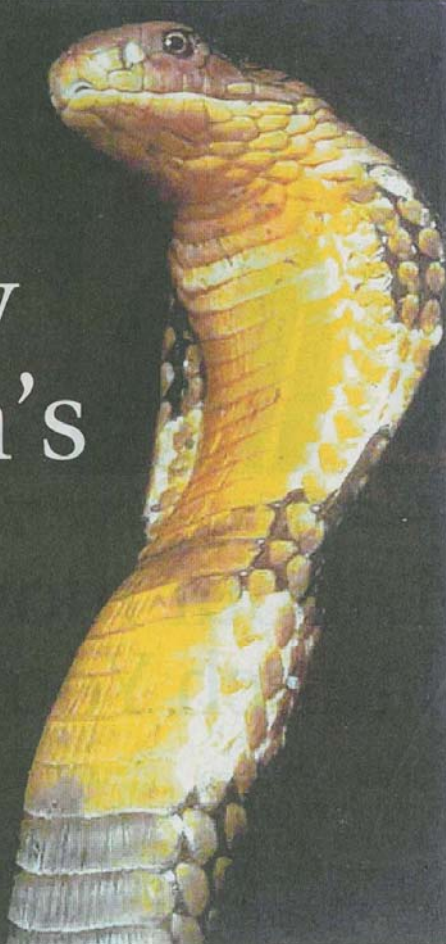


Deadly venom's saving grace

It may protect lives as local firm aims to process King Cobra toxin into a potent painkiller and blood-clot inhibitor



By GRACE NG

THE deadly venom of the King Cobra snake contains a key substance that can actually help you rather than kill you.

Pro-Therapeutics, a newly established local drug development company, is working on a series of drugs, including a breakthrough painkiller based on snake venom and proteins.

The company is the first collaboration between the Economic Development Board (EDB), the Agency for Science, Technology and Research (A*Star) and the National University of Singapore.

The three bodies have invested \$3 million in the biomedical start-up, which was set up last month.

Pro-Therapeutics is the first homegrown drug development

company to use technology derived from animal toxins.

One of the products it hopes to take to the market is a new painkiller several thousand times more potent than morphine, but without the addictive side effect.

Another innovative drug inhibits blood clot formation and may have potential uses for treating heart problems.

The secret ingredient to these two breakthrough drugs is a peptide — from which proteins are formed — extracted from the venom of the King Cobra.

However, one longstanding difficulty with peptide drugs is that they have to be injected. If administered orally, they are destroyed in the digestive system.

But Pro-Therapeutics has a solution using patented technology it has bought that will please patients wary of the pain and inconvenience of a jab.

Its peptide drugs are administered in the form of a thin film placed on the tongue and absorbed by blood vessels there, thus bypassing the digestive tract.

The firm reckons its first drug, the painkiller from King Cobra venom, could hit the market in about five to seven years.

The drug is currently undergoing animal and human testing and will eventually be submitted for approval by the United States health authorities.

Other products are in the early stages of testing.

Mr Howard Califano, chief executive of Pro-Therapeutics, is confident that the company could one day become a multi-billion-dollar drug giant.

"In 2003, sales of approved peptide drugs in the US totalled over US\$9 billion, so the commercial potential for success is attractive," he said.