

AIIMS TECHNOLOGISTS NEWSLETTER

Inside this issue

Computerization Initiatives	2-3
Medical Laboratory Technologists: Horizon of work	4-5
Events and celebrations	6-8
Awards and accolades	9-10
Science corner	11
Literary works and gallery	12-14
Cartoon Corner	14

VISION ABOUT AIIMS

I want this Institute to be a unique institute and to be able to give to our people-the young men and women doctors-the opportunities for study for post-graduate education that they have not until now been able to have in their own country.



Dr. Raj Kumari Amrit Kaur

Director's Message



I am delighted to learn that the 1st technologists' newsletter is being released during CEUTEH 2016. This has been long overdue and is one step in helping galvanising and motivating the technologists to continue to give their best for this great institution. The contents of the newsletter show that there is huge untapped talent available in every person and we need to channelize and showcase this talent at every platform available. It is because of the efforts of the technologists working in the labs that lab module was such a big success and I thank each one of them for helping in making AIIMS the most IT enabled hospital in India. I would urge technologists working in other areas such as radiology and OT to also embrace computerisation and use it for the benefit of the patients and the hospital. I hope this newsletter is a regular feature of AIIMS bouquet of newsletters being taken out by Dr Deepak Agrawal and his team and wish them the best in this noble endeavour.

Jai Hind

Chairman Computerisation, AIIMS

It has taken almost 1 year of planning and coordination to take out this technologists' newsletter and it is only due to the efforts of Ms Angeleena and her team that the 1st issue is being released in CEUTEH 2016. Since Prof Misra became director and we have consciously trying to take out newsletters for various cadres of staff to improve interaction and serve as a platform to disseminate information regarding the changes occurring at AIIMS. After the success of the nursing newsletter and the doctor's newsletter, we turned our attention towards the technologists and were very happy to receive the response and contents. However, to make it a regular feature your continued support will be required.

Being an e-Newsletter available on AIIMS website, there is no limitation on the number of articles that we can put in an issue and this platform us wide dissemination as well as worldwide audience at negligible cost. I hope you will enjoying reading it as much as we enjoyed putting it together.

Dr Deepak Agrawal

COMPUTERIZATION INITIATIVES



PAPERLESS OPD - A NEW INITIATIVE FROM COMPUTER FACILITY

Gone are those days, when JRs and SRs used to run from one lab to another for getting the report of patients admitted in the wards. Now from placing an order in the lab till receiving of the report is possible with the click of a mouse. Lab module in e hospital was proved to be extremely useful for both doctors and patients in AIIMS.

Even though the lab module was completely online for inpatients, doctors in the OPD were filling the investigation forms manually for outpatients.

As a new initiative towards making the OPD paperless, manual forms are stopped from OPDs. Now for all the investigations available in the e hospital, doctor sitting in the OPD need to only



mention the investigations in the OPD card of the patient. Online order entry for those investigations will be done from the Central Collection Facility and reports will be generated online. This change in the workflow will avoid duplication of work and in turn will save the time of clinicians.

Another step towards making the OPD paperless is online medical certificate. After seeing the patient in the OPD, instead of filling the medical certificate doctor need to mention the period of rest, date, diagnosis and full name of the doctor in the OPD card of the patient. Medical certificate will be generated through online application in the CRO Office and patient will get it signed from the concerned doctor. This will save the time of the doctors and can focus more on patient care.

OPEN PACS

Picture Archiving and Communicating Systems (PACS) is a computer system for digitized radiologic images. It provides archives for storage of multimodality images, integrates images with patient database information, facilitates laser printing of images and displays both images and patient information at work stations throughout the network.

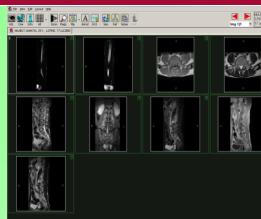
In AIIMS, open PACS was made available in 2014 and images of x-ray, CT, MRI etc can be accessed through Open PACS in handles devices like smart phones, iPad etc through intranet and wifi.

The reports of Holter, HUTT, ambulatory BP (ABP) and PFT (Department of medicine) from CNC are also available in open PACS.

It can be accessed from:

192.168.15.35/newsite.main.html

192.168.15.23:8080/oviyam2 (directly available).



SNOMED CT INTEGRATED E DEATH NOTE

Online death certificate has been started in AIIMS with the vision of maintaining a digital death record with a uniform format across the hospital since 2014. Integration of SNOMED to e-death note is a new initiative from computer facility in collaboration with National Release Centre (NRC) which is sponsored by Ministry of Health & Family Welfare.

SNOMED CT (Systematized Nomenclature of Medicine - Clinical Terms) is the most comprehensive, clinically validated, semantically rich, multilingual clinical healthcare terminology in the world that is used by physicians and other healthcare providers in Electronic Healthcare Records to capture, retrieve and analyse clinical data.

All the details of the patient should be filled in the death entry form including cause of death. Once the form is filled it has to be saved by the doctor. Since the multiple users are using the e-death note module SNOMED will ensure the uniqueness among the diagnosis entered in fields of immediate cause and antecedent cause that are coded in the SNOMED CT ID. SNOMED integrated death note will be a vital turning point in data mining and analysis. All fields in e-death note is SNOMED enabled and while entering the data it will be coded with SNOMED CT id so that uniqueness will be developed in data retrieval.

If you care enough for a result, you will most certainly attain it -William James

ADOPT A PATIENT PROGRAM

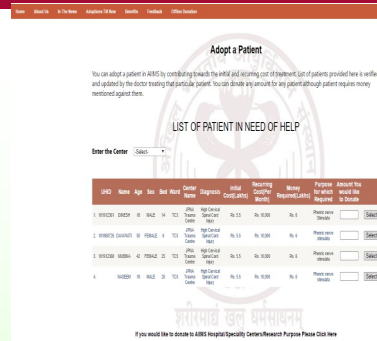
AIIMS launched 'adopt a patient' policy on 4th of June 2016, under which public donations can be made for patients who are unable to continue their treatment or bear cost of buying equipment needed for rehabilitation at home.

Donations can be made online as well as offline for this purpose. List of patients provided in website is verified and updated by the doctor treating that particular patient. The policy was launched with a focus on patients with brain and spinal cord injuries who are left with huge and enormous disability, requiring rehabilitation.

Donations can be also made to centers and for research activities. You can donate any amount for any patient.

Online donations

These can be made at www.aiims.edu by clicking online donations at the bottom of the page. Donations can be made for whole of AIIMS or a specific centre of AIIMS (both eligible for 100% tax deduction). Donation can also be made for promoting research at AIIMS (eligible for 175% tax deduction).



In case you want to adopt a patient or pay partially for any patient, you can select the patient from the list of eligible patients at the link '[adopt a patient program](#)' and you will be guided through the process.

Offline Donations

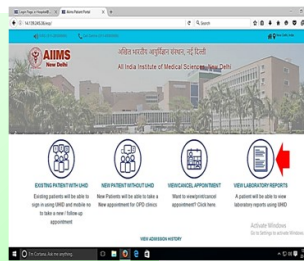
If you want to submit cheque/ bank draft, it should be in favour of 'Director, AIIMS' and/or "Chief, JPNATC, AIIMS" and should be accompanied with a cover letter stating the purpose of the donation. In case the donation is for a specific patient, please mention the UHID of the patient and Kindly let your intention known to us and we will discuss the modalities under '[adopt a patient program](#)'. List of patients with their UHID's can be found on our website at the link '[adopt a patient program](#)'.

adopt a patient or pay partially for any patient, you can select the patient from the list of eligible patients at the link '[adopt a patient program](#)' and you will be guided through the process.

COMPUTERIZATION OF LABORATORIES AT AIIMS

In the modern age the information spreads frequently and can reach to the needy person quit conveniently. The strength of computerization and digitization of government facilities is to provide information to the right person as soon as possible. The Hospitals are also ahead in providing information easily to the patients as well as treating consultants. Not only in taking online appointment of clinicians, this is now the part of one of the most important section of health care, the diagnostic laboratories.

Here at AIIMS, the Medical Laboratory Technologists have adopted this needful initiative and have become the part of it. Almost 90% of laboratories of AIIMS have got online. Now, computerization in laboratory crosses its limit from automation of machines, computerized instrumentations, interfacing and reached



higher levels. The digitization starts at the very beginning when a sample is withdrawn and not only the records are maintained but each sample achieves a unique identification with the barcoding technology. Barcoding facility have reduced the number of

reporting errors to minimum. Computerization have served enormous benefits like reproducibility and precision of lab tests, easy correlation and reference of previous values. It serves the very critical patients in Operation theaters and emergencies as their reports and critical values can be obtained within no time.

The patients, their attendants and even clinician can access the reports online from anywhere. This has also reduced the number of patients' visits to collect reports personally.

Anyone who has never made a mistake has never tried anything new- Albert Einstein

MEDICAL LABORATORY TECHNOLOGIST'S :HORIZON OF WORK



Medical Laboratory Technologists' horizon of work is very wide and covers Hospital labs, Research Centers, Dispensaries and Primary Health Care Centers. They play important role in health care delivery system by aiding in diagnosis, treatment, disease prevention, clinical research, and in teaching, trainings of upcoming health care professionals. It takes their expertise with the equipment and medical knowledge to diagnose patients' disease and their hospital stay. They cater to patient care, community medicine and epidemiology but in a latent and unidentified manner.

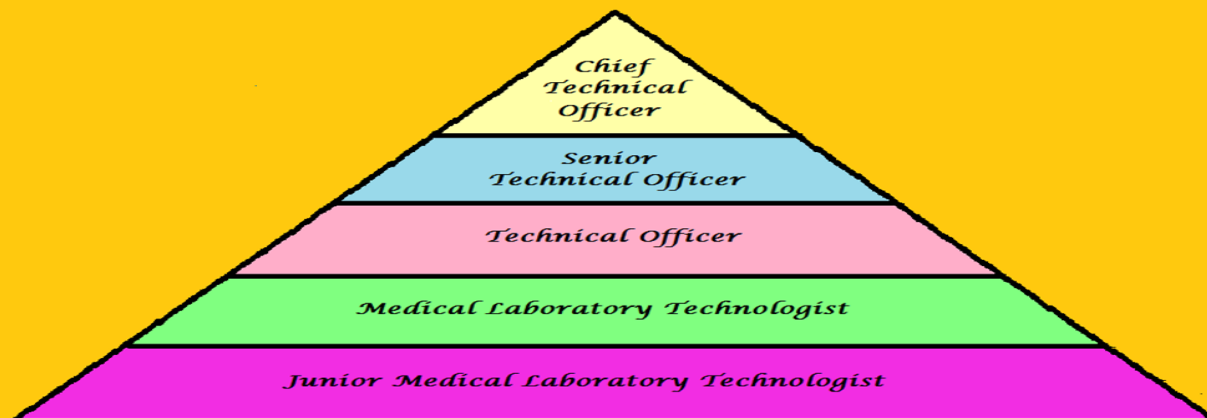
As they have to put various sophisticated tests, run latest computerized instruments, identify abnormal values, analyse and correlate the results and manage enormous data, they are the monitors of quality assurance. Their health and safety issues are the major areas of concern as their work profile pose exposure to toxic, corrosive, flammable, infectious and radioactive materials. Today, they are getting versed with academics, latest technology, data management and quality control practices to balance between the technology and manual skills. In premiere institute like AIIMS, they have explained their ability to learn by giving reproducible output in facilities like Cath Lab, EEG Lab, EPS Lab, Gamma Knife, TMT/ Holter Lab and IVF Lab.

Even at the time of emergency, outbreak of disease or seasonally increased and ever increasing work load they manage to produce reproducible results with same accuracy and precision. Our nation's clinical laboratories are facing a critical and growing shortage of qualified laboratory personnel. This shortage hampers the ability of clinical laboratories to meet patient testing demands, which may pose problems for patient health and welfare. Making students aware of laboratory profession can support to form the future workforce. Also, to improve the standard of laboratories there is an urgent need of advanced trainings and **Continuous Medical Education (CME)** of Medical Lab Technologists.

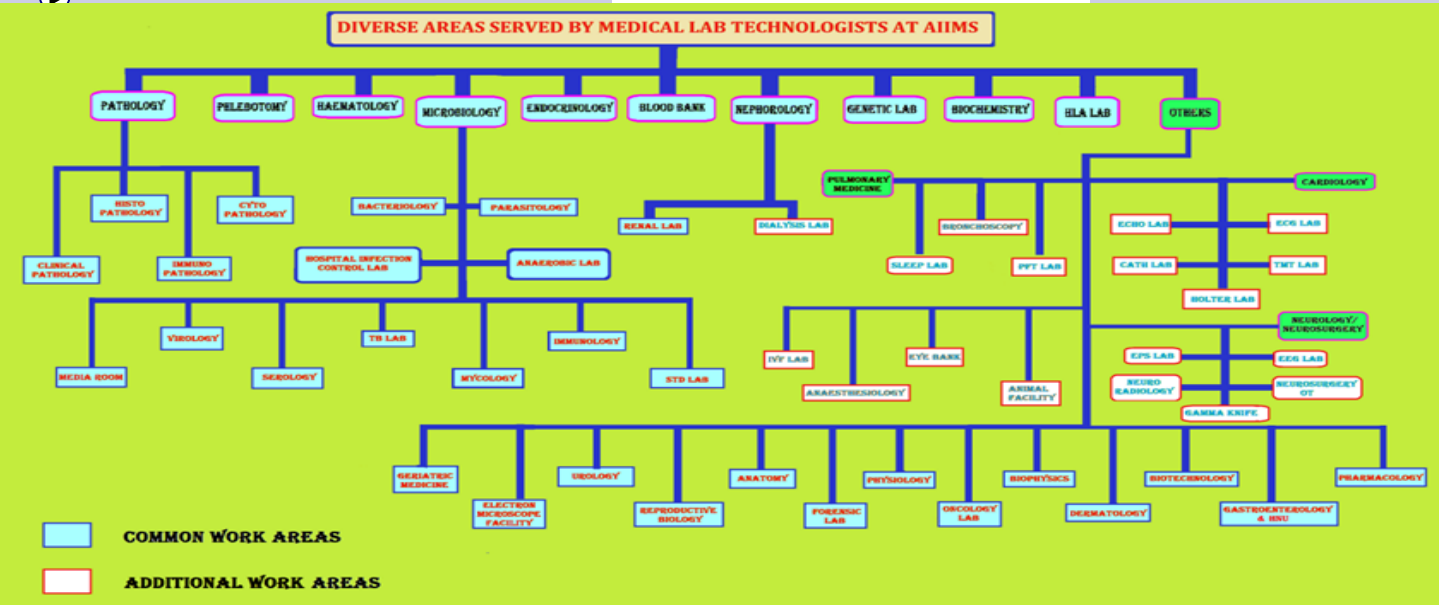
They are deprived of due recognition due to lack of a Central regulatory mechanism to regulate the educational and professional standards. Thus for the bright future of our laboratories and health care standards, there is an alarming need of a Central regulatory council.

Satya Wati Yadav
 Chief Technical Officer
 Dept of Haematology

Organizational Hierarchy Of Medical Laboratory Technology Cadre



Without laboratories men of science are soldiers without arms -Louis Pasteur



A WORD OF THANKS TO AIIMS

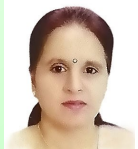
It gives me immense pleasure and content with the incipience of technologists’ newsletter. I would like to thank the administration for providing us a rostrum to share our developments among the technologists and other members of AIIMS.

It is a long awaited dream coming true. It will bring awareness, visibility, coordination, interaction and integration among the readers. It will motivate the laboratory personnel by providing them proper acknowledgment which they deserve. Simultaneously, it will bring out many additional talents our laboratory personnel have, which goes without recognition. I appreciate the team members who are not leaving any stone unturned to make this newsletter a success. On behalf of my laboratory colleagues, I once again thank you all.

**Saroj Singh, STO
Dr BRAIRCH**

Dear Readers,
My heartfelt greetings to all.

At the outset I would like to congratulate the editorial team for bringing out a newsletter for the technologists of AIIMS, New Delhi which will not only promote the spirit of patient care services but also help in reaching the different corners of the country carrying the message of *“sarīramādyam khalu dharmasādhanam,”* (this body is surely the foremost instrument of doing good deeds). This message is also an integral part of our AIIMS logo. I am sure this newsletter will also serve to satisfy and enthrall all its readers.



From an institute like AIIMS having an unimaginable global reputation, I hope this newsletter will definitely help in promoting the goals of the institution viz. Education, Research and Patient care by reaching out to the community. The institute offers not only great understanding to its technologists, staff nurses, doctors but also gives the best platform to utilise these knowledge based understandings for the sake of humanity. The institute serves more than million patients every year. The responsibility to provide excellent services to such a huge patient community lies on the able shoulders of the technologists, nurses and the doctors. Without the aggressive, focused and whole hearted efforts from the entire community of the technologists, nurse and doctors, it is impossible to uphold the legacy of AIIMS. The technologists of AIIMS work tirelessly in various laboratories and operation theatres alongside the rest of the hospital staff to provide healthcare that is class apart rather it’s world-class.

Dept. of Transfusion Medicine has been in the service of the mankind for long and I sincerely acknowledge the work-efforts of my technologists who work sincerely and tirelessly day and night to make this department run smoothly and provide quality care to all patients in terms of safest blood components using the latest technologies at hand. The technologists not only form the bulk of the work-force of this institution but they along with the other staffs, nurses and doctors form the spine of the institution that helps it in standing straight and holding its head high-up.

I would like to thank the entire editorial team for offering me an opportunity to express my gratitude towards this cadre. Let the newsletter spread the words of success of this world-class institution in terms of Healthcare, Administration, Research, Education and Innovations.

All the Best!
Dr.Poonam Kaushik

EVENTS AND CELEBRATIONS

NATIONAL MEDICAL LABORATORY PROFESSIONALS' WEEK CELEBRATION 17TH -23RD JULY 2016

National Medical Laboratory Professionals Week (NMLPW) is an annual national event of ICMLS (Indian Confederation of Medical Laboratory Science) organised first time in India to commemorate the significance of medical laboratory profession and its professionals who play a vital role in every aspect of health care. 17th July is the landmark date when Central Government revamped the career pathway, job roles and qualification criteria for Central Government Medical Laboratory Professionals.

NMLPW is the time for medical laboratory personnel to celebrate their professionalism and honour the ability and dedication to serve mankind being a vital part of the health care community. Another goal is to inform and educate medical colleagues and the public about the medical laboratory and the impact of having these dedicated skilled professionals on the overall patient care. The focus area of this year was to put light on need of a Central regulatory body /council for MLS professionals.

At AIIMS, the closing day program of NMLPW was organised on 23rd July, 2016. A Scientific CME cum discussion was organised at LT-1, AIIMS. The program was inaugurated by the chief guest **Dr. D.K. Sharma, Medical Superintendent, AIIMS**. **Dr. A.K. Mukopadhyay, Dr. K.P. Kochhar, Dr S Arulsevi, Dr Purva Mathur** -eminent faculty members of AIIMS also graced the occasion.

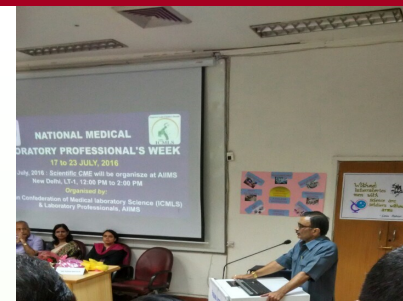


Dr D.K. Sharma and faculty members praised the organizers and participants highly for holding this kind of event for the very first time in AIIMS. They put emphasis on need of CME (continuous medical education) and academic as well as technical up gradation of MLS professionals. Dr. A.K. Mukopadhyay enlightened on the importance of role of Medical Laboratory Professionals in Health care. Dr K.P.Kochhar specially mentioned in her speech that MLS professionals should be given due recognition for their contribution in all the research activities.

Mr Kaptaan Singh Sehrawat, President, ICMLS also boosted our morale with his super enthusiastic speech. He enlightened us on the upcoming bright future pathway of medical laboratory professionals.

NMLPW gave a platform to all the members of Medical Lab Technology cadre at AIIMS to share their ideas, interact with peers and hear directly from renowned faculty members resulting in a hall packed gathering.

It also motivated all to celebrate this event at higher level in the following years and stay current in the professional activities.



If you care enough for a result, you will most certainly attain it -William James

MEDICAL LAB TECHNOLOGISTS SERVING BLOOD DONATION CAMPS

WHO's main strategy of safe transfusion is establishment of a well-organized, nationally coordinated blood transfusion service that can provide adequate and timely supplies of safe blood for all patients in need. Blood donation camp is one such source of safe blood.

Our aim should always be not to compromise with quality in exchange of quantity. Prior to camp, donor motivation can lead to more number of donations. A well-organized camp inspires many on-lookers around to become blood donors. Its advantages are

- Convenience for donors
- Familiar atmosphere for donors
- Community participation
- Recruitment of new donors
- Helps in donor retention.

Medical Laboratory Technologists play a very pivotal role in camps from phlebotomy to supervision of camp. They also motivate the donors to become regular donor by providing information and need of blood



donation. They are experts in differentiating among voluntary and professional donors. Yearly collection of main blood bank AIIMS is more than 45000 units, out of which approximately 5000 are voluntary donors and rest are replacement donors. This is also supported by the well quipped mobile bus for blood collection.

On 9th August 2016, a mass blood donation camp was organized by Fluor Corp., India in Cyber-hub, Gurugram with the help of Blood Connect (NGO). A total of 218 non-remunerated voluntary donors donated blood in this camp making it a grand success. Medical Laboratory Technologists Mr Santosh Balooni, Mr Luv Bansal and Mr Naresh Chaudhary from Main Blood bank AIIMS along with the help of Senior Resident Doctors made this camp a success.



Compiled by
Santosh Balooni
Medical lab Technologist
Main Blood bank

WHO GLOBAL HAND HYGIENE DAY



Medical Laboratory Technologists (Histopathology lab) Meenakshi Sharma, Renu Rani, Uma Vohra and Thang Chinlian won 1st prize in Poster making competition and 2nd prize in Slogan writing competition on the occasion of **WHO GLOBAL HAND HY-**

GIENE DAY (5th May, 2016) having themes like "see your hands", "hand hygiene support and safe surgical care from admission to discharge" organized by Hospital Infection Control unit, Dr. Purva Mathur at JPNA Trauma Center.



SLOGAN — Haathon ki safaai, Keetanu ki pitai

AHPCON 2016 2ND NATIONAL ALLIED HEALTH PROFESSIONALS' CONFERENCE

AHPCON-2016 was second biennial conference organised at JLN Auditorium, AIIMS, New Delhi on 22-23 February, 2016. It was organised for all major Allied Health Professions represented by JFMTI (Joint Forum of Medical Technologists of India) with an objective of deliberating upon the common national health issues related to the betterment of allied health sciences and medical lab technology professions in India.

The event was a landmark success and was attended by more than 700 delegates including faculty members of AIIMS and various other national and international institutes. The conference gave a scientific and professional opportunity for allied health professionals to exchange their professional knowledge.

The theme of Conference “**Proposed Regulatory Framework and Future Roadmap for Revamping of Allied Health Professions under NI-AHS-(Ministry of Health & F.W., Government of In-**



dia initiative)” has a great significance in modern era of Allied Health Sciences.

Day I, there was a Plenary Session on Allied Health Science Educational & Professional Services followed by Panel Discus-

sions, Techno Quiz and Cultural Programmes. Day II witnessed Scientific session- Medical laboratory Science having oral presentations on topics like Tissue Microarray, Flow Cytometry and Challenges in Emergency Laboratory Services. Plenary guest lectures included Ethics in Medical Lab Sciences and Defining scope of Practice Medical laboratory Profession. Various Scientific and research work Posters were presented by Technologists of AIIMS and other institutes which were evaluated and awarded by guest faculty members.



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TECHNOLOGISTS IN TEACHING & TRAINING



Medical laboratory technologists at AIIMS are overwhelmed by the opportunity provided to them to showcase their abilities in the field of Teaching and Training of upcoming health professionals. They assist UGs and PGs in Laboratory experiments and practical work guiding them in various respective techniques.

Mr Ram Avtar, MLT, Dr R.P. Centre, AIIMS was deputed to train the staff of State IDD Lab, Punjab regarding testing of Iodine content in Salt and Urine Samples.

He also delivered lecture on SPECULAR MICROSCOPY during 7th National CME on Eye Banking at Le Meridian Hotel, New Delhi. For his enthusiasm he received outstanding contribution award form National Eye Bank on the event of 30th National Eye Donation Fortnight.

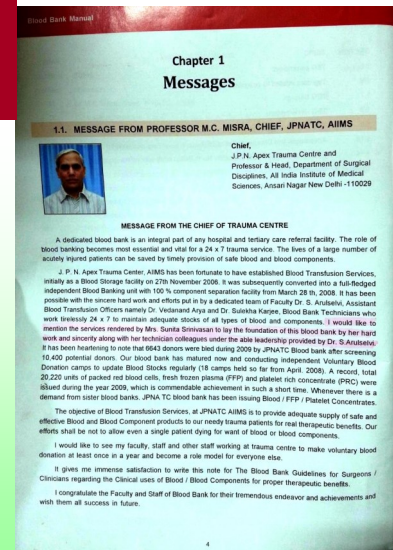
Fortune favors the prepared mind.- Louis Pasteur

AWARDS AND ACCOLADES

A WORD OF APPRECIATION

JPNATC of AIIMS started functioning in 2006 and Blood Bank has a main role to save patients' life. Availability of all blood group and cross-matching, components preparation performed by competent staff is the critical requirement for the successful operation of the trauma centre.

The current running blood bank was established with modern techniques and successfully maintained to cater all the blood banking needs of the trauma centre. We are happy and proud that **Mrs Sunita Srinivasan, Chief Technical Officer** could play an important role in establishing and running the JPNATC Blood Bank and thus Prof. M.C. Mishra made a special mention of her name in Blood Bank Manual.



A FEATHER TO THE CROWN

Preety Rana, Medical Lab Technologist (Pharmacology Lab) won two 3rd Prizes for

- ⇒ Essay writing competition (Topic- Swachh Bharat Abhiyan)
 - ⇒ Debate Competition (Topic- Computerisation of Patient Care Services at AIIMS)
- On the occasion of Hindi Pakhwara (01-09-2015)



Medical Laboratory Technologists working in Blood Bank, JPNATC AIIMS :- Ms Ruchika Kanojia and Mr Vipul Solanki won 1st and 2nd prize respectively in Post Training



Ruchika Kanojia
MLT
Blood Bank



Vipul Solanki
MLT

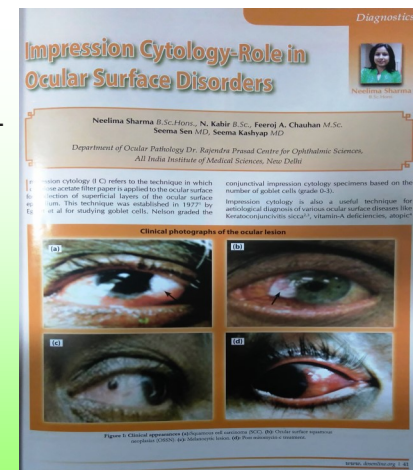
Exam conducted by NACO at RML Hospital New Delhi from 30/11/2015 – 04/12/2015.



Neelima Sharma
Technical Officer
Dr. R.P.C.

IMPRESSION CYTOLOGY (IC) refers to the application of cellulose acetate filter paper to the ocular surface for collection of superficial layers of the ocular surface epithelium for morphological examination. The study titled Impression cytology-Role in ocular surface Disorders was published by Ms Neelima Sharma, Technical officer, Dr.R.P.Centre, AIIMS with Dr. Seema Sen and Dr. Seema Kashyap in Ophthalmological society Delhi (Dos) times -Bulletin of Ophthalmological society Volume 20: Nov 6, December 2014.

She also presented the same study at **AHPCON (Allied health professionals conference) 2016** and won **first prize in Poster presentation competition.**



The entire world is a laboratory to the inquiring mind. - Martin H. Fisher

It's the Icing on the Cake!



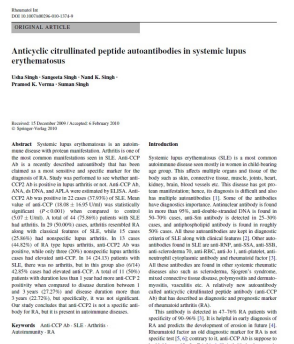
Dr Pramod Kr Verma
MLT
Dr BRAIRCH

Medical Laboratory Technology cadre at AIIMS has many achievers in different fields. Among the long list, one is **Dr Pramod Kumar Verma** having many academic achievements.

While working in Molecular Lab Unit, AIIMS, he has been awarded with **Doctor of Philosophy from Department of Pathology, Institute of Medical Sciences, Banaras Hindu University, Varanasi in 2015**. He has published several

papers which include five papers in International and one in Indian journal. We are gratified to have him among us and wish him for ever increasing progress. His academic work includes following publications.:

- ⇒ **Pramod Kumar Verma**, Usha, Niladri, Nand Kumar Singh, Shyam Kumar Saraf. A Comparative diagnostic evaluation of rheumatoid factor by different immunological techniques: latex agglutination, gelatin agglutination, turbidometry and elisa in rheumatoid arthritis, *INDIAN JOURNAL OF RESEARCH*(6457)^{1,5}-21 (Impact : 0.28)
- ⇒ **Pramod Kumar Verma**, Usha, Anjali, S K Saraf. A Comparative Diagnostic Utilities of Anti-keratin Antibody and Anti-CCP2 Antibody in Rheumatoid Arthritis: A Brief Study, *INTERNATIONAL JOURNAL OF PHARMACUTICAL SCIENCE AND HEALTH CARE*: 2012; vol. 1, issue 2;32-38.
- ⇒ Behera DIBYA RANJAN, Singh NAND KUMAR, Singh USHA and **Verma PRAMOD KUMAR**, HLA-DR typing in polyarticular juvenile idiopathic arthritis: a study from a tertiary care hospital in northern India, *International Journal of Rheumatic Diseases* 2014; 17: 268–273



TECHNOLOGISTS SERVING EYE BANKS WITH DEDICATION.

Medical Laboratory Technologists' duties nowadays are not just restricted to a narrow area of clinical laboratories, rather they are catering to patient care by serving various other special facilities like **National Eye Bank**. These men of science are pouring their best of expertise by complete involvement in important procedures.

At Eye Bank their profile includes Serological testing of Donor's blood sample, Microbial Culture Analysis of Donor's Cornea, Specular Microscopy of Cornea, Retrieval of Cornea, Proper documentation and record maintenance.

Currently, there are 238 Eye Banks in India, which require a big workforce of trained Laboratory Professionals for their smooth functioning.

Thus, I saw a whole new field of opportunities for laboratory technologists in Eye Banks of India.
Ram Avtar
Medical Laboratory Technologist
National Eye Bank



Without your involvement you can't succeed. With your involvement you can't fail. - A.P.J Abdul

SCIENCE CORNER

AUTOMATION IN TRANSFUSION MEDICINE: A PARADIGM SHIFT

Transfusion medicine over the past decade has witnessed rapid technological advancements. Newer methods have come up which boost the workflow of the blood bank.

Blood bank Information System (BBIS) ensures the safety of the collection, processing, storage, issuing and traceability of the blood components. It permits to create a record for the characteristics of the donation, blood components prepared, TTI status, blood groups, blood components transfused and the immunohematological status of the patient and sometimes, the donor as well. . In the recent past, automated immunohematology work station based on Erythrocyte Magnetization (EM) technology for blood grouping, antibody screening and cross-matching was introduced in immunohematology. This not only reduces the man-hours involved but also improves the functionality of blood banks. TTI screening, to test all donated units for different infections (HIV, HBV, HCV, Malaria and Syphilis) requires the continuous deployment of fast and reliable screening methods. Automated serologic techniques viz. Chemiluminescence (an immunoassay based on the emission of light caused by chemical reaction) and systems for viral nucleic acid detection NAT which is a qualitative molecular screening test having high sensitivity and specificity for detection of HIV, HBV and HCV are established; thus, providing the safest possible blood components to the patients. Blood component separation can be performed by the automated component extractors. A unit of whole blood collected can be separated in to 3 different blood components; thus, saving 3 lives.

Collection of platelets by apheresis has been a major advance. Donors can donate more frequently than that with whole blood. New technology allows leukoreduced components, reduced donor exposure and reduced risk of alloimmunization. Therapeutic plasma Exchanges are used as a primary or adjunctive therapy for various diseases such as TTP, HUS, drug toxicities, autoimmune disease, etc. Selective apheresis procedures have been developed to target specific molecules, antibodies, or cellular elements in several diseases which preserves the essential plasma components such as albumin, immunoglobulins, and clotting factors.

Leukodepletion (removal of WBCs) from blood components is effective in preventing some adverse transfusion reactions such as febrile non-haemolytic transfusion reactions and alloimmunization. Furthermore, it helps reducing patient mortality and post-operative infections. Each leukodepleted blood component contains $< 5 \times 10^6$ leucocytes/unit. Advances in blood irradiation practice led to a better definition of the most appropriate dose that should be used when irradiating blood components (25 Gy in the mid-plane; not < 15 Gy and not > 50 Gy to any part). Radiation sensitive indicator labels are used to confirm the irradiation process. Caesium-137 (^{137}Cs) is used as the source of gamma irradiation causing abrogation of in-vitro proliferation of lymphocytes in the blood.

Automation improves the objectivity and reproducibility of procedures, reduces human errors, and improves documentation, traceability and archiving of results. Nevertheless, the newer challenges would be to keep pace with ever changing technologies with concurrent staff training so as to ensure a safe blood supply.

Neelam Singh
MLT
Main Blood Bank
AIIMS

Anyone who has never made a mistake has never tried anything new. —Albert Einstein

LITERARY WORKS AND GALLERY



हमारे बुजुर्ग

बन जाये जीवन जब परिवार हो
सम्पूर्ण

तन, मन, धन सबसे हो परिपूर्ण
खुशियां ही खुशियां बरसती रहें
गम भी दस्तक देने को तरसती रहें
हर पल मिलती रहें जिनकी दुआएं
जिनके आगे सिर झुका दे ये हवायें ये फिजाएं
जिनकी मौजूदगी से घर बने महकता हुआ
हर पल, हरदम, हर माहौल हो चहकता हुआ
ये बुजुर्ग है हमारे, इन्हें जरा तू पहचान
ये ही वो दाता है हमें बनाने वाले इन्सान
इन्हीं की बदौलत मकान में आती है जान
इनके चरणों में हमारा शत शत प्रणाम

Neelam Singh

MLT

Main Blood Bank



The poster is drawn by Dr Pramod Kr Verma, MLT

Dr BRA IRCH.

VAASTU TIPS

सुख एवं समृद्धि के लिए वास्तु के स्वर्णिम सूत्र



KAPIL SHASTRI
TECHNICAL
OFFICER
PHARMACOLOGY

1. पूजा घर उत्तर पूर्व में ही बनाएँ।
2. गृह स्वामी का कक्ष घर के दक्षिण-पश्चिम में होना चाहिए।
3. तुलसी का पौधा (वास्तु दोष नाशक) घर के उत्तर, उत्तर - पूर्व या पूर्व दिशा में रखना चाहिए।
4. घर में टूटे दर्पण, टूटा फर्नीचर, रुकी हुई घड़ी नहीं रखनी चाहिए।
5. शयन कक्ष में मन्दिर एवं शीशा नहीं होना चाहिए।
6. नल से लगातार पानी नहीं टपकता रहना चाहिए।
7. रसोई और टायलेट साथ-साथ नहीं होना चाहिए।
8. मुख्य द्वार पर गणेश प्रतिमा लगाने से घर में सुख और समृद्धि आती है।