

Science team bags \$1.25m prize

S'pore-German trio wins US Defence Department contest with its algorithm

By FENG ZENGKUN

A JOINT Singapore-German team from three universities has won a US\$1 million (S\$1.25 million) cash prize from the United States Department of Defence for their ground-breaking work which can be used to fight bio-terrorism.

The team, which beat more than 2,700 people around the world, has developed a computer algorithm that enables the fastest and most accurate way to identify traces of biological weapons in human clinical samples.

It comprises two scientists from the Singapore Centre on Environmental Life Sciences Engineering (Scelse), which is a partnership between Nanyang Technological University and the National University of Singapore, and a graduate student from Germany's University of Tuebingen, the two local universities announced in a joint statement on Tuesday.

The US Defence Department's Defence Threat Reduction Agency launched a competition in January to crowd-source computer algorithms to diagnose "known, emerging or engineered pathogens" in clinical samples. Pathogens are viruses or other microorganisms that can cause diseases.

It said America's enemies could focus on acquiring biological and chemical weapons instead of the more sophisticated and complex nuclear weapons.

Scelse's Dr Xie Chao said his team's algorithm can identify the quantities and genes of known bacteria in samples with more than 90 per cent accuracy, and within five minutes. It can also be used to flag unknown bacteria strains. The scientists plan to continue working on the algorithm and said it might even be used for medical research.

"If a doctor wants to identify what bacteria is causing an infection, for example, you could use the algorithm to identify all of the bacteria in a clinical sample in a very short time," he said.

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QUICK RESULTS

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– Dr Xie Chao of the Singapore Centre on Environmental Life Sciences Engineering

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