

UMS to patent its creations

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KOTA KINABALU: Research and innovative creations of Universiti Malaysia Sabah (UMS) researchers will be patented for copyright purposes, said its Deputy Vice Chancellor, Prof. Dr Rosnah Ismail Wednesday.

"We recently held an invention and research competition, *Pereka 2010* on April 5 and 6, and through this competition, a total of 18 projects have been awarded the gold medal for both categories," she said.

"Of the number, seven medals were won by the innovation projects whereas another 11 were awarded to the research projects, and all these project researches will be patented and identified for their commercial value as soon as possible," she added.

She said many of these research projects are beneficial to the community at large through different classifications, among them being Educational Aid, Information and Communication Technology (ICT), Agriculture, Forestry and Food, Bio-sciences and Bio-technology, Environment and Energy, and Engineering and Technology.

One of the researchers, Dr Tan Choon Keong from the School of Education and Social Development and his team invented a 'Flexi 3D Shapes Creator' which he said is able to increase academic achievement in the learning of 'Lines and Planes in 3-Dimensions' topic for Form 4 and 5 Mathematics.

"To prove this, the Flexi 3D Shapes Creator was tested in two schools in Papar and Kuala Penyu, and findings showed the method was able to achieve a mean score of 11.25 compared to the traditional method which yielded only a mean score of 5.78.

"This invention could aid in the building up of Mathematics skills regarding 'Lines and planes in 3D' and the improvement of the understanding of the subject, especially for rural students," he said.

He also explained that these 3D prototypes will cost less than RM50 each, and has promising market value as there are thousands of secondary schools in the country, and assuming that every school needs three such models for teaching, it can already generate a certain amount of income for UMS.

Another, Dr Nurmin Bolong from the School of Engineering and Information Technology, together with two other professors, invented a 'Novel NanoCharge Hollow Fibre Membrane for the removal of (BPA) Bisphenol-A (plastic materials) in wastewater.

BPA is a persistent compound and difficult to be removed by the conventional water treatment process; it disrupts the endocrine system a thousand times higher than other chemicals and can cause estrogenic effects, breast cancer risks and feminising side effects in males, she said.



Rosnah (seated, centre) with the gold award researchers and inventors.

"This fabricated NanoCharge – hollow fibre membrane performs seven times higher flux and higher removal of ionic solutes, apart from being able to remove 90 per cent BPA from wastewater, which is two times better than the conventional reverse osmosis.

"The application expansion can be applied directly towards water and wastewater treatment industries, and also water purification industrial applications," Nurmin said.

Chong Kim Phin from the School of Sustainable Agriculture and his team researched and found a 'fast detection method for fungi related to infectious disease in oil palm root'.

"The difference between what we researched and the other methods available in the market here is that our method can detect an infectious oil palm root in a mere 10 minutes, and it is also so much cheaper, probably less than RM30 for one indicator.

"This is a method based on ergosterol (elements that are present in fungi) analysis and Modified Disease Severity Scale (MDSS), which has been developed for a quicker and more reliable detection of fungi infection in palm oil root," he explained.

This method, he added, has very great commercialisation potential as root problems caused by fungi of different kinds remain the major problem in oil palm industry in South East Asia.

"Any related findings to early detection of the disease will surely generate big revenue in return," Chong said.

Meanwhile, winners of this invention and research competition will be brought to compete in a higher level in the coming Innovation Technology Exhibition in Kuala Lumpur from May 14-16 and also to Germany for the international level competition this year.