Researchers provide simple solution to familiar problem faced by diabetics

By Asha PopatlaI, Channel NewsAsia

SINGAPORE: Nanotechnology may be a long word but it is providing a simple solution to a familiar problem faced by diabetics.

It's the latest project of the Institute of Bioengineering and Nanotechnology.

It's just one of 30 projects up its sleeve - half of which are slated for commercialisation in the next two years.

Any diabetic will probably tell you that drawing blood for repeated glucose tests is a painful affair.

The Institute's Principal Research Scientist, Dr Gao Zhiqiang said: "Fingertips have nerves and capillaries. You may get one big drop of blood but it's very painful. If you move away, less blood is needed and not so painful."

So, researchers have now come up with a simple solution by using nanotechnology to develop smaller test strips - far less painful and more accurate results.

One major advantage is that it also uses less blood - just 0.2 microns that can be taken from any part of the body which constitutes about 20% of the blood needed for current tests.

The institute has a patent pending for the device and hopes to commercialise it within a year.

The Institute's Executive Director, Professor Jackie Yi-Ru Ying said: "These types of medical devices can be quickly commercialised and benefit a lot of diabetic patients because it doesn't require clinical trials or FDA approval."

But that's not all the institute is planning.

It hopes to use the same type of technology to produce more direct and accurate diagnostic tests for diseases ranging from breast cancer to even SARS.
"A usual diagnostic test runs through multiple equipment for diagnosis. But with this, all you need is one micro chip and one set of equipment, much less bulky and can also be done in a clinic rather than in a major facility like a hospital," said Professor Ying.

Five patents are now in the pipeline and the Institute hopes that there'll be at least 12 patents by next March. - CNA