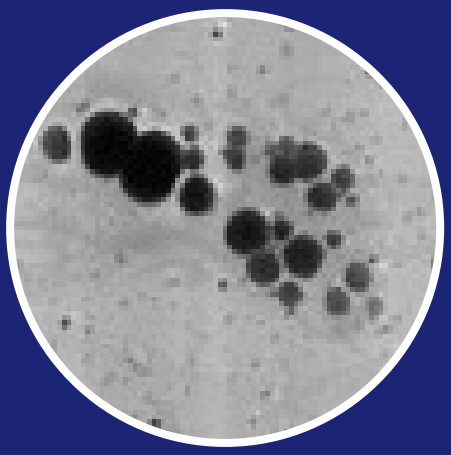
VOL. 6
NO. 1
2018

MILESTONE @ UM NEWSLETTER

UNIVERSITY OF MALAYA



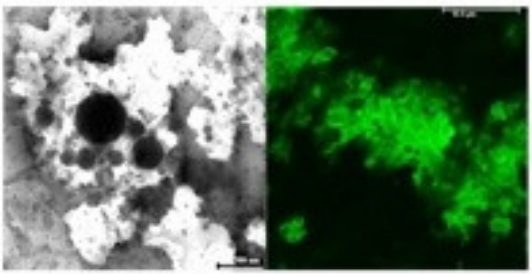
DRUG DELIVERY NANO CARRIERS

Nanotechnology has emerged as an attractive alternative with the improvement of nano carriers drugs delivery system in bioavailability and reduction in toxicity. The contributions of drug delivery research paved new directions in advancement of sciences, and development of new products that offer slow release properties for applications in medical, cosmetics and general health.

The methodological approach encompasses knowledge contribution in fundamental, theoretical and applied science within and across disciplines. It improves active ingredients or drugs delivery methods, as well as added values to enhance current technology, products and the use of existing medications.

Prof. Dr. Misni Misran has spent most of his research career in drug delivery systems, focusing on polymeric nanoparticles synthesis, nano lipids, creams, gels, emulsions and micro emulsions. His research journey in nano medical delivery has been very colourful yet challenging, imbibing multidisciplinary in nature and high financial cost.

Prof. Dr. Misni designs a much cheaper liposomal formulations using unsaturated fatty acids with and without phospholipids mixture to produce stable liposomal system. Interaction between lipid-lipid and drug-lipid in the bilayer membrane mixture is the important decisive factor in designing a stable form of liposomal system. Hence, liposome with stealth properties (which is coated with polymers such as Polyethylene Glycol, chitosan and poly (lactic-co-glycolic acid)) was introduced to ensure that the drugs are protected from external conditions and increase circulation time, yet entrapment efficiency.



Chitonated liposomes in gel

Soluble Chitosans

PROF.DR. MISNI MISRAN
Deputy Dean (Research)
Faculty of Science
University Of Malaya
misni@um.edu.my

NANOCELLULOSE: FROM BIOMASS TO SUPER MATERIALS

Lignocellulosic not only exist in forest wood, but can also be found in agricultural residues (palm biomass, corncobs, wheat straw, sugarcane bagasse, corn stover, coconut husks, and wheat rice); energy crops (switch grass); food wastes; and industrial wastes (waste paper and demolition wood). Malaysia produces massive volume of lignocellulose-based biomass resources which can be converted into alternative energy or advance eco-product. Our country generates a minimum of 168 million tonnes of biomass waste, including palm oil waste (94%), forestry wood residues (4%), rice husk (1%), and sugarcane industry wastes (1%).

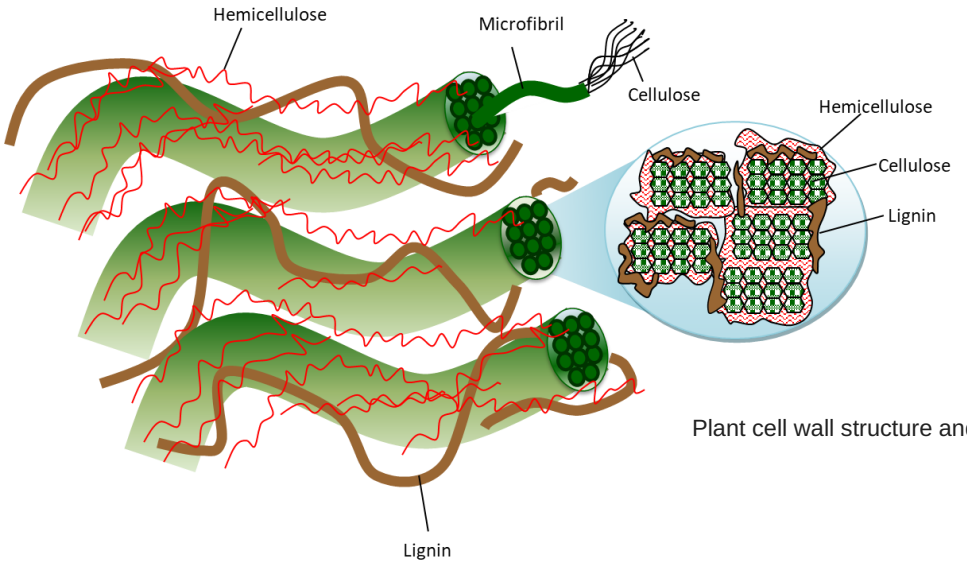
Agricultural waste

Nanocellulose materials and potential nanocellulose-based products

The nanocellulose market has developed tremendously in the recent years, and satisfying both manufacture and consumer at reasonable cost has become a challenge. As such, Dr. Lee Hwei Voon and her team aim to develop a feasible and practical process for the re-engineering of lignocellulosic biomass into high quality nanocellulose. The researchers are currently in the pipeline of converting all types of potential biomass into high quality nanocellulose for different applications. Instead of using the conventional isolation multi-process that involves alkalization, bleaching and hydrolysis, Dr. Lee's team has successfully developed an one-pot isolation system, which reduced the treatment time and waste water generation, while promising high recovery of the nanocellulose product at the same time.

The continuous effort in this research has won Dr. Lee and her team several international and national awards.

DR. LEE HWEI VOON
Nanotechnology and Catalysis Research Centre (NANOCAT)
leehweivoon@um.edu.my



Plant cell wall structure and microfibril cross-section

ETHICS IN SCHOLARLY PUBLICATIONS SEMINAR

A one-day seminar entitled "Ethics in Scholarly Publications Seminar" was organized by Centre for Research Services (PPP), Institute of Research Management & Services (IPPP) on Jan 22, 2018 at the HIR Auditorium. The objective of this seminar was to provide a platform for opinions sharing and discussion about predatory journals as well as the best practices of scholarly publications which adhere to ethics and moral principles. The seminar was attended by a total of 87 participants, with 26.4% are academic staffs, while the remaining are administrative staffs and postgraduate students.

The sessions addressed some common themes and issues in scholarly publications, including:

- Introduction to Predatory Journals by Prof. Dr. Ng Kwan Hoong from Faculty of Medicine.
  A forum session moderated by Prof. Dr. Ainin Sulaiman, Dean for Equitable Society Research Cluster and undertaking the functions of the Dean for Humanities Research Cluster
- Code of Publication Ethics by Dr. Nur Azah Hamzaid, Head of Research Training Unit for ADeC
- Policy on Authorship by Mdm. Nor Aishah Samah, Head of Integrity Unit
- Ethics in Scholarly Publishing: The Reasons behind Retractions by Prof. Dr. Abrizah Abdullah, Dean of Faculty of Science & Information Technology
- Sharing on the perspective from Journal Editor by Prof. Dr. Abrizah Abdullah as Chief Editor for Malaysian Journal of Library & Information Science [indexed and abstracted by Clarivate Analytics' Web of Science (Q3) and Elsevier Scopus (Q2)]
- The trends of publications in UM by Mdm. Koh Ai Peng, Deputy Chief Librarian UM
- Code of Research Ethics by Prof. Dr. Sarinah Low Wah Yun.

NATIONAL HEALTH RESEARCH INSTITUTES (NHRI),TAIWAN VISIT TO UM

Early this year, Prof. Dr. Noorsaadah Abd Rahman, Deputy Vice Chancellor of Research & Innovation, led a group of 11 UM's delegates to Taiwan for the 2018 Bilateral Symposium on Cutting-Edge Chemistry between Malaysia and Taiwan. Besides research presentations, the delegates discussed about possible joint programme between UM and Taiwanese researchers. As an extended effort from the meeting, the National Health Research Institutes (NHRI) Taiwan paid a visit to UM on March 8, 2018, and had a MoU signing ceremony to strengthen and foster close collaborations between UM and NHRI. Two research talks were presented by Dr. Hsing-Pang Hsieh (From Bench to Clinics: Novel Kinase Inhibitors in Cancer Therapy) and Dr. Chun-Hong Chen (Dengue Control in Taiwan from 2016-2017).

A roundtable discussion was conducted to identify fields of possible collaborations and future activities. Some follow-up plans and projects proposed between the two organizations included the snake venom research collaboration, drug discovery project and cancer treatment research. The NHRI delegations later attended another meeting chaired by Prof. Dr. Yvonne Lim, Deputy Dean of Research, Faculty of Medicine, and were brought around to visit the Animal Testing Facilities, Tropical Infectious Diseases Research (TIDREC) and UBAT Laboratory.

UMR
University of Malaya Research
InfraLab
INFRA LAB SERVICES
UNIVERSITY OF MALAYA

INFRA LAB SERVICES

UNIVERSITY OF MALAYA

TESTING | WORKSHOP | TRAINING | RESEARCH

EDITORIAL

Dr. Choo Yeun Mun
Dr. Bong Yii Bonn
Yanti Norima Mohd Shobri

DESIGN

Alfatiha Ahmad
Fatimah Mohamad
Zuliana Zainal Abidin

CONTACT

Centre for Research Services
Institute of Research Management & Services
Level 2,
Research Management & Innovation Complex,
University of Malaya,
50603 Kuala Lumpur
Tel: +603-7967 4651 / 6942
Fax: +603-7967 6390

UNIVERSITI MALAYA
RESEARCH
CARNIVAL
UMRC 2018

Research Partnership for Societal Impact

16 - 17 NOVEMBER 2018
University of Malaya,
Kuala Lumpur, MALAYSIA

umresearch.um.edu.my

UNIVERSITY OF MALAYA

Themed "Research Partnership for Societal Impact", this year's UMRC aims to provide a platform for networking and linkages for researchers, community and the industry as well as to showcase multi, integrated and action-oriented solutions for sharing and implementation among all relevant stakeholders.

UMRC 2018 will focus on:

- **Commercialization as precursor for research sustainability**
- **Celebration of excellent --- the Rising Stars**
- **Exploriscience which focuses on sharing best practices, research visibility and creanovation**

We promise a myriad of fun and excitement activities for researchers and public.

Welcome to the **UMRC 2018**