

# ADVANCING DRUG DISCOVERY THROUGH ETHICAL RESEARCH:

## THE 21<sup>ST</sup> WORKSHOP ON LABORATORY RODENTS (RATS & MICE) CARE AND USE 2025

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Organising Chairman, 21<sup>st</sup> Workshop on Laboratory Rodents (Rats and Mice) Care and Use



The Faculty of Pharmacy, Universiti Teknologi MARA (UiTM), successfully hosted the 21<sup>st</sup> Workshop on Laboratory Rodents (Rats and Mice) Care and Use from 7 to 8 October 2025 at the UiTM Puncak Alam campus. The event brought together participants from Universiti Teknologi MARA (UiTM), Universiti Selangor (UNISEL), and the Malaysian Palm Oil Board (MPOB), reaffirming the Faculty's role as a national hub for laboratory animal science training.

In his opening remarks, Assoc. Prof. Dr. John Shia Kwong Siew, Organising Chairman and Coordinator of Laboratory Animal Facility and Management (LAFAM), reminded participants that rats and mice remain “the cornerstone of biomedical, pharmacological, and toxicological research”. Their close genetic and physiological similarity to humans makes them indispensable for understanding disease mechanisms and evaluating new therapies. Rodent models have shaped virtually every milestone in modern medicine; from the discovery of insulin in diabetic rats, to the development of antihypertensive drugs, anticancer agents, and vaccines. In preclinical pharmacology, rodents enable the screening of compounds for efficacy, safety, metabolism, and toxicity before any human trial can begin. These small animals, through controlled and humane experimentation, bridge the gap between molecular discovery and clinical application, which is the very essence of translational medicine.

However, as Dr. John emphasised, “The privilege of working with these models comes with a profound moral and scientific responsibility.” Poor handling not only causes unnecessary pain or distress but also compromises the validity of data through physiological stress responses and altered behaviour. Upholding ethical and humane standards is thus not merely compliance, it is a scientific necessity.

Over two intensive days, participants engaged in a blend of lectures, hands-on sessions, and assessments that covered every aspect of responsible rodent research. Topics ranged from genetics and nomenclature, sample-size determination, animal care and enrichment, and health monitoring, to the Animal Welfare Act 2015 and MyCode 2019 (Malaysia’s guiding framework for humane animal research). Day Two at the LAFAM unit focused on hands-on competencies, including handling and restraint, oral gavage, blood sampling via tail, facial, or saphenous veins, anaesthesia, and euthanasia techniques. Each session was conducted under strict supervision by trained LAFAM facilitators to ensure both skill mastery and empathy in animal handling. Participants also benefited from a critical ethics briefing by Prof. Dr. Mizaton Hazizul Hasan, who highlighted the “do’s and don’ts” of animal ethics applications, ensuring that young researchers are well-versed in institutional review processes and ethical justification for animal use.



A highlight of this year’s programme was a special demonstration by Dr. Zolkapli Eshak, focusing on the use of the guillotine method to humanely sacrifice rats for uncontaminated brain samples. This procedure is essential in neuropharmacology studies where post-mortem tissue integrity directly affects the accuracy of biochemical and histological analyses. Dr. Zolkapli’s session highlighted the importance of technique precision and rapid execution to minimise distress and prevent enzymatic degradation, ensuring that collected brain samples remain suitable for downstream assays in neurodegenerative drug discovery and central nervous system (CNS) toxicity testing.

The workshop's recurring success, now in its 21<sup>st</sup> edition, reflects UiTM's sustained commitment to fostering ethical and competent researchers. As Dr. John reminded participants, laboratory animal training is not merely technical, it embodies the values of respect, compassion, and responsibility that underpin credible science.

Behind the scenes, the dedication of LAFAM facilitators and technical staff of the Workshop and Income Generation Committee (WIGC) of the Faculty of Pharmacy ensured the smooth execution of every session, from lecture halls to the laboratory benches. Their efforts affirm UiTM's reputation as a model institution in laboratory animal care and education in Malaysia.

As the workshop concluded, participants left not only with certificates but also with renewed conviction that ethical animal research is central to scientific excellence. Every accurate data point, every reliable assay, and every new drug owes its foundation to the unseen but indispensable contributions of these animals.

