAN	PLAN	NON-PLAN
1	2	3	4	5	6	7
A. (Main Instt.)						
Pay & Allow. Incl. LS & PC, stipend etc.	-	10205.47	-	10758.45		9900.00
Mach. & Equip	2407.68	237.84	2301.89	221.28		225.00
Mat. & Supply	-	8080.90	-	8423.69		8400.00
Maintenance of Bldg. -	513.29	-	463.18			475.00
Pension & other pensionary benefits	-	1588.76	-	1807.01		1800.00
Recoverable Advances- House Building Adv. -	56.64	-	9.14			50.00
	-	-	19.26			50.00
Instt. Research Grant -	12.00	-	50.00			50.00
Books & Publication142.71 (M. & S.)	-	147.56	-			-
Conference/Symposia -	50.00	-	50.00			50.00
Capital Building1184.51	-	1955.99	-			-
P.E.T. Facility 936.37	-	175.30	-			-
Robotic Surgical System -	-	900.00	-			-
Covering of Nallah -	-	1533.83	-			-
TOTAL A	4671.27	20744.90	7014.57	21802.01		21000.00

TOTAL A & B	4671.27	20744.90	7014.57	21802.01		21000.00
	1	2	3	4	5	6
7						
B. SUPERSPECIALITIES						
C.N.Centre	1452.77	4519.69	2257.83	4639.29		4500.00
Dr. R.P. Centre	610.44	2248.60	599.92	2348.22		1650.00
Dr.B.R.A. I.R.C.H.	269.72	1064.37	2530.55	1212.38		1150.00
i/c Linear Accelerator						
J.P.N. Apex Trauma Centre	686.18	-	2443.25	-		-
Centre for Dental Education and Res.		519.31	-	1509.28	-	-
TOTAL (A & B)		8209.69	28577.56	16355.40	30001.90	20586.00
28300.00						
C. DE-Addiction Centre		360.35	-	344.39	-	400.00
D. N.A.C.O. (Dr. Ashok Kumar)		-	0.71	-	-	-
GRAND TOTAL(A to D)		8572.65	28577.56	16700.50	30001.90	20986.00
28300.00						

GRANTS RECEIVED DURING (2005-2006)

(Rs. in Lakhs)

S.NO.	HEAD	PLAN	NON-PLAN
1	AIIMS	16336.00	27500.00
2	De-Addiction Centre	370.00	-
TOTAL		16706.00	27500.00

REVENUE RECEIPT
BREAK UP OF BUDGET RECEIPTS FOR 2005-2006 AND ESTIMATE FOR 2006-2007
FOR AIIMS, INCLUDING SUPERSPECIALITY, C.N. CENTRE, DR. R.P. CENTRE
AND I.R.C.H.

(RS.IN LAKHS)

S.NO.	HEAD/SUB HEAD	ACTUAL RECEIPT DURING 2005-2006	ESTIMATED RECEIPT 2006-2007
1	COLLEGE/HOSTEL	19.96	20.00
2	RENT & WATER CHARGES	160.28	165.00
3	HOSPITAL RECEIPT INCLUDING E.H.S. & REVOLVING FUNDS	3099.88	3155.00
4	RECOVERABLE ADVANCES	157.65	160.00
TOTAL		3437.77	3500.00

STATEMENT SHOWING REVENUE RECEIPT FOR THE YEAR 2005-06 OF AIIMS

(Rs. in Lakhs)

HEAD	AIIMS(M)	C.N. CENTRE	R.P. CENTRE	I.R.C.H.	TOTAL
Hospital Receipts	971.01	-	750.87	65.02	1786.90
Interest	353.42	15.29	14.93	-	383.64
Rent	152.70	7.58	-	-	160.28
Fee	19.96	-	-	-	19.96
E.H.S.	98.32	14.31	-	-	112.63
Private Ward	-	148.86	-	-	148.86
X-Ray	-	8.87	-	-	8.87
Ultra Sound	-	1.37	-	-	1.37
C.T. Scan	-	12.00	-	-	12.00
Levy Charges	-	3.85	-	-	3.85
Thallium Test	-	37.76	-	-	37.76
Blood Test/Lab. Test	-	41.44	-	-	41.44
Cardiac Test Collection	-	38.08	-	-	38.08
Recoverable Advances	124.11	26.98	6.34	0.22	157.65
Revolving Fund	490.75	-	-	33.73	524.48
TOTAL	2210.27	356.39	772.14	98.97	3437.77

ALL INDIA INSTITUTE OF MEDICAL SCIENCE
RECEIPTS & PAYMENT ACCOUNT
FOR THE YEAR 2005-2006

RECEIPTS	2005-06	2004-05	PAYMENTS	2005-06	2004-05
1 <u>OPENING BALANCES</u>			1 <u>Grants transferred to the Centres/Schemes Cell</u>		
A <u>Cash at bank</u>			A <u>Dr. R.P. Centre</u>		
i)a AIIMS (MAIN)	118822691	164793790	i) PLAN	60000000	
b Unspent Balance of specific grants remained with AIIMS(M)	112927426	-	ii) Non-Plan	160000000	220000000
					212500000
ii) Scheme Cell	74902476	20426715	B <u>C.N. Centre</u>		
iii) R.P. Centre	18988109	14069683	i) Plan	225000000	
iv) C.N. Centre	88193471	68537525	ii) Non-Plan	435700000	660700000
v) CT Patient A/c					558400000
a) Bank	6267675	12532136	C <u>N.D.D.T.C.</u>		
b) FDR	225000000	200000000	i) Plan		37000000
vi) Angiography A/c					31000000
a) Bank	2176746	3657418	D <u>Scheme Cell</u>		
b) FDR	75000000	85000000	i) Grants	263009557	
vii) Gamma Knife patient A/c			II) National Oral Health Care Programme	400000	263409557
a) Bank	946909	5245015			270000000
b) FDR	67500000	70000000	E <u>Dr.B.R.A.I.R.C.H.</u>		
viii) Neuro Surgery patient A/c			a) Grant from AIIMS		
a) Bank	7387294	5710082	i) Plan	266844000	
b) FDR	22000000	12000000	ii) Non-Plan	120000000	386844000
ix) Dr.B.R.A.I.R.CH.	8360963	10017685			118226000
x) a) N.D.D.T.C.	3970240	8526619	F <u>J.P.N. APEX TRAUMA CENTRE</u>		
b) UNDCP	980715	402801	i) Plan		120000000
xi) Hostels					-
a) Cash in hand	8038	13423	2 <u>ADMINISTRATIVE EXPENDITURE</u>		
b) Cash at bank	106431	36077	<u>AIIMS (MAIN)</u>		
c) FDR's	1341563	1271404	a) i) Salaries (Non-Plan)	1056239333	
B <u>CASH IN HAND (IMPREST)</u>			ii) Add salary for the year 2004-05 paid now	525234	1056764567
i) AIIMS (Main)	458650	436650			1004212231
ii) Dr. R.P. Centre	8000	8000	b) Travelling Allowances		13949525
iii) C.N. Centre		40000			10802178
40000			c) i) Stipend	5142170	
C <u>AMOUNT LYING UNDISBURSED</u>			ii) Add Stipend for the year 2004-2005 paid now	39355	
i) AIIMS (Main)	980546	1413611	iii) Less amount due but not paid	-500	5181025
ii) Scheme Cell	121866	357398			4829914
iii) R.P. Centre	-	126876	d) Leave salary & Pension contribution		515542
					461742
			e) Pensionary Benefits	180701304	158892986

iv)	C.N. Centre	43103	669985	3	Office Contingency			
v)	CT Patient A/c	-	1677362	i)	During 2005-2006	372696022		
vi)	Angiography A/c	-	1093721	ii)	Undisbursed of	415957	373111979	397992452
vii)	Gamma Knife patient A/c	-	300000		2004-2005 paid now			
viii)	Neuro Surgery patient A/c	-	734500	4	Mat. & Supply (Non-Plan)	431131905		372768631
D	<u>POOR PATIENT A/C</u>			5	Mach. & Equip. (Non-Plan)	22128113		23783540
i)	AIIMS (Main)			6	Furniture & Fixture	472332		30132
a)	Cash/Bank	559517	595415	7	Books & Publications			
b)	FDRs	327078	327078	a)	Assets	14756651		
ii)	Dr.B.R.A.I.R.C.H.			b)	Consumables	108195	14864846	14372310
a)	Cash/Bank	377382	163105	8	Employees Insurance Scheme		2881271	2778409
iii)	Dr. R.P. Centre			9	G.P.F.		178373215	176014526
a)	Cash/Bank	140511	207709	10	Maintenance of buildings		46317423	51328800
b)	FDRs	-	100000	11	Recoverable Advances			
iv)	N.S. Centre			a)	Car	131700		554400
a)	Cash/Bank	56793	48263	b)	Scooter/Motor Cycle	376690		891800
b)	Imprest	-	500	c)	Bicycle	10500		7500
E	<u>PATIENT TREATMENT A/C</u>			d)	House Building Advance	1926000		3827100
i)	AIIMS	12404563	10558630	e)	Computer	395000		383230
ii)	Dr.B.R.A.I.R.C.H.			12	Expenditure out of grant received for specific purpose (Scheme Cell)			
a)	Cash/Bank	8620196	13609245	i)	Appendix-A	291238872		
b)	FDR's	6000000	-	ii)	Add undisbursed for 2004-2005 paid now		121866	
2	<u>GRANTS FROM GOVT. OF INDIA</u>			iii)	Less undisbursed for 2005-2006	-28000	291332738	236770998
a)	<u>NON-PLAN</u>			13	Post Partum Programme (Incentive money)		253775	281925
i)	AIIMS (Main)	2034300000		14	College of Nursing		424677	-
ii)	R.P.C	160000000		15	<u>PLAN</u>			
iii)	C.N.C.	435700000		a)	Machinery & Equipment	72897065		163094830
iv)	Dr.B.R.A.I.R.C.H.	120000000	2750000000	2500000000	b)	Building Construction	184344051	112368779
b)	<u>PLAN</u>			16	CGHS GRANT FOR V.V.I.P. CARE		7908616	-
i)	AIIMS (Main)	961356000		17	Purchase of Vehicles		997070	-
ii)	RPC	60000000		18	<u>Advance Payments</u>			
iii)	CNC	225000000		a)	Mat. & Supply (NP)	14771179		14398172
iv)	Dr.B.R.A.I.R.C.H.	266844000		b)	Mach.&Equip.(Plan)	253505493		171280133
v)	Scheme Cell	400000		c)	P. & A.O. etc. for Bldg. material	3245827		6082168
vi)	J.P.N.A.Trauma Centre	120000000	1633600000	820000000	d)	Ty./Contigent Advances	2830607	2489032
vii)	Dr.B.R.A.I.R.C.H.	-	2500000	e)	Private firms for stores	3101195		7039972
c)	N.D.D.T.C.	37000000	31000000	f)	M/s. H.S.C.C. for Trauma Centre	121870000		68618000
d)	NACO	-	261088					
e)	CGHS Grant for V.V.I.P. CARE	9115671	-					
e)	College of Nursing	700000	-					
3	Miscellaneous Receipts	83378676	77937675					
4	Hospital Receipts	97101060	82796949					
5	Interest	35342226	12385692					
6	License Fee	15270086	7465570					
7	Tution Fee/Exam. Fee	1995995	1731924					
8	Employees Health Scheme (EHS)	9831979	9047350					

9	Pot Fund	236103	107648	g)	M/s. H.S.C.C. for Dental College	15000000	51931487
10	Employees Insurance Scheme	2857390	2865376	h)	P&PAO for procurement of Stores	300000	300000
11	GPF	178373215	176014526	i)	NDMC for Covering of Nallah	153383000	-
12	Out side recoveries	102151162	106194433	j)	Custom Duty	2148754	-
13	Security Deposits/ Earnest Money	13018817	22667189	k)	CPWD for Surgical Ward	1711770	-
14	Caution Money	44500	41500	l)	CPWD for lift	14000000	-
15	Leave Salary & Pension contribution	607166	240717	19	Security Deposit/ Earnest Money	9194745	10084513
16	Recoverable Advances			20	Outside recoveries	103154719	108166636
a)	Car	1024420	1432546	21	Investment of short term deposit	-	1200000000
b)	Scooter/Motor Cycle	1877214	2438074	22	<u>NACO</u>		
c)	Bicycle	12493	7565	i)	Salary	71500	78000
d)	H.B.A.	8988583	9459925	ii)	Mat. & Supply	-	183085
e)	Computer	508720	398512	23	Misc. Donations (Appendix-D)	20108160	10636322
17	<u>NACO</u> Generated from test charges	68500	35000	24	Pot Fund	36327	145714
18	Post Partum Programme (Incentive money)	300000	400000	25	P.M.R. ADIP Scheme	335153	297181
19	Encashment of Short Term Deposit	-	1200000000	26	Revolving Funds	26792404	19149733
20	Grants received for specific purpose Appendix-A (Scheme Cell)	274963754	316596681	27	New Pension Scheme	3590251	-
21	Schemes			28	Investment Dr.V.Ramalingaswami	100000	-
i)	Grants against receipt	263009557	270000000		Dr.N.G. Nayak	100000	-
ii)	Grants transfer from AIIMS (Plan)	400000	-		Dr. H.D. Tandon	100000	-
iii)	Transferred from AIIMS	-	8456737		Prof. N. Gopinath (CTVS)	1200000	-
iv)	Others	14127493	12554490		Dr. L. K. Bhutani Oration	500000	-
22	Misc. Donations (Appendix-D)	20310427	10256868	29	J.P.N. Apex Trauma Centre		
23	Revolving Funds	49074610	32946017	I)	Salary	9422199	-
24	New Pension Scheme	1037872	-	30	Centre for Dental Education & Research		
25	Donation			I)	Salary	928457	-
	Dr.V.Ramalingaswami	100000	-	31	Excess paid by the Cashier		
	Dr.N.G. Nayak	100000	-	i)	Salary head	303675	
	Dr. H.D. Tandon	100000	-	ii)	Officer contingency	2611	306286
	Prof. N. Gopinath (CTVS)	1200000	-				
	Dr. L. K. Bhutani Oration	500000	-				

DR. RAJENDER PRASAD CENTRE FOR OPTHALMIC SCIENCES

1	<u>GRANT-IN-AID</u>		
i)	Plan	60000000	
	60000000		
ii)	Non-Plan	160000000	220000000
	152500000		

DR. RAJENDER PRASAD CENTRE FOR OPTHALMIC SCIENCES

1	i) Pay & allowances	146830810	
	ii) Festival Advance	366000	
	iii) Festival Advance recovered	-380990	
	iv) Undisbursed Salary for 2004-05 paid now.	-	146815820
			138385348

2	<u>GRANT-IN-AID (SCHEMES)</u>			2	Travelling Expenses	825723	698574	
i)	ICMR	220983	-	505185	3	Office Expenses	2942512	2978061
ii)	USP	50886	-	1226303	4	Capital Works	2430067	2010011
iii)	Savers	679900	-	1100000	5	Maintenance of Buildings	2036691	2315795
iv)	Surgeries	675000	-	1275000	6	Mat. & Supply(NP)	73691315	76503134
v)	Indeye	6215566	-	4569659	7	Mach. & Equip. (Non-Plan)	8132182	367042
vi)	ORBIS	878865	-	1075628	8	Refund of Security	345000	110000
vii)	Manage	-	-	628405	9	<u>Mach. & Equip. (Plan)</u>		
viii)	COdBIL	-	-	420000	i)	Actual Payment	19572023	
ix)	NAB	1116700	-	718200	ii)	Advance Payment made to Foreign Purchase	37323433	56895456
x)	LCIF	586770	-	319500	10	Furniture & Fixtures	667853	522820
xi)	NPCB-NSU	-	-	400000	11	<u>PAYMENT TOWARDS RPC SCHEMES</u>		
xii)	NPCB-SSU	50000	-	155000	i)	ICMR	573594	318319
xiii)	RIP	-	-	19350	ii)	USP -Pay/Conty. M&E	793458	1001240
xiv)	AEH	-	-	93000		Savers	285441	-
xv)	MBDL	86359	-	103356	iii)	Surgeries	838445	978272
xvi)	DOS	135000	-	225000	iv)	ORBIS	1262502	930698
xvii)	CSIR	1538353	-	1587164	v)	Manage	405778	551447
xviii)	NIAF	430000	-	415000	vi)	COdBIL	133455	494950
xix)	CRP	166300	-	100800	vii)	NAB	-	420000
xx)	DBCS	1019400	-	15500	viii)	LCIF	715504	113609
xxi)	Phakie IOL	-	-	270000	ix)	NPCB-NSU	808939	97331
xxii)	Allergan	193910	-	289131	x)	NPCB-SSU	84954	236917
xxiii)	Neema-Pilot Study	50027	-	11600	xi)	RIP	163083	84272
xxiv)	Workshop	72700	-	122547	xii)	AEH	11222	25405
xxv)	DST/DBT (Stem)	1603500	-	-	xiii)	MBDL	-	93000
xxvi)	ORP Vision 2020	145000	-	-	xiv)	DOS	62294	10000
xxvii)	Multifocal IOL	100000	-	-	xv)	CSIR	475244	153361
xxviii)	Evaluation Study- anti Cataract	130000	-	-	xvi)	NIAF	1538353	1609378
xxix)	DST (Cyclo)	250000	-	-	xvii)	CRP	156990	112145
xxx)	Reliance Clinical Research	78000	-	-	xviii)	DBCS	119166	92000
xxxi)	DST (Bio-dispo)	435000	-	-	xix)	Phakie IOL	29900	5000
xxxii)	Clinical Evaluation on B&C(AMO)	57000	-	-	xx)	Allergan	86320	213954
xxxiii)	National Survey on Cataract (NPCB)	379375	17344594	-	xxi)	Neema-Pilot Study	165079	201384
xxxiv)	WHO Short term training	-	-	-	xxii)	Workshop	1509	11600
xxxv)	Evaluation study on Glaucoma	-	-	-	xxiii)	DST/DBT (Stem)	56375	122547
3	Hospital Receipts	75087078	67633200		(a) Pay & Conty.	695057	-	
4	Security Deposits	125000	110000		(b) M&E	805264	-	
5	Interest on Recoverable Advance	136219	246363		xxv)	ORP Vision 2020	47567	-
6	Misc. Receipts	1810195	1339376		xxvi)	Multifocal IOL	11000	-
7	AIIMS Recovery Received	38779138	28979956		xxvii)	Evaluation Study- anti Cataract	78419	-
8	Outside Recovery	6192170	14824384		xxviii)	Indeye		
9	Interest on CLTD	1356776	-		a) Pay & Conty.	4784218	3846076	
10	<u>Recoverable Advance</u>				b) M&E	116663	-	
a)	Car	24816	43096		xxix)	DST (Cyclo)	38196	-
b)	Scooter	196352	250737		xxx)	Reliance Clinical Research	3120	-
c)	Cycle	13616	65300		xxxi)	DST (Bio-dispo)	435000	-
d)	HBA	399522	499930		xxxii)	Clinical Evaluation on B&C(AMO)	54457	-

xxxiii) Cataract (NPCB)	57394	-
xxxiv) WHO Short term training	-	-
xxxv) Evaluation study on Glaucoma	-	-
12 Cash Withdrawal Tax	2073	-
13 AIIMS Recoveries remitted	38779138	28979956
14 Outside recoveries remitted	6191597	14824384
15 <u>Recoverable Advance</u>		
a) Scooter	30000	227000
b) H.B.A.	350000	175000
c) Cycle	-	1500

CARDIO-THORACIC & NEURO SCIENCES CENTRE

1 GRANT-IN-AID

a) Plan		
(i) For C.N. Centre	225000000	152500000
(ii) For Stem Cell Facility	-	5900000
b) Non-Plan	435700000	400000000
2 a) Misc. Receipts	3513364	3937943
b) Private Ward	14885978	14378674
c) X-Ray	887165	777890
d) C.T.Scan charges	1199610	866820
e) Ultra sound	137200	99000
3 Interest	1528858	422044
4 Security Deposit/ Earnest Deposit	4902000	4186000
5 Donations	162830	920272
6 Refund and Recoveries	1552663	849953
7 Neurology Patient A/c	12376948	16607161
8 Thallium Test	3776000	4335500
9 Heart Transplant Donation	-	50000
10 Levy charges	384670	388270
11 Rent Charges	758546	653941
12 GPF	50550367	50438134
13 GPF remitted to P&AO	-	58600
14 New Pension Schemes	1153840	-
15 <u>Recoverable Advances</u>		
a) Bicycle	13950	3450
b) Scooter	485210	578265

CARDIO-THORACIC & NEURO SCIENCES CENTRE

1 ADMINISTRATIVE EXPENDITURE

a) i) Salary (Non-Plan)	296208519	281147797
ii) Less amount due but not paid during 2005-2006		
b) Payment of un-disbursed salary for 2004-2005	39170	
c) Wages	15554415	15528130
d) Travelling Allowance	1574607	1236487
2 <u>Stores (Non-Plan)</u>		
a) Mach. & Equip.	5084453	-
b) Material & Supply	116308886	122171591
c) ORBO	36825	554627
d) Stem Cell	93600	-
3 <u>Stores (PLAN)</u>		
a) Mach. & Equipment	162707558	135441467
b) Stem Cell	826461	4289228
c) Furniture & Fixtures	460483	244587
4 Building maintenance	6134191	6327438
5 Building construction (Plan)	61790063	5302274
6 i) Office Contingencies	1982676	1496042
ii) Payment of un-disbursed amount for 2004-2005	3933	-
7 <u>Recoverable Advance (Non-Plan)</u>		
a) Car	-	360000
b) Scooter/Motor Cycle	300000	120000
c) Bi-Cycle	3000	16500
d) Computer	-	130000
e) House Building Advance	1261380	2284250

c) Car	289406	485945	8	Institute Recovery	9820	4800	
d) House Building	1860454	1499894	9	Refund of Security Deposit	2441000	1395000	
e) Computer	48580	14420					
16	Transport	294	564	10	Donation	2657	-
17	Cardio Test	3808255	3464235	11	Heart Transplant	153692	48792
18	Blood Test	4144055	4123415	12	Neurology Patient A/c	6846787	8138045
19	Institute Recovery	-	4800	13	Blood Test	4703307	3672824
20	Income Tax	7057820	-	14	Cardio Test	3385189	3112378
21	EIS	489396	-	15	Thallium Test	4276687	4968573
22	EHS	1430603	-	16	Amt. sent to P.A.O.	109800	58600
23	LIC	2426509	-	17	GPF	50440567	50438134
24	RDA	30470	-	18	New Pension Schemes	1153840	-
25	Institute Recovery	9820	-	19	Income Tax	7057820	-
26	Society/F-club	10837763	-	20	EIS	488436	-
27	Water Charges	36806	-	21	Amt. Sent to PAO	900	-
28	Pot Fund	27935	-	22	EHS	1430603	-
29	P.M. Relief Fund	429906	-	23	LIC	2426509	-
30	AIIMS Recovery	-	2600131	24	RDA	30470	-
31	Outside Recovery	-	2278459	25	Pot Fund	27935	-
				26	Society/F-club	10837763	-
				27	Water charges	36806	-
				28	P.M. Relief Fund	429906	-
				29	AIIMS Recovery	-	2600131
				30	Outside Recovery	-	22783159
				31	Angiography patient A/c against adjustment of previous year	-	30000

C.T. PATIENT A/C

1a)	Patient's Receipts during 2005-2006	223957287		
b)	Patient's Refunds 2005-2006	-37465945		
c)	Fresh Cheque in lieu of cancelled Cheques	-76500		
c)	Poor Patient's treatment out of interest earned during 2005-06	1202178	187617020	189914576

C.T. PATIENT A/C

1	Purchase of Stores	181984863	181671900
2	Bank Charges	12464	16286
3	Fresh Cheque	-	500

2	Interest during 2005-2006	13067432		
	Poor Patient's treatment expenditure 04-05	-1202178	11865254	8832287

ANGIOGRAPHY PATIENT A/C

1a)	Patient's Receipts 2005-2006	196384992		
b)	Patients refunds	-22359830		
c)	Fresh Cheque in lieu of cancelled Cheques -4000			
d)	Poor Patient's treatment out of interest earned during 2005-06	169312	174190474	146057275
2a)	Interest during 2005-2006	4469958		
b)	Poor Patient's treatment expenditure 04-05	-169312	4300646	4758765
3	Cancelled Cheques	342279		
4	Receipt from CNC A/c against Sh. Dal Chand Verma Cashier (CNC)		-	30000

GAMMA KNIFE PATIENT A/C

1	Patient Receipts 2005-2006	19291739		
	Refund to Patients	-1249100	18042639	15660700
2	Interest		3986002	8709528
3	Cancelled Cheque 03-04		-	119100

NEURO SURGERY PATIENT A/C

1	Patient Receipts 2005-2006	39749955		
	Patient Refund 2005-2006	-4000335		
	Poor Patient's treatment out of interest earned during 2005-2006	2290000	38039620	33064300
2	Fixed/CLTD Interest	2392632		
	Poor Patient's treatment expenditure during 2005-2006	-2290000	102632	-
3	Cancelled Cheque 2003-04		-	2000

ANGIOGRAPHY PATIENT A/C

1	Purchase for stores	168217044	163405134
2	Bank Charges	4140	3299
3	Fresh Cheque	-	12000

GAMMA KNIFE PATIENT A/C

1	Purchase for Stores	2055168	30315514
2	MRI Charges	590100	1268000
3	TLD Services		2800
4	Bank Charges		1120

NEURO SURGERY PATIENT A/C

1	Purchase for Stores	27951759	22123393
2	Bank charges	213	195

**NATIONAL DRUG DEPENDENCE TREATMENT
CENTRE (N.D.D.T.C.)**

1	Grant-in-Aid (DAC)	3700000	3100000
2	Hosp. Receipt	477320	329575
3	Interest on FDR	73973	16440
4	Security Deposit	55000	65000
5	WHO Fund	121622	-
6	Car Adv. Recovery	34560	-
7	Misc. Receipt		-
i)	Water Charges	960	-
ii)	Licence fee	36000	-
iii)	Imprest Refund	4060	-
iv)	TA/LTC Refund	17984	-
v)	Advance Refund	24630	-
vi)	Income Tax Cash Deposit	1119	1062
vii)	Misc. Receipt	12480	38556
viii)	Adj. of totalling error	1840	-
ix)	in June 2003 C/B	1	99074

Institute Recovery 4235978

GPF Sub. & Adv.	3275610
Conveyance	72051
HBA	113725
Licence fee	49936
Officer Association	2020
EIS	38840
EHS	80600
Society	637660
Comp. Rec.	8004
Faculty	700
New Pension Scheme	27871

Outside Recovery 1318342

GIS	720
Income Tax	738243
GPF	120000
LIC	27035
Court Rec.	24000
Earth quake Relief Fund	29753

**NATIONAL DRUG DEPENDENCE TREATMENT
CENTRE (N.D.D.T.C.)
(UNDCP PROJECT)**

1	Grant-in-Aid	857371	1267600
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**NATIONAL DRUG DEPENDENCE TREATMENT
CENTRE (N.D.D.T.C.)**

1	Salary	18347041	17682594
2	Mat. & Supply	9592922	8462867
3	Wages	2120786	2301840
4	Books & Pub.	1764017	1250151
5	Furniture	71286	344197
6	Build. Const.	109502	1773505
7	Motar Vehicle	561616	-
8	Mach. & Equip.	1867951	4159138
9	Security Refund	5000	50000

Institute Recovery Remitted 4218698

GPF Sub. & Adv.	3275610
Conveyance	72051
HBA	113725
Licence fee	49936
Officer Association	2020
EIS	38840
EHS	80600
Society	637660
Comp. Rec.	8004
Faculty	700
New Pension Scheme	27871

Outside Recovery 1318342

GIS	720
Income Tax	738243
GPF	120000
LIC	27035
Court Rec.	24000
Earth quake Relief Fund	29753
Bank/Draft Charges	2594

**NATIONAL DRUG DEPENDENCE TREATMENT
CENTRE (N.D.D.T.C.)
(UNDCP PROJECT)**

1	TA/DA	551514	376117
2	Misc./Office Contingency		
	Office contingency	64379	22178
	Honorarium	64515	38500
	Refreshment	72810	71938
	Hiring accor.	13742	129200
	Postage & courior	15463	15544
	Printing material	310500	-
	Stationary	14606	36209
3	Bank Charge	550	-
4	Refund to WHO	195721	-
5	Transfer to NDDTC	121622	-
6	Advance Payment	155000	-

Dr.B.R.A. INSTITUTE ROTARY CANCER HOSPITAL

1	<u>Grant in Aid</u>		23226000	
a)	Plan			
	i) Non-EFC	174344000		
	ii) EFC	92500000		
	iii) National Cancer Control Prog.		6262655	
b)	Non-Plan	120000000	92500000	
2	Hospital Receipts	6502311	5302105	
3	Revolving Funds	3373500	3658500	
4	Medical Oncology Receipts	320340	409300	
5	ICMR (DCR)	375000	375810	
6	Receipts on account of L/c Adjustment by Bank	4716486	-	
7	AIIMS Recoveries remitted	14599085	11922149	
8	Outside Recoveries remitted	2767412	6206996	
9	Scoter Advance	22710	4800	
10	Car Advance	-	12000	

J.P.N. APEX TRAUMA CENTRE

1	<u>GRANT-IN-AID</u>			
	Plan	120000000	-	

POOR PATIENT ACCOUNTS

i)	a) AIIMS	392478	146780	
ii)	R.P. Centre	13175		
	a) Interest	2540	5095	
	b) wrongly credit by bank.	30000	-	
iii)	(a) I.R.C.H.	793351	264722	
	(b) Interest on FDR's	440968	8087	
iv)	N.S. Centre Donation	16676	32072	

PATIENT TREATMENT ACCOUNTS

1	(a) AIIMS	28722510	27891450	
	(b) Interest	488516	407015	
2	a) Dr.B.R.A.I.R.C.H.	30926652	25615053	

Dr.B.R.A. INSTITUTE ROTARY CANCER HOSPITAL

1	Pay & Allowances	68383729	59939141	
2	TA/DA	1185241	898676	
3	Contingency Bills	802449	925187	
4	Custom Duty	2544974	836210	
5	Medical Oncology	366077	300600	
6	Revolving Fund	1731713	2304434	
7	Sulabh Services	470489	-	
8	Security Services	1143856	1503957	
9	Maintenance of Building	4780108	1798666	
10	Mat. & Supp. (Non-Plan)	42377227	38528134	
11	Capital Works	4064201	-	
12	PLAN (EFC)	90835902	-	
13	HSCC	1477371	-	
14	PLAN (NON-EFC)	154133521	-	
15	AIIMS Recoveries Remitted	14599085	11922149	
16	Out Side Recoveries Remitted	6206996	2767412	
17	Car Advance	-	150000	
18	H.B.A.	-	87750	
19	<u>Building</u>			
	i) Manifold System (HSCC)	-	1800000	
	ii) NDMC	-	2626000	
20	<u>Plan</u>			
	i) Mach. & Equipments Advance payment	-	15900696	
	ii) Mach. & Equip. received	-	2649641	
	iii) Furniture & Fixtures	-	3158800	

J.P.N. APEX TRAUMA CENTRE

1	Machinery & Equipment	112932400		
2	Material & Supply	100999	-	

POOR PATIENT ACCOUNTS

i)	AIIMS	138692	182678	
ii)	R.P. Centre	160222	185468	
iii)	I.R.C.H.	376857	58532	
iv)	N.S. Centre	14465	24042	

PATIENT TREATMENT ACCOUNTS

i)	AIIMS	27379449	26452532	
ii)	Dr.B.R.A.I.R.C.H.	27605041	24604102	
iii)	Institute A/c after reconciliation with the Bank as per Audit para 2.2.1.9 of 2004-05	419384	-	

HOSTELS

a) Receipts during 2005-06		
I) Security Deposits	616676	271000
ii) Misc. Receipts	43380	7597
iii) Interest earned	92402	164525

HOSTELS

a) Security refunds	195350	264450
b) Misc. Expenditure	46253	43544

CLOSING BALANCES**A CASH AT BANK**

i) a) AIIMS(Main)	382986814	118822691
b) Unspent Balance of Specific Grants remained with AIIMS (Main)		112927426
ii) Schemes Cell	61200654	74902476
iii) Dr. R.P. Centre	24422198	18988109
iv) C.N. Centre	113473131	88193471
v) C.T. Patient A/c		
(a) Bank	13752622	6267675
(b) FDRs	235000000	225000000
vi) N.D.D.T.C.	7389074	3970240
vii) Angiography A/c		
a) Bank	12788961	2176746
b) FDRs	75000000	75000000
viii) UNDCP	257664	980715
ix) I.R.C.H.	36218452	8360963
x) J.P.N.Apex Trauma Centre	6966601	-
xi) Gamma Knife Pt. A/c		
a) Bank	5330282	946909
b) FDRs	82500000	67500000
xii) Neuro Surgery Pt. A/c		
a) Bank	7577574	7387294
b) FDRs	32000000	22000000

B CASH IN HAND (IMPREST)

i) AIIMS (Main)		458650
a) Balance as per cash book of the cashier	479150	
b) Excess paid by the cashier	-306286	172864
ii) Dr. R.P. Centre	10000	8000
iii) C.N. Centre	40000	40000

C AMOUNT LYING UNDISBURSED

i) AIIMS (Main)	500	980546
ii) C.N. Centre	-	43103
iii) Scheme Cell	28000	121866

D POOR PATIENT ACCOUNT

i) AIIMS (Main)		
(a) Cash/Bank	813303	559517
(b) FDR's	327078	327078
ii) IRCH	1234844	377382
Cash/Bank		

	iii) Dr. R.P. Centre Cash/Bank	12829	140511
	iv) N.S. Centre Cash at Bank	59004	56793
	E <u>PATIENT TREATMENT A/C</u>		
	I) AIIMS	14236140	12404563
	ii) IRCH		
	a) Cash/Bank	11522423	8620196
	b) FDRs	6000000	6000000
	F <u>HOSTELS</u>		
	I) Cash in hand	7541	8038
	ii) Cash at Bank	221318	106431
	iii) FDR's	1738028	1341563
TOTAL		8711248635	8118144031

(R.G. Garg)
Financial Advisor

(P. Venugopal)
Director

ALL INDIA INSTITUTE OF MEDICAL SCIENCE
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR 2005-2006

<u>EXPENDITURE</u>	<u>2005-06</u>	<u>2004-05</u>	<u>INCOME</u>	2005-06	2004-05
<u>AIIMS (MAIN)</u>			<u>AIIMS (MAIN)</u>		
A <u>NON-PLAN</u>			<u>GRANT-IN-AID</u>		
1 Salaries	1056239333	1004559797	Non-Plan	2031571017	1853226658
2 Stipend	5142170	4723123	Plan	10350656	
			<u>REVENUE RECEIPTS</u>		
3 Travelling Allowances	13949525	10802178	Hospital Receipts	99041194	82154239
4 Pensionary Benefits	180701304	158892986	Tution Fee and		
5 Mat. & Supply	447442184	405612760	Exam. Fee	1995995	1731924
6 Office Contingency	375130054	399661966	Employees Health		
7 Mach. & Equipment	22128113	23783540	Scheme	9831979	9047350
8 Maintenance of Buildings	46317423	51328800	License fee	15270086	7465570
9 New Pension Scheme	3590251		Interest	35342226	12385692
i) Less Receipts	-1037872	2552379	Miscellaneous Receipts	83378676	77937675
10 L.S.P.C.		221025	L.S.P.C.	607166	
B <u>PLAN</u>					
11 Salary - J.P.N. Apex Trauma Centre	9422199	-	Less payments during 2005-06	-515542 91624	-
12 Salary - Centre for Dental Education & Research Centre	928457	-			
<u>DR. RAJENDER PRASAD CENTRE FOR OPTHALMIC SCIENCES</u>			<u>DR. RAJENDER PRASAD CENTRE FOR OPTHALMIC SCIENCES</u>		
1 Salary and Wages	146815820	138258472	<u>Grant-in-Aid</u>		
2 Travelling Allowances	825723	698574	Non-Plan	160000000	152500000
3 Material & Supply	73691315	76503134	Hospital Receipts	75087078	67633200
4 Office Expenses	2942512	297806	Interest on Recoverable	136219	246363
5 Maintenance of Buildings	2036691	2315795	Advances		
6 Machinery & Equipment	8132182	367042	Misc. Receipts	1810195	1339376
7 Cash withdrawal Tax	2073	-	Interest on CLTD	1356776	-

CARDIO-THORACIC & NEURO SCIENCES CENTRE**Non-Plan**

1	Salary & Wages	311762934	296237033
2	Travelling Exp.	1574607	1236487
3	Material & Supply	116439311	122726218
4	Office Contingency	1982676	1436834
5	Mach. & Equip.	5084453	-
6	Maint. of Buildings	6134191	6327438

C.T. PATIENT A/C

1	Purchase for Stores 181671900		181984863
2	Bank Charges 16286		12464

ANGIOGRAPHY PATIENT A/C

1	Purchase for Stores	168217044	163405134
2	Bank Charges	4140	3299

GAMMA KNIFE PATIENT A/C

1	Purchase of Stores	2055168	30315514
2	MRI Charges	590100	1268000
3	TLD Service	-	2800
4	Bank Charges	-	1120

CARDIO-THORACIC & NEURO SCIENCES CENTRE**Grant-in-Aid**

Non-Plan	435700000	400000000
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Revenue Receipts

Hosp. Receipts	17109953	
Amount received from outside patients 2005-2006	-628865	
Amount due 2005-06	103402	16584490
Misc. Receipts	3513364	3937943
Licence Fee	758546	653941
Refund & Recoveries	1552663	849953
Interest earned	1528858	422044
Levy Charges	384670	388270
Transport	294	564

C.T. PATIENT A/C

Patient's Receipts	187617020	189914576
Interest during 2005-2006	11865254	8832287

ANGIOGRAPHY PATIENT A/C

Patient's Receipts	174190474	146057275
Interest during the year 2005-2006	4300646	4758765
Cancelled Cheques	342279	-

GAMMA KNIFE PATIENT A/C

Patient Receipts	18042639	15660700
Interest	3986002	8709528
Cancelled Cheques		119100

NEURO SURGERY PATIENT A/C

1 Purchase of Stores	27951759	22123393
2 Bank Charges	213	195

NATIONAL DRUG DEPENDENCE TREATMENT CENTRE (N.D.D.T.C.)

1 Salary	18347041	17509794
2 Wages	2120786	2301840
3 i) Material & Supply		
2005-06	9592922	
ii) 2004-05	1121679	10714601
9733307		
4 Misc. Expenditure	2044	
550	2594	-

NATIONAL DRUG DEPENDENCE TREATMENT CENTRE (N.D.D.T.C.) (UNDCP PROJECT)

1 TA/DA	551514	-
2 Printing Work/Stationary	310500	-
3 Misc./Office Contingency	245515	-
4 Transfer to NDDTC a/c	121622	-
5 Refund to WHO	195721	-
6 Bank Charges	550	-

Dr.B.R.A. INSTITUTE ROTARY CANCER HOSPITAL

1 Pay & Allowances	68383729	59939141
2 Travelling expenses/DA	1185241	898676
3 Material & Supply	42377227	38528134
4 Maintenance of	4780108	1798666
5 Security Services	1143856	1503957
6 Sulabh Services	470489	-
7 Contingency Expenditure	802449	925187

NEURO SURGERY PATIENT A/C

Patient Receipts	38039620	33064300
Fixed/CLTD Interest	102632	-
Cancelled Cheque		2000

NATIONAL DRUG DEPENDENCE TREATMENT CENTRE (N.D.D.T.C.)

Grant-in-aid (Plan)	37000000	31000000
Mach. & Equip.	-1867951	-4159138
Motar Vehicle	-561616	-
Bldg. & Const.	-109502	-1773505
Furniture	-71286	-344197
Books & Pub.	-1764017	32625628
		-128472
Hospital Receipt	477320	329575
Miscellaenous Receipt	99074	39618
FDR's Interest	73973	16440
WHO Fund	121622	-

NATIONAL DRUG DEPENDENCE TREATMENT CENTRE (N.D.D.T.C.) (UNDCP PROJECT)

Grant-in-aid (Plan)	857371	-
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Dr.B.R.A. INSTITUTE ROTARY CANCER HOSPITAL

Grant-in-aid	120000000	92500000
Hospital Receipts	6502311	5302105
ICMR (DCR)	375000	375810

J.P.N. APEX TRAUMA CENTRE

1 Material & Supply (Plan) 100999 -

HOSTELS

1 Misc. Expenditure 46253 43544

EXCESS OF INCOME OVER EXPENDITURE

1 AIIMS (Main) 126920312 -

2 DR. R.P. CENTRE 3943952 597861

3 C.N. CENTRE 17044713 17058677

4 CT PATIENT A/C 17484947 -

5 ANGIO PATIENT A/C 10612215 -

6 NEURO SURGERY A/C 10190280 10942712

7 GAMMA KNIFE
PATIENT A/C 19383373 -

8 N.D.D.T.C. 2212595 -

9 I.R.C.H. 7734212 -

10 Hostel 89529 128578

TOTAL 3585710303 3269388978

J.P.N. APEX TRAUMA CENTRE**Grant-in-aid**

Plan 100999

HOSTELS

Misc. Receipts 43380 7597

Interest 92402 164525

EXCESS OF EXPENDITURE OVER INCOME

N.D.D.T.C.(UNDCP) 568051 -

AIIMS - 15637067

CNC - 5835393

ANGIOGRAPHY PATIENT A/C - 12592393

GAMMA KNIFE PATIENT A/C - 7098106

NDDTC - 4564620

DR. BRAIRCH - 5415846

TOTAL 3585710303 3269388978

(R.G. Garg)
Financial Advisor**(P. Venugopal)**
Director

ALL INDIA INSTITUTE OF MEDICAL SCIENCES
BALANCE SHEET AS ON 31.3.2006

<u>LIABILITIES</u>	<u>2005-06</u>	<u>2004-05</u>	<u>ASSETS</u>	<u>2005-06</u>	<u>2004-05</u>
<u>AIIMS (MAIN)</u>			<u>AIIMS (MAIN)</u>		
1 <u>BALANCE</u>			1 <u>CASH IN HAND</u>		
a) Amount due but not paid (AIIMS CASHIER)	500	980546	a) Imprest (AIIMS CASHIER)	172864	458650
b) Amount due but not paid (Scheme Cell)	28000	121866	b) Amount due but not paid with (AIIMS CASHIER)	500	980546
2 <u>CAPITAL GRANTS FROM GOVT. OF INDIA</u>			c) Amount due but not paid (Scheme Cell)	28000	121866
i) Upto 2004-2005	5119316418		2 <u>Cash at Bank</u>		
ii) During 2005-06 (AIIMS)	961356000		a) (i) AIIMS (Main)	258105191	
iii) Less transferred to Income & Expdr.	-10350656		(ii) Unspent Balance of Specific Grants remained with AIIMS (Main)	124881623	382986814
iv) Non-Plan Capitalisation	2728983		b) Scheme Cell	61200654	74902476
v) Less on account of Mach. & Equip. condemned	-6684113		3 <u>GPF BANK ACCOUNT</u>	15032985	14725784
vi) Less Books weeded out during 2005-06	-10826		4 <u>Investment</u>		
vii) Less Furniture condemned during 2005-06	-342528		i) (Appendix-C)	1456588127	1341013127
viii) Less vehicle condemned during 2005-06	-1060762	6064952516	5 <u>Silver Jubilee Fund</u>	200000	200000
		5119316418	6 <u>Sundry Debtors</u>		
			Scheme Cell		
			(Appendix-B)	7417446	12064025

AIIMS 2005-2006 / 543

3	Grant recd. From Min. of Welf. for P.M.R. ADIP Scheme				7	Misc. Deposits (Appendix-E)	330986	330986
	(a) Upto 2004-05	353208						
	(b) Exp. during 2005-06	-335153	18055	353208	8	Recoverable Advances		
					i)	Car	2849520	3742240
4	Centralised Accident & Trauma Services		29142	29142	ii)	Motor Cycle-Scooter	1691355	3191879
5	Diabetes Control		420000	420000	iii)	Bicycle	132605	134598
6	AIDS		2400000	2400000	iv)	Computer Advance	1696073	1809793
7	<u>NON-INSTT. SCHEMES</u>				v)	House Building Advance	33734649	40797232
	Unspent balance of grants received for specific purpose (APPENDIX-A)		193499723	199893927	9	Outside Recoveries	2975760	1972203
8	<u>Donated Vehicles</u>				10	Furniture & Fixture (AIIMS)		
a)	Up to 2004-2005		3036507	3036507	a)	Upto 2004-2005	1951602	
b)	During 2005-06	-	0		b)	During 2005-2006	472332	
					c)	Less Furniture condemned during 2005-2006	-342528	2081406
9	Donated books				11	Machinery & Equipment		
a)	Up to 2004-2005	84012			A	AIIMS (MAIN)		
b)	During 2005-2006	58711	142723	84012	a)	Upto 2004-2005	2389173217	
					b)	During 2005-2006	72897065	
10	Donations (Appendix-C)		10959524	8959524	c)	Goods received during 2005-2006	116478216	
11	Misc. Donations (Appendix-D)				d)	Mach. Condemned	-6684113	
a)	Up to 2004-2005	2171418			e)	Correction due to para 2.3.4181825 of SAR for 2004-05	2572046210	2389173217
b)	Receipts during 2005-2006	20310427			B	AIDS	820600	820600
c)	Less Expdr. During 2005-2006	-20108160	2373685	2171418	C	NACO Mach. & Equip purchased	1932605	1932605

12	Employees Insurance Schemes		63086		86967	A	For Foreign purchase of MACH. & EQUIP (PLAN)			
13	Security Deposits/ Earnest Money		63421931		59597859	a)	Upto 2004-2005	166950002		
14	Caution Money		1064633		1020133	b)	During 2005-2006	253505493		
15	G.P.F. Account		1461045678		1347163477	c)	Less equip. recd.	-116478216	303977279	166950002
16	Pot Fund					B	Mat. & Supply (Non-Plan)			
	i)Upto 2004-2005	164983				a)	Upto 2004-2005	6266586		
	ii)During 2005-06	236103				b)	During 2005-2006	14771179		
	iii)Less expd. during 2005-06	-36327	364759	164983		c)	Less M. & S. received during 2005-2006	-11192518	9845247	6266586
17	N.A.C.O.					C	P. & AO (for procurement of stores)			
a)	Salary/Reagents/Maint.					a)	Upto 2004-05	3056829		
i)	Upto 2004-05	50915				b)	During 2005-06	300000		
ii)	Generated from test charges.	68500				c)	Adjustment of advances made during 2005-06	-347115	3009714	3056829
iii)	Less expenditure during 2005-06	-71500	47915	50915		D	Ty. Contingent Adv.			
b)	Mach. & Equipment	-	1932605	1932605		a)	Upto 2004-2005	2584032		
18	Revolving funds				-	b)	During 2005-2006	2830607		
a)	2004-05					c)	Adj.during 2005-2006 of previous year	-2434032	2980607	2584032
i)	Receipt	32946017				E	Private Firms for stores			
ii)	Expenditure	-19149733		32946017		a)	Upto 2004-2005	9982400		
b)	2005-06					b)	during 2005-2006	3101195		
i)	Receipt	49074610				c)	Less adj. during 2005-2006	-4662451	8421144	9982400
ii)	Expenditure	-26792404	36078490	-		F	M/s. H.S.C.C. for Trauma Centre			
19	P.P. Programme					a)	Upto 2004-2005	47220538		
a)	Upto 2005-06	115870				b)	Excess shown	-193		
b)	Receipts during 2005-06	300000				c)	During 2005-2006	121870000		
						d)	Adjustment of advances	-81178281	87912064	47220538

c) Expenditure during 2005-06	-253775	162095	-	115870	G M/s H.S.C.C. for Dental Centre			
					a) Upto 2004-05	53951487		
					b) during 2005-06	150000000		
20 V.V.I.P.					c) Adjustment	-45557811	158393676	53951487
a) Receipt from C.G.H.S. 9115671								
b) Payment	-7908616	1207055	-		H NDMC for augmenting L.T-Line in Eastern & Western Campus		12755500	12755500
21 College of Nursing								
a) Receipt	700000				I Delhi Vidyut Board for Installation of 11 K.V.A. Sub-Station		3362787	3362787
b) Payment	-424677	275323	-					
					J NDMC for HT Transformer and laying of cable	7463500		-
					K Custome duty	2148754		-
					L Covering of Nallah	153383000		-
					M CPWD for Lift	14000000		-
					N CPWD for Surgical Ward	1711770		-
					13 i) Books & Publications			
					a) Upto 2004-2005	143569040		
					b) During 2005-2006	14756651		
					c) Less books weeded out during 2005-2006	-10826	158314865	143569040
					ii) Books donated			
					a) Upto 2004-2005	84012		
					b) During 2005-2006	58711	142723	84012
					14 Building Construction			
					(A) AIIMS (Main)			
					a) Upto 2004-2005	1614413933		
					b) Less shown during 2004-05	193		

b) during 2005-2006	184344051		
c) Add Adjustment of Advance payment	1463337		
d) Correction due to para 2.3.1 of SAR for the year 2004-05-9900000			
e) Correction due to para 2.5.2 of SAR for the year 2004-05-7463500		1782858014	1614413933
(B) Trauma Centre			
(a) Upto 2004-05	368647462		
(b) During 2005-06	81178281	449825743	368647462
15 Dental Education & Research Centre			
During 2005-06		45557811	-
16 Advance Payment			
i) Indian Iron & Steel Co.		572139	572139
ii) Tata Iron & Steel Co.		654154	654154
iii) Hindustan Steel Ltd.		520295	520295
iv) Indian Iron & Steel Co.		594000	594000
17 Land Account			
(a) Upto 2004-05		112832263	112832263
18 Land Account Trauma Centre			
		9900000	-
19 Vehicles			
i) Vehicle (purchased for AIIMS)			
a) Up to 2004-2005	31407857		
b) During 2005-2006	997070		
c) Less condemned during 2005-06	-1060762	31344165	31407857
ii) Vehicles donated for AIIMS			
a) Up to 2004-2005		3036507	3036507
b) During 2005-2006			

20	Advance payment to P&AO for purchase of Building Material			
a)	Upto 2004-2005	31031524		
b)	During 2005-2006	3245827		
c)	Less Adjustment in 2005-2006	-1463337	32814014	31031524
21	Hospital receipts recoverable from outside patients			
a)	Up to 2004-05	3647238		
b)	During 2005-06	4321309		
c)	Amount recd. 2005-06	-2381175	5587372	3647238
22	Revolving Fund		-	19149733
21	Amount recoverable from the cashier		306286	

DR. RAJENDER PRASAD CENTRE FOR OPHTHALMIC SCIENCES

1	<u>Balances</u>			
	Amount due but not paid	-	-	
2	<u>Capital Grant from Govt. of India</u>			
a)	Upto 2004-2005	517250320		
b)	During 2005-2006	60000000		
c)	Mach. & Equip. & Furniture & Fixture condemned during 2005-2006	-6911050		
d)	Correction due to para 2.4.4 of SAR for 2004-05	-2690540	567648730	517250320
3	NPCB as per last year Balance Sheet	25629000	25629000	

DR. RAJENDER PRASAD CENTRE FOR OPHTHALMIC SCIENCES

1	<u>CASH IN HAND</u>			
a)	Imprest		10000	8000
2	Cash at Bank		24422198	18988109
3	<u>RECOVERABLE ADVANCE</u>			
a)	Car			
i)	Upto 2004-05	65485		
ii)	Paid during 2005-06	-		
iii)	Recovery received during 2005-06	-24816	40669	65485
b)	Scooter			
i)	Upto 2004-05	61371		
ii)	Paid during 2005-06	30000		
iii)	Recovery received during 2005-06	-196352	-104981	61371

4	Donated vehicle		896357	896357	c) Cycle				
					i) Upto 2004-05	6448			
	Non-RPC Scheme ICMR				ii) Recovery received during 2005-06	-13616	-7168		6448
5	ICMR				d) H.B.A.				
a)	Upto 2004-2005	1824102			i) Upto 2004-05	2657317			
b)	During 2005-2006	220983			ii) Paid during 2005-06	350000			
c)	Expenditure during 2005-2006	-573594	1471491	1824102	iii) Recovery received during 2005-06	-399522	2607795		2657317
6	USP				4 Machinery & Equipment (Plan)				
a)	Upto 2004-2005	6333838			i) Upto 2004-05	419887612			
b)	During 2005-2006	50886			ii) During 2005-06	44293633			
c)	Expenditure during 2005-2006	-1078899	5305825	6333838	iii) M&E condemned during 2005-06	-6877200			
7	Savers International				iv) Correction due to para 2.3.4 of SAR for the year 2004-05	40000			
a)	Upto 2004-2005	653070			v) Correction due to para 2004-05	-2690540	455353505		419887612
b)	During 2005-2006	679900			5 Machinery & Equipment (Non-Plan)				
c)	Expenditure during 2005-2006	-838445	494525	653070	Upto 2004-05		5872266		5872266
8	Sight international-Surgeries				6 Building Construction				
a)	Upto 2004-2005	878702			i) Upto 2004-05	75866438			
b)	During 2005-2006	675000			ii) During 2005-06	2430067	78296505		75866438
c)	Expenditure during 2005-2006	-1262502	291200	878702	7 NPCB (M & E)		7002852		7002852
9	Indeye				8 ICMR (M&E)		605150		605150
a)	Upto 2004-2005	723583			9 Vehicles				
b)	During 2005-2006	6215566			i) RPC Vehicle	2722763			2722763
c)	Expenditure during 2005-2006	-4900881	2038268	723583	ii) Donated Vehicles	896357			896357
10	ORBIS				10 Hospital Furniture & Fixture				
a)	Upto 2004-2005	524181			i) Upto 2004-05	1121982			
b)	During 2005-2006	878865							
c)	Expenditure during 2005-2006	-405778	997268	524181					

11	<u>Manage</u>				ii) During 2005-06	667853		
a)	Upto 2004-2005	133455			iii) Condemned during			
b)	During 2005-2006	-			2005-06 (-)	-33850	1755985	1121982
c)	Expenditure				11	Sundry debtors	76253	76253
	during 2005-2006	-133455	0	133455				
12	<u>CODBIL</u>				12	<u>Advance Payment made to</u>		
a)	Upto 2004-2005	-			<u>Foreign Purchase</u>			
b)	During 2005-2006	-			i) Upto 2004-05	29354545		
c)	Expenditure				ii) Advance during			
	during 2005-2006	-	-	-	2005-06	37323433		
					iii) Equip. received			
					during 2005-06	-24721610	41956368	29354545
13	<u>NAB</u>				13	<u>Material & Supply</u>		
a)	Upto 2004-2005	604591			Upto 2004-05		76352	76352
b)	During 2005-2006	1116700			14	<u>Non-RPC (Indeye)</u>		
c)	Expenditure				i) Upto 2004-05	-		
	during 2005-2006	-715504	1005787	604591	ii) Advance payment			
					for foreign			
14	<u>LCIF</u>				purchases 2005-06	116663		
a)	Upto 2004-2005	222169			iii) Material received			
b)	During 2005-2006	586770			during 2005-06	-116663	0	-
c)	Expenditure				15	<u>USP</u>		
	during 2005-2006	-808939	0	222169	i) Upto 2004-05	-		
					ii) Advance payment			
15	<u>NPCB-NSU</u>				for foreign			
a)	Upto 2004-2005	163083			purchases 2005-06	285441		
b)	During 2005-2006	-			iii) Machinery received			
c)	Expenditure				during 2005-06	-285441	0	-
	during 2005-2006	-163083	0	163083	16	<u>DST/DBT (Stem)</u>		
					i) Upto 2004-05	-		
16	<u>NPCB-SSU</u>				ii) Advance payment			
a)	Upto 2004-2005	70728			for foreign			
b)	During 2005-2006	50000			purchases 2005-06	805264		
c)	Expenditure				iii) Material received			
	during 2005-2006	-84954	35774	70728	during 2005-06	-805264	0	-
					17	<u>RIP</u>		
17	<u>RIP</u>				a) Upto 2004-2005	11222		
a)	Upto 2004-2005	11222			b) During 2005-2006	-		
b)	During 2005-2006	-			c) Expenditure			
c)	Expenditure				during 2005-2006	-11222	0	11222
	during 2005-2006	-11222	0	11222				

18 AEH

a) Upto 2004-2005	-		
b) During 2005-2006	-		
c) Expenditure during 2005-2006	-	-	-

19 MBDL

a) Upto 2004-2005	93356		
b) During 2005-2006	86359		
c) Expenditure during 2005-2006	-62294	117421	93356

20 DOS-NPCB

a) Upto 2004-2005	340244		
b) During 2005-2006	135000		
c) Expenditure during 2005-2006	-475244	0	340244

21 CSIR

a) Upto 2004-2005	-		
b) During 2005-2006	1538353		
c) Expenditure during 2005-2006	-1538353	0	-

22 NIAF

a) Upto 2004-2005	501285		
b) During 2005-2006	430000		
c) Expenditure during 2005-2006	-156990	774295	501285

23 CRP

a) Upto 2004-2005	8800		
b) During 2005-2006	166300		
c) Expenditure during 2005-2006	-119166	55934	8800

24 DBCS

a) Upto 2004-2005	10500		
b) During 2005-2006	1019400		
c) Expenditure during 2005-2006	-29900	1000000	10500

25	<u>CEP-Phakie IOL</u>			
a)	Upto 2004-2005	86320		
b)	During 2005-2006	-		
c)	Expenditure during 2005-2006	-86320	0	86320
26	<u>Allargan International</u>			
a)	Upto 2004-2005	118612		
b)	During 2005-2006	193910		
c)	Expenditure during 2005-2006	-165079	147443	118612
27	<u>Neema-International Pilot study</u>			
a)	Upto 2004-2005	-		
b)	During 2005-2006	50027		
c)	Expenditure during 2005-2006	-1509	48518	-
28	<u>Workshop</u>			
a)	Upto 2004-2005	21019		
b)	During 2005-2006	72700		
c)	Expenditure during 2005-2006	-56375	37344	21019
29	<u>DST/DBT (Stem)</u>			
a)	Upto 2004-2005	-		
b)	During 2005-2006	1603500		
c)	Expenditure during 2005-2006	-1500321	103179	-
30	<u>WHO Short term Training Programme</u>			
a)	Upto 2004-2005	41191		
b)	During 2005-2006	-		
c)	Expenditure during 2005-2006	-	41191	41191
31	<u>Evaluation Study on glaucoma</u>			
a)	Upto 2004-2005	65800		
b)	During 2005-2006	-		
c)	Expenditure during 2005-2006	-	65800	65800

32	<u>ORP-VISION 2020</u>			
a)	Upto 2004-2005	-		
b)	During 2005-2006	145000		
c)	Expenditure during 2005-2006	-47567	97433	-
33	<u>Multifocal IOL</u>			
a)	Upto 2004-2005	-		
b)	During 2005-2006	100000		
c)	Expenditure during 2005-2006	-11000	89000	-
34	<u>Evaluation of Anti Cat</u>			
a)	Upto 2004-2005	-		
b)	During 2005-2006	130000		
c)	Expenditure during 2005-2006	-78419	51581	-
35	<u>DST (CYCLO)</u>			
a)	Upto 2004-2005	-		
b)	During 2005-2006	250000		
c)	Expenditure during 2005-2006	-38196	211804	-
37	<u>Reliance/Clinical Research</u>			
a)	Upto 2004-2005	-		
b)	During 2005-2006	78000		
c)	Expenditure during 2005-2006	-3120	74880	-
38	<u>DST (DISPO)</u>			
a)	Upto 2004-2005	-		
b)	During 2005-2006	435000		
c)	Expenditure during 2005-2006	-435000	0	-
39	<u>Clinical Evaluation B&C(AM0)</u>			
a)	Upto 2004-2005	-		
b)	During 2005-2006	57000		
c)	Expenditure during 2005-2006	-54457	2543	-

40 Cataract Surgery (NPCB)

a) Upto 2004-2005	-		
b) During 2005-2006	379375		
c) Expenditure during 2005-2006	-57394	321981	-

41 Refund of Security Deposits

a) Upto 2004-2005	2136000		
b) During 2005-2006	125000		
c) Expenditure during 2005-2006	-345000	1916000	2136000

42 AIIMS Remittance

a) As per last year	214410		
b) Outside recoveries			
i) Upto 04-05	11923		
ii) During 2005-06	573	226906	226333

CARDIO-THORACIC & NEURO SCIENCES CENTRE

1 Balance

Amount due but not paid (cashier)			
a) Salary	-		
b) Office Contingency	-	43103	

2 Capital Grant from Govt. of India

i) Upto 2004-2005	2093656416		
ii) During 2005-2006	225000000		
iii) Less Machinery condemned	-8772886	2309883530	2093656416

3 Cost of the vehicle donated by Sai Bhakta Samaj

		613384	613384
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4 Neurology Patient A/c

i) Upto 2004-2005	12000631		
ii) Receipt during 2005-2006	12376948		

CARDIO-THORACIC & NEURO SCIENCES CENTRE

1 Cash in hand

a) Imprest (CTNS-Cashier) 2005-2006	40000	40000
b) Amount due but not paid	-	
c) Amount received but not credited	-	43103

2 Cash at Bank

	113473131	88193471
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3 Recoverable Advance

a) Computer	173400	221980
b) Car	746188	1035594
c) Cycle	2100	13050
d) Scooter	918183	1103393
e) House Building Advance	10570252	11169326

4 Mach. & Equip.

i) Upto 2004-2005	1602635558	
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iii) Less refund/Exp. 2005-2006	-6846787	17530792	12000631	ii) During 2005-2006	150160651		
6 <u>Outside recoveries</u>				iii) Correction agt. para 2.3.4 of SAR for the year 2004-05	1712000		
i) Upto 2004-2005	304608			iv) (-) Mach. Condemned	-8704816		
ii) 2005-2006 (+)	60	304668	304608	v) Correction due to para 2.5.4 of SAR for the year 2004-05-941000			
7 <u>Donations</u>				vi) Adj. 2004-2005	495503	1745357896	1602635558
i) Upto 2004-2005	1813613			5 <u>Advance payment for Foreign purchase</u>			
ii) Receipt during 2005-2006	162830			a) <u>Mach. & Equip.</u>			
iii) Less Expenditure 2005-2006	-2657	1973786	1813613	i) Upto 2004-2005	98646152		
8 <u>Security Deposits</u>				ii) During 2005-2006	125786245		
i) Upto 2004-2005	15283964			iii) Less Equip.received	-112412877	112019520	98646152
ii) During 2005-2006	4902000			6 <u>Building construction</u>			
iii) Less refund	-2441000	17744964	15283964	i) Upto 2004-2005	182818557		
9 <u>Thallium</u>				ii) During 2005-2006	3603153	186421710	182818557
i) Upto 2004-2005	3578340			7 <u>Advance Agt. works</u>			
ii) During 2005-2006	3776000			2004-05	120800000		
iii) Less Expenditure 2005-2006	-4276687	3077653	3578340	2005-06	58186910	178986910	120800000
10 <u>Heart Transplant Donation</u>				8 <u>Amount due from outside patients</u>			
i) Upto 2004-2005	540579			i) Upto 2004-2005	1979423		
ii) During 2005-2006	-			ii) During 2005-2006	103402		
iii) Less Expenditure	-153692	386887	540579	iii) Less amount Recd.	-628865	1453960	1979423
11 <u>Lab Test</u>				9 <u>Vehicles</u>		2025954	2025954
i) Upto 2004-2005	1885958			i) Ambassador Cars			
ii) During 2005-2006	4144055			ii) Ambulance ORBO			
iii) Less Expenditure 2005-2006	-4703307	1326706	1885958	10 <u>Furniture & Fixture during 2004-05 2005-06</u>		244587	
12 <u>Cardiac Test</u>				Furniture condemned	-68070	637000	244587
i) Upto 2004-2005	4660764						
ii) During 2005-2006	3808255						
iii) Less Expenditure 2005-2006	-3385189	5083830	4660764				

C.T. PATIENT A/C**C.T. PATIENT A/C**

1	Fixed Deposits	235000000	225000000
2	Cash in hand	-	
3	Cash at Bank	13752622	6267675

ANGIOGRAPHY PATIENT A/C**ANGIOGRAPHY PATIENT A/C**

1	Cash recoverable from Sh. Dal Chand Verma, Cashier	3245441	3245441
2	Fixed Deposits	75000000	75000000
3	Cash in hand	-	
4	Cash at bank	12788961	2176746

GAMMA KNIFE PATIENT A/C**GAMMA KNIFE PATIENT A/C**

1	Fixed Deposit		
a)	2004-2005	67500000	
b)	2005-2006	15000000	82500000
2	Cash in Hand	-	
3	Cash at Bank	5330282	946909

NEURO SURGERY PATIENT A/C**NEURO SURGERY PATIENT A/C**

1	Fixed Deposits		
a)	2004-05	22000000	
b)	2005-06	10000000	32000000
2	Cash in hand	-	
3	Cash at bank	7577574	7387294

**NATIONAL DRUG DEPENDENCE TREATMENT
CENTRE (N.D.D.T.C.)**

1	Capital fund of DAC			
a)	Upto 2004-2005	120682519		
b)	Mach.& Equip.	1867951		
c)	Motar Vehicle	561616		
d)	Furniture	71286		
e)	Building Const.	109502		
f)	Books & Pub.	1764017		
g)	Adj. of para-9 cond. Vehicle	-191173	124865718	120682519
2	Institute Recovery			
i)	Upto 2004-05	113215		
l)	During 2005-06	-	113215	113215
3	Security Deposit			
a)	Upto 2004-05	65000		
b)	During 2005-06	55000		
c)	Refund 2005-06	-5000	115000	65000

**NATIONAL DRUG DEPENDENCE TREATMENT
CENTRE (N.D.D.T.C.)**

1	Cash at Bank		7389074	3970240
2	<u>Mach. & Equip.</u>			
a)	Upto 2004-2005	18693817		
b)	During 2005-2006	1867951		18693817
c)	Adv. for purchase of Mat. & Supply upto 2004-05	1121679		
d)	Adjustment 2005-06	-1121679	20561768	1121679
3	Books & Publication			
a)	Upto 2004-05	5450218		
b)	During 2005-06	1764017	7214235	5450218
4	<u>Furniture & Fixture</u>			
a)	Upto 2004-05	2034969		
b)	During 2005-06	71286	2106255	2034969
5	<u>Building Construction</u>			
a)	Upto 2004-05	91844213		
b)	During 2005-06	109502	91953715	91844213
6	<u>Vehicle</u>			
a)	Upto 2004-05	3022928		
b)	During 2005-06	561616		
c)	Cond. less	-191173	3393371	3022928
7	Outside recovery			
a)	Upto 2004-05	40708		
b)	During 2005-06	-	40708	40708
8	Car Advance			
a)	2004-05	155520		
b)	Recovery	-34560	120960	155520

**NATIONAL DRUG DEPENDENCE TREATMENT
CENTRE (N.D.D.T.C.)
(UNDCP PROJECT)**

Opening balance 980715 402801

Dr.B.R.A. INSTITUTE ROTARY CANCER HOSPITAL

1	During 2004-2005	795834329		
(a)	Plan (Non EFC)	174344000		
(b)	Plan (EFC)	92500000		
(c)	L/c Adjustments	4716486		
(d)	Less condemnation of Furniture during 2005-06	-64583		
(e)	Add Value of TATA Sumo at the issued value of Rs.200000 only as intimated by (ASO/AAO)	200000		
	(Ref. para 2.3.3. of SAR for the year 2004-05)			
(f)	Add. Understatement of Assets pointed out by Certification Audit	3602000		
	(Ref. Para 2.3.4 of SAR for the year 2004-05)			
(g)	Less overstatement of Receipts from NCCP as pointed out by Audit vide para 3.1.1 of Audit Report for 2004-05	-3763000	1067369232	795834329

**NATIONAL DRUG DEPENDENCE TREATMENT
CENTRE (N.D.D.T.C.)
(UNDCP PROJECT)**

Cash in hand	257664		
Cash at Bank	-		980715
Advance Payment 2005-06 Mat. & Sup.	155000		-

Dr.B.R.A. INSTITUTE ROTARY CANCER HOSPITAL

1	Cash at Bank		36218452	8360963
2	<u>Furniture & Fixtures</u>			
a)	Upto 2004-2005	10423894		
b)	Less adjustment on account of condemnation of Furniture during 2005-06	-64583	10359311	10423894
3	Scooter Advance	2000		
	Less	-2000	0	2000
4	Car/HBA Advance	225750		
	Less	-18000	207750	225750
5	Mach. & Equip.			
a)	Upto 2004-2005	443219566		
b)	Add during 2005-2006	15798861		
c)	Add Advance adjustment 2005-06	16283787		
d)	Add Custom Duty	2544974		
e)	Add Understatement of Assets pointed out by the Audit	3602000	481449188	443219566

2	Interest Accrued		2710	-	6	Advance Payments			
					a)	During 2004-2005	24268779		
3	Revolving Fund				b)	Add during 2005-2006(+)	229170562		
(i)	Upto 2004-2005	1865195			c)	Less Advance Adjustments			
(ii)	Add during 2005-2006	3373500				during the year 2005-06-	16283787	237155554	24268779
(iii)	Less payment during 2005-06-	1731713	3506982	1865195					
4	Medical Oncology Fund				7	Building Construction			
(i)	Upto 2004-2005	108700			a)	Upto 2004-2005	297405544		
(ii)	Add during 2005-2006	320340			b)	During 2005-2006			
(iii)	Less payment during 2005-06-	366077	62963	108700		HSCC (Manifold)	1477371	298882915	297405544
					8	Vehicle			
					a)	Upto 2004-2005	741321		
					b)	Add value of TATA Sumo			
						taken on stock by stores			
						Section- IRCH as per			
						Audit Para 2.3.3 of SAR	200000	941321	741321
						for the year 2004-05			
					9	Capital Works		4064201	-

J.P.N. APEX TRAUMA CENTRE

Capital Grants	120000000	-	
Less transferred to			
Income & Expenditure	-100999	119899001	-

J.P.N. APEX TRAUMA CENTRE

Cash at Bank	6966601	-
Mach. & Equip.	112932400	-

POOR PATIENT A/C

1	AIIMS (Main)		
a)	Opening Balance		
	i) Cash/Bank	559517	
	ii) FDR's	327078	
b)	Receipts		
	i) Grants	392478	
	ii) Interest on		
	FDR's		

POOR PATIENT A/C

1	AIIMS (Main)		
a)	Cash/Bank	813303	559517
b)	FDR's	327078	327078
2	Dr.B.R.A.I.R.C.H		
	Cash/Bank	1234844	377382

iii) Payments	-138692			3 DR. R.P. CENTRE		
				a) Cash/Bank	12829	140511
c) Closing Balance						
i) Cash/Bank		813303	559517	4 N.S. CENTRE		
ii) FDR's		327078	327078	a) Cash/Bank	59004	56793
2 Dr.B.R.A.I.R.C.H.						
a) Cash/Bank	377382					
b) Receipts						
i) Grants	793351					
ii)Interest on FDR's	440968					
(iii) Payments	-376857					
c) Closing Balance						
Cash/Bank		1234844	377382			
3 DR. R.P. CENTRE						
a) Cash	140511					
b) Wrongly credit by bank	30000					
c) Receipts						
i) Interest on FDR's	2540					
ii) Payments	-160222					
d) Closing Balance		12829	140511			
4 N.S. Centre						
a) Cash/Bank	56793					
b) Imprest						
c) Donations	16676					
i) Payments	-14465					
d) Closing Balance		59004	56793			

PATIENT TREATMENT ACCOUNTS

1	AIIMS			
a)	Opening Balance	12404563		
b)	Receipts			
	(i) Grants	28722510		
	(ii) Interest	488516		
	(iii) Payments	-27379449		
c)	Closing Balance		14236140	12404563

2	Dr.B.R.A.I.R.C.H.			
a)	Opening Balance	8620196		
b)	FDR	6000000		
b)	Receipts			
	i) Grants	30926652		
	ii) Cheque Cancelled	-27605041		
	iii) Payments	-419384		
c)	Closing Balance		17522423	14620196

HOSTELS**Security Deposits**

i)	Upto 2004-05	155800		
ii)	receipts during 2005-06	616676		
iii)	less refunds during 2005-06	-195350	577126	155800

EXCESS OF INCOME OVER EXPENDITURE

1	AIIMS (Main)			-
(i)	During 2005-06	126920312		
(ii)	Excess of expenditure over income 2004-05	-22481530		
(iii)	Correction due to para 2.3.4 of SAR for 2004-05	181825	104620607	-

PATIENT TREATMENT ACCOUNTS

1	AIIMS	14236140		12404563
2	Dr.B.R.A.I.R.C.H.			
a)	Cash/Bank	11522423		8620196
b)	FDR's	6000000		6000000

HOSTELS

1	Cash in hand	7541		8038
2	Cash at Bank	221318		106431
3	FDR's	1738028		1341563

EXCESS OF EXPENDITURE OVER INCOME

1	AIIMS (M)			-	22481530
2	C.N.C.				
(i)	Excess of Expenditure over income	23411212			

2	R.P. Centre							
a)	Upto 2004-2005	5701439						
b)	During 2005-2006	3943952						
c)	Adj. due to para 2.3.4 of SAR for 04-05	740000	10385391	5701439				
3	C.T. PATIENT A/C							
i)	Upto 2004-05	231267675						
ii)	Excess of income over expenditure during 2005-06	17484947	248752622	231267675				
4	ANGIOGRAPHY PATIENT A/C							
i)	Upto 2004-05	80422187						
ii)	Less excess of expenditure over income during 2005-06	10612215	91034402	80422187				
5	GAMMA KNIFE PATIENT A/C							
i)	Upto 2004-2005	68446909						
ii)	Less excess of expenditure over income during 2005-06	19383373	87830282	68446909				
6	NEURO SURGERY PATIENT A/C							
i)	Upto 2004-05	29387294						
ii)	Excess of income over expenditure during 2005-06	10190280	39577574	29387294				
7	NDDTC							
i)	2004-05	5473558						
ii)	2005-06	2212595	7686153	5473558				
8	Dr.B.R.A.I.R.C.H.							
	During 2005-06		7734212	-				
					(ii) (-) Correction against para 2.3.4 of SAR 2004-05-1712000			
					(iii) Correction against para 2.5.4 of SAR 2004-05 941000			
					(iv) (-) Adjustment 2004-05 -495503			
					(v) Excess of Income over Expenditure	-17044713	5099996	23411212
					3 UNDCP		568051	-
					4 Dr.B.R.A.I.R.C.H.			
					i) During 2004-05	13160407		
					ii) Less over statement of receipts from NCCP as pointed out by the Audit-3763000		9397407	13160407
					Para 3.1.1 of SAR for the year 2004-05			

9	HOSTEL				
i)	Upto 2004-05	1300232			
ii)	During 2005-06	89529	1389761	1300232	
10	NATIONAL DRUG DEPENDENCE TREATMENT PROJECT (UNDCP)			577914	
		12763356910	10845085422		
				12763356910	10845085422

Note:

- 1 The accounts have been prepared on actual Receipts and Expenditure basis.
- 2 No depreciation on Mach. & Equipment, vehicles etc. has been provided as the Institute is fully funded by the Govt.
- 3 A statement showing by various project Investigators during 2005-06 is attached at Appendix-A-I. It may be mentioned that on completion of Research Projects, the equipment are either returned to the funding agencies or are used in the Departments.
- 4 Institute is exempted from Income-Tax under Section 8G(5)(vi) of the Income Tax Act, 1961.

(R.G. GARG)
FINANCIAL ADVISOR

(P. VENUGOPAL)
DIRECTOR

ALL INDIA INSTITUTE OF MEDICAL SCIENCES

**STATEMENT SHOWING THE RECEIPTS, EXPENDITURE OF THE GRANTS RECEIVED
DURING THE YEAR 2005-2006**

S. No.	Funding Agency	Opening Balance		Receipt	Total	Expenditure	Adj.	Opening Balance		Undisbursed Expenditure
		Credit	Debit					Credit	Debit	
1	ICMR	19217072	0	44462922	63679994	47644094			16035900	
2	C.S.I.R.	8331401	0	24795294	33126695	24132384			8994311	
3	DST	17382260	0	53525367	70907627	40785798			30121829	
4	UNICEF	287450	0	0	287450	0	0		287450	
5	D.B.T.	73386302	0	80839216	154225518	86103607		4635755	63486156	
6	CIPLA	12973	0	0	12973	0	56577		69550	
7	W.H.O.	200090	0	6076472	6276562	11974824	16079821		10381559	
8	CTC/ICDS	0	64789	0	-64789	0	60838			3951
9	U.G.C.	0	233332	2709437	2476105	2742545				266440
10	Indian Council of Agriculture Research.	0	30029	0	-30029	0	69965		39936	
11	Domain Chemical India Pvt. Ltd.	0	663	0	-663	0	0			663
12	Ministry of Health and Family welfare	6822799	0	3063553	9886352	3703689		2957643	3225020	
13	Ministry of Environment & Forest	0	421699	434418	12719	121130	0		0	108411
14	Dabur Research Foundation	1305924	0	689600	1995524	639831		74166	1281527	
15	M.R.C. - U.K.	217670	0	0	217670	0	42700		260370	
16	DEPTT. OF ELECTRONICS	0	830995	0	-830995	54583	1074732		189154	
17	Ministry of H.R.D. (DWCD)	0	4579	0	-4579	0				4579
18	Himalaya Drug Co.	60183	0	219289	279472	257371	105306		127407	
19	International Atomic Energy Agency	1100028	0	1524572	2624600	1707135	453881		1371346	
20	Deptt. of Atomic Energy	0	33733	0	-33733	0	65544		31811	
21	Serdia Pharma Company	0	7188	0	-7188	0	7188		0	

AIIMS 2005-2006/564

50	Hoechst India Ltd.	0	3105	0	-3105	0	4299		1194	
51	Central Council for Research in Yoga And Naturopathy	348425	0	1528878	1877303	1612446		102439	162418	
52	A.S.T.A	0	14963	0	-14963	0	14963		0	
53	Ranbaxy /Elililly & company pvt Ltd	825711	0	289509	1115220	409314		543488	162418	
54	Biomed Pvt. Ltd.	0	4744	0	-4744	0	5293		549	
55	Smithline Beecham Pharma	0	108018	0	-108018	0	124309		16291	
56	Rockfeller Fondation	3658161	0	0	3658161	0		3638792	19369	
57	National Institute of Health	16397577	0	11078359	27475936	28099941	8169668		7545663	
58	Norad, Norway	14748	0	2644460	2659208	2833922	274897		100183	
59	Central lab of Netherland	11131	0	0	11131	0		11131	0	
60	RLU (Orient Steel Industries)	0	40642	0	-40642	0	40642		0	
61	NIE	9802513	0	8821767	18624280	871769		1580579	16171932	
62	SAFA	12133	0	0	12133	0	12999		25132	
63	E.I.P.	0	150	0	-150	0	150		0	
64	I.E.C.	0	757	0	-757	0	0			757
65	Foster Parents Plan It.	9211	0	0	9211	0		9211	0	
66	Family Planning Foundation	1983	0	0	1983	0			1983	
67	Sarabhai Chemicals	1236	0	0	1236	0	0		1236	
68	INSA	592481	0	20000	612481	0		567150	45331	
69	Delhi Police	35	0	0	35	0		35	0	
70	TCL Bombay	0	1264	0	-1264	0	0			1264
71	Hindustan Antibiotic Ltd.	83	0	0	83	0			83	
72	Indira Gandhi National	0	122	0	-122	0	122		0	
73	SRB-Clinical Pharamacology	0	2847025	0	-2847025	0	0	307075	0	3154100
74	West Midland Regional Centre Services, UK	0	504	0	-504	0	504		0	
75	I.C.C.S.R.	14870	0	0	14870	0		14870	0	
76	Andaman/Nicobar	4192	0	0	4192	0			4192	
77	Asia Media Liasion (India)	9190	0	0	9190	0		9190	0	
78	M/S Jagsonpal Pharma	0	13869	0	-13869	0	20988		7119	
79	Panacea biotech Ltd.	86678	0	252340	339018	313958	0		25060	
80	The Dr.Willimar Sachwabe Arzneimittel Germany	14489	0	0	14489	0			14489	

81	Rhone-Poulence India Ltd.	86	0	0	86	0	0	86	
82	Somdutt Builders Ltd.	579	0	0	579	0	500	79	
83	Hindustan Lever Ltd.	0	431	0	-431	0	1080		1511
84	Revolving Funds for Drugs. / SNMC	311618	0	3500	315118	5744	113664	195710	
85	Atomic Energy Regulatory Board	859497	0	0	859497	410136	118055	331306	
86	Bhart Electrical Ltd.	0	77862	0	-77862	0	78000	138	
87	Sandoz	0	179842	0	-179842	0	179875	33	
88	Pfizer Ltd.	1148512	0	3732244	4880756	3427224		1453532	
89	Buyer India Ltd.	0	16002	0	-16002	0	17650	1648	
90	NATCO Pharma India	0	4000	110725	106725	80501	13180	13044	
91	University of Maryland	906598	0	711641	1618239	934221	0	344826	339192
92	Haryana Govt. (Distt, Sirsa)	0	3123	0	-3123	0	3123	0	
93	Glaxo India Ltd.	0	8376	0	-8376	0	8376	0	
94	Ministry of Defence (D.R.D.O)	156199	0	0	156199	87340	0	68859	
95	Cynamid India Ltd.	7410	0	0	7410	0	19895	27305	
96	Reckitt and Column	0	1405	0	-1405	0	8000	6595	
97	MBI Kits.	0	219	0	-219	0	0		219
98	Becton and Dickinson India	0	17	0	-17	0	17	0	
99	Nova Nordisk India	188003	0	260312	448315	89262	117521	241532	
100	Central Pollution Control Board	0	3017	0	-3017	0	7433	4416	
101	Bureau of Police Research and Development	0	23433	0	-23433	0	25580	2147	
102	Office of Salt Commission Jaipur	49049	0	0	49049	0	11935	37114	
103	Univesity of Nottingham	9229	0	0	9229	0	9229	0	
104	Unichem India Ltd.	0	204704	0	-204704	0	204704	0	
105	NAMS	12086	0	0	12086	0	0	12086	
106	Norweign University	1047674	0	0	1047674	0	1047674	0	
107	European Union/Commission	243971	0	0	243971	0	201996	41975	
108	Indian Institute of Technology	1829203	0	0	1829203	0	1829203	0	
109	International Cystic Febrosis/ World Wide USA	14287	0	0	14287	0	14287	0	
110	CONARD, USA	9832	0	0	9832	12221	2980	591	

111	The Cancer Foundation	0	464399	275000	-189399	43250	462814	230165	
112	Novartis India Ltd.	691986	0	721212	1413198	589810		289540	533848
113	National Institute for Population	258901	0	0	258901	0		258901	0
114	Atlas-Trail, U.K.	819086	0	0	819086	0		819086	0
115	Duke University Medical Centre	205588	0	0	205588	0			205588
116	National Institute for Mental Health	675849	0	0	675849	0		675849	0
117	Indian Council for Culture Relation	47357	0	0	47357	0		21413	25944
118	Lupin Lab	428003	0	0	428003	0		331905	96098
119	Maharishi Ayurveda	0	38228	406000	367772	344586	35292		58478
120	Nicholes India Ltd Mumbai	28103	0	0	28103	0		28103	0
121	UN International Drug and crime Control Programme	973561	0	1795144	2768705	1252464		1032139	484102
122	Dupher Interfrom Ltd	19290	0	0	19290	0		10827	8463
123	Hoechst Marian Russel	146724	0	0	146724	0		146724	0
124	Ministry of Home Affair	0	57403	0	-57403	0	57403		0
125	Russan Pharma Ltd Mumbai	0	119727	0	-119727	0	124742		5015
126	Central Council for Research in Ayurveda & Sidha	563607	0	951727	1515334	631387		53824	830123
127	Global Forum for Health and Research	0	299460	0	-299460	0	406210		106750
128	Nucron Pharma Ltd.	66902	0	0	66902	0		430	66472
129	Terry Fox Foundation/ CANADIAN HIGH COMMISSION	805528	0	700000	1505528	921075		579503	4950
130	Ministry of Social Justice and Empowerment	90834	0	130220	221054	152657	9485		77882
131	Quintiles Spectral India	1443866	0	3035908	4479774	2213079	9143		2275838
132	United Nation Industrial Development	95946	0	0	95946	0		52089	43857
133	Mustrad Research And Promotion Center	0	15359	0	-15359	0	32795		17436
134	National Institute of Management	0	16625	0	-16625	0	16625		0
135	Ministry of Communication and Information & Technology	3093488	0	0	3093488	939603		59949	2093936
136	University of Bergan, Norway	0	112865	5116616	5003751	2296463	1040235		3747523

137	Shantha Biotechics Pvt Ltd	0	46510	0	-46510	0	46510		0	
138	Zydas Healthcare Ltd	87835	0	0	87835	0		88233		398
139	Life Sciences Research Board	375219	0	0	375219	0		375219	0	
140	Jamia Milia Islamia	40691	0	0	40691	0		40691	0	
141	Ferrosan, Denmark	65603	0	0	65603	0		59051	6552	
142	University of Queensland	22700	0	0	22700	0		22700	0	
143	University of Delhi	0	309857	0	-309857	0	329075		19218	
144	Oxford University, UK	0	290728	388640	97912	355582	1131833		874163	
145	Federation of Obstetric & Gynaecological	0	70992	0	-70992	7148	77764			376
146	United Nation Development Programme	0	6343	0	-6343	0	44129		37786	
147	National Cancer Research U.S.A.	430381	0	0	430381	0		430381	0	
148	Aimil Pharmaceutical India Ltd.	0	35657	0	-35657	0	35792		135	
149	U.S.V. Ltd.	0	20270	0	-20270	0	20456		186	
150	Pharmacia India Pvt. Ltd	0	38186	0	-38186	0	38186		0	
151	Heinz Nutrition Foundation India	24370	0	0	24370	0			24370	
152	International Pancia Ltd.	34718	0	0	34718	0		34718	0	
153	National Council of Applied Economic Research	157098	0	0	157098	0		157098	0	
154	SGPGIMS	414957	0	0	414957	0		386426	28531	
155	Caltaq Laboratories Ltd.(U.S.A)	13500	0	0	13500	0	8558		22058	
156	Jaslok Hospital & Research Center	35000	0	0	35000	0		35000	0	
157	INCTR USA	1156153	0	749690	1905843	922455	0	737183	246205	
158	Ortho Clinical Diagnostic	25000	0	0	25000	0		25000	0	
159	Indian Institute of Sciences, Banglore	384981	0	0	384981	0		384976	5	
160	Society for Innovation & Devlopment	15840	0	0	15840	0		15840	0	
161	FOGSI-Rhoge India	0	67114	0	-67114	0	67114		0	
162	Development Co. Pharmaceuticals Ltd (U.K)	0	478674	0	-478674	0	478674		0	
163	Nottingham Health Care	0	9200	0	-9200	0	23429		14229	
164	International Consortium for Mental Health Policy	0	313319	0	-313319	0	735472		422153	

194	INST. OF NUCLEAR MEDICNE & ALLIED SCIENC	17639	0	0	17639	0	4930		22569	
195	SAVING NEWBORN LIVES, USA	679774	0	0	679774	669050		1804	8920	
196	DANIDA RESEARCH COUNCIL	168393	0	340019	508412	311282		23912	173218	
197	CASE WESTERN RESERVE UNIVERSITY	0	162	0	-162	0	162		0	
198	THE MICRONUTRIENT INITIATIVE, ASIA	621481	0	379784	1001265	984233		2020	15012	
199	Ministry of Health And Family Walfare(N.A.C.O)	696107	0	3157112	3853219	1349409	376289		2880099	
200	The University of Albama, USA	2406206	0	843750	3249956	780611			2469345	
201	Ministry of External Affairs	0	60350	632920	572570	359650	0		212920	
202	Indian council of Philosophical Research	40000	0	42000	82000	82000	0		0	
203	FACSIMILE TRANSMITTAL	0	8769	0	-8769	0	8769		0	
204	Sterling Synergy System (P) Ltd.	48732	0	124800	173532	13744	6190		165978	
205	Reliance Clinical Research Services (P) Ltd.	131938	0	10000	141938	84214	4847		62571	
206	INTAS Pharmaceuticals Ltd.	12997	0	157499	170496	170496	0		0	
207	KLPP,USA	1446504	0	1540000	2986504	1023445		103947	1859112	
208	Vulimini Ramalingaswami Foundation	147611	0	25000	172611	104561		14248	53802	
209	Texas A&M Research Foundation (TAMRF) USA	551492	0	0	551492	533839			17653	
210	Biomerieux India (P)Ltd.	56093	0	82029	138122	126916	0		11206	
211	Media Lab Asia	209045	0	958058	1167103	881772		20150	265181	
212	University of Warwick U.K	166220	0	0	166220	0	0		166220	
213	BHARAT SERUMS AND VACCINES LTD.	0	0	200000	200000	176981		6396	16623	
214	CD PHARMA INDIA Pvt. Ltd.	0	0	400659	400659	143084		38756	218819	
215	Khandelwal Laboratories Ltd.	0	0	50000	50000	23803			26197	
216	BONE & JOINT DECADE INDIA	0	0	100000	100000	91000	0		9000	
217	I.S.H.T.M	0	0	200000	200000	58371		67992	73637	
218	National Institute of Nutrition (NIN) Hyderabad	0	0	595000	595000	623795	13531			15264
219	Ozone pharmaceuticals ltd.	0	0	124595	124595	3738	0		120857	

220	Delhi Tapedik Unmulan Samiti	0	0	250640	250640	91693		18148	140799	
221	KOBE, JAPAN	0	0	275730	275730	63833			211897	
222	Troikaa Pharmaceutical Ltd	0	0	94390	94390	59532	0		34858	
223	International Paedtrics Nephrology Association	0	0	266825	266825	168325		22000	76500	
224	Synergy Network India Pvt Ltd,	0	0	183000	183000	177763			5237	
225	Solvey Pharma Ltd.	0	0	123764	123764	3713	0		120051	
226	PPD Pharmaceutical Development India Pvt. Ltd.	0	0	144900	144900	44585		29436	70879	
227	M/S Aspreva Pharmaceutical Corporation, Canada	0	0	58729	58729	28442		32680		2393
228	Clinirx Research Pvt. Ltd. Gurgaon, Haryana	0	0	112212	112212	3366	0		108846	
229	Clincyte, Usa	0	0	250000	250000	7500	0		242500	
	Grand Total	199893927	12064025	289491247	477321149	291238872	33958964	33958964	193499723	7417446

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(R.G. GARG)
FINANCIAL ADVISOR

**ALL INDIA INSTITUTE OF MEDICAL SCIENCES
RESEARCH SECTION****Statement of Expenditure Made for Purchasing Equipment
during the Financial Year 2005-2006**

S.No.	Code No.	Project Investigators	Month	Amount
1	N690A	DR. A.K.DINDA	MAY'2005	75,060
2	N659	DR. A.K.MAHAPATRA	AUG'2005	28,000
3	N771	DR. A.SRINIVASAN	DEC 2005	795,828
4	N771	DR. A.SRINIVASAN	JAN 2006	350,212
5	N771	DR. A.SRINIVASAN	FEB 2006	85,836
6	N782	DR. ANJU DAWAN	MAR 2006	5,100
7	N730	DR. ASHOK KUMAR	JUL'2005	65,000
8	N730	DR. ASHOK KUMAR	AUG'2005	325,900
9	N642	DR. ATUL SHARMA	SEP'2005	71,032
10	N772	DR. B.K.DAS	JAN 2006	96,594
11	N772	DR. B.K.DAS	MAR 2006	99,563
12	N787	DR. B.K.DAS	MAR'2006	413,130
13	D174	DR. B.R.MIRDHA	NOV'2005	27,000
14	N811	DR. BALRAM BHARGAVA	MAR 2006	92,980
15	N656	DR. BENU DHAWAN	NOV'2005	30,688
16	N794	DR. BENU DHAWAN	MAR 2006	1,475,187
17	N700	DR. Ch. V.RAO/KAMAL KISHORE	JUL'2005	19,800
18	N800	DR. D.K.GUPTA	JAN 2006	250,248
19	N800	DR. D.K.GUPTA	MAR 2006	517,291
20	D169	DR. D.N.RAO	MAY'2005	10,114
21	N469	DR. D.N.SRIVASTAVA	MAR'2006	5,400
22	I413	DR. H.K.PRASAD	SEP'2005	9,000
23	N728	DR. J.S.TYAGI	MAR'2006	343,656
24	N739	DR. J.S.TYAGI	DEC'2005	121,264
25	N645	DR. K.ANAND	MAY'2005	61,040
26	N707	DR. K.ANAND	AUG'2005	80,906
27	I457	DR. KALPANA LUTHRA	DEC 2005	228,969
28	N770	DR. KALPANA LUTHRA	NOV 2005	1,377,770
29	N695	DR. KIRAN KUCHERIA	JUN'2005	62,400

30	N749	DR. KIRAN KUCHERIA	MAY'2005	434,838
31	N749	DR. KIRAN KUCHERIA	NOV'2005	384,154
32	N749	DR. KIRAN KUCHERIA	MAR'2006	1,058,200
33	N760	DR. KIRAN KUCHERIA	JAN'2006	4,206,701
34	N766	DR. KRISHNA DALAL	NOV 2005	548,815
35	N766	DR. KRISHNA DALAL	DEC 2005	21,005
36	N766	DR. KRISHNA DALAL	JAN 2006	22,950
37	I420	DR. LALIT DAR	MAY'2005	733,200
38	N721	DR. M.IRSHAD	MAR'2006	19,968
39	N727	DR. M.R.RAJESWARI	OCT'2005	81,900
40	N727	DR. M.R.RAJESWARI	MAR'2006	878,144
41	N625	DR. M.V.PADMA	SEP'2005	43,575
42	N640	DR. N.C.CHANDRA	DEC'2005	48,600
43	N781	DR. N.K.MEHRA	MAR 2006	9,125,706
44	D179	DR. N.R.JAGANNATHAN	NOV'2005	460
45	D180	DR. NAGENDRA SINGH/ T.P.SINGH	JUL'2005	57,070
46	D180	DR. NAGENDRA SINGH/ T.P.SINGH	AUG'2005	7,700
47	D180	DR. NAGENDRA SINGH/ T.P.SINGH	SEP'2005	39,955
48	D180	DR. NAGENDRA SINGH/ T.P.SINGH	FEB'2006	7,300
49	N612	DR. NAVEET WIG	NOV'2005	14,000
50	N756	DR. NEERJA BHATLA	MAR 2006	444,355
51	N731	DR. NEETA SINGH	JUL'2005	47,250
52	N731	DR. NEETA SINGH	AUG'2005	65,329
53	N731	DR. NEETA SINGH	SEP'2005	612,527
54	N731	DR. NEETA SINGH	NOV'2005	48,000
55	C611	DR. P.CHATTOPADHYAY	MAR 2006	293,609
56	I450	DR. PARTHAPRASAD CHATTOPADHYA	AUG 2005	8,100
57	I450	DR. PARTHAPRASAD CHATTOPADHYA	MAR 2006	139,872
58	I394	DR. PRAMOD GARG	MAR'2006	14,800
59	N632	DR. PRATIMA RAY	MAY'2005	204,825
60	N632	DR. PRATIMA RAY	JUL'2005	49,100
61	N632	DR. PRATIMA RAY	OCT'2005	72,246
62	N089	DR. R.K SHARMA	MAY'2005	18,402
63	N089	DR. R.K SHARMA	NOV'2005	151,840
64	I455	DR. R.LAKSHMY	MAR 2006	337,077
65	D182	DR. R.M.PANDEY	SEP'2005	14,900

66	D182	DR. R.M.PANDEY	NOV'2005	82,800
67	N284A	DR. R.M.PANDEY	AUG'2005	14,000
68	N745	DR. RAMA CHAUDHARY	JUL'2005	35,625
69	N745	DR. RAMA CHAUDHARY	AUG'2005	61,491
70	N745	DR. RAMA CHAUDHARY	SEP'2005	251,621
71	N745	DR. RAMA CHAUDHARY	OCT'2005	260,342
72	N784	DR. RANDEEP GULERIA	MAR 2006	140,400
73	N702	DR. RANI KUMAR	MAY'2005	43,160
74	D185	DR. RANJU RALHAN	DEC 2005	43,713
75	D185	DR. RANJU RALHAN	MAR 2006	385,348
76	I391	DR. RANJU RALHAN	MAY'2005	38,189
77	N729	DR. RANJU RALHAN	DEC'2005	926,672
78	N729	DR. RANJU RALHAN	JAN'2006	153,341
79	N729	DR. RANJU RALHAN	MAR'2006	39,520
80	N742	DR. RANJU RALHAN	DEC'2005	123,711
81	N742	DR. RANJU RALHAN	MAR'2006	599,015
82	D160	DR. RENU SAXENA	MAY'2005	179,500
83	D184	DR. RENU SAXENA	MAR 2006	5,998,044
84	N711	DR. RENU SAXENA	FEB'2006	496,467
85	N780	DR. RENU SAXENA	MAR 2006	32,592
86	C605	DR. ROHINI HANDA	NOV'2005	19,990
87	D186	Dr. ROHIT SAXENA	MAR 2006	14,352
88	I441	DR. S.K.ACHARYA	MAY'2005	227,478
89	I441	DR. S.K.ACHARYA	JUN'2005	1,471,975
90	N776	DR. S.K.KABRA	DEC 2005	17,100
91	N776	DR. S.K.KABRA	JAN 2006	18,800
92	N703	DR. S.K.MAULIK	AUG'2005	54,236
93	D173	DR. S.K.PANDA	MAY'2005	28,000
94	D173	DR. S.K.PANDA	OCT'2005	93,702
95	N710	DR. S.K.PANDA	APR'2005	691,492
96	N724	DR. S.K.PANDA	JUL'2005	92,038
97	N724	DR. S.K.PANDA	SEP'2005	629,700
98	N755	DR. S.K.SHARMA	DEC'2005	48,672
99	D189	DR. S.S.CHAUHAN	SEP 2005	130,219
100	D189	DR. S.S.CHAUHAN	DEC 2005	48,199
101	D166	DR. SAMPATH MUKHOPADHAYAY/ M.K.BHAN	OCT'2005	22,391

102	N824	DR. Sanjeev Sinha	MAR 2006	482,355
103	D181	DR. SARMAN SINGH	SEP'2005	1,838,950
104	D181	DR. SARMAN SINGH	FEB'2006	296,400
105	D177	DR. SAVITA YADAV	MAY'2005	7,700
106	N623	DR. SEEMA MUKHOPADHYAY	MAR'2006	43,110
107	D194	Dr. Sharmistha Dey	DEC 2005	214,972
108	D194	Dr. Sharmistha Dey	JAN 2006	36,787
109	N765	DR. SHEFFALI GULATI	DEC'2005	14,000
110	N318	DR. SHINJINI BHATNAGAR	DEC'2005	4,545
111	N661	DR. SHINJINI BHATNAGAR	JUL'2005	74,460
112	N661	DR. SHINJINI BHATNAGAR	MAR'2006	29,700
113	N725	DR. SHINJINI BHATNAGAR	NOV'2005	453,988
114	N725	DR. SHINJINI BHATNAGAR	DEC'2005	7,750
115	N737	DR. SHINJINI BHATNAGAR	JUL'2005	17,700
116	N737	DR. SHINJINI BHATNAGAR	SEP'2005	38,500
117	I435	DR. SHOBHA BROOR	MAY'2005	47,320
118	I435	DR. SHOBHA BROOR	JUN'2005	4,056
119	I435	DR. SHOBHA BROOR	SEP'2005	198,660
120	I435	DR. SHOBHA BROOR	OCT'2005	703,831
121	N691	DR. SHOBHA BROOR	JUN'2005	2,150
122	D192	DR. SUBRATA SINHA	DEC 2005	3,905,140
123	D192	DR. SUBRATA SINHA	MAR 2006	4,570,601
124	N741	DR. SUBRATA SINHA	MAY'2005	395,305
125	N741	DR. SUBRATA SINHA	JAN'2006	86,494
126	N602	DR. SUNEETA MITTAL	AUG'2005	72,765
127	N603	DR. SUNEETA MITTAL	APR'2005	135,589
128	D183	DR. T.P.SINGH	JUN 2005	66,938
129	D183	DR. T.P.SINGH	JUL 2005	704,821
130	D183	DR. T.P.SINGH	AUG 2005	217,803
131	N736	DR. T.P.SINGH	NOV'2005	26,410,587
132	N736	DR. T.P.SINGH	DEC'2005	9,095,216
133	N736	DR. T.P.SINGH	JAN'2006	2,688,465
134	N747	DR. T.S.JAYALAKSHMI	JUN'2005	3,200
135	N763	DR. UMESH KAPIL	AUG'2005	19,950
136	N764	DR. UMESH KAPIL	AUG 2005	25,600
137	D142	DR. USHA KIRAN	JUN'2005	122,011

138	N358	DR. V.RAINA	FEB'2006	142,064
139	N804	DR. VINEET AHUJA	FEB 2006	15,808
140	D176	DR. VINOD KOCHUPILLAI	OCT'2005	936,160
141	N809	DR. VINOD KOCHUPILLAI	MAR 2006	1,071,899
142	I447	DR. Y.D.SHARMA	FEB'2006	626,101
143	I447	DR. Y.D.SHARMA	MAR'2006	337,077
144	N052	DR. Y.D.SHARMA	FEB'2006	318,603
145	N052	DR. Y.D.SHARMA	MAR'2006	177,531
146	N775	DR. Y.D.SHARMA	JAN 2006	8,040,385
147	N195	DR. Y.K.GUPTA	MAR'2006	131,643
148	N000	SH. S.P.MAHLA	OCT'2005	126,550
149	N000	SH. S.P.MAHLA	NOV'2005	28,750
TOTAL				105,885,326

(R.G. GARG)

ALL INDIA INSTITUTE OF MEDICAL SCIENCES

LIST OF SUNDRY DEBTORS (SCHEME CELL)

S.No	Funding Agency	AMOUNT
1	CTC/ICDS	3951
2	U.G.C.	266440
3	Domain Chemical India Pvt. Ltd.	663
4	Ministry of Environment & Forest	108411
5	Ministry of H.R.D. (DWCD)	4579
6	Roussel Sci. Instt.	73
7	Serum Instt. Of India	236
8	Deptt. Of Ocean Development	5644
9	Torrent Pharma	51312
10	Prakash Health and Research Foundation	120
11	Australian International Development Assistance Bureau	1858
12	INCLEN	2204211
13	Park-Davis	1011
14	I.E.C.	757
15	TCL Bombay	1264
16	SRB-Clinical Pharamacology	3154100
17	Hindustan Lever Ltd.	1511
18	MBI Kits.	219
19	Zydas Healthcare Ltd	398
20	Federation of Obstetric & Gynaecological	376
21	The Population Council	1589737
22	National Institute of Oceanography	2918
23	National Institute of Nutrition (NIN) Hyderabad	15264
24	M/S ASPREVA PHARMACEUTICAL CORPORATION, CANADA	2393
Grand Total		7417446

ALL INDIA INSTITUTE OF MEDICAL SCIENCES
STATEMENT SHOWING THE DONATIONS & INVESTMENT AS ON 31-3-2006

S.NO.	PARTICULARS & MODE OF INVESTMENT	AMOUNT OF DONATION	AMOUNT OF INVESTMENT
1	AIIMS ROTARY CANCER HOSPITAL	70000	70000
2	MISC DONATION FOR THE DEPTT OF ONCOLOGY UNDER DR. A.K. SARAYA (FIXED DEPOSIT)	8000	8000
3	R.S. NANDA (UNIT TRUST)	78274	78274
4	ANNONYMOUS DONORS	70000	70000
5	DR. B.B. DIXIT LIB.	10000	13700
6	CHACHAMA DONORS	150000	199600
7	MJ. GENERAL S.L. BHATIA	10000	9800
8	MJ. GENERAL AMIR CHAND	150000	149660
9	DR. K.L. WIG(UNIT TRUST)	15000	14910
10	ZENITH FINANCE & CO.(UNIT TRUST)	6000	6000
11	KAMANI CHARITY TRUST(UNIT TRUST)	5000	5100
12	SARUP CHAND HANS RAJ	20000	19500
13	RAJ KUMARI AMIRT KAUR(FIXED DEPO.)	25000	25000
14	KATHERINE SORAL FROYMAN	5000	5000
15	DR.S.L. KALRA	6000	5800
16	R.L. RAJGARHIA(FIXED DEPOSIT)	850000	850000
17	SMT. PRAKASH WATI DONATION	13800	13800
18	SMT. KRIPAL KAUR(UNIT TRUST)	6000	5908
19	SMT. KAUSHALYA THAPAR(UNIT TRUST)	12000	12017

20	SH. G.D. JHANGINI(FIXED DEPOSIT)	25500	25602
21	LALA KHUSHI RAM(FIXED DEPOSIT)	247753	247753
22	SMT. BRIJ RAJ SAWHENY(UNIT TRUST)	22501	22472
23	S.P. VIRMANI(FIXED DEPOSIT)	1500	1500
24	EAST INDIA COMMERCIAL PVT.LTD. CALCUTTA (FIXED DEPOSIT)	3200000	2800000
25	DR. KANTI KAPILA(UNIT TRUST)	10079	10002
26	DR. V. RAMALINGASWAMI(UNIT TRUST)	8000	7996
27	DR. S. SABHARWAL(UNIT TRUST)	10000	9951
28	DR. N.H. KASWANI(UNIT TRUST)	10000	9990
29	DR. B.K. ANAND(UNIT TRUST)	5000	4995
30	DR. V. HINGORANI	15000	15000
31	KUMUDINI KRISHNA MOORTHY	15000	15000
32	G.R. RADHAKRISHNA (SARASWATI MEMORIAL ORATION, unit Trust)	20000	19987
33	P.L. TANDON(FIXED DEPOSIT)	15000	15000
34	XV INTERNATION CONGRESS OF PEDIATRICS (UNIT TRUST)	40000	40000
35	RAM LOBHAYA DONATION(F.D.)	15000	15000
36	SUBHASH MEMORIAL FOUNDATION (V.L. TELEKAR DONATION)	10101	10101
37	SMT. INDIRA SATYANAND	10000	10000
38	SH. K.V. SUBA RAO	10000	10000
39	NEWZELAND HIGH COMMISSION	10000	10000
40	AKHILESH MITTAL(SUMITH MOHAN SADAN DAYAL TRUST)	20000	20000
41	PREMALATA KAPOOR	10000	10000

42	DWARKA PRASAD TRUST	50000	50000
43	LATE. SH. D.R. BAHRI	15000	15000
44	SEWA RAM	15000	15000
45	FACULTY BENEVELENT FUNT	60065	60065
46	VCERANGE MEMORAIL TRUST	50000	50000
47	SH. DORABJI TRUST	10000	10000
48	CORPUS FUND	30000	30000
49	AIIMSONIANS	10000	10000
50	SARLA ATAM PRAKASH	15000	15000
51	K.L. WIG RESEARCH FOUNDATION	100000	100000
52	KAMLA B.K. ANAND	100000	100000
53	V.K. MITTAL	130000	130000
54	SNEH LATA SONI	15000	15000
55	AIIMSONIAN OF AMERICA	129850 151630 126471	129850 151630 126471
56	SMT. LEELA WATI SALWAN	15000	15000
57	BINEY ROHTAGI & SMT. SHAKUNTALA	36000	-
58	DR. D.K. GUPTA	100000	100000
59	J.R. CHAWLA	15000	15000
60	URMIL SHARMA IN R/O SHYAM SHARMA	15000	15000
61	SMT. SUSHILA WATI MALHOTRA	500000	500000
62	BASATI DEVI	100000	100000
63	ORTHOPAEDICS FUND	250000	250000
64	DR. S.B. ROY	125000	125000
65	MR. R.V. KANDHARI	100000	100000

66	DR. B.K. KAPOOR	125000	125000
67	SMT. SAVITRI UGGARSEAN	100000	100000
68	VIMAL LAUMAS	200000	200000
69.1	MRS. PROMIDA BAJAJ	200000	200000
69.2	MRS. PROMIDA BAJAJ (for TREATMENT OF BREAST CANCER PATIENTS)	200000	200000
70	DR. V. RAMALINGASWAMI	100000	100000
71	DR. N.C. NAYAK	100000	100000
72	DR. H.D. TANDON	100000	100000
73	Prof. N.GOPINATH (CTVS)	1200000	1200000
74	Prof. L.K. BHUTANI ORATION	500000	500000
TOTAL		10959524	10575434

It is certified that investment shown above are either lying with the safe custody of Accounts Officer (Cash) or held with the State Bank of India, Ansari Nagar, New Delhi.

(R.G. GARG)
FINANCIAL ADVISOR

STATEMENT SHOWING THE GPF INVESTMENTS AS ON 31.03.2006

(a) Investment in Banks / PSUs

	Name of the Bank / PSUs	FDR No.	Amount	Date of maturity
1.	HUDCO	38969	Rs. 6,00,00,000/-	22.02.2007
2.	Sardar Sarovar Narmada Nigam Limited	C-725824	Rs. 6,00,00,000/-	21.02.2007
3.	Sardar Sarovar Narmada Nigam Limited	C-787745	Rs. 3,50,00,000/-	12.08.2007
4.	Sardar Sarovar Narmada Nigam Limited	D-0858967	Rs. 7,00,00,000/-	01.07.2008
5.	Sardar Sarovar Narmada Nigam Limited	C-714944	Rs. 6,00,00,000/-	17.12.2006
6.	State Bank of India	A/37 227201	Rs. 7,00,00,000/-	06.11.2006
7.	Canara Bank	CCS022/80	Rs. 5,00,00,000/-	22.01.2008
8.	Syndicate Bank	693985	Rs.18,00,00,000/-	20.12.2008
9.	Syndicate Bank	874034	Rs. 5,00,00,000/-	11.02.2009
	Total		Rs.63,50,00,000/-	

(b) Investments in Post office

	Name of the Post Office	Number	Amount	Date of maturity
1.	Post Office Jaipur		Rs.10,00,00,000/-	25.03.2009
2.	Post Office Jaipur		Rs.12,00,00,000/-	29.09.2009
3.	Post office, Jhunjhnu		Rs.13,00,00,000/-	31.03.2010
	Total		Rs.35,00,00,000/-	

(c) List of Securities held with R.B.I

S.No	Detail of the bonds	Date of Maturity	Amount
1	6.75% GOI	2006	Rs. 1,25,000/-
2	7% GOI	2009	Rs. 7,50,000/-
3	8% GOI	2011	Rs. 2,00,000/-
	Total		Rs.10,75,000/-

d. Special Deposit Scheme
(SDS SBI 10.9.75)

Rs. 44,34,17,465/-

e. I.D.B.I Bonds

S.No	Detail of the bonds	Date of Maturity	Amount
1.	No.000807	2009	Rs. 5,00,000/-
2.	No.0007	2009	Rs. 1,00,000/-
3.	No.000713	2009	Rs. 1,00,000/-
4.	No.000430 to 000447& 000454 to 000462(total 27 bonds)	2010	Rs. 27,00,000/-
5.	000364 to 376 (total 13)	2009	Rs. 13,00,000/-
6.	No.000434	2010	Rs. 20,00,000/-
7.	No.000674	2010	Rs. 10,00,000/-
Total			Rs. 77,00,000/-

f. CENTRAL AND STATE BONDS/CERTIFICATES

S.No	Detail of the bonds	Date of Maturity	
1	DH-88 @ 8% Rs.6,25,000/- G.O.I Certificate	2011	Rs. 625,000/-
2	DH-11 @ 10.5% Rs.4 lacs G.O.I Certificate	2014	Rs. 4,00,000/-
3	DH-6 @ 6.5% Rs.5 lacs G.O.I Certificate	2006	Rs. 5,00,000/-
4	DH-12 @ 7% Rs.4,50,000/- G.O.I Certificate	2009	Rs. 4,50,000/-
5	DH-4 @ 10% Rs.20 lacs G.O.I Certificate	2014	Rs. 20,00,000/-
6	DH-47 @ 11.5% Rs.4.5 lacs G.O.I Certificate	2015	Rs. 4,50,000/-
7	DH-11 @ 10% Rs.10 lacs G.O.I Certificate	2014	Rs. 10,00,000/-
8	DH-50 @ 11.5% Rs.5.05 lacs (G.O.I)	2015	Rs. 5,05,000/-
9	DH-64 @ 11.5% Rs.6 lacs G.O.I Certificate	2015	Rs.6 ,00,000/-
10	DH-23 @ 12% U.P.State Rs.15,96,000/-	2011	Rs. 15,96,000/-
Total			Rs. 81,26,000/-

(g) Sardar Sarovar Narmada Nigam Limited (SSNNL) Bonds (200 Bonds of Rs. 5000/- each) of Rs. 10,00,000/- bearing serial number from 119091 to 119290 had been sent for redemption after maturity but redemption amount has not been received so far.

Grand Total

Rs. 144,63,18,465/-

It is certified that all the above securities / Bonds / FDRs are physically lying in safe custody of Accounts Officer (GPF) except securities at (c) and (g) as securities at (c) are held by RBI and bonds at (g) had been sent for redemption.

Financial Advisor

**ALL INDIA INSTITUTE OF MEDICAL SCIENCES
DETAILS OF MISC. DONATION ACCOUNTS FOR THE YEAR 2005-2006**

S.NO.	DEPARTMENT	OPENING BALANCE AS ON 1-4-2005	GRANT	TOTAL	EXPENDITURE	CLOSING BALANCE AS ON 31-3-2006
1	R. & A.L.	19475	-	19475	-	19475
2	Psychiatry	28495	-	28495	-	28495
3	Haematology	18374	75000	93374	34032	59342
4	Orthopaedics	65586	-	65586	-	65586
5	Immunology	824	-	824	-	824
6	Paed. Surgery	32041	-	32041	-	32041
7	Instt. Misc.	137338	-	137338	-	137338
8	Dermatology	15974	-	15974	-	15974
9	Dr.B.R.A.I.R.C.H. (Dr. V. Kochupillai)	10460	-	10460	-	10460
10	Leprosy (Dr. L.K. Bhutani)	115785	-	115785	-	115785
11	A.K. Basu/Dr. Raina Dr.B.R.A.I.R.C.H.	17651	-	17651	-	17651
12	C.N. Centre Purchase of Ambulance	20418	-	20418	-	20418
13	B.B. Dixit Library	3324	-	3324	-	3324
14	Employees Welfare Fund	125139	-	125139	-	125139
15	PMR Poor Fund	46199	-	46199	2000	44199
16	Surgery Deptt.	501	-	501	-	501
17	K.L. Wig CMET (Ford Foundation)	12021	-	12021	-	12021
18	N. MEDICINE	19571	-	19571	-	19571
19	C.E.U.	30000	-	30000	-	30000
20	A.I.D. Marrow Registry Dr. N.K. Mehra, HLA	50000	-	50000	-	50000
21	I.C.G.E.B. (Dr. T.P. Singh)	444630	-	444630	-	444630

22	Dr. Veena Kalra	138200	-	138200	-	138200
23	Liver Clinic Deptt. of Gastro.	2865	-	2865	-	2865
24	M.I. Urology Dr. N.P. Gupta	4982	-	4982	-	4982
25	Dr. N. Kochupillai (Poor Patient)	120000	-	120000	-	120000
26	Paed. Genetics	162586	2016590	2179176	1651414	527762
27	Cochlear (ENT)	528979	18218837	18747816	18420714	327102
TOTAL		2171418	20310427	22481845	20108160	2373685

(R.G. GARG)
FINANCIAL ADVISOR

ALL INDIA INSTITUTE OF MEDICAL SCIENCES**2005-2006**

S.NO.	MISCELLANEOUS DEPOSITS	AMOUNT
1	Controller of Printing & Stationary	16076
2	C.P.W.D. Shimla	70432
3	C.P.W.D.	7096
4	Delhi Municipal Corporation	33750
5	Indian Institute of Technology	4250
6	N.D.M.C.	173242
7	P. & T. Circle Division	12796
8	Indian Telephone Industries	13344
TOTAL		330986

(R.G. GARG)
FINANCIAL ADVISOR

ALL INDIA INSTITUTE OF MEDICAL SCIENCES
G.P.F. SECTION

Receipts and payments accounts of General Provident Funds of the AIIMS for the year ending 31st March, 2006

Receipts	Amount	Payment	Amount
Cash Book	14725784.00	Withdrawal	300435044.00
Opening Balance	308001159.00	Investment during the year 2005-06	390000000.00
Receipts (Sub.& Rec.)	106316086.00	Cash Book Balance	15032985.00
Add Investment Maturity	<u>276425000.00</u>		
	<u>705468029.00</u>		<u>705468029.00</u>

Balance sheet of General Provident Funds of the AIIMS as on 31st March, 2006

Liabilities	Amount	Assets	Amount
General Provident		Investment	
Opening Balance	1347163477.00	Opening Balance	1332437693.00
Add Receipt during the year 2005-06	308001159.00	Add Investment during the year 2005	390000000.00
Add Interest Received	106316086.00	Add Cash Book Closing Balance	15032985.00
	<u>1761480722.00</u>		
Less Withdrawal	300435044.00	1737470678.00	
	<u>1461045678.00</u>	Less Investment	276425000.00
			<u>1461045678.00</u>

ACCOUNTS OFFICER

12.2 Audit Report on the accounts of All India Institute of Medical Sciences, New Delhi for the year 2005-06

Introduction

The All India Institute of Medical Sciences (Institute) was established in November 1956 under All India Institute of Medical Sciences Act, 1956. The main objectives of the Institute are to provide:

- Undergraduate and postgraduate teaching in the science of modern medicines and other allied sciences including biological sciences.
- Facilities for research in various branches of such sciences, establish and maintain one or more medical college, dental college, nursing college and well equipped hospital etc. and hold examinations and grant degrees, diplomas and other academic distinctions and titles

The accounts of the Institute are audited under Section 19(2) of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 read with Section 18(2) of the All India Institute of Medical Sciences Act, 1956.

During 2005-06 the Institute received grants of Rs. 275.00 crore under Non-plan and Rs. 163.36 crore under Plan from Government of India, Ministry of Health and Family Welfare. In addition, the Institute received plan grants amounting to Rs. 3.70 crore for National Drugs Dependence Treatment Centre, Rs. 0.91 crore for VVIP care and Rs. 0.07 crore for College of Nursing.

Comments on Accounts

2. Balance Sheet

Liabilities

2.1 Incorrect exhibition of liabilities in Patients Accounts.

Cardio-thoracic and Neurosciences Centre (CNC) of the Institute maintains Angiography patient account, C.T. patient account, Gamma knife patient account and Neuro surgery patient account. The receipts of these departments consist of charges received from the patients and the interest earned from investing the receipts in C.T. patient and Angiography patient account in FDRs. At the close of the financial year, the balances in this account should be the amounts which have to be refunded to the patients who did not turn up for treatment or balances on account of excess receipts. The liability side of the Balance Sheet shows excess of income over expenditure of these amounts in all the four accounts as under:

(Rs. in lakh)		
S. No.	Name of the account	Amount
1	Angiography Patient	910.34
2	C.T. Patient	2487.53
3	Gamma knife Patient	878.30
4	Neuro Surgery Patient	395.78
	Total	4671.95

The Institute should have ascertained the exact liability towards the patients as on 31 March 2006 and depicted it distinctly as 'refundable to the patients' on the liability side of the Balance Sheet. Any surplus left thereafter was to be depicted as excess of income over expenditure in respect of these accounts. This was also pointed out in the previous years' audit reports but the institute has not depicted details under the heads Patients' account, donations received from Prime Minister's Office, voluntary organisations and interest earned separately.

2.2 Unspent grant

Grants received from Government organisation and private bodies for specific purposes are initially accounted for in the books of Institute (Main) and are transferred to scheme cell on the basis of their actual requirement from time to time. A part of such grant remains with the Institute (Main) but the unspent balances were not being separately indicated in the Balance Sheet.

The Institute stated (November 2006) that unspent balance of grant received for specific purpose was included in the total balance of unspent grant. The reply is not tenable as balances of unspent grant under plan, non-plan and specific purpose were required to be depicted distinctly in the Balance Sheet.

Assets

2.3 Non maintenance of Land and Building Register

Balance Sheet of the Institute (Main) as on 31 March 2006 depicted cost of land and building at Rs. 235.53 crore (Land-Rs. 12.27 crore and Building- Rs. 223.26 crore). The records relating to acquisition of land and construction of building viz. details of land acquired and its cost, number of buildings and built up area etc. were not made available to audit. Similar observations about non maintenance of Land and Building records and non accounting of cost of land acquired for National Drug Dependence Treatment Centre (NDDTC) during April 2000 at a cost of Rs. 1.00 crore were made during the previous years' Audit Reports (2003-05) but the Institute has not taken any corrective action so far.

2.4 Understatement of assets

2.4.1 Assets acquired by Research Section not accounted for

The Institute had procured assets (machines and equipment) worth Rs. 10.59 crore during 2005-06. In the earlier year also assets were acquired out of the grants received from Government organisations and private bodies for implementation of special schemes. The assets acquired by the Research section were, however, not depicted in the Balance Sheet of the Institute. This resulted in understatement of assets to that extent. Similar omission had been pointed out in the previous years' audit reports also as machines and equipment amounting to Rs. 3.24 crore, Rs. 1.76 crore, Rs. 3.20 crore and Rs. 1.92 crore acquired during 2001-02, 2002-03, 2003-04 and 2004-05 respectively were not accounted for in the assets accounts. It is once again reiterated that all such assets should be accounted for in the Balance Sheet of the Institute.

2.4.2 Items of capital nature purchased during the year accounted for as contingent expenditure

Items of capital nature (machinery, equipment and furniture) purchased by different centres of the Institute have been booked in the accounts as recurring contingent expenditure

under the head 'Material and supply' as detailed below:

Name of the centre	Amount(in Rupees)
CNC	5,65,887
Research Centre	1,68,899
Total	7,34,786

This resulted in understatement of assets by Rs 7.35 lakh and overstatement of revenue expenditure by the corresponding amount.

2.4.3. Advances still to be adjusted accounted for as expenditure

The Scheme cell had depicted Rs 29.12 crore under the head 'Expenditure out of grant received for specific purpose' in the Receipts and Payments account. Scrutiny of records however, revealed

that the above expenditure included advances amounting to Rs. 0.28 crore given to project staff for various purposes which were still to be adjusted as on 31.3.06. Thus, the booking of advances as expenditure under final head resulted in overstatement of expenditure by Rs. 0.28 crore and understatement of assets by the corresponding amount.

2.5 Overstatement of assets

2.5.1 Capitalisation of recurring expenditure

Repair and maintenance works aggregating Rs. 11.12 lakh had been capitalised and booked under the head "Construction" in the Balance Sheet by the Institute (Main). This resulted in overstatement of assets by Rs. 11.12 lakh and understatement of expenditure by the corresponding amount.

2.5.2 Hospital receipts recoverable since 1978-79 shown as assets

The Institute depicted Rs. 55.87 lakh and Rs. 14.54 lakh under the head 'Hospital receipts recoverable/amount due from outside patients' in the Institute (Main) account and Cardiac and Neuro Centre (CNC) account respectively, on the assets side of the Balance Sheet as on 31 March 2006 which includes Rs. 11.60 lakh and Rs. 10.31 lakh respectively pertaining to period 1978-79 to 2000-01.

Considering the fact that the outstanding amounts pertained to the periods as far back as 1978-79 the Institute should take effective steps either to recover these amounts or consider their write-off so that assets are not unduly inflated. This was pointed out by audit in the previous years' audit reports (2003-05), but no action has been taken by the Institute.

The Institute stated (November 2006) that Rs. 24.09 lakh and Rs. 0.45 lakh in the Institute (Main) account and CNC account respectively had since been recovered and efforts were being made to recover the balance amount.

2.5.3 Variation in figures of 'Advances with other agencies'

Scrutiny of 'Advances with other agencies' reflected in the annual accounts and accounts being maintained by the Engineering Department of the institute revealed following variations:-

(Rs. in lakh)

Sl. No.	Name of the firm	Purpose for which advance is given	Amount outstanding as per Balance Sheet	Amount outstanding as per Engineering Department	Variation
1.	M/s Central Public Works Department	Construction of C. N. Tower	1789.87	1723.42	66.45
2.	M/s HSCC (India) Limited	Construction of Trauma Centre	879.12	1322.38	(-) 443.26
3.	M/s H.S.C.C. (India) Limited	Construction of Dental College	1583.94	1538.74	45.20

The above variations between two sets of accounts need to be reconciled immediately. The confirmation of balances may also be obtained from the concerned agencies under intimation to audit.

2.6 Misclassification of assets

2.6.1 The charges on account of payment of custom duty for clearing foreign consignment were being deposited by various departments with the main store of the Institute and expenditure was being

accounted for under the final head 'Machinery and Equipment' instead of 'Advances pending final adjustment'. Scrutiny of records revealed that against the amount of Rs. 25.45 lakh deposited by the IRCH centre with the main store Rs. 15.62 lakh only was adjusted during the year 2005-06. The balance amount of Rs 9.83 lakh was to be depicted as 'Advances pending final adjustment' in the current assets of the Balance Sheet. This resulted in overstatement of expenditure under the head "Machinery and Equipment" by Rs 9.83 lakh and under statement of 'advances' by a corresponding amount.

2.6.2 Scrutiny of records relating to National Drug Dependence Treatment Centre (NDDTC) revealed that advances aggregating Rs. 33.60 lakh* paid to the suppliers for purchase of Machinery & Equipment, Books & Journals and Vehicles were treated as final payment under the respective heads instead of treating them as current assets. This resulted in understatement of current assets by Rs. 33.60 lakh and overstatement of expenditure in the respective assets by the corresponding amount.

2.7 Variation in the figures of investments

The Institute had depicted investments of Rs. 145.66 Crore on the assets side of the Balance Sheet with corresponding details of investments in Appendix 'C'. However, appendix 'C' contains details of investments of Rs. 1.06 crore only. Thus, details of remaining investments of Rs. 144.60 crore are required to be appended with the annual accounts alongwith a certificate to the effect that all the investment are in the safe custody of concerned officials.

3. Income and Expenditure Account

3.1 Expenditure

3.1.1 Overstatement of Expenditure

The IRCH centre has depicted expenditure of Rs 4.24 crore under the head 'Material and Supply'- Non Plan in the Income and Expenditure account. This includes letter of credit for Rs 1.08 crore for the purchase of Cobalt 60 Teletherapy source for theratron 780-C and Theratron 780-E opened on 31-3-2006 and Rs 0.19 crore for the purchase of Accessories for Harmonic Scalpel. Scrutiny of records revealed that the material in respect of above supply orders was not received by the institute during 2005-06. Thus, booking of this amount as expenditure under the final head, instead of advances, resulted in overstatement of expenditure by Rs 1.27 crore and understatement of current assets by a corresponding amount.

The Institute stated (November 2006) that the items being consumable/disposable were correctly booked under the head 'Material & Supply'. The reply is not tenable as advance payment made for consumable store was required to be shown as Advance instead of charging it to the final head of account.

3.2 Misclassification of expenditure

3.2.1 In the Income and Expenditure accounts of AIIMS (Main), R.P. Centre and C.N.Centre, expenditure of Rs. 2.21 crore, Rs. 0.81 crore and Rs. 0.51 crore respectively incurred on repair and maintenance of Machinery and equipments was depicted under the head machinery & equipment. The Institute is advised to book this expenditure under correct heads of accounts i e 'Repair & Maintenance of Machinery and Equipments'.

3.2.2 Expenditure of Rs. 32.50 lakh incurred for the construction of Trauma centre for which separate budget head exists was accounted for in the main AIIMS account under the head capital construction. This resulted in overstatement of expenditure of Rs. 32.50 lakh under AIIMS (main) account and understatement of expenditure under Trauma centre.

4 General

4.1 Excess amount disbursed by the cashier

Scrutiny of cash book AIIMS (Main) revealed that during surprise check of cash on 03.06.2005 shortage of cash amounting to Rs. 3.06 lakh was detected which was shown as under

Sno Head Closing cash balance

i) Pay and allowances	(-) 303675
ii) Scholarship	500
iii) Out of Permanent advance	479150
iv) Out of money drawn in anticipation of payments	(-) 2611
Total closing cash balance	1,73,364

The Institute stated (November 2006) that an amount of Rs.17, 930/- had since been recovered from the Ex-Cashier and that matter had been referred to the vigilance section of the AIIMS for initiating departmental enquiry.

4.2 Security deposit/Earnest money and Caution money

Institute (main) account depicted Rs. 6.34 crore and Rs. 10.65 lakh under the head ‘Security deposit/ Earnest money’ and ‘Caution money’, respectively on the liability side of the Balance Sheet as on 31 March 2006. The year-wise, party-wise and item-wise details of these deposits called for by audit were not made available. In the absence of details, the authenticity of the figures of Rs. 6.34 crore and Rs. 10.65 lakh shown under these heads could not be verified in audit.

4.3 Assets register-fixed assets Rs. 839.86 Crore

As per Rule 190 (2) of General Financial Rules, Undertaking/Organisations/Bodies which are mainly financed by the grants from Government are required to maintain a ‘Register of Asset’ in form GFR 40 wherein all assets of permanent nature and machinery and equipment should find place.

It was observed that no centralised asset register/stock register was being maintained by the Institute (Main) or by different Centres. Also no schedule of the fixed Assets was being appended to the annual accounts. In the absence of the requisite asset register(s) and the relevant details of the assets not having been appended to the annual accounts, the correctness of the figures depicted in the annual accounts could not be verified in audit. The scrutiny of assets register being maintained by the different departments also revealed that they were not preparing summary of all the assets at the end of the year due to which it was not possible for audit to compare the figures of assets shown in the subsidiary register with the figures shown in the Balance Sheet.

Similarly, records relating to assets acquired by way of gifts, donations etc., valuation of such assets and information on whether these have been accounted for in the annual accounts for the year 2005-06 were also not furnished to audit. This omission was pointed out in previous year’s audit report also but the institute has not taken any corrective action.

4.4 Expenditure in excess of grants received for research purposes

Sundry debtors of Rs 74.17 lakh depicted in the assets side of the Balance Sheet of the Institute (Main) as on 31 March 2006 represent expenditure incurred by the Institute for research works in excess of grants received from 24 organisations. Incurring expenditure from Institute funds pending receipt of grants from various organisations indicates poor financial management.

4.5 Expenditure against grants received for specific purpose

Balance Sheet of the Institute (Main) depicted liability of Rs. 19.35 crore (Appendix-A) in respect of schemes being carried out by the Institute which were funded by other Government Organisations and Private Bodies. The liability of Rs. 19.35 crore includes balance of Rs. 0.25 crore in respect of 24 schemes though these projects have been completed/closed during 2005-06 or in previous years. These balance had not been refunded to the concerned organisation or taken in income as lapsed deposits, after review.

4.6 Depreciation of assets

Balance Sheet as on 31 March 2006 depicts the asset accounts at their book value of acquisition and does not exclude obsolete, unusable and irreparable assets and also does not take into account depreciation. The asset accounts are overstated accordingly. The Institute should provide for depreciation in the accounts.

The Institute stated (November 2006) that there was no provision for providing depreciation of assets as per earlier format. The reply is not tenable as common format of accounts, prescribed by the Government of India, Ministry of Finance vide O.M. dated 23-07-2006 clearly provides for depreciation of assets.

4.7 Accounting policies

The Institute is required to append to the annual accounts 'Significant accounting policies' to indicate method of accounting regularly followed, valuation of inventory and method of depreciation etc. and changes in the existing policy if any made during the year. The Institute is also required to append 'Notes on Account' to indicate exemption from statutory enactments, treatment of contingent liabilities, etc. Such disclosures by the Institute will introduce transparency in accounts. The Institute has not appended the 'significant accounting policies' and 'notes on accounts' despite this having been pointed out continuously in audit reports since 1999-2000. The Institute only made disclosures of four items at the bottom of Balance Sheet.

The Institute stated (November 2006) that there was no provision for significant accounting policies and notes on accounts as per earlier format. The reply is not tenable as the new format of accounts prescribed by the Government clearly provides for appending significant accounting policies and notes on accounts.

4.8 Non adherence to the approved pattern of investment

The investment of General Provident Fund balance amounting to Rs. 144.60 crore was not made by the Institute as per the approved pattern of investment prescribed by the Ministry of Finance, Government of India.

4.9 Separate accounts of GPF not annexed

The Separate account of General Provident Fund had not been annexed with the annual accounts.

4.10 Variation in investment of GP Fund

In the Balance Sheet, investments of Rs.145.66 Crore included General Provident Fund investments of Rs.144.60 crore. However, during physical verification, investment certificates of Rs. 144.53 crore were shown to audit. The variation of Rs. 6.94 lakh needs to be investigated.

4.11 Non-maintenance of accounts on accrual basis in the common format of accounts

The Institute maintains its accounts on cash basis. The system of accounting should be on accrual basis so that Income and Expenditure Account and Balance Sheet make a meaningful depiction of a true and fair view of the financial position. An accrual based common format of accounts for the Central Autonomous Bodies has been devised by Government of India, Ministry of Finance to bring about uniformity and transparency in accounts.

The Institute stated (November 2006) that there was no provision for maintaining accounts on accrual basis as per earlier format. The reply is not tenable as the new format of accounts prescribed by the Government clearly provides for maintenance of accounts on accrual basis. The Institute is advised to immediately switch over to accrual basis of accounts and adopt common format of accounts.

4.12 Progressive total of the cost of books not worked out in the Accession Register

The Institute's Library had books and Journals numbering 134112 valued at Rs. 15.83 crore as on 31 March 2006. Similarly, the value of books at the Drug De-Addiction Centre of the Institute's Library was Rs. 72.14 lakh as on 31 March 2006. However, the correctness of the value of books shown in the balance sheet could not be verified, as the Accession Register of the Libraries does not have the progressive total of the value of the books and Journals.

4.13 Variation in Bank balances

In the Balance Sheet of IRCH, bank balance was depicted as Rs. 3.62 crore. However, closing bank balance worked out through receipts and payment in Cash Book was Rs. 2.25 crore. This resulted in overstatement of bank balance by Rs. 1.37 crore and understatement of expenditure/ assets by the like amount. The variation of Rs. 1.37 crore needs to be reconciled.

The Institute stated (November 2006) that the variation of Rs. 1.37 crore was due to non-adjustment of "letter of credit adjustment" advised by the Bank. The reply is not tenable as the balance as per cash book was to be depicted in the annual accounts and the details of L.C adjustment from the concerned bank should have been called for and adjusted under the proper accounting head

4.14 Bank Reconciliation Statement AIIMS (Main) account

4.14.1 As per Annual accounts the closing bank balance of AIIMS (Main) as on 31.3.06 was Rs. 38.30 crore. The bank reconciliation statement was not provided to audit due to which the authenticity of figures of bank balance as shown in the annual accounts could not be verified.

4.14.2 Cheques amounting to Rs. 64.89 lakh pertaining to the years 2001-02 to 2004-05 issued by AIIMS main accounts had become time barred as on 31.03.2006 and were required to be cancelled which had not been done in the accounts for the year ending on 31st March, 2006.

4.14.3 The bank had not given credit for cheques of Rs. 72.62 lakh deposited during the year 1996-97 to 2004-05 by the AIIMS main accounts.

4.14.4 Further the bank had debited Rs. 1.34 lakh for cheques not issued by the Institute or its various centres. The excess debit of Rs. 1.34 lakh needs to be investigated immediately.

4.15 Others accounts

4.15.1 In bank reconciliation statement of IRCH there was a variation of Rs. 5.23 lakh between the balance of cash as per cash book and as depicted in bank reconciliation statement

4.15.2 Cheques amounting to Rs. 20.74 lakh pertaining to the years 2001-02 to 2004-05 issued by the R.P. Centre, CNC, C.T. and Patient Research sections had become time barred and were required to be cancelled which had not been done in the accounts for the year ending on 31 March 2006.

The Institute stated (November 2006) that against the amount of Rs. 20.74 lakh an amount of Rs. 9.97 lakh had been settled.

4.15.3 The bank had not given credit for cheques of Rs. 8.08 crore deposited during the years 1989-90 to 2004-05 by CNC, R.P Centre, Angiography Research Centre and C.T. patient centres. Effective steps may be taken to reconcile these differences with the bank.

The Institute stated (November 2006) that due to regular pursuance cheques amounting to Rs. 7.64 crore out of Rs. 8.08 crore had been credited by the bank.

4.15.4 The bank had debited Rs. 2.74 crore for cheques not issued by the Institute or its various centres. The excess debit of Rs. 2.74 crore needs to be investigated immediately.

The Institute stated (November 2006) that against excess debit of Rs. 2.74 crore by the bank an amount of Rs. 1.60 crore had been settled.

5. Net impact

The net impact of the comments given in the preceding paragraphs is that as on 31 March 2006 the assets were understated by Rs. 12.06 crore and expenditure was overstated by Rs. 1.61 crore.

6. Deficiencies which are not included in the audit report have been brought to the notice of the Director, All India Institute of Medical Sciences through management letter issued separately for corrective action.

Place: New Delhi
Dated: 4.12.2006

Director General of Audit
Central Revenues

Audit Certificate

I have audited the attached Balance Sheet of All India Institute of Medical Sciences as at 31st March 2006 and the Income and Expenditure Account, Receipts and Payments Account for the year ended as on that date. Preparation of these financial statements is the responsibility of the All India Institute of Medical Sciences' management. My responsibility is to express an opinion on these financial statements based on my audit.

I have conducted my audit in accordance with applicable rules and the auditing standards generally accepted in India. These standards require that I plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. I believe that my audit provides a reasonable basis for my opinion.

Based on our audit, I report that:

- 1) I have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purposes of our audit.
- 2) Subject to the major observations given below and detailed observations in the Audit Report annexed herewith, I report that the Balance Sheet, Income and Expenditure Account and Receipts and Payments Account dealt with by this report are properly drawn up and are in agreement with the books of accounts.
 - Incorrect exhibition of liabilities in Patients Accounts
 - Assets acquired by the Research Section not accounted for in the Annual Accounts.
 - Shortage of cash detected in surprise check.
 - Non-preparation of Assets register.
 - Variations in the investment by Rs 6.94 lakh.
 - Non-maintenance of accounts on accrual basis and in Common Format of Accounts.
 - Variation in the bank balance.
 - Variation of Rs. 5.23 lakh in Bank Reconciliation Statement.
- 3) In my opinion and to the best of my information and according to the explanations given to me:
 - i) the accounts give the complete information required under the prescribed format of accounts
 - ii) the said Balance sheet, Income and Expenditure Account and Receipts and Payments Account and subject to the significant matters stated above and other matters mentioned in the Audit Report annexed herewith give a true and fair view.

In so far as it relates to the Balance Sheet of the state of affairs of the All India Institute of Medical Sciences as at 31st March 2006 and

In so far as it relates to the Income and Expenditure Account of the surplus for the year ended on that date.

Place: New Delhi
Dated: 4.12.2006

Director General of Audit
Central Revenues

12.3 Para-wise replies to the Audit Report on the Accounts of the All India Institute of Medical Sciences, New Delhi for the year 2005-06.

2. Balance Sheet

Liabilities

2.1 Incorrect exhibition of liabilities in Patients Accounts

C.N.Centre maintains revolving funds for Angiography patient, C.T.patient, Gamma Knife patient and Neuro Surgery Patient's account as approved by the competent authority.

The accumulated balances shown in the paragraph consists of interest element also apart from liability. The two elements have now been segregated and will be depicted separately in the annual accounts for the year 2006-07.

2.2 Unspent Grant

The unspent balance of grant received for specific purposes was included in the total balance of unspent grant. However, as desired by Audit, the unspent balances of grant for specific purpose will be depicted distinctly in the balance sheet.

Assets

2.3 Non-maintenance of land and Building Register

Earnest efforts will be made to maintain relevant registers/records relating to cost of land and construction of buildings from the year 2006-07. Necessary instructions have been issued to all the executive engineers that no final bill may be paid without making the corresponding entry in the register.

Further, in respect of land for NDDTC, the cost of land of Rs.1=00 crore will be shown in annual accounts for the year 2006-07.

2.4 Understatement of assets

2.4.1 Assets acquired by the Research Section not accounted for

As desired by the Audit all the machinery & equipments will be shown in the balance sheet of the Institute (Main) under the head "machinery & equipment" for research work 'not belonging to the Institute' on Assets side and corresponding entry on the liability side in "machinery & equipment" belonging to funding agencies for research work.

Further these assets will be taken as the machinery & equipment" of the Institute (Main) only when funding agencies allow this. The matter has again been taken up with all the project investigators / funding agencies and necessary correction will be carried out accordingly.

2.4.2 Items of capital nature purchased during the year accounted for as contingent expenditure

Center wise position is as under:-

CNC

It has already been stated to the Audit vide this office letter no.4-1/2005-06/MSU dated 06-11-2006 that there is no under statement of assets and overstatement of revenue expenditure. All the vouchers pointed out by the Audit were pertaining to the material & supply and therefore, were correctly booked under the appropriate head.

Research Section

Similarly, an amount of Rs.59,903/- (voucher no.3140) was correctly debited against material & supply as the item purchased was of consumable nature. However, necessary correction for Rs.1,08,996/- (voucher nos.3042 & 3585) have been carried out in the monthly accounts of September 2006 and the same will be reflected in the annual account for the year 2006-07.

2.4.3 Advances still to be adjusted accounted for as expenditure

Noted for future compliance.

2.5 Overstatement of assets

2.5.1 Capitalisation of recurring expenditure

The expenditure of Rs.11.12 lakh will be adjusted through transfer entry by debiting to maintenance head and crediting to capital works and will be reflected in the accounts for the year 2006-07.

2.5.2 Hospital Receipts recoverable since 1978-99 shown as assets

Institute (Main)

Against outstanding advance of Rs.55.87 lakhs, an amount of Rs.24.09 lakhs has since been recovered due to regular pursuance. Sincere efforts are being made to recover the remaining amount of Rs.31.78 lakh.

C.N.Centre

Against an amount of Rs.14.54 lakh, Rs.0.45 lakh has been recovered by personal visit to the office of DGHS. Efforts are further being made to recover the balance amount.

2.5.3 Variation between figures in advances with other agencies

It has already been intimated to the Audit vide this office letter no.4-1/2005-06/MSU dated 06-11-2006 that all the figures have been reconciled with the engineering department. However, further steps are being initiated for confirmation of balances with the concerned agencies.

2.6 Misclassification of assets

2.6.1 Noted for future guidance. However, amount of Rs.9.83 has been adjusted in the final bills, therefore, no correction is required in the next year's accounts.

2.6.2 Noted for future guidance.

2.7 Variation in the funds of investments

As already confirmed earlier, details of the investments of Rs.144.60 crore have been appended with the annual accounts along with a certificate thereof.

3. Income and Expenditure Account

3.1 Expenditure

3.1.1 Overstatement of Expenditure

Noted for future guidance. However, as already been intimated to the Audit no correction is required as both the items have already been received in the Institute in the month of July/August 2006.

3.2 Misclassification of Expenditures

3.2.1 Noted for future compliance.

3.2.2 Necessary correction has been made in the current month's account and the same will be reflected in the annual accounts for the year 2006-07.

4. General

4.1 Excess amount disbursed by the cashier

An amount of Rs.17,930/- has since been recovered from the Ex cashier. However, for final settlement the matter has been referred to the vigilance Section of the AIIMS for initiating departmental enquiry.

4.2 Security Deposit/Earnest money and Caution money

All the concerned departments have been once again directed to make available all the records/informations to the audit party during their next visit.

4.3 Assets Register

All the centres/units/depts/sections have been instructed to maintain the Assets Registers as per form GFR 40 (New GFR 2005). Further, it is once again stated that efforts are being made to maintain a centralized Asset Register.

4.4 Expenditure in excess of grants received for research purposes

All such cases are being reviewed and it is assured that the same will be settled before the finalization of the accounts for the year 2006-07.

4.5 Expenditure against grants received for specific purposes

All such cases are being reviewed and it is assured that the same will be settled before the finalization of the accounts for the year 2006-07.

4.6 Depreciation of assets

As this Institute is a central autonomous body governed by a separate Act of Parliament and the office of the Comptroller and Auditor General of India is the sole auditor, hence Institute is exempted from adoption of new format of accounts till 2005-06. However, now in view of instructions of July 2006 of the Controller General of Accounts, the new format of accounts will be applicable to the Institute from the current year (2006-07).

In view of the above, it is quite evident that there was no provision for providing depreciation of assets as per earlier format.

4.7 Accounting policies

Same remarks as against paragraph no. 4.6. above. Hence accounting policy will be added with the accounts for the year 2006-07 only.

4.8 Non adherence to the approved pattern of investment

As desired by Audit pattern of investment prescribed by the Government of India will be followed in future.

4.9 Separate accounts of GPF not annexed

The GPF account has now been annexed with the main annual accounts and the same has been incorporated in the Annual Report of the AIIMS for the year 2005-06.

4.10 Variation in investment of GP Fund

The difference has been identified. The matter has already been taken up with the concerned Public Sector Undertaking for payment of maturity amount.

4.11 Non-maintenance of accounts on accrual basis in the common format of accounts

Same remarks as against paragraph no. 4.6 & 4.7 above.

4.12 Progressive total of the cost of books not worked out in the Accession Register

As desired by Audit, library has started maintaining the progressive total of the cost of books in accession register w.e.f. December 2005 and the same will be shown to the Audit party at the time of their next visit.

4.13 Variation in Bank balances

Details are being obtained from the bank and necessary corrections, if any, will be carried out in the annual accounts for the year 2006-07.

4.14 Bank reconciliation statement

AIIMS (Main) account

4.14.1 Bank reconciliation has already been completed and the same was sent to the Audit vide letter no.4-1/2006-07/MSU dated 6-11-2006.

- 4.14.2** As desired by Audit, steps have been initiated to cancel the time barred cheques.
- 4.14.3** Against the amount of Rs.72.62 lakh cheques amounting to Rs.49.61 lakh have been credited by the bank. Efforts are being made to get the credit of the remaining cheques.
- 4.14.4** Matter has been taken up with the bank and the same will be cleared before finalization of the accounts for the year 2006-07.
- 4.15 Others accounts**
- 4.15.1** Figures are being reconciled and necessary corrections, if any, will be made in the annual accounts for the year 2006-07.
- 4.15.2** Against the amount of Rs.20.74 lakhs an amount of Rs.9.97 lakh has been settled leaving balance of Rs.10.77 lakh. The remaining time barred cheques will also be cancelled shortly.
- 4.15.3** Due to regular pursuance against the amount of Rs.8.08 crore, cheques amounting to Rs.7.64 crore have been credited by the bank. Sincere efforts are being made with the bank authorities for crediting the remaining cheques of Rs.0.44 crores.
- 4.15.4** Against excess debit of Rs.2.74 crore an amount of Rs.1.60 crore has been settled. Regular and sincere efforts are being taken with the bank to settle the remaining excess debit of Rs.1.14 crore.

(P. VENUGOPAL)
DIRECTOR