

# Gain knowledge on molecular medicine

HUMAN diseases such as cancer, diabetes, dementia, heart diseases, influenza, tuberculosis, malaria, dengue and HIV, along with other pathological conditions have caused a significant reduction in human lifespan. Current strategies have been vastly ineffective and there is an urgent need to develop novel techniques and therapies that may be potent and effective against such diseases.

Molecular medicine is a relatively new field that may help in addressing the issues faced by conventional remedies. Therefore, it is important for us to have updated knowledge in molecular medicine and to continuously update newer developments in the scientific field.

International Medical University (IMU) has been delivering the Master of Science in Molecular Medicine (MMM) programme since 2012. Candidates can enrol through a part-time or a full-time mode.

“One of the advantages of the programme is that students can perform their research activities at the convenience of their workplace. As a working adult, I find this very convenient and thoughtful. It is very challenging for a working adult to travel, which can be very time-consuming and costly. Being able to conduct the research project modules at work is like killing two birds with one stone; we get to complete our day-to-day job while keeping track of the progression of the project,” says Ashraf Hakim Dzulkarnain Azman, an alumnus of the programme.

This programme is designed to help students develop their skills in molecular research (either lab-based or non-lab-based such as computational analysis for the larger dataset). These skills are required to gain knowledge and confidence if a student intends to pursue a doctoral programme. In addition, the MMM has always equipped students with in-depth knowledge of



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medical-related diseases and mechanisms at a molecular level.

A key feature of this programme is the possibility of credit transfer and enrolling in a double-degree option offered by the Queen Mary University of London (QMUL). Through this option, students obtain two MSc degrees, one from the UK university and another from IMU. The MMM programme trains students to have critical thinking abilities, problem-solving skills as well as a scientific foresight in anticipating potential problems.

In March 2020, IMU had a double-degree student who carried out a joint research project with QMUL in studying the roles of

genes responsible for cardiac arrhythmia and cardiac excitability. These were studied using exome analysis at a UK biobank. The student successfully completed this preliminary research study this year.

Besides that, there were several research projects conducted within the MMM programme that were conducted in collaboration with universities from Australia such as the University of Technology Sydney as well as some local universities including Monash University Malaysia, Universiti Malaya, Universiti Putra Malaysia and so on. Such opportunities enabled students to work with diverse

experts and promote broad levels of expertise through teamwork within those research teams.

This has led to students having the advantage of interprofessional collaboration, which in turn has led to quality research being published. For example, a study related to pancreatic cancer was recently published in *Nature Research* through collaborations with Universiti Sains Islam Malaysia, Universiti Putra Malaysia and Tohoku University Graduate School of Medicine.

In May this year, another MMM student published her comprehensive review on the therapeutic potential of agarwood in the management of chronic inflammatory diseases with input from different expertise from the University of Sydney and University of Technology Sydney from Australia, as well as Sharda University, Shoolini University, Lovely Professional University and Saveetha University from India. Such collaborations play a major role in widening students' perspectives and outlook on the world of research.

The MMM programme also features several forums and discussion activities, enabling students to meet and interact with course mates from diverse academic backgrounds such as working experience in medicine, pharmacy and diagnostic labs. Notably, some of them have been promoted to higher positions such as manager, principal medical lab scientist, and more, upon completion of the MMM programme.

The commencement of this programme is in March and September of each year. If you are interested to join this programme, make an online application today.

■ For more information about this or other IMU postgraduate programmes, email [postgraduate@imu.edu.my](mailto:postgraduate@imu.edu.my), call 03-2731 7272 or visit [www.imu.edu.my](http://www.imu.edu.my).