



WA Nobel Laureate Barry Marshall in the Ondek Research Molecular Lab at UWA's Marshall Centre. PHOTO: DANELLA BEVIS

# Tasty ways to replace jabs

**Sarah Quinton**

Imagine eating a banana that could vaccinate you from influenza or an apple that helps to fight against malaria or treat diabetes?

For more than a decade, scientists worldwide have been trying to perfect this "holy grail" of science; however, the problem has been finding a way for the body to absorb the vaccine rather than ignore it.

University of WA scientist Professor Barry Marshall who won a Nobel Prize for identifying a cancer-causing stomach bacterium – *Helicobacter pylori* – is developing these bacteria into yoghurt that would line the stomach cells of humans, allowing vaccines such as the flu to be ingested.

Through his WA company Ondek, Professor Marshall will make this platform science available to companies around the world to create vaccines to treat dia-

betics, create appetite suppressants for obese people or even administer AIDS vaccines to people in Africa for 25 cents a dose.

By extracting DNA from a virus or bacteria – such as malaria – and inserting it into a plant or a harmless bacteria, the vaccine is ingested through the stomach, as opposed to inserting a small amount of the virus through the traditional needle methods used today.

"The future is that instead of having needles all the time, you could have a vaccine that you just eat," he said.

"There are people all over the world who are trying to make vaccines in bananas, potatoes, apples, carrots; any kind of food that you don't need to cook that could easily have a bacteria or part of a virus inside of it," Prof Marshall said. He said the immune-modulating yoghurt products could be available within five years and the genetically modified vaccine foods could be mainstream in 20 years.