

RESEARCH universities across the country are actively commercialising their technologies and innovations and setting up innovation and commercialisation centres (ICC) in their campuses to register these innovations as intellectual properties (IP).

These centres also promote the university's technologies and manage the agreements with companies that wish to acquire licences of the universities' innovations.

Leveraging on its 15-year history, Putra Science Park, the ICC of Universiti Putra Malaysia (UPM), has managed to license 97 out of the 1,800 intellectual properties it currently has.

The centre has on multiple occasions won the National Intellectual Property Award organised by the Intellectual Property Corporation of Malaysia in innovation management.

The highly supportive innovation-focused ecosystem in UPM has enhanced the culture of innovation and commercialisation among the university's staff, resulting in four UPM professors winning the prestigious Anugerah Akademik Negara in this category – the highest recognition given to academics who have made significant contributions to the discovery and development of science in the country.

## From theories to practical solutions

The general concept of Putra Science Park is to experiment on the idea of combining an ICC with a science park, which was inspired by the Quadruple Helix concept – an innovation concept that focuses on the relationship between universities, industry business, the Government and the general public.

In addition to the common channels of technology transfer, involving licensing and outright sales, new initiatives are done to encourage companies to open research and development (R&D) divisions in UPM.

This smart partnership allows businesses to utilise technical expertise from the university's researchers and graduate students while exposing them to continuous engagement with the industry and to work on innovations that fit market demands.

"The purpose of commercialising our technology is not primarily to make a profit, but rather to complete the full cycle of research and development.

"When we conduct R&D, ultimately we want our

# Introducing discoveries to the masses



Innovation Open Day (IOD) allows researchers and businesses to discuss new technology.



UPM's pneumonia vaccine for goats.

more than eight countries for overcoming diseases such as fowlpox in poultry and pneumonia in goats.

## Overcoming challenges

"Other research universities are interested in what we do as we are always pushing the boundaries and testing new ideas," says Dr Mohamad Fakri Zaky Ja'afar, deputy director of innovation promotion and marketing division at Putra Science Park.

Among the most apparent problems for any research university is finding businesses that are willing to take the risk in funding innovative projects and bringing untested technology from the laboratory to the market.

"When companies introduce a new and unproven technology, there is a phase called Death Valley where most new innovations fail – there is a possibility that the business model would not work in the market, forcing the closure of many innovative ventures," says Dr Zaky.

To meet potential funders and spread the word about its research, Putra Science Park organises a series of Innovation Open Days (IOD) events that feature small focused exhibitions tailored to industrial players, allowing staff to not only introduce their technology to industry agents but gain insight into the market and ideas for future research.

"We have organised seven IOD events over the last two years and these events yield a higher return in terms of generating industry interests compared to big exhibitions or conventions," says Dr Zaky.

Other challenges are for researchers to properly identify the problems, niches and needs of the market that should be addressed, as well as conveying messages effectively between

scientists and businesses.

Putra Science Park solves this by learning the experiences from the Silicon Valley in the United States by inviting experts to conduct training programmes over a two-year duration and partnering with foreign research institutes such as Stamford Research Institute and University of California Davis.

"Efforts are also taken to mould a new breed of technopreneurs – business-minded scientists who will be able to drive start-up companies and make businesses out of new innovations.

"The advantage of such individuals is that they will have the capability to explain science effectively to potential funders and investors who may not have a technical background," says Assoc Prof Samsilah.

The centre has also played a key role in founding the Innovation and Technology Managers Association of Malaysia (Itma), a non-government organisation for

universities and agencies that are involved in innovation and commercialisation in the country.

Itma provides its members with a platform from which to share important information regarding the industry, network among industry professionals, combine resources to come up with better technologies and educate the wider public regarding the processes behind innovation and commercialisation.

In line with UPM's mission, Putra Science Park will continue its efforts to impart knowledge with the wider community and introduce new technologies to the market.

With the support of various government ministries on UPM's commercialisation initiatives, Assoc Prof Samsilah is confident that Malaysia is on the right path to becoming an advanced nation.

■ For details, visit [www.sciencepark.upm.edu.my](http://www.sciencepark.upm.edu.my)



Dr Mohamad Fakri Zaky Ja'afar.



Assoc Prof Dr Samsilah Roslan.

## Educating the young

UPM believes that there is a need to present science in a fun manner and to attract the younger generation to consider science as a career option.

One such initiative was establishing Edu-Park, an area within UPM consisting of science-related attractions that are open to the public.

"Among the attractions include the Putra Dairy and Deer Farm, Equine Centre, Human Anatomy Museum and Malay Heritage Museum.

"Visitors to these locations can choose among the 23 experiential learning modules available to learn more about the different aspects of science in an interesting way," says Assoc Prof Dr Samsilah Roslan, director of Putra Science Park.

"We also have an interesting series of exhibitions called Nyawa, which stands for Nature's Yield And Wonders of Art, where we establish through collaboration between our

research scientists and designers from the university's Faculty of Design and Architecture to portray scientific material in art form," adds Dr Mohamad Fakri Zaky Ja'afar, deputy director of innovation promotion and marketing division at Putra Science Park.

The programme pairs scientists with designers to work on artistic artefacts that depict scientific concepts.

The themes featured in previous exhibitions were fruits, insects and microbes.

This year, the theme will be birds.

"We find that the public is more interested to engage with scientific concepts through art than by reading scientific papers and this makes it an interesting way to share scientific knowledge," says Dr Zaky.

"With all the amazing facilities the university has for learning and research, why not share it with the public?"



UPM successfully commercialised animal vaccines to overcome fowlpox in poultry and pneumonia in goats.