

Institute of Medical Molecular Biotechnology Newsletter



UNIVERSITI
TEKNOLOGI
MARA

Institut
Bioteknologi
Perubatan
Molekul

ISSUE 57 (OCT-DEC 2025)

IMMB 2025 STATS	1 INTERNAL ADVISORY & SUPERVISORY MEETING	11 RESEARCH TALK & BASIC LECTURE	TOWNHALL WITH SUPERVISORS & STUDENTS 1	CONFERENCE & WORKSHOP 6	COMMUNITY PROGRAM JUNIOR SCIENTIST DAY & BUBUR MANIS 2
1 INTERNATIONAL VISITING SCIENTIST & PROFESSOR	5 TECHNICAL & SAFETY TALK	4 RAMADAN TALK	APPRECIATION & EID FEAST 3	MOU 1	8 Visit from International/ National Delegation
8 INTERNATIONAL WEBINAR SERIES	7 JOURNAL CLUB	4 IMMB Staff Empowerment	1 MOU	8 Visit from International/ National Delegation	Visitors from International/ National Institution 22

Editor's Note

Greetings from the Institute of Medical Molecular Biotechnology (IMMB)!

As we conclude the final quarter of 2025, this issue of the IMMB Newsletter reflects a period of active academic exchange, notable achievements, and continued growth within our research community. Over the past months, our research talks, journal club sessions, and postgraduate milestones have highlighted the strong spirit of collaboration and learning shared by our staff, students, and partners.

This issue also underscores IMMB's commitment to nurturing an inclusive and supportive research environment, one that values interdisciplinary engagement, curiosity, and personal development. We are particularly proud of our

postgraduate students, whose dedication and resilience are evident in both their scientific progress and personal reflections. Their journeys remind us that research is built not only on outcomes, but also on perseverance and purpose.

We also celebrate recent institutional achievements, the strength of our advisory and support networks, and the unwavering contributions of our academic and technical staff.

Thank you for being part of the IMMB community. I hope this issue keeps you informed, inspired, and connected.

Happy Reading!

Assoc. Prof. Dr. Wang Seok Mui
IMMB, Director

More To Explore:

[Research Talks](#)

[Achievement](#)

[Staff Profile Highlight](#)

[Postgraduate Diary](#)

[IMMB Advisor & Support Network](#)

[Image of the Month](#)

[Quote of the Day](#)



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BROWSE & EXPLORE



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IMMB RESEARCH TALKS: CONNECTING MINDS, SHARING KNOWLEDGE

At IMMB, we believe that innovation thrives when ideas are exchanged. To nurture this spirit, we regularly organize Research Talks featuring experts from UiTM, partner universities, industry leaders, and international collaborators. These sessions serve as a dynamic platform for sharing insights, sparking interdisciplinary collaborations, and strengthening connections across local and global research communities.

Complementing these talks, our Journal Club sessions provide postgraduate students with an excellent opportunity to showcase their research, refine presentation skills, and engage in stimulating academic discussions.

From October to December 2025, IMMB hosted four research talks and three journal clubs, typically scheduled during the Wednesday noon hour. Several sessions were conducted in hybrid mode, ensuring accessibility for a wider audience. For those who missed them, recordings are available on IMMB's official YouTube channel: <https://www.youtube.com/@immbmedic1048>.

Through these enriching engagements, IMMB continues to champion a culture of knowledge sharing and collaboration, fueling innovative research and meaningful conversations across disciplines.

HIGHLIGHTS OF RESEARCH TALKS

Dr. Saw Jo Anne

On 15 October 2025, Dr. Saw Jo Anne, Clinical Psychologist and academic from UiTM's Department of Psychiatry, delivered an insightful talk titled "From Surviving to Thriving: Why Mental Health Conversations Matter in Academia". Drawing from over a decade of experience in mental health research and education, Dr. Saw

emphasized the importance of fostering open conversations about psychological well-being in academic settings. Her session focused on practical strategies for students to cope with stress and maintain balance in their academic journey. The talk resonated deeply with attendees, reminding us that mental health is integral to academic success and personal growth.

IMMB RESEARCH TALK 2025
IRT 09/2025

UNIVERSITI TEKNOLOGI MARA Institut Bioteknologi Perubatan Molekul

From Surviving to Thriving:
Why Mental Health Conversations Matter in Academia

Wednesday
15 October 2025

12:00 pm - 1:00 pm

VENUE
IMMB Level 1
Meeting Room 1
Faculty of Medicine
UiTM Sungai Buloh

DR. SAW JO ANNE
Department of Psychiatry
Faculty of Medicine
Universiti Teknologi MARA

For any inquiries, contact Aisyah +6013-5214525

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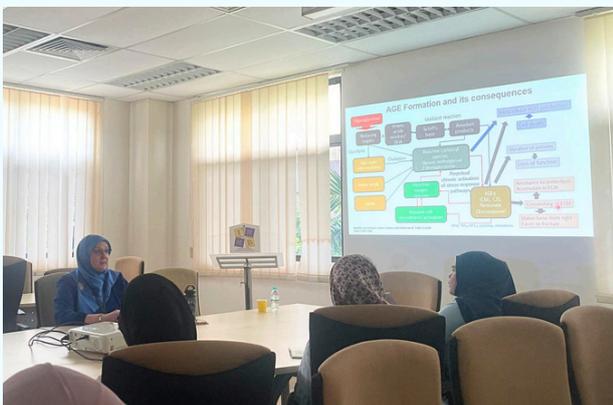


Dr. Jo Anne with participants after her inspiring talk on at IMMB.

Prof. Dr. Gabriele Ruth Anisah Frömming

On 12th November 2025, Prof. Dr. Gabriele Ruth Anisah Frömming, Professor at the Faculty of Dentistry, Universiti Teknologi MARA (UiTM) and former Director of IMMB, delivered an insightful presentation titled “The Use of Phytochemicals in the Prevention of Advanced Glycation End Products Formation and Associated Bone Loss”.

Her talk explored the protective potential of natural compounds against AGE-induced damage in bone tissue. She highlighted experimental findings on berberine and genistein, phytochemicals that help mitigate oxidative stress and DNA damage in osteoblast cells exposed to methylglyoxal. While metformin showed the strongest protective effect, phytochemicals demonstrated promising complementary roles in preserving bone health. Prof. Gabriele’s presentation underscored the potential of natural compounds as adjunctive strategies for improving skeletal outcomes in metabolic disorders.



Prof. Gabriele sharing insights on the role of phytochemicals in preventing advanced glycation end-product formation and related bone loss.



Dr. Lee Sau Har



Participants listening attentively to Dr. Lee’s talk

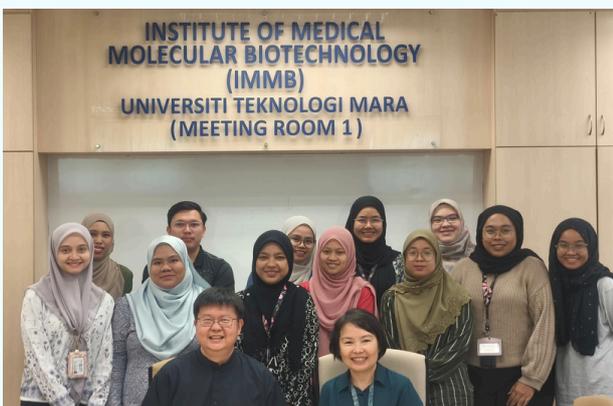
On 25 November 2025, Dr. Lee Sau Har, Senior Lecturer II at Taylor’s University and Programme Director for the Bachelor of Applied Health Sciences (Hons), delivered an engaging talk titled “From Peptide Discovery to Delivering Precision Nanomedicines for Breast Cancer.” Her presentation focused on innovative strategies to develop safer and more selective cancer therapeutics through rational peptide engineering and targeted nanomedicine platforms.

In the second part of her talk, Dr. Lee highlighted key research breakthroughs, including the design of a modified D18.13 peptide with reduced hemolytic activity while maintaining anticancer potency. She also discussed the development of a CD44-targeted PEGylated liposomal system co-encapsulating doxorubicin and miR-145 mimics, which demonstrated enhanced uptake and anti-metastatic effects in triple-negative breast cancer cells. Her presentation underscored the synergy between drug discovery and delivery engineering, offering a promising translational strategy for advancing precision cancer therapies.

Prof. Dr. Chua Chee Wai

On 1 December 2025, Prof. Chua Chee Wai, Principal Investigator and Professor at the Shanghai Cancer Institute, State Key Laboratory of Systems Medicine for Cancer, and Department of Urology, Ren Ji Hospital, School of Medicine, Shanghai Jiao Tong University, presented a fascinating talk on organoid technology and its application in studying prostate luminal progenitors.

He introduced the development of prostate organoid culture methods that enable efficient growth and maintenance of luminal epithelial progenitors and cancer cells, overcoming long-standing challenges in prostate research. Prof. Chua explained how these organoid models have been instrumental in identifying prostate stem cell subsets and generating novel tumour models for drug discovery. His presentation also featured recent unpublished findings on immune-evading prostate cancer, explored through integrated organoid technology, single-cell transcriptomics, and in vivo grafting approaches. The session concluded with key challenges and future directions for organoid research, offering valuable insights into advancing prostate cancer biology and therapeutic development.



Prof. Chua (seated, left) with participants of the research talk.

HIGHLIGHTS OF JOURNAL CLUBS**Amir Muhaimin Akmal Shukri (PhD Student)**

Best wishes to Muhaimin as he prepares for his viva voce examination.

Amir Muhaimin Akmal Shukri presented his mock PhD viva titled “Construction of SARS-CoV-2 Delta Variant Virus-Like Particles (VLPs) and Its Application in the Development of an Enzyme-Linked Aptasorbent Assay (ELASA)” on 22 October 2025. He discussed the challenges of SARS-CoV-2 research associated with biosafety requirements and viral mutations, highlighting the use of virus-like particles (VLPs) as a safe and functional alternative to live virus handling.

Muhaimin presented the construction of SARS-CoV-2 Delta variant VLPs using a recombinant construct incorporating ten recurrent spike protein mutations identified from Malaysian isolates, together with the spike (S), membrane (M), and envelope (E) proteins and enhanced green fluorescent protein (EGFP). VLP expression in Vero 76 cells was confirmed using fluorescence microscopy and immuno-based assays. He further described the refinement of anti-SARS-CoV-2 aptamers and the development of a sandwich ELASA employing Hom-RT as the capturing aptamer and Apt25 as the detection aptamer, which demonstrated high specificity towards Delta variant VLPs with a limit of detection of 14 nM.

Nor Shazlina Mohamed Mizan (MSc Student)

Nor Shazlina bt Mohamed Mizan delivered her pre-viva presentation titled “Development of a Multiplex Real-Time Polymerase Chain Reaction Assay for Detection of Enteric Protozoan Infection” on 5 November 2025. She highlighted the limitations of conventional diagnostic methods in detecting intestinal protozoal infections caused by *Giardia lamblia*, *Cryptosporidium parvum*, and *Entamoeba histolytica*, particularly in resource-limited settings.

Nor Shazlina presented the development of an affordable, locally produced multiplex qPCR assay incorporating optimised primers and TaqMan probes targeting all three protozoa, with the ABCA1 gene included as an internal control. Validation using spiked faecal samples showed high specificity without cross-reactivity, clinically relevant limits of detection, and improved sensitivity compared to microscopy, especially at low parasite loads, while reducing reagent usage and turnaround time.

Haziq bin Faisal (MSc Student)

Haziq bin Faisal presented his mock MSc viva titled “Molecular Epidemiology and Antifungal Susceptibility of *Cryptococcus neoformans* Isolated from Bird Droppings in Public Places and Zoological Gardens of Peninsular Malaysia” on 8 December 2025. He addressed the public health risks associated with *Cryptococcus neoformans*, an environmentally acquired fungal pathogen commonly linked to bird droppings.

Haziq presented findings from the analysis of 509 bird dropping samples collected across Peninsular Malaysia, which were subjected to presumptive identification using Bird Seed Agar followed by molecular confirmation via nested PCR targeting the CNLAC1 gene. Antifungal susceptibility testing and environmental risk assessments

revealed a high prevalence of *C. neoformans*, particularly among pigeons and bird species in zoological gardens, with enclosure density and the Columbidae family identified as significant risk factors, alongside the detection of clinically relevant serotypes A and D and isolated antifungal resistance.

IMMB JOURNAL CLUB 2025

DEVELOPMENT OF A MULTIPLEX REAL-TIME POLYMERASE CHAIN REACTION ASSAY FOR DETECTION OF ENTERIC PROTOZOAN INFECTION

THURSDAY
06 November 2025
12:00 pm – 1:00 pm

**IMMB Level 1, Meeting Room 1,
Faculty of Medicine
UITM Sungai Buloh**

PRESENTER
**NOR SHAZLINA
MOHAMED MIZAN**
Postgraduate student

For any inquiries, contact Aisyah +60135214525

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IMMB JOURNAL CLUB 2025

Molecular Epidemiology & Antifungal Susceptibility of *Cryptococcus neoformans* Isolated from Bird Droppings in Public Places and Zoological Gardens of Peninsular Malaysia

MONDAY
08 December 2025
11:00 am – 12:00 pm

**IMMB Level 1
Meeting Room 1
Faculty of Medicine
UITM Sungai Buloh**

PRESENTER
HAZIQ BIN FAISAL
Postgraduate student

For any inquiries, contact Aisyah +60135214525

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Best wishes to Shazlina and Haziq as they prepare for their viva voce examinations.

Want to Share Your Research?

IMMB welcomes academic staff, students, and collaborators who wish to present their findings or invite guest speakers. If you're interested, please contact: Pn. Fara Fariza Zahar. Email: fara_fariza@uitm.edu.my



IMMB Achievement at the Invention, Innovation, and Design Exposition (IIDEX)2025

The Institute for Medical Molecular Biotechnology (IMMB) achieved a remarkable success at the Invention, Innovation, and Design Exposition (IIDEX) 2025, organised by the Department of Research & Innovation, Universiti Teknologi MARA (UiTM), and held from 28 to 30 October 2025. IMMB’s submission, “CSI MED: The Forensic Experience”, was awarded the Silver Award, recognising its innovation, educational impact, and commercial potential.

CSI MED: The Forensic Experience is an immersive educational programme designed to bring crime scene investigation to life through a combination of simulated fieldwork, evidence collection, and laboratory analysis. Aimed at professionals and higher education students, the programme adopts a problem-based learning (PBL) approach using complex case scenarios to foster critical thinking, teamwork, leadership, and effective technical communication. The module also promotes cross-disciplinary learning and real-world exposure through collaborations with strategic agencies, including FRIM, PERHILITAN, and PDRM, covering criminal, wildlife, and environmental forensics.

Beyond its educational value, CSI MED demonstrates strong commercialisation potential through its niche market appeal, strategic industry collaborations, and prospects for regional and global expansion. The programme has already facilitated international academic linkages with institutions such as the National University of Singapore (NUS) and Murdoch University, Australia, while revenue generated contributes to institutional sustainability and helps reduce the socioeconomic burden on the university.

The competition was led by Hazrul Nizam Hisham Hasmia, with team members Mohd Yusri Idorus, Azhar Ahmad, Norita Salim, Mohd Ameer Azezy Abdul Wahab, Muhammad Daniel Hakim Zulkepli, Salina Othman, Dayana Syahirah Adam Hong, Siti Aisyah Mokhtar, Wang Seok Mui, and Heo Chong Chin. This achievement reflects IMMB’s continued commitment to impactful innovation, industry engagement, and excellence in education and research.



A proud moment for Hazrul Nizam with Prof. Dr. Fazah Akhtar Hanapiah (left), Dean, and Prof. Dr. Anis Safura Ramli (right), Deputy Dean (Research & Innovation), Faculty of Medicine.



The CSI MED booth setup at IDEX 2025.



Hazrul Nizam and Yusri Idorus with a judge after the evaluation session.



Learning Beyond the Bench: A Medical Laboratory Technologist's Journey

Meet Muhammad Daniel Hakim Zulkepli



Academic Foundation and Early Achievements

Daniel's journey in medical laboratory technology began at Universiti Teknologi MARA (UiTM), where he earned a Diploma in Medical Laboratory Technology (2018–2021). His academic excellence was recognized with the Dean's Award, and his leadership qualities shone through his active involvement in student organizations, including serving as an Executive Council member for the Medical Laboratory Technologist Association (Meltech) and as a committee member of the Librarian Council. These roles helped him develop strong organizational and teamwork skills while managing university programs and resources.

Professional Growth and Technical Expertise

Daniel joined the Institute of Medical Molecular Biotechnology (IMMB), Faculty of Medicine, UiTM in 2023 as a Medical Laboratory Technologist, where he plays a pivotal role in supporting research and laboratory operations. His responsibilities include conducting experiments, managing laboratory workflows, assisting students during practical sessions, and ensuring compliance with Good Laboratory Practice (GLP) and biosafety standards.

He currently serves as the Person-in-Charge (PIC) for cell culture operations, overseeing equipment maintenance, monitoring CO₂ and nitrogen gas systems, and ensuring the integrity of samples through meticulous freezer and incubator management. His technical proficiency spans sterile techniques, laboratory safety, equipment operation, and precision measurement, skills honed through years of hands-on experience.

Prior to joining IMMB, Daniel worked as a Quality Control Inspector at NL Scientific Instrument (2022–2023), where he specialized in inspecting and repairing machines to meet industry standards. He also completed an internship at Hospital Universiti Sains Malaysia (HUSM), gaining exposure to histology, hematology, microbiology, and chemical pathology laboratory work.

Beyond the Bench

Daniel's commitment extends beyond technical duties. He actively contributes to institutional programs, serving as a committee member for the Annual Junior Scientist Day (JSD), and for the Global Forensic Classroom in 2024 and 2025, where he supports program coordination and logistics.

Personal Values and Aspirations

Known for his precision, adaptability, and eagerness to learn, Daniel strives to enhance laboratory efficiency while upholding the highest standards of safety and quality. His journey reflects a passion for continuous growth, both as a technologist and as a contributor to IMMB's mission of advancing medical molecular biotechnology.

Fun Fact about Daniel

Outside the lab, Daniel enjoys exploring new skills and staying active, embodying a balance between professional dedication and personal well-being.

***Daniel's journey reflects precision, adaptability, and a passion for continuous growth
— qualities that strengthen IMMB's commitment to excellence and inspire those
around him.***

Grace in the Lab and Beyond: My Postgraduate Story

By: Khairiyah Murad (1st Year PhD, Faculty of Medicine, UiTM)

If you had asked me years ago, I would have confidently said I wanted to become a doctor. Little did I know that years later, I would still be on that path, but in a different way, as a researcher, if God wills.

My research journey began with a deeply personal experience. While preparing for my PMR examination, a big milestone that year, my late grandmother was diagnosed with a severe blood infection. Watching how profoundly it changed her life, and how it affected our family, sparked a curiosity in me that continues to inspire my work today.

Balancing life as a student and as a granddaughter helping to care for my grandparents was far from easy. From the delayed start of my Master's lab work due to the COVID-19 MCO, to enduring countless failed experiments and paper rejections, each challenge shaped me. Now, as I begin my first year of PhD, I am still learning and growing at my own pace. Every small

achievement is a quiet victory that teaches me resilience and the beauty of embracing uncertainty. After all, every researcher succeeds differently.

I am profoundly grateful for the unwavering support from my parents and the understanding guidance of my supervisors. Their belief in me helped shape the person I am today. With their endless support and dua', I was honoured to receive the IMMB Best Student Award 2023 (Master's category) and successfully graduate on time! One of the most meaningful milestones, however, was being invited as a speaker for Biomedical Sciences students at Asia Metropolitan University in 2024. Sharing my story and lessons with the next generation of researchers was an honour I will always treasure.

Beyond the bench, I try to nurture my mind and creativity, finding balance in the things I love. I challenge myself to read at least 20



A proud moment shared with those who made it possible.



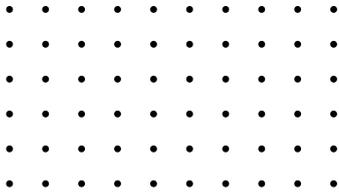
Lab life, laughter, and lifelong friendships at IMMB — captured during the Hari Raya celebration.

books a year, with a new target of 26 books in 2026. I also enjoy simple creative escapes, such as painting and making handwritten cards. One of my quiet joys is arranging small hand bouquets, little gifts I love preparing for my closest friends.

To those just beginning their own postgraduate journey, I'd like to share a few lessons I have learned along the way:

- Stay organised and plan your work well. It will save you more time than you expect.
- Join journal clubs and IMMB/faculty events. Even those outside your research area, because one day that speaker might become your collaborator or even a friend.
- Be alert, helpful, and cooperative. When you do good for others, Allah will ease your path and bless your efforts.
- Seek blessings and support. Always ask for your parents' blessings, your supervisors' guidance, and the dua' of those around you. Their prayers can carry you further than you imagine.

May our postgraduate journeys be filled with learning, growth, and meaningful discoveries, both in the lab and in life.



Supporting Governance, Research, and Laboratory Operations:

An overview of IMMB's advisors, resource persons, and student liaisons

To strengthen institutional governance, enhance research and training programmes, and support sustainable growth, the Institute for Medical Molecular Biotechnology (IMMB) has established a structured support network comprising Internal Advisors, Research Laboratory Resource Persons, and Student Laboratory Liaisons. Together, these roles support strategic planning, operational excellence, and effective engagement within the IMMB research community.

Internal Advisors

IMMB's Internal Advisors are appointed for a two-year term to provide strategic guidance and professional advice to support the Institute's governance, research direction, and programme development. Drawing on their expertise and leadership experience, they serve as key reference points for IMMB management in planning, decision-making, and institutional development.

Their roles include advising on long-term strategic priorities, strengthening research programmes with high impact, and ensuring alignment with the University's vision and mission. The Internal Advisors also contribute to knowledge sharing, promote best practices in management and research, and support continuous improvement across IMMB activities. Through their professional networks, they assist in expanding collaborative opportunities at both national and international levels, while contributing to IMMB's efforts to achieve international benchmarks and global visibility.

IMMB Research Laboratory Resource Persons

The IMMB Research Laboratory Resource Persons play a crucial role in supporting scientific excellence and ensuring high

laboratory standards. They provide expert technical advice related to laboratory operations, research methodologies, and the effective use of specialised equipment within their respective laboratories.

In addition to offering guidance on laboratory protocols and safety practices, the Resource Persons contribute to the development and review of standard operating procedures (SOPs) to ensure compliance with institutional regulations and ethical standards. They are actively involved in training and mentoring students and researchers, strengthening technical competencies, and promoting responsible laboratory practices. Furthermore, they support research implementation by facilitating collaborative projects, contributing to grant proposals and publications, and fostering research linkages with external institutions.

IMMB Student Laboratory Liaisons

The Student Laboratory Liaisons support IMMB laboratory operations by serving as communication links between students and laboratory personnel. They assist in maintaining a well-organised, safe, and functional laboratory environment by reporting technical issues, supporting housekeeping efforts, and coordinating student-related laboratory activities.

The appointment term is one year, allowing opportunities for wider student participation and leadership development. These student representatives also help disseminate important information related to laboratory access, maintenance schedules, safety briefings, training sessions, and updates to standard operating procedures. In addition, they promote adherence to laboratory rules, research ethics, and biosafety practices, while

encouraging a culture of professionalism, responsibility, and collaboration among student users of IMMB laboratories.

Through the collective contributions of the Internal Advisors, Resource Persons, and Student Laboratory Liaisons, IMMB

continues to strengthen its governance, enhance laboratory excellence, and foster a supportive and collaborative research environment for staff and students. The following section lists the appointed Advisors, Resource Persons, and Student Liaisons.

INTERNAL ADVISORS



Assoc. Prof. Dr. Thuhairah Hasrah Abd Rahman
*Department of Pathology, Faculty of Medicine
 Research, Industrial Linkages & Innovation, HASA (Head)
 CARE Institute (Fellow)*



Assoc. Prof. Dr. Siti Hamimah Sheikh Abdul Kadir
*Department of Biochemistry & Molecular Medicine,
 Faculty of Medicine
 CARE Institute (Deputy Director)*



Assoc. Prof. Dr. Heo Chong Chin
*Department of Medical Microbiology & Parasitology,
 Faculty of Medicine
 CARE Institute (Associate Fellow)*

Assoc. Prof. Dr. Damayanthi Durairajanayagam
*Department of Physiology, Faculty of Medicine
 (Head)*



Dr. Noor Fahitah Abu Hanipah
Department of Pharmacology, Faculty of Medicine



Dr. Choy Ker Woon
*Department of Anatomy, Faculty of Medicine
 CARE Institute (Associate Fellow)*



CELL CULTURE LABORATORY



RESOURCE PERSON

Assoc. Prof. Dr. Sharaniza Ab Rahim
*Department of Biochemistry & Molecular
Medicine, Faculty of Medicine*



STUDENT LAB LIAISON I

Nur Sufiah Zukifli
PhD Student



STUDENT LAB LIAISON II

Khairiyah Binti Murad
PhD Student

RNA/DNA LABORATORY



RESOURCE PERSON

Assoc. Prof. Dr. Mohammad Johari Ibahim
*Department of Biochemistry & Molecular
Medicine, Faculty of Medicine*



STUDENT LAB LIAISON

**Sharifah Aliah Diyanah Binti Syed
Hussin**
PhD Student

PROTEIN LABORATORY



RESOURCE PERSON

Assoc. Prof. Dr. Mudiana Muhamad
*Department of Biochemistry & Molecular
Medicine, Faculty of Medicine*



STUDENT LAB LIAISON

Siti Rohaliza Binti Alitar
PhD Student

MICROBIOLOGY LABORATORY



RESOURCE PERSON

Assoc. Prof. Dr. Hassanain Al-Talib
*Department of Medical Microbiology &
Parasitology, Faculty of Medicine*



STUDENT LAB LIAISON I

Khairiyah Binti Murad
PhD Student



STUDENT LAB LIAISON II

Aisyah Syakirah Binti Shahari
PhD Student

PARASITOLOGY LABORATORY



RESOURCE PERSON

Dr. Azdayanti Muslim

Department of Medical Microbiology & Parasitology, Faculty of Medicine



STUDENT LAB LIAISON

Anis Munirah Zaharuddin

PhD Student

ENTOMOLOGY LABORATORY



RESOURCE PERSON

Assoc. Prof. Dr. Heo Chong Chin

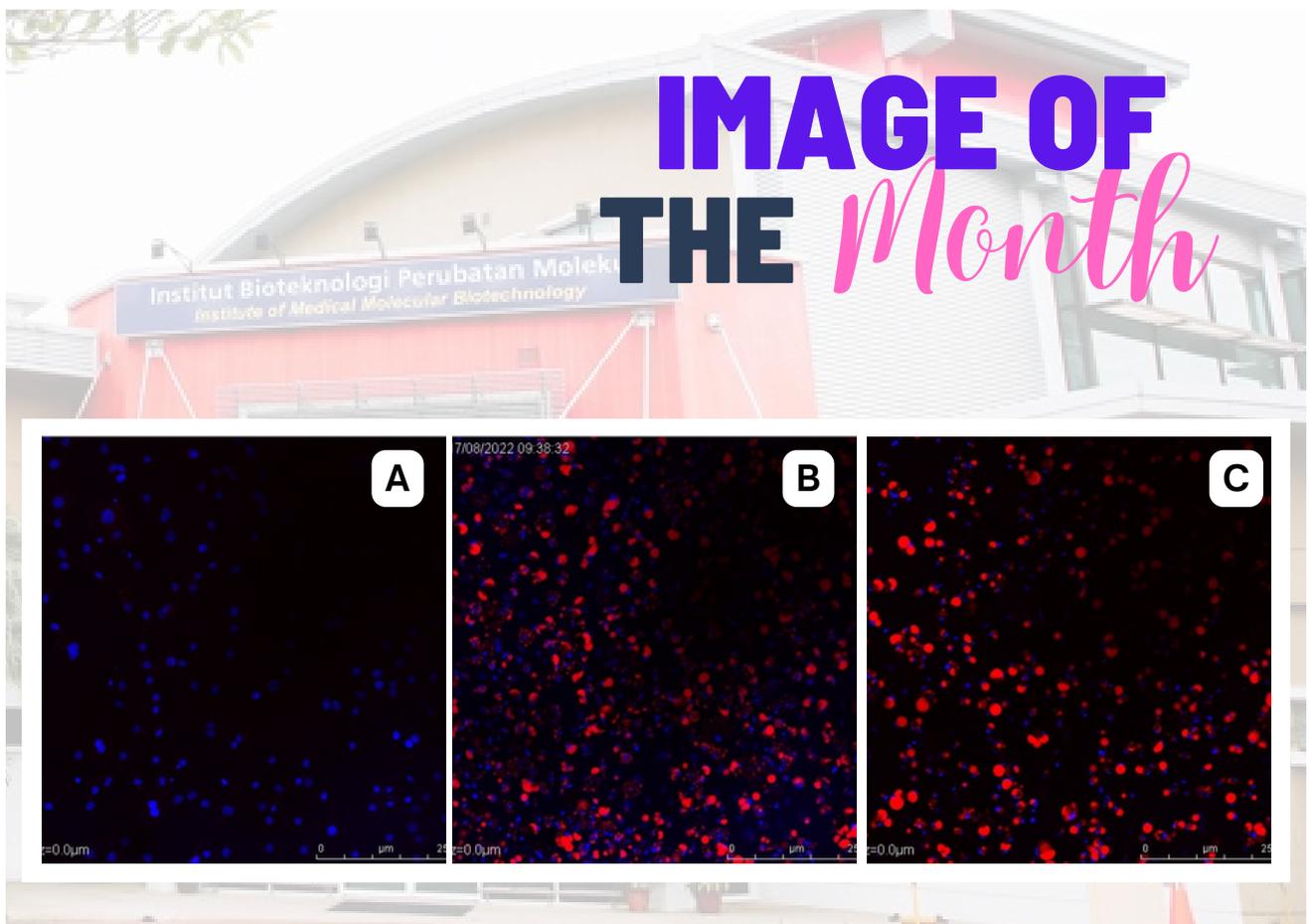
Department of Medical Microbiology & Parasitology, Faculty of Medicine



STUDENT LAB LIAISON

Nur Aliah Natasha Binti Azmi

PhD Student



Tracking Lipid Accumulation in Adipocyte Cells. The image of nucleus (blue) and AdipoRed (red) staining, indicating lipid accumulation in adipocyte cells.

(A) Day 0: No lipid accumulation was observed.

(B) Day 9: Lipid accumulation was detected (indicated by red staining).

(C) Day 15: An increased accumulation of lipids was detected.

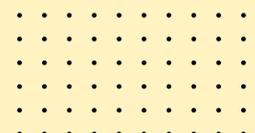
These images were captured using a Confocal Laser Scanning Microscope (CLSM) at 20x magnification.

Image courtesy of Pn. Salina Othman, taken for the project by Assoc. Prof. Dr. Ahmad Ramzi Yusoff.

Above is the Image of the Month for November.

Calling all researchers and students

Do you have an amazing microscopic image or a fascinating photo captured during your research? We would love to showcase it! Share your research images with us and let your work inspire others. Microscopic images, fieldwork photos, or any research-related visuals are welcome, and every contribution will be credited to you. Selected images will be featured in our Image of the Month section, celebrating the beauty of science through your lens. Send your images to salina4860@uitm.edu.my and be part of this exciting initiative!





Nature fights back!

Oregano (O, 1), Habbatus sauda (H, 2), and Myrrh (M, 3) essential oils on Methicillin-resistant *Staphylococcus aureus* (MRSA) (A), *Escherichia coli* (B) and *Staphylococcus epidermidis* (C) by disc diffusion. Vancomycin (V) and Gentamicin (4) acts as the control antibiotic. Both Oregano and Habbatus sauda but not Myrrh, have excellent antimicrobial activity against these three nosocomial bacteria. This suggests that natural products extracts could serve as valuable additional supplements or alternatives to conventional antibiotics. Study published in April 2025 (Mat Homsa et al., 2025).

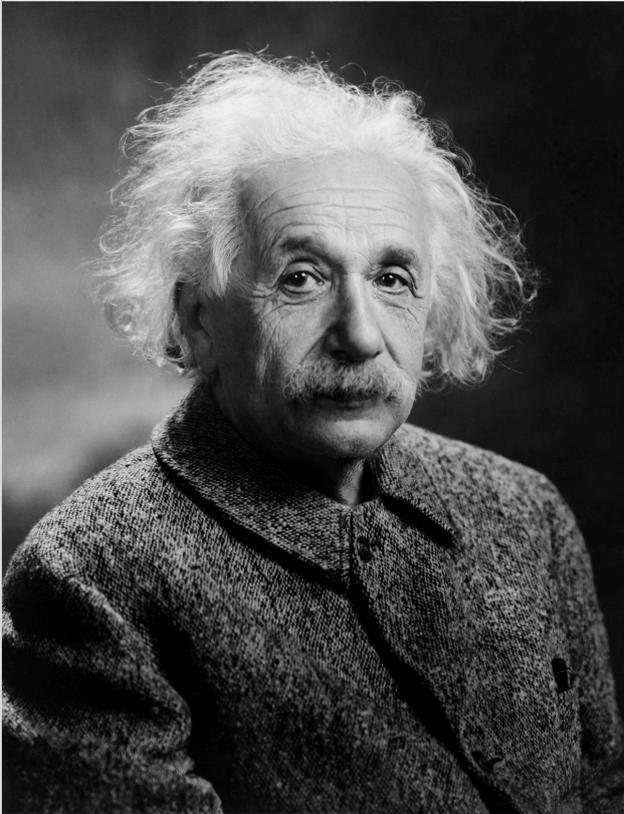
Image courtesy of Khairiyah Murad, PhD student under supervision of Associate Professor Dr. Hassanain Al-Talib

Above is the Image of the Month for December.

“The important thing is to never stop questioning. Curiosity has its own reason for existing”



Albert Einstein
Nobel Laureate in Physics (1921)



About Albert Einstein

Albert Einstein (1879–1955) was a theoretical physicist whose groundbreaking work revolutionized our understanding of space, time, and gravity through his theory of relativity. His contributions laid the foundation for modern physics and earned him the Nobel Prize in Physics in 1921 for his explanation of the photoelectric effect. Beyond his scientific achievements, Einstein was a passionate advocate for curiosity and lifelong learning.

What This Quote Means

Einstein reminds us that curiosity is the driving force behind discovery. Science is not just about answers—it begins with questions. For researchers, this mindset encourages exploration, innovation, and the courage to challenge assumptions. Never stop asking “why” and “how,” because every question opens the door to new possibilities.

Reference: <https://www.nobelprize.org/prizes/physics/1921/summary/>

