

Researchers on Asian cancer win President's Science Award

SINGAPORE – First, they identified a specific molecular signature of a form of urinary tract cancer associated with exposure to aristolochic acid, a carcinogen found in a plant common in supplements consumed in Taiwan.

This allowed them to determine that this carcinogen is also the cause of other cancers found not just in Taiwan, but in other parts of China, Singapore and even the United States.

Discoveries like these about Asian

cancers — of which little is yet understood — have earned Professors Patrick Tan, Teh Bin Tean and Steven Rozen of Duke-NUS Graduate Medical School the President's Science Award, which is among the

President's Science and Technology Awards given out this year in recognition of achievements in science and technology in Singapore. The World Health Organization estimates that by 2030, 70 per cent of the world's cancer deaths will occur in Asia and developing countries. But Asian cancers differ from those found in Western countries and little is known about their underlying molecular genetics.

Recognising the urgency of research in this area, the trio have collaborated over the past eight years to find information to diagnose, treat and possibly prevent cancers in the future.

Their findings have been published in the Science Translational magazine and attracted international interest from other publications such as the South China Post and Cai Jing.

Another key discovery is their identification of mutated genes in breast fibroepithelial tumours, the most common benign breast tumour in young women. They discovered the tumour was caused by genetic mutations that occurred at a specific point of a gene known as MED12 they term a "hot spot". Working with Professor Tan Puay Hoon of Singapore General Hospital's pathology department, they hope to extend their discovery to other breast fibroepithelial tumours, and create "customised diagnostic panels, and (push) it towards clinical application and commercialisation".

The professors attributed their success to their "team-science" approach. Prof Patrick Tan said at a media briefing yesterday: "One of the emerging challenges is to use the success of awards like the (President's Science Award) to try to encourage the next generation to embrace this idea of team science ... I think the problems we have today are the sort that we really need team effort."

FRANCIS MICAH LAW

ENGINEERS, SCIENTISTS RECEIVE AWARDS FROM PRESIDENT TONY TAN

● Five top scientists and engineers were given awards by President Tony Tan yesterday. Four young researchers were also recognised with the Young Scientist Awards, which are organised by the Singapore National Academy of Science and supported by A*STAR.