



BMLT NEWSLETTER

LAB CHRONICLES: INNOVATING, LEARNING, AND EXCELLING TOGETHER!

FROM HOD'S DESK: DEPARTMENT OF MEDICAL LABORATORY TECHNOLOGY

Dear Students, Faculty, and Esteemed Readers,

It gives me immense pleasure to connect with you through this latest edition of our department's newsletter. As the field of Medical Laboratory Technology continues to evolve, our department remains committed to fostering academic excellence, innovation, and professional growth.

This edition highlights the remarkable achievements and activities of the past months, including detailed reports on the conferences and workshops attended by our faculty and students. These platforms have provided valuable insights into the latest trends and advancements in our field, fostering collaborative learning and research opportunities.

We also take pride in showcasing the skill enhancement programs conducted to equip our students with hands-on expertise and industry-relevant knowledge. Such initiatives ensure that our graduates are prepared to meet the demands of a dynamic healthcare landscape.

Looking ahead, we have an exciting lineup of events and activities planned. From upcoming seminars and guest lectures to training programs and outreach initiatives, we are dedicated to providing our department community with enriching experiences that inspire professional and personal growth.

I extend my heartfelt gratitude to our faculty, students, and staff for their unwavering dedication and enthusiasm, which continue to drive our department's success. I also thank our alumni and collaborators for their ongoing support in strengthening our endeavors.

As we navigate this journey together, let us remain committed to our shared vision of excellence and innovation in Medical Laboratory Technology.

Happy reading, and I look forward to your continued participation and contributions to our department's initiatives!

Warm Regards

Dr. Oly Banerjee
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Department Overview

Swami Vivekananda University is among the best medical laboratory technology colleges, and its BSc Medical Laboratory Technology Course is designed to equip students with the skills required to contribute effectively to the healthcare sector. The medical laboratory technician course emphasizes laboratory procedures, diagnostic techniques, and analytical skills necessary for accurate medical testing and research. The curriculum includes subjects such as Clinical Microbiology, Pathology, Biochemistry, Hematology, Immunology, Medical Genetics, and Clinical Instrumentation.

Students gain hands-on experience through clinical rotations and laboratory internships, which provide exposure to the real-world demands and challenges of the profession. The laboratory technician course curriculum is regularly reviewed to incorporate the latest advancements in medical laboratory technology, ensuring that students remain up-to-date with industry practices. Upon completion of the Medical Laboratory Technology program, individuals have the option to pursue roles like R&D Lab Technicians, medical laboratory technologists, Technical Executives, among others. Graduates of this course can explore employment prospects in Private Hospitals, Academic Institutions, Colleges, Pathology Labs, Medical Content Writing, and similar fields.



Program's Educational Objectives:

The BMLT Program at Swami Vivekananda University strives to produce graduates with:

- abilities, qualities and competencies that ensure success in the field of laboratory medicine as a medical laboratory technician.
- theoretical knowledge and practical skills which allow them to conduct up to date laboratory tests, interpret generated laboratory results and understand their relationship to the diagnosis of disease.
- high principles of character, a sense of civic and moral responsibility, and a commitment to basic values of human life

TOP NEWS

MLTs performing community reach programs

The students of Medical laboratory technologists have always taken initiatives in serving people of the local community is one of the prior objective for the understanding of the program. These also increase interest of the students for doing social activities. The name has been given “health monitoring camp” and enlisted as outreach program for the department as well.



Skill Enhancement Program for the Students

In the dynamic landscape of healthcare, the role of Medical Laboratory Technologists (MLTs) is pivotal in providing accurate diagnostic information for patient care. Recognizing the rapid advancements in medical technology and the evolving demands of the healthcare industry, a comprehensive Skill Enhancement Program (SEP) has been designed and executed at our department for the students to empower MLTs with cutting-edge skills, knowledge, and competencies. This program aims to ensure that MLTs remain at the forefront of their profession, delivering high-quality laboratory services and contributing to improved patient outcomes.



Objectives:

1. Staying Current with Technological Advancements:

- Providing MLTs with in-depth training on the latest laboratory equipment and technology.
- Familiarizing participants with emerging diagnostic methodologies and techniques.

2. Enhancing Analytical and Critical Thinking Skills:

- Developing MLTs' ability to analyze complex data and interpret results accurately.
- Fostering critical thinking skills to troubleshoot issues and adapt to challenging situations.

3. Quality Assurance and Compliance:

- Instill a strong understanding of quality control measures and laboratory standards.
- Ensure compliance with regulatory guidelines to maintain the highest standards of patient care and safety.

Program Components:

We designed interactive workshops where students were provided with hands-on training sessions for using advanced laboratory equipment. Sessions on case studies and group discussions were conducted to enhance problem-solving skills. Quizzes and assessments were also executed to reinforce understanding.

NABL Quality Control Training Program for Medical Laboratory Students

The National Accreditation Board for Testing and Calibration Laboratories (NABL) Quality Control Training Program for Medical Laboratory Students is a pioneering initiative designed at our university to instill a culture of excellence, precision, and adherence to international standards in the next generation of medical laboratory professionals. Recognizing the critical role that quality control plays in diagnostic accuracy and patient care, this program is tailored to empower students with the skills and knowledge necessary to meet the stringent requirements of the healthcare industry. Students were given Hands-On Training in Laboratory Techniques to equip them with practical skills in implementing quality control measures. Students were also educated on risk assessment methodologies to identify potential sources of error and also, they were trained to develop strategies for error prevention and continuous improvement. It was ensured from our ends that students are well-versed in NABL guidelines and requirements for laboratory accreditation. They were provided with guidance on documentation practices to meet accreditation standards.

Program Components:

- Lectures and Theoretical Sessions
- Practical Training Modules
- Laboratory Audits and Assessments
- Interactive Workshops
- Industry Experts and NABL Representatives

Internship and placements:

So far, the students of the ongoing batches are placed at several prestigious organizations for the internship programs atleast for 2 to 6 months duration. The organizations where the students are allotted are as follows: Belegkata ID & BG hospitals, Apollo clinics, SKM barasat, ILS Hospitals Howrah, Narayana Multispecialty hospitals, Medica super specialty Hospitals, Woodlands Hospitals, IQ city Durgapur, Burdwan Medical College etc

Tech Fest 2024: A Proud Moment for MLT Students

The School of Allied Health Sciences at Swami Vivekananda University hosted an exhilarating Tech Fest from February 19–21, 2024. The event brought together students from various disciplines to showcase their creativity, innovation, and technical expertise.

Students from the Department of Medical Laboratory Technology (MLT) actively participated by presenting innovative models that highlighted cutting-edge concepts in diagnostic techniques and laboratory sciences. Their dedication and ingenuity earned them the Second Prize, a testament to their hard work and technical acumen.



Congratulations

to our talented MLT students for their outstanding achievement! Your success continues to inspire us all.



SEMINARS AND SYMPOSIUMS

International Conferences 2024: Advancing Global Healthcare

The School of Allied Health Sciences, Swami Vivekananda University, proudly hosted three international conferences in 2024: Global HealthCon 2024 (February 22–24 and June 20–22) and the International Conference on Healthcare Research and Technology (ICHRT) (September 25–26). These events provided a vibrant platform for knowledge exchange, featuring research presentations by students from the Department of Medical Laboratory Technology (MLT). Their contributions reflected innovation and academic rigor. The conferences also welcomed esteemed delegates from reputed institutions, who delivered insightful invited talks on cutting-edge topics in healthcare and research.

These gatherings reinforced our commitment to fostering academic excellence, research, and global collaboration in allied health sciences.





National Science Day Celebration

On **28th February**, we celebrated National Science Day with enthusiasm and intellectual vigor. The keynote address by **Dr. Anindya Sundar Panja** captivated the audience, delving into the theme of the day with expertise and passion. A highlight of the event was the **Science Quiz Competition**, where students demonstrated their knowledge and enthusiasm for science. Congratulations to all participants and winners for making the day memorable



CELEBRATION OF NO SMOKING DAY

No Smoking Day is a time to celebrate the commitment to a smoke-free life. It's a day to recognize the importance of health and well-being by saying no to tobacco. Communities come together to raise awareness about the harmful effects of smoking and to support those who are trying to quit. This year, on the occasion of National No smoking Day, Swami Vivekananda University celebrated this day to spread awareness about the destructive impacts of smoking. In the first phase of the celebration, Dr. Joy Basu, Vice President, Apollo Group of Hospitals (Pan India), Dr. Payel Talukdar, Associate Professor and Head of the Department, Psychiatry, RG Kar Medical College and Dr. Dibyendu Roy (PT), HOD, Department of Onco Rehabilitation, Apex Hospital, Varanasi delivered an insightful talk where they discussed about the hazardous impact of smoking on individual's health and environment.



On the occasion of No Smoking Day, students of Swami Vivekananda University, organized impactful events like street plays directed and narrated by Prof. Prabir Guha, Director of ALTERNATIVE LIVING THEATRE & Mentor for the Performing Arts, Swami Vivekananda University, Arpita Sarkar & Souryadip Sanyal (Incharge Library, SVU) along with the rallies to spread awareness about the hazards of smoking. The day ended with enthusiastic students gathering in the campus armed with posters, banners, and pamphlets advocating for a smoke-free lifestyle. The vibrant energy of the youth was palpable as they prepared to engage with each other. First, a street play unfolds, featuring compelling narratives and relatable characters depicting the harmful effects of smoking on individuals and society. Through drama and dialogue, the audience was captivated, and the message resonated deeply. Following the street play, the students led a spirited rally, marching through the campus with fervor and determination. Chants and slogans echo, emphasizing the importance of saying no to tobacco and embracing healthier habits. Other students were encouraged to join, and bystanders paused to listen, drawn in by the impassioned voices of the youth. The rally culminated in a central location, where students delivered speeches, testimonials, and presentations, further emphasizing the significance of quitting smoking for personal health and community well-being.



As the day comes to a close, the impact of the students' efforts is tangible.

LOOKING AHEAD

We remain committed to fostering academic excellence, research innovation, and professional growth. Stay tuned for upcoming events and initiatives designed to enhance your learning experience and career readiness.

RESEARCH AND PUBLICATIONS

In the dynamic and rapidly evolving field of healthcare, research and publication play a pivotal role in driving advancements, fostering innovation, and enhancing the overall quality of education and patient care. Universities, as hubs of knowledge and learning, have a critical responsibility to cultivate a culture of research within their healthcare departments.

Research contributes to the expansion of knowledge in healthcare, ensuring that academic programs remain up-to-date and relevant. Faculty and students engaged in research are exposed to cutting-edge developments, enabling them to incorporate the latest evidence-based practices into their teaching and clinical work. This continuous cycle of learning enhances the overall academic excellence of the healthcare department. Some of the research articles published in the 2023 are.....



Microglial Inflammatory Responses to SARS-CoV-2 Infection: A Comprehensive Review

Rajen Dey¹ · Biswadev Bishayi²

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Inflammatory perspectives of polycystic ovary syndrome: role of specific mediators and markers

Rajen Dey¹, Koushik Bhattacharya^{2*}, Asim Kumar Basak³, Nimisha Paul⁴, Raktima Bandyopadhyay⁵, Gargi Ray Chaudhuri⁶, Mahuya Patra Purkait⁷, Aniruddha Bhattacharjee⁸, Chaitali Bose⁹, Nandini Shukla¹⁰, Rama Bhaduri¹¹, Soumya Sinha Roy¹² and Alak Kumar Syamal⁹



Review Article

Koushik Bhattacharya*, Rajen Dey, Debanjana Sen, Nimisha Paul, Asim Kumar Basak, Mohuya Patra Purkait, Nandini Shukla, Gargi Ray Chaudhuri, Aniruddha Bhattacharya, Rajkumar Maiti, Krishnendu Adhikary, Prity Chatterjee, Prithviraj Karak, Alak Kumar Syamal

Polycystic ovary syndrome and its management: In view of oxidative stress

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proportion of women globally. Therefore, the understanding of the relationship between OS and PCOS is crucial to the development of therapeutic and preventive strategies for

Abstract: In the past two decades, oxidative stress (OS) has



Exploring aryl hydrocarbon receptor (AhR) as a target for Bisphenol-A (BPA)-induced pancreatic islet toxicity and impaired glucose homeostasis: Protective efficacy of ethanol extract of *Centella asiatica*

Oly Banerjee^{1,2}, Siddhartha Singh³, Shilpi Kumari Prasad⁴, Ankita Bhattacharjee⁵, Tapan Seal⁶, Jayanta Mandal⁷, Sangram Sinha⁸, Anindita Banerjee⁹, Bithin Kumar Maji¹⁰, Sandip Mukherjee^{11,12}

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Individual and combined antagonism of aryl hydrocarbon receptor (AhR) and estrogen receptors (ERs) offers distinct level of protection against Bisphenol A (BPA)-induced pancreatic islet cell toxicity in mice

Oly Banerjee^{1,2} · Tiyyesh Paul³ · Siddhartha Singh¹ · Bithin Kumar Maji⁴ · Sandip Mukherjee⁵

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scientific reports



OPEN *Centella asiatica* mitigates the detrimental effects of Bisphenol-A (BPA) on pancreatic islets

Oly Banerjee^{1,2}, Siddhartha Singh¹, Tiyyesh Paul³, Bithin Kumar Maji⁴ & Sandip Mukherjee^{5,11}



The role of microglia in Zika virus pathogenesis: Possible diagnostic and therapeutic strategies

Subhrajyoti Paul, Sudipta Patra, Ayan Mondal, Gungun Sharma Adhikari, Piu Ghosh, Manojit Bysack, Rajen Dey^{1,2}

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