About the Faculty of Pharmaceutical Sciences

The Faculty of Pharmaceutical Sciences strives to establish itself as an important research centre for innovative research in the various areas of pharmaceutical sciences especially in clinical pharmacy, pharmaceutical chemistry, pharmaceutical technology and pharmaceutical biology. The Faculty of Pharmaceutical Sciences has an established track record of training pharmacists and scientists since its founding in the year 2000. The Faculty offers both undergraduate and postgraduate programmes with an emphasis on serving the community. It has collaborated with hospitals, community pharmacies, pharmaceutical and other manufacturing industries. The Faculty of Pharmaceutical Sciences conducts the Bachelor of Pharmacy (Hons) degree, Master of Clinical Pharmacy Practice, Master of Science in Pharmaceutical Chemistry, Master of Science in Pharmaceutical Technology and Doctor of Philosophy (PhD) Pharmaceutical Sciences. The Faculty is comprised of dedicated academics, cutting-edge teaching and research facilities with seven fully equipped teaching laboratories and a research laboratory. Through its curricula at both the undergraduate and graduate levels, the school aims to train world leaders in the pharmaceutical sciences. In accordance with this, the education programmes cover not only the basic sciences, but also specialised sciences associated with industrial drug discovery and development, the theorisation of pharmacotherapy theories at medical institutions, and the science behind governmental pharmaceutical regulations.

Research is a significant component in the Faculty of Pharmaceutical Sciences. Lecturers who are also experienced researchers lead the Faculty’s postgraduate programmes. This integration of coursework with research findings in our teaching enables learners to understand and extend their power of creativity and critical thinking in their pursuit towards acquiring new knowledge.

As the accumulated knowledge and new technologies produced by the pharmaceutical sciences fraternity increase and as the field continues to play an increasingly important role in internationalisation, society’s awareness of its importance is also rising. The Faculty of Pharmaceutical Sciences seeks to expand its horizons and develop new cooperative links with various other disciplines of sciences such as medicine and information technology in order to implement its academic theories and contribute to a healthier world.
DEPARTMENT OF CLINICAL PHARMACY
Full Name:  
Dr Omotayo Oladuntoye Fatokun  

Designation:  
Assistant Professor  

Department:  
Clinical Pharmacy  

Research areas or topics:  
- Evaluation of the utilization and provision of written medicine information (WMI) among consumers, community pharmacists and private general practitioners in Klang Valley, Malaysia  
- Perception and acceptance of pharmacogenetic testing among the general public in the Federal Territory of Kuala Lumpur, Malaysia  
- Community pharmacists’ intentions to report adverse drug reactions (ADRs) in Malaysia using the theory of planned behaviour: a cross-sectional study in Johor, Malaysia.  

Summary of selected research work:  
*Exploring antibiotic use and practices in a Malaysian community*  
This study examined the pattern of antibiotic use and the practice among individuals in a Malaysian community. The study found that most individuals obtain antibiotics through prescriptions. Factors identified to be significantly associated with a greater likelihood of non-compliance with a full course of prescribed antibiotic treatment were male gender, lack of knowledge of antibiotic functions, and lack of awareness of antibiotic resistance. The study pointed out that patients education and counselling on antibiotics and antibacterial resistance are important to enhance compliance to antibiotic therapy and prevent antimicrobial resistance (AMR).  

Representative Publications:  
Full Name: 
Dr Aziz Ur Rahman

Designation: 
Assistant Professor

Department: 
Clinical Pharmacy

Research areas or topics:
Evaluating electronic cigarettes (ECG) dependency with tobacco cigarettes (TCG) among ex-smokers who converted to e-cigarettes

Summary of selected research work:
There have been heterogeneous regulatory responses about ECG that range from no regulation to complete bans. ECG need to be appropriately regulated in Malaysia. This study will evaluate the dependency of ECG by equivalent modified Fagerstrom test for nicotine dependence (FTND) scale and retrospectively compare them with dependency to tobacco cigarettes by original FTND scale among ex-smokers who had shifted to ECG use. The outcomes of the study will raise awareness amongst the consumers and policy makers about the addiction to ECGs. The study findings will also help in preparing the guidelines and vaping regulation in Malaysia.

Representative Publications:


Full Name:  
Dr Yeong Siew Wei  

Designation:  
Professor  

Department:  
Clinical Pharmacy  

Research areas or topics:  
- Pharmaceuticals as emergent pollutants in the aquatic environment  
- The roles of pharmacists in the safe usage of herbal products; assessing the public’s knowledge on herbal products  
- Beliefs and perceptions amongst breast cancer patients in relation to the usage of herbal medicine  
- Design and development of a patient-focused medication adherence plan  

Summary of selected research work:  

Pharmaceuticals as emergent pollutants: This research programme studied the impact on the ecosystem due to the pollution levels of the aquatic environment by pharmaceuticals. This important public health topic is closely related with United Nations’ Sustainable Development Goals.  

Usage of herbal medicines: Herbal medicines has been primarily utilised before the development of modern medicines. There are concerns on the usage of herbal medicine without proper evidence. In addition, the research focused on the public’s awareness level on the potentially harmful effect from herbal medicines, herb-drug and herb-disease interactions.  

Representative Publications:  


Research areas or topics:
- Post-licensure safety surveillance for human papilloma virus vaccine in Malaysia [Project for Master of Clinical Pharmacy Practice]
- A cross-sectional study of public knowledge, attitude and practice towards counterfeit, and adulterated medicines in Kuala Lumpur, Malaysia
- Malaysian Hospital Pharmacists’ Perception and Attitude toward Medication Error Reporting: A Qualitative Study
- Assessment of knowledge, attitude and practice of Malaysian women towards Osteoporosis.
- Course Satisfaction and Perception of Malaysian Provisionally Registered Pharmacists toward Their Training; A Qualitative Study
- Prevalence of Atopic Dermatitis and Pattern of Drug Therapy in Malaysian Children
- Knowledge, attitude and practice of Malaysian women towards periconceptional use of folic acid

Summary of selected research work:
*Prevalence of Atopic Dermatitis and Pattern of Drug Therapy in Malaysian Children*
This survey was conducted in Kuala Lumpur among children selected from various kindergartens. The prevalence of atopic dermatitis was identified for the first time in Malaysia, using a validated scoring system. Moreover, the pattern of drug use by parents was explored. The findings were published in the Journal of Dermatitis in 2018.

Representative Publications:

Full Name: Muhammad Ahsan Iftikhar Baig

Designation: Lecturer

Department: Clinical Pharmacy

Research areas or topics:

- Clinical treatment outcomes of obese patients at tertiary and primary healthcare settings in Penang, Malaysia
- Knowledge, attitude and perception of Malaysian towards obesity
- Knowledge and attitude towards sexually transmitted diseases amongs undergraduate Malaysian students
- Lifestyles of type II diabetic patients under treatment at Malaysian tertiary healthcare providers
- Clinical outcomes of type II diabetic patients at a Malaysian tertiary healthcare setting
- Medication therapy evaluation among hospitalised pediatric patients diagnosed with asthma at Malaysian tertiary care setting
- Compliance and prescribing pattern of antibiotics among patients with upper respiratory tract infections at Malaysian tertiary care setting
- Drug therapy pattern in acute pain management of surgery patients at Malaysian tertiary healthcare setting

Summary of selected research work:

Study on overweight and obese patients has found that majority (87.1%) of the sample had central obesity which is the real culprit in developing metabolic syndromes. The outcome has indicated a slight improvement in BMI that has minimal or no clinical significance which could be better with the use of anti-obesity medication (prescribed in only 1.0% of obese patients) and adhering to clinical practice guidelines.

Representative Publications:

Baig, M.A.I., Sulaiman, S.A.S., Gillani, S.W. and Hariadha, E. A preliminary study on knowledge about obesity in Penang, Malaysia. IJPLS. (2013); 4(6), 2705-2712.

Baig M.A.I., Chang P Gie. Knowledge and Attitude towards Sexually Transmitted Diseases among undergraduate students at selected public and private universities in Malaysia. AJPCR. (2016). 9(6), 35.
DEPARTMENT OF CLINICAL PHARMACY

Full Name:  
Dr Muhammad Junaid Farrukh

Designation:  
Assistant Professor

Department:  
Clinical Pharmacy

Research areas or topics:
- Pharmaceutical care issues in patients with atrial fibrillation receiving thromboprophylaxis
- Complementary, alternative medications and adherence to antiepileptic therapy

Summary of selected research work:
Complimentary and alternative medications and adherence to antiepileptic therapy:
The use of CAMs may vary due to the difference in cultural norms and healthcare settings. This study identified the usage pattern of complementary and alternative medicine (CAM) and its impact on antiepileptic drug (AED) adherence amongst patients with epilepsy. The most common reason for inadequate AED therapy and higher dependence on CAM was the patients’ belief that epilepsy had a spiritual or psychological cause, rather than primarily being a disease of the brain.

Representative Publications:


Full Name:
Por Choo Shiuan

Designation:
Lecturer

Department:
Clinical Pharmacy

Research areas or topics:
- Clinical Pharmacy Practice
- Counterfeit and Adulterated Medicine
- Natural Herbal Formulation

Summary of selected research work:
The core research area is focused on standardisation, investigation of mechanism of action of polyherbal formulation.

Representative Publications:
Full Name:
Yap Chuan Sheng

Designation:
Lecturer

Department:
Clinical Pharmacy

Research areas or topics:
- Knowledge and Awareness about Blood Pressure, Stroke and Prevalence of Hypertension: A Cross Sectional Study in Respondents in a Private University in Kuala Lumpur
- Knowledge and Awareness about Blood Pressure, Stroke and Prevalence of Hypertension: A Cross Sectional Study in Respondents in Community Pharmacies of Klang Valley

Summary of selected research work:
Knowledge and Awareness about Blood Pressure, Stroke and Prevalence of Hypertension: A Cross Sectional Study in Respondents in a Private University in Kuala Lumpur.
Increasing prevalence of hypertension among the Malaysian population is one of the main healthcare concerns nationally. This study aims to identify the prevalence of hypertension among university students and staff, and their knowledge and awareness regarding hypertension and one of its common complications - stroke.

Representative Publications:

Full Name: Anabelle Rose Joykin
Designation: Lecturer
Department: Clinical Pharmacy Practice

Research areas or topics:
- Research areas or topics:
- Public Health
- Pharmacy Education

Summary of selected research work:
The core research area is focused on studying the impact of health care and medication optimisation in the population along with improving the delivery of pharmacy education. Currently developing a keen interest in botany and pharmacognosy.
Full Name: Hee Mei Qi
Designation: Lecturer
Department: Clinical Pharmacy

Research areas or topics:
• Public Health
• Social and Behavioural Pharmacy
• Clinical Pharmacy Practice

Summary of selected research work:
The core research area is focused on improving Malaysian health status through the health promotion programmes and activities for the benefits of community, especially on youth and the low-income groups.

Representative Publications:
Course Satisfaction and Perception of Malaysian Provisionally Registered Pharmacists Toward Their Training: A Qualitative Study (under review by Current Trends in Biotechnology and Pharmacy).
Full Name: Dr Sasikala Chinnappan
Designation: Assistant Professor
Department: Pharmaceutical Biology

Research areas or topics:
- Diabetes mellitus and its vascular complications
- Wound healing activities
- Toxicity studies

Summary of selected research work:
Natural products and their pharmacological in vivo screening [toxicity studies, diabetes mellitus and its vascular complication; wound healing activity; antiulcer; analgesic and antinflammatory; antidepressant; diuretic; anthelmintic] and also ex-vivo studies by using tissues from various species.

Representative Publications:


Full Name:  
Dr Mogana Sundari Rajagopal  

Designation:  
Dean and Associate Professor  

Department:  
Pharmaceutical Biology  

Research areas or topics:  
- Research into natural antimicrobial products in addressing antibiotic resistance (AMR)  
- Dual inhibition of COX-2/5-LOX and inflammatory bioactive markers  
- Natural products derived from polyherbal formulations for dysmenorrhea  

Summary of selected research work:  
The research is focused on natural products that are derived from bioactive compounds and herbal formulation to produce an effective antibacterial agent especially for the multi-drug resistant (MDR) bacterial clinical isolates. Research also includes discovering dual inhibitors for inflammation specifically COX-2/5-LOX with a special focus on polyherbal formulations for dysmenorrhea.  

Representative Publications:  
Full Name: Dr Ashok Kumar Balaraman
Designation: Assistant Professor
Department: Pharmaceutical Biology

Research areas or topics:
- Antidiabetics
- Anticancer
- Antimicrobials

Summary of selected research work:
Identification of potential leads for the antidiabetic, anticancer and antimicrobial drug developments.

Representative Publications:
Extract of passion fruit peel and seed of Passiflora edulis (Passifloraceae) attenuates oxidative stress in diabetic rat model. Chinese Journal of Natural Medicine 2015, 13(8):0001-0005

Synthesis of some novel 3, 5-disubstituted 1, 3, 4-oxadiazole derivatives and anticancer activity on EAC animal model. Medicinal Chemistry Research, 12, 1-8, 2011


Full Name:  
Haryati Binti Anuar  

Designation:  
Lecturer  

Department:  
Pharmaceutical Biology  

Research areas or topics:  
- Public Health  
- Communicable Diseases  
- Non-Communicable Diseases  

Summary of selected research work:  
Focused on ascertaining the chronic kidney disease perception scale development and to subsequently construct validity.  

Representative Publications:  
Assessing Respiratory Inflammation among Children Living Near to Non-sanitary Landfill Using Interleukin-6 (IL-6)  

Knowledge and perceptions of regenerative medicine among physicians from Johor Bahru Malaysia
Research areas or topics:
- Animal models of pathological pain and neuropsychiatric disorders
- Neuropharmacology and neurobiology of analgesia and neuropsychiatric disorders
- Complementary medicine in preclinical models

Summary of selected research work:
Employs various preclinical model of pathological pain and neuropsychiatric disorders to study the neuropharmacology of novel neurotherapeutics as well as neurobiology of diseases, eg. migraine, neuropathic pain, substance abuse, cognitive and mood disorders etc.

Representative Publications:


Lee MT*, Chiu YT*, Chiu YC*, Hor CC, Lee HJ, Guerrini R, Calo G, and Chiou LC. Neuropeptide S-initiated sequential cascade mediated by OX1, NK1, mGlu5 and CB1 receptors: A pivotal role in stress-induced analgesia. (2020) Journal of Biomedical Science 27:7 (IF 2019 = 5.762; JCR Q1, Medicine, Research & Experimental) *Equal contribution

DEPARTMENT OF PHARMACEUTICAL CHEMISTRY
Full Name:
Dr Gabriel Akyirem Akowuah

Designation:
Associate Professor

Department:
Pharmaceutical Chemistry

Research areas or topics:
• Phytochemistry and natural products drug development
• Development and validation of analytical and bioanalytical methods
• Pharmacokinetic, bioavailability and toxicology studies of bioactive compounds

Summary of selected research work:
The research focuses on the absorption, distribution, metabolism, and elimination of bioactive compounds in supplements and herbal medicinal products as well as their interaction with drugs. The effect of the bioactive extracts on the absorption of conventional drugs and CYP450 - mediated drug metabolism enzymes when the extracts are co-administered with the conventional drugs is important to ensure the safety of the use of herbal medicinal products and botanical supplements.

Representative Publications:


Full Name: Dr Anand Gaurav
Designation: Assistant Professor
Department: Pharmaceutical Chemistry

Research areas or topics:
- Computer Aided Drug Design and Discovery
- Drug Synthesis

Summary of selected research work:
The research focuses on the application of computational tools to solve various issues related to discovery and development of new drugs. The study will, among others, include analysing small changes in the structure of isoenzymes and the significant difference they have in binding affinity of ligands to them. The research incorporates well established computational techniques like docking, molecular dynamics simulations as well as ligand-based drug design methods like QSAR and pharmacophore modelling.

Representative Publications:


Full Name: 
Dr Chew Yik Ling

Designation: 
Assistant Professor

Department: 
Pharmaceutical Chemistry

Research areas or topics:
- Phytochemical investigation of tropical plants and medicinal herbs
- Therapeutic use of tropical plants and medicinal plant herbs
- Usage of natural products in managing skin diseases

Summary of selected research work:
The study revolves around biological activities and medicinal properties of plants, assessment, evaluation and biochemical mechanism from potential herbal medicines in atopic dermatitis management.

Representative Publications:


Full Name: Dr Shaik Ibrahim Khalivulla
Designation: Assistant Professor
Department: Pharmaceutical Chemistry

Research areas or topics:
- HPLC, GC and FTIR method development and validation techniques for determination of pharmaceutical drugs
- Phytochemical analysis and chemical characterisation of bioactive plant extracts for woundhealing, anticancer and oral toxicity studies
- Design, synthesis and evaluation of active secondary metabolites for Alzheimer disease

Summary of selected research work:
The research involves the study of bioassay guided isolation and spectral characterisation of active natural products and and to subsequently synthesise their analogues in drug discovery and development research.

Representative Publications:

Antinociceptive activity of a synthetic curcuminoid analogue, 2,6-bis-(4-hydroxy-3-methoxybenzylidenecyclo-hexanone, on Nociception-induced models in Mice. Basic & Clinical Pharm. & Toxicol., 2012, 110, 275-285.


DEPARTMENT OF PHARMACEUTICAL TECHNOLOGY
Full Name:  
Dr Palanirajan Vijayarajkumar  

Designation:  
Associate Professor  

Department:  
Pharmaceutical Technology  

Research areas or topics:  
• Formulation of vaccines containing live recombinant  
• Recombinant protein delivery systems  
• Drug delivery systems and evaluation techniques  
• Nutritional supplement formulation  

Summary of selected research work:  
The ongoing research is on conventional and nanoparticulated drug delivery systems, dendrimers, novel ligands for targeted drug delivery system, recombinant proteins, live vaccines and phytochemicals delivery systems.  

Representative Publications:  
Full Name:  
**Dr Ashok Kumar Janakiraman**

Designation:  
**Assistant Professor**

Department:  
**Pharmaceutical Technology**

**Research areas or topics:**
- Preparation and characterisation of self-micro emulsifying drug delivery system
- Development and evaluation of sustained release matrix tablets
- Development and evaluation of transdermal patches

**Summary of selected research work:**
The research is focused on the study of self-micro emulsifying drug delivery systems (SMEDDS) for enhancing the oral bioavailability of poorly water-soluble drugs.

**Representative Publications:**


Research areas or topics:
- Oral drug delivery systems
- Transdermal drug delivery systems
- Teaching and learning methodologies for pharmaceutical calculations

Summary of selected research work:
The research work revolves around the formulation and evaluation of transdermal microneedles for a regenerative drug. Transdermal microneedles for a macromolecular drug were prepared using cost-effective molding fabrication technology to evaluate its design and release characteristics. Adopting a flipped classroom approach for Pharmaceutical Calculations, the aim of the study was to explore the flipped classroom model as a student-centered learning in the teaching and learning of pharmaceutical calculations. Students were exposed to a series of vodcasts (pedagogically segmented chunks of video lectures) which accentuates their self-paced and self-regulated learning. These vodcasts underlined the step-by-step process of pharmacokinetic calculations. Subsequently, a survey was administered to measure students’ learning experience and learning engagement in the flipped classroom approach.