

Institute of Medical Molecular Biotechnology Newsletter



UNIVERSITI
TEKNOLOGI
MARA

Institut
Bioteknologi
Perubatan
Molekul

Issue 46 | August 2024 | <https://immb.uitm.edu.my/>

On July 9, 2023, **Assoc. Prof. Dr. Heo Chong Chin** delivered a talk at **Hanyang University in Seoul, South Korea**, engaging with students about his experiences in Antarctica, including his time at the **Korean Antarctic Research Station**. He shared insights from his research on the factors contributing to the decomposition of penguin carcasses in the Antarctic environment. This invitation, extended by **Prof. Dr. Hyo Bang Moon**, builds on Prof. Moon's visit to IMMB in January 2024, fostering potential new research collaborations between Hanyang University and UiTM. Such exchanges not only promote academic partnerships but also enrich the cultural understanding between the institutions through collaborative activities.



On July 31, 2024, **Dr. Nur Alia Johari**, a senior lecturer at the Institute for Research, Development, and Innovation at **IMU University Kuala Lumpur**, delivered an engaging presentation on titled **"Field Work in Maritime Antarctica: Research on Rhizosphere Soil Bacterial Communities"** as part of the **IMMB Research Talk series**. The event was chaired by Assoc. Prof. Dr. Heo Chong Chin and attracted 20 participants. In her discussion, Dr. Alia discussed her fieldwork in the harsh Antarctic environment, where she spends around three months collecting samples and documenting data on the distinct bacterial communities that are present in rhizosphere soil. Her experience bringing in samples from Antarctica and having to wait a long time for authorisation to bring back the samples because of the Movement Control Order (MCO) gave her valuable insight into how to handle stressful situations and unexpected events. Additionally, the data from the research provided valuable contributions to the understanding of microbial ecology in extreme environments, highlighting the importance of such research for broader ecological and environmental studies.



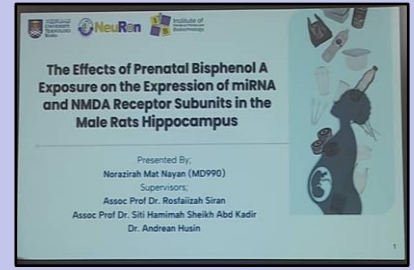
IMMB Technical Talk: Dr. Benson Lim, Science & Technology Advisor at **10x Genomics, Singapore**, was invited as a speaker for the IMMB Technical Talk 2024, which was held on July 29, 2024. He presented a talk entitled **"Access the Full Richness of Biological Complexity with Single Cell and Spatial Multiomics"**. The talk delved into the cutting-edge technologies and methodologies used to dissect the intricacies of biological systems at an unprecedented resolution. Dr. Lim explained how single-cell analysis and spatial multiomics enable researchers to capture the heterogeneity within tissues, revealing critical insights into cellular functions, interactions, and the spatial organisation of complex biological structures. He showcased the applications of these techniques in various fields, including cancer research, neuroscience, and developmental biology, illustrating their potential to revolutionise our understanding of biological complexity. The session was chaired by Mr. Muhammad Daniel Hakim Zulkepeli and drew an audience of 18 participants.



IMMB Research Talk: Dr. Tania Ivorra, a Research Fellow, was invited as a speaker for the IMMB Research Talk 2024, which was held on July 17, 2024. Her talk entitled **"Navigating My UiTM Adventure: A Story of Growth and Achievement"**. Her personal journey and her experiences at UiTM were the main topics of discussion, with an emphasis on her professional development and the noteworthy accomplishments she was able to make while in IMMB. Her insightful explanations of the difficulties and successes she had faced as a research scholar inspired and encouraged other researchers and students. The session was chaired by Assoc. Prof. Dr. Heo Chong Chin and drew an audience of 20 participants.

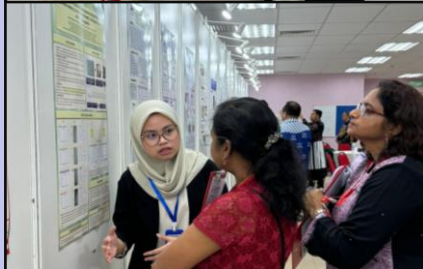
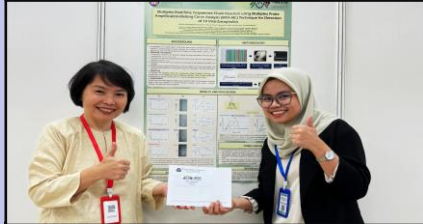
ACTIVITIES, INITIATIVES & INVOLVEMENT

IMMB Journal Club 2024, featuring **Norazirah binti Mat Nayan** as the presenter, was held on July 10, 2024. Norazirah, a student under the supervision of **Assoc. Prof. Dr. Rosfaizah Siran**, with co-supervisors **Assoc. Prof. Dr. Siti Hamimah Sheikh Abdul Kadir** and **Dr. Andrean Husin** from the Faculty of Dentistry, UiTM, presented her research on **“The Effects of Prenatal Bisphenol A (BPA) Exposure on the Expression of miRNA and NMDA Receptor Subunits in the Male Rat Hippocampus”**. Her work focusses on the impact of plastic exposure during pregnancy on the offspring's learning and memory functions. This study specifically focusses on the effect of BPA on epigenetic mechanisms involved in the development of the hippocampus. The talk was attended by 25 participants and chaired by Miss Siti Aisyah Mokhtar.



Congratulations to **Norazimah binti Tajudin**, who is under the supervision of **Dr. Siti Farah Alwani bt Mohd Nawi** and co-supervised by **Assoc. Prof. Dr. Wang Seok Mui** and **Assoc. Prof. Dr. Mariam Mohamad**, for successfully passing her **MSc VIVA VOCE** on July 17, 2024. Her MSc thesis is entitled **“Genomic Characterization of SARS-CoV-2 by Whole Genome Sequencing and its Association with Disease Severity”**. She passed her MSc viva with minor corrections. Throughout her MSc studies, she participated in six conferences and authored one paper published in the APJMBS journal.

Congratulations to **Dr. Afiqq Aiman bin Abd Ghapor**, a fellow PhD student under the supervision of **Assoc. Prof. Dr. Nurul Alimah Abdul Nasir** and **Dr. Norhafiza Razali**, for successfully passing his **PhD VIVA VOCE** on July 18, 2024, with minor corrections. His PhD thesis is entitled **“The Mechanism of the Neuroprotective Effect of Trans-Resveratrol Against NMDA-Induced Retinal Excitotoxicity in Sprague-Dawley Rats: Focus on NMDA-Mediated Calcium Signaling and Adenosine A1 Receptor”**. Throughout his PhD studies, he authored three full papers, won five innovation awards, and received five science communication awards. He represented Malaysia in the 2021 Virtual National 3-Minute Thesis hosted by the University of Queensland, Australia. All the best for his future endeavors.

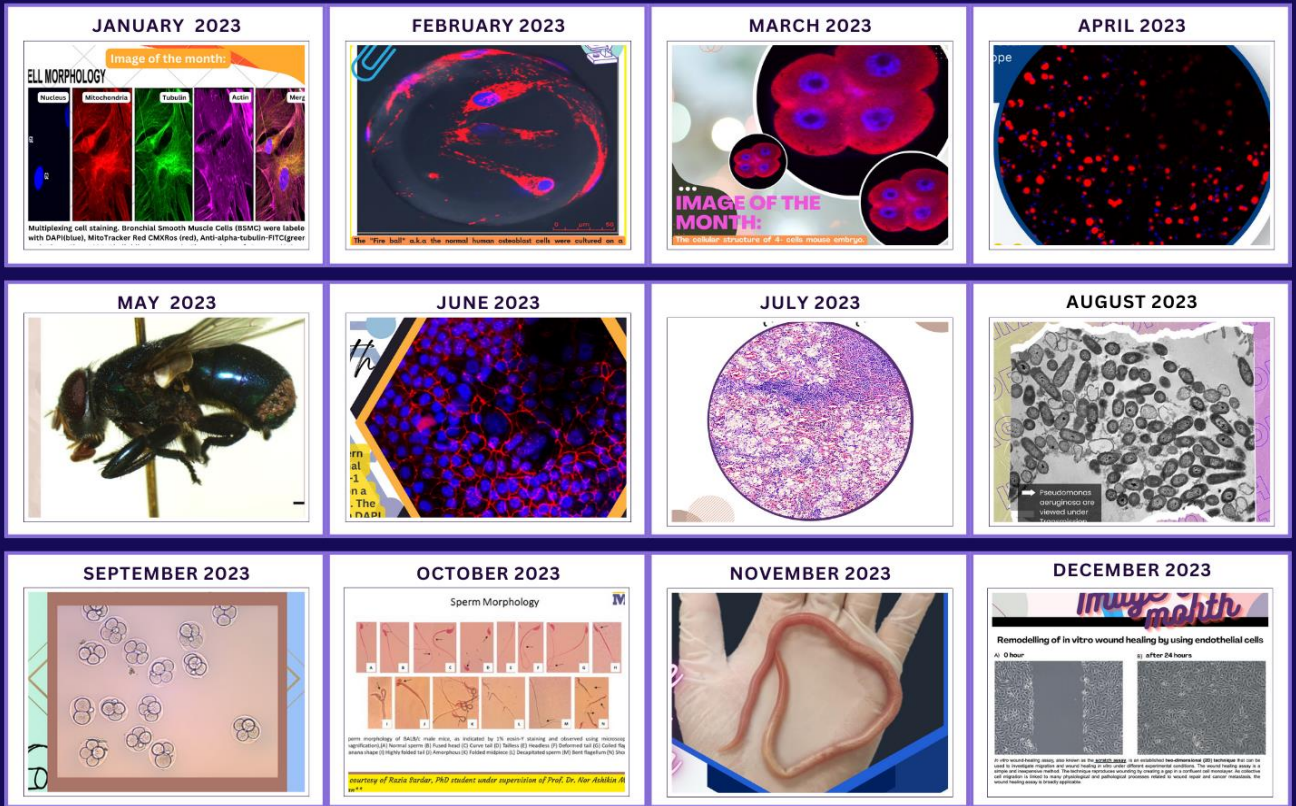


BEST PRESENTER AWARD: The **7th International Conference on Molecular Biology and Biotechnology (ICMBB 2024)** and the **6th USIM International Health Conference (IHeC) 2024** were held together on June 26–27, 2024, at **Universiti Sains Islam Malaysia (USIM)**. This year's theme, **“Transdisciplinary Synergy: Shaping a Sustainable Future for a Better World”**, brought together experts and students from various fields to discuss innovative research and sustainable solutions. **Sharifah Aliah Diyanah Syed Hussin**, a PhD student at the Faculty of Medicine supervised by **Assoc. Prof. Dr. Wang Seok Mui**, won the Best Presenter Award for her outstanding presentation titled **“Multiplex Real-Time Polymerase Chain Reaction using Multiplex Probe Amplification-Melting Curve Analysis (MPA-MC) Technique for Detection of 10 Viral Encephalitis”**. Her research focused on developing a Multiplex Real-Time Polymerase Chain Reaction (RT-PCR) incorporating the MPA-MC Technique, which enables the simultaneous detection of 10 viral encephalitis. The significance of her work lies in its potential to provide faster and more accurate diagnoses, leading to more effective treatments, reduced health costs, and shorter antiviral therapy durations. This advancement not only improves patient outcomes by reducing morbidity and mortality but also decreases overall treatment costs. Sharifah's exceptional presentation and research contributions were recognised, serving as an inspiration to her fellow postgraduate colleagues.

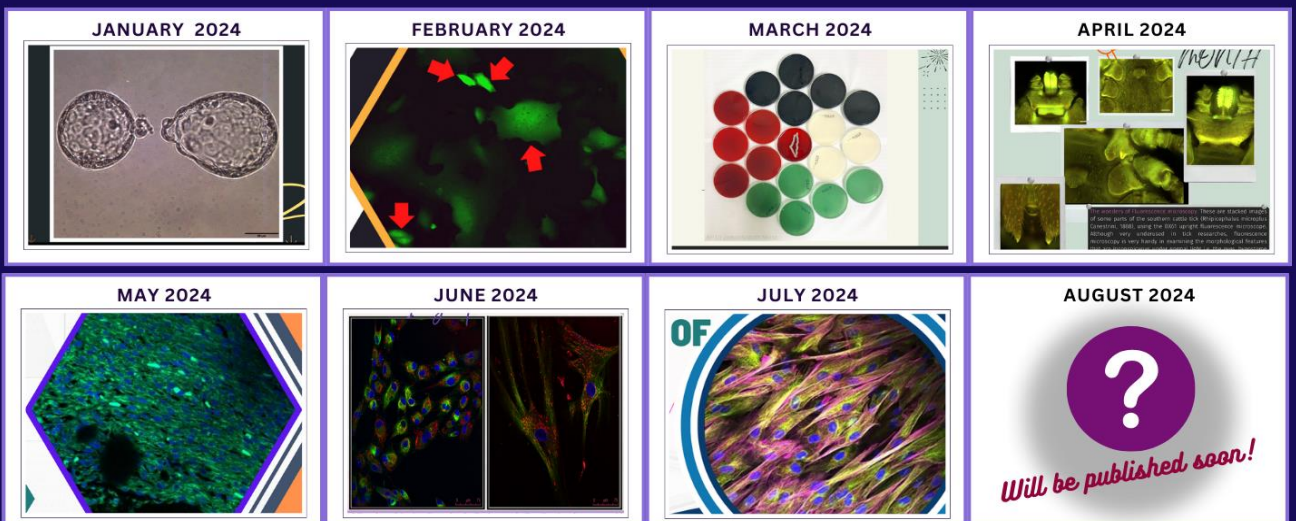
Participation in conferences offers benefits such as improved networking, presentation skills, and cultural exploration. Sharifah's achievement at ICMBB 2024 is expected to motivate other students at IMMB, encouraging them to actively participate in conferences and pursue excellence in their work.

“Believe and act as if it were impossible to fail” - Charles Kettering

IMAGE OF THE MONTH COLLECTION: A SPECIAL THANKS TO OUR CONTRIBUTORS



IMMB IMAGE OF THE MONTH is an initiative led by **Mrs. Salina Othman** (Senior Ass. Science Officer). As an important output in research, images and visualization play a crucial role in improving understanding among researchers. These images have the potential to be attractive due to their uniqueness and the mystery behind them. For potential students, these stunning images can spark curiosity and inspire them to pursue careers in science. Academicians can use these visuals to make their teaching more interesting and easier to understand. The industry may see the potential for practical applications through these images, leading to collaboration and innovation. By projecting the beauty and detail of these research images, this initiative not only highlights the expertise and facilities at IMMB but also enlivens the dynamic research community. It can lead to interdisciplinary collaboration, initiate research interest, and increase the visibility of IMMB.



To contribute in the future, please contact the PIC at salina4860@uitm.edu.my