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Myopia genetics study tops biomed fund awards

Team gets \$1.7m; in total, \$31.7m given to 51 projects

By Daryl Loo

A STUDY on the cause of myopia by a Singapore Eye Research Institute team has received the highest amount in the Agency for Science, Technology and Research's (A*Star) annual research fund awards.

The study, which aims to discover the genes that cause myopia and devise better ways to treat or prevent it, will receive \$1.74 million over three years.

It is one of 51 promising biomedical projects, mainly in the fields of cancer and neuroscience, chosen by A*Star's Biomedical Research Council to receive government funding.

A total of \$31.68 million was awarded yesterday to researchers, to be disbursed over periods of two to three years, with amounts ranging from \$250,000 to \$1.74 million.

The myopia study has recruited about 2,000 primary school pupils over the past eight years, with the aim of tracking their eyesight into adulthood.

Myopia, or short-sightedness, is a critical health problem in Singapore, said the study's principal investigator, Associate Professor Saw Seang Mei, as rates here 'are one of the highest in the world and severe myopia may lead to blindness'.

If the researchers can discover the genes that cause myopia, they may be able to come up with better ways to treat or prevent it.

'For example, this can help us identify children with a genetic disposition to myopia and allow us to counsel them earlier before they develop the disease,' Prof Saw said.

Any such find is likely to be some years away, however, as scientists have thus far managed to identify only geographical regions where suspected myopia-causing genes are prevalent.

The myopia study is part of the fifth batch of biomedical projects to be funded by A*Star since 2002, after the sector was identified as one of Singapore's key growth sectors.

The call for grant applications is open to researchers from Singapore's public institutions such as hospitals and universities, but excludes institutes under A*Star.

According to Biomedical Research Council executive director Beh Swan Gin, the latest grant call received 168 research proposals.

The 51 recipients were picked by a review committee comprising local and international experts. Of the winning projects, six are related to cancer and neuroscience, with the remainder spread across fields such as genetics, immunology and stem cell research.

'We continue to get a good balance of basic and translational research proposals and our expert reviewers inform us that the quality of research proposals submitted is getting better,' Dr Beh said.

Translational research refers to the work of turning basic research discoveries in laboratories into new diagnostic tests, therapies, medical devices and other technologies that can be used to help patients.

Another project, conducted at the National University of Singapore, seeks to track the changes that occur in cells when breast cancer progresses from the early to late stages.

Each year, about 1,000 women in Singapore are diagnosed with breast cancer and some 270 die from the disease, and the numbers are rising at about 3 per cent annually.

The aim of this breast cancer study, said lead investigator Lim Yoon Pin, is to find new and better biological markers to help doctors in the early detection of breast cancer.

'Our hope is to improve the detection process, so that it is more definitive than current methods of determining if breast cells are cancerous or malignant,' he said.

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