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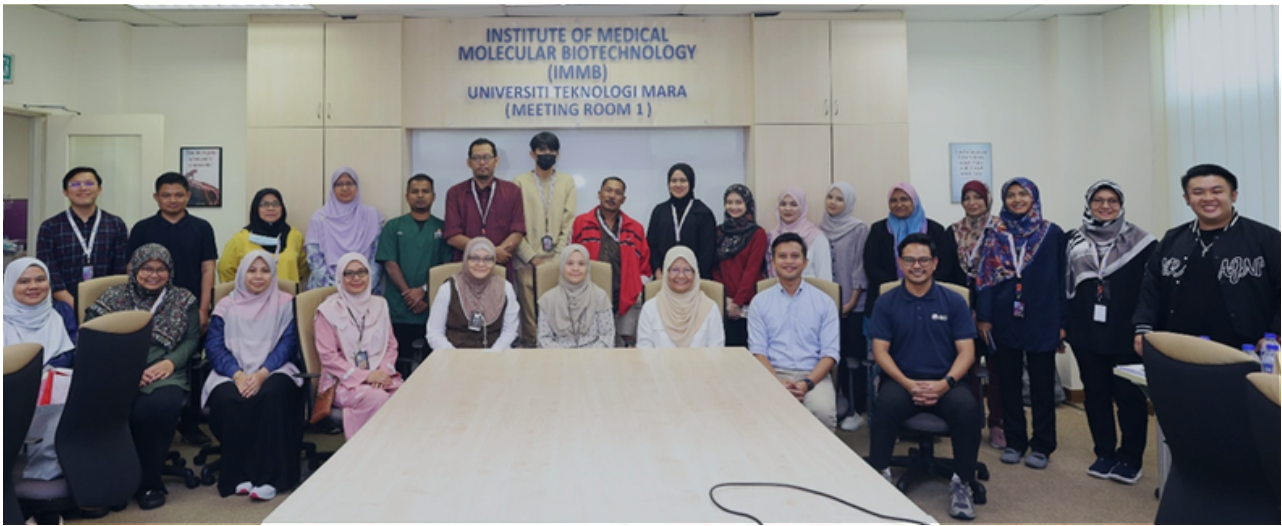
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CELL CULTURE AND FLUORESCENCE IMAGING WORKSHOP 2023

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The Institute of Medical Molecular Biotechnology (IMMB), Faculty of Medicine UiTM, Sungai Buloh Campus organized a hands-on workshop on Cell Culture and Fluorescence Imaging from 12th to 15th September 2023 in IMMB. The workshop was chaired by Dr. Wan Nor I'zzah Wan Mohamad Zain from the Department of Biochemistry and Molecular Medicine, Faculty of Medicine UiTM. The primary objectives of the workshop were to provide participants with a robust comprehension of fundamental cell culture techniques and cell staining, achieved through a combination of theoretical knowledge and practical laboratory exercises. Additionally, the workshop aimed to deepen participants' understanding of the applications and relevant topics within the field of cell culture. The event also served as a valuable platform to showcase the excellent cell culture

facilities available at IMMB.



Twenty-one participants, including faculty members, research scholars, and postgraduate students from esteemed universities such as Universiti Sains Malaysia, Management & Science University, University College of MAIWP International, University Malaya, UCSI, as well as representatives from the government agency Veterinary Research Institute in Ipoh, Perak, attended the workshop. The diversity of the attendees enriched the workshop's knowledge-sharing and networking opportunities.

The workshop included theoretical and practical sessions featuring experienced lecturers in the respective fields. The theoretical sessions were delivered by Assoc. Prof. Dr. Mudiana Muhamad, Assoc. Prof. Dr. Sharaniza Ab. Rahim, Assoc. Prof. Dr. Mohammad Johari, Assoc. Prof. Dr. Suhaila Abd Muid, and Dr. Wan Nor I'zzah Wan Mohamad Zain. These sessions comprehensively covered topics ranging from the foundational principles of basic cell culture techniques to advanced fluorescence microscopy.



In addition to these sessions with academicians and researchers, two industry experts, Dr. Loo Zhang Xin, an Application Specialist from Bio-diagnostics Sdn. Bhd, and Mr. Muhammad Zul'atfi bin Rahmat, an Application Specialist from Biomed Global, delivered insightful talks. Their presentations not only enhanced the participants' knowledge but also offered valuable guidance on selecting the most appropriate techniques for their specific research interests. These sessions also provided ample networking opportunities.



A highlight of the workshop was the hands-on laboratory sessions. Participants were divided into small groups of 4 to 5, fostering an interactive and conducive learning environment. The practical sessions encompassed crucial skills, including aseptic technique, the cultivation of adherent cells, cryopreservation, cryo-thawing cells, subculturing cells, cell counting using a trypan-blue hemocytometer, and conducting proliferation assays with an MTS kit. The MTS assay has become indispensable for most of the application areas of cell culture, including drug development and cytotoxicity testing.



During the fluorescence imaging hands-on session, participants could examine beautifully stained slides with fluorescent markers using a confocal laser scanning microscope and a cell

imager. Each group received guidance from a postgraduate PhD student in the Faculty of Medicine UiTM, who acted as a facilitator. These practical sessions encouraged discussions on facility requirements, safety measures, and critical considerations for working within a cell culture laboratory.

The successful and enjoyable 4-day Cell Culture and Fluorescence Imaging Workshop ended with problem-solving after practical sessions and formal and informal discussions throughout the workshop, which identified the challenges in research involving cell culture and fluorescence imaging. This allowed participants to translate the techniques into applications in their laboratories, advancing their research endeavors. The workshop not only fulfilled its educational objectives but also fostered a collaborative and enjoyable atmosphere among the participants and organizer.

