

CELEBRATING
COMMERCIALISATION
YEAR 2014

iiindex 2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

invention
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exposition 2014

INNOVATEUR
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2014

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UNIVERSITI TEKNOLOGI MARA
MALAYSIA

*Bridging
the valley of death :
advancing the
commercialisation
of research*

RESEARCH BOOK

iiindex2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

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FOREWORD

The Honourable Minister of Science, Technology and Innovation (MOSTI) has launched 2014 as Malaysia Commercialisation Year 2014 (MCY2014) with the theme Science Technology and Innovation (STI) for Wealth Creation. In line with this theme, Invention, Innovation, Design & Exposition 2014 (iidex2014) is an annual exposition organized by UiTM and is the ultimate platform to highlight and commercialise new inventions and innovations. Researchers and inventors will exhibit their products which cater to the needs and wants of the community and the country.

The iidex2014 creates a new dimension by fusing two competitive concepts, a competition among innovative products and a competition to invite Innovateur Wannabes to perform live pitching of their products to the audience. The iidex2014 focuses on comprehensive commercialization and creating opportunities for entrepreneurs to carry out R&D as well as to provide avenue to commercialise their products. Through expositions such as iidex2014, MOSTI hopes to inculcate the culture of commercialisation of new technology designed and created by Malaysians.

I wish to congratulate all the participants of the iidex2014 and this is the opportunity for all researchers to show their ideas and exhibits their products and creativity. Apart from showcasing their products, innovators will have the opportunity to provide a window to the industry for business matching during the exposition.

Tan Sri Dato' Sri Sallehuddin Mohamed
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HOTEL RODENTIA

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Laboratory Animal Facility and Management (LAFAM) was used to house laboratory animals such as rodents and rabbits for experiments in teaching and learning also research projects in Faculty of Pharmacy, UiTM. Proper housing and management of animal facilities is important to ensure quality and reliable research data and teaching or testing programs in which animals are used. A good management program provides environment, housing, and care that permit animals to grow, mature, reproduce, and maintain good health; provides for their welfare; and minimizes variations that can affect research results. It does not only involve the care and use of animals but also the breeding of clean and healthy pups. To ensure high-quality breeding and animal-care, well-trained and motivated personnel are needed. LAFAM animal house has controlled environments to maintain these animals singly or in groups with proper care and management. They are housed in individually ventilated cages (IVC) at 12-h light / 12-h dark cycle (~24°C) and have access to food and water ad libitum. Currently, LAFAM is divided into two areas, the breeding area at Level 1 and research area at Level 2. Research area is where the animals are housed after they have been weaned and ready for the customers. This area is also used for by investigators to conduct their experiments on the rodents. For breeding purposes, LAFAM purchased specific-pathogen-free (SPF) rats (Sprague-Dawley and Wistar) and mice (ICR and BALB/c) breeding stocks imported from Taiwan and Singapore. These SPF rodents are bred (at level 1) to ensure the rodents are clean and pathogen free. Breeding of these animals are planned and handled by trained LAFAM veterinary assistants following standard operating procedures to make sure a certain number of pups are produced after each mating. So, any request for rodents needs to be submitted two months in advance for LAFAM to commit to the demand. Health of the breeders and offspring are monitored regularly by a qualified veterinarian. There are two types of diet used for the rodents, i.e. special diet and local diet. Special diet is important to be fed to breeders to produce healthy, clean pups as this diet contains high level of protein and fibre. Local diet, rat chow diet was introduced during weaning until the rodents were handed over to the customers according to the age, gender and species requested. This local diet contains essential vitamins, minerals, fat, protein etc. needed for the development of these rodents. Cages are kept clean by changing the bedding once every two days. The bedding material is very important as absorbency of bedding can affect in-cage temperature, moisture, and ammonia levels through concentration of urease-producing bacteria which convert urea into ammonia. Hence, corncob was used for bedding to keep the animals dry and clean. Besides housing rats and mice, LAFAM also provide rabbit and guinea pig cages. Expert advice from LAFAM veterinarian can be sought to guide investigators on care, use and handling of laboratory animals. This animal house is to be renovated into an animal facility that implements Good Laboratory Practice/ Association for Assessment and Accreditation of Laboratory Animal Care (GLP/AAALAC) requirements.