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CANBERRA, July 29 (Xinhua) -- Barry Marshall, the Australian scientist who won a Nobel Prize for discovering the bacteria responsible for stomach ulcers is now working on a way to make edible vaccines, according to a report by Australian Associated Press on Wednesday.

Barry Marshall identified *Helicobacter pylori*, a breakthrough which helped develop a cure for the ulcers, and he indicated the same bacteria is the key to needle-free vaccinations.

Scientists at his Sydney-based company Ondek have spent three years developing a way to add a vaccine particle into the genetic code of the bacteria - which is relatively harmless but adept at sticking itself to the wall of the stomach.

It is estimated that up to 20 percent of the Australian population has the bug living in their stomach without knowing it.

"Your immune system sees the *Helicobacter* which irritates it a little bit, and at the same time it will see the flu vaccine particle and reacts against that," Marshall said.

"People have always dreamed about having oral vaccines but usually the immune system just regards it as food."

Vaccines work by pre-exposing the immune system to an inert version of, for example, the flu virus so that when the real version invades, the body already has its defenses in place.

Marshall's bacteria delivery method has been successfully tried in mice and a study in humans will begin later this year.