

Headline	Planting a garden of bio-drugs to treat diseases		
MediaTitle	The Sun		
Date	04 Nov 2015	Color	Full Color
Section	Entertainment	Circulation	305,473
Page No	24	Readership	832,000
Language	English	ArticleSize	146 cm <sup>2</sup>
Journalist	N/A	AdValue	RM 3,747
Frequency	Daily	PR Value	RM 11,241



## Planting a garden of bio-drugs to treat diseases

AUSTRALIAN scientists are developing genetically-modified plants containing drugs to treat life-threatening illnesses including cancer, diabetes, heart disease and HIV.

David Craik of Queensland University together with Marilyn Anderson of La Trobe University said "bio-drugs" would be less expensive, more effective and have fewer side effects than pharmaceutical drugs.

"Our work is discovering peptides, which are mini-proteins from plants, and then trying to redesign them as next-generation drugs," Craik told ABC Radio recently.

"We have a prostate cancer drug lead that we could put into sunflower seeds, for example, so that people wouldn't necessarily have to swallow tablets or capsules but could be having their prostate cancer drug as part of their diet.

"So it opens up a whole new world of possibilities for drug delivery," Craik said, adding that it could have major advantages for the developing world.

Life expectancy in Tanzania today is less than 40 years because of HIV AIDS, Craik said. "And that's not because we don't have good medicines for that. It's just that they can't afford it over there."

The scientists hope to produce a plant containing an anti-HIV bio-drug, that people could grow in gardens and make tea from it.

"In theory, it could be something that could revolutionise the treatment of HIV for example in Africa," Craik said.

Anderson added: "If the theory becomes a reality, people will be able to grow their own medicine.

"And the advantage is that you don't have to store them in the refrigerator, you don't have to inject them, and they can be easily transported."

Human trials of bio-drugs are expected to begin within 10 years, beginning with medicines for cancer and pain, they said.

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