

UQ Communications
Ph: 61 7 3365 3367
Fax: 61 7 3365 1488
E-mail: communications@uq.edu.au

MEDIA RELEASE

UQ scientist honoured for developing the world's first cancer vaccine

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The Australian newspaper's Australian of the Year recipient is not just leading the world with his research, he is changing it and hopes others will be inspired to do the same.

[University of Queensland](#) scientist Professor Ian Frazer today received the prestigious award for developing a vaccine to prevent cervical cancer – the world's first ever cancer vaccine. He was a joint recipient of the award with Professor Barry Marshall and Dr Robin Warren who received the Nobel Prize for Medicine in 2005 for their research on stomach ulcers.

Professor Frazer, who founded and leads UQ's [Centre for Immunology and Cancer Research](#), is also the 2006 Queensland Australian of the Year and is consequently in the running for the Australian of the Year Award, which will be announced at Parliament House on January 25.

He said *The Australian's* award and the nomination for Australian of the Year were both a tremendous honour and responsibility.

"It gives me a great opportunity to promote science and specifically biomedical research and it also gives me an opportunity to talk with people about how they can contribute through their own work to the community," he said.

"You can get a great deal of personal satisfaction out of doing good for others.

"I think society has become very focused on self and on consumerism and what I'd like to see in addition to this concept of financial benefit is the concept of social credit – doing things that are of benefit to others.

"You can get a great kick out of that for yourself but it's also good for the community and people should be rewarded for doing things for the community.

"Not everybody is going to invent a vaccine to prevent cervical cancer but everybody can do something good in the community by just thinking about others as well as themselves."

Professor Frazer is keen to see the vaccine become readily available to all females

across the world.

"The vaccine is designed for the developing world," he said.

"It will be sold first in the developed world, and of course there is a significant benefit for women in countries with effective Pap smear programs, as abnormal smears will be much less likely after vaccination, but the real need is for the developing world and to have this vaccine used routinely in young women to prevent cervical cancer in countries where there are no Pap smear programs to reduce the risk."

He said both companies involved in the development of the vaccine had indicated that they would introduce a differential pricing structure so developing countries could get the vaccine at a cheaper price.

"But cheaper isn't cheap. This is a vaccine which is technically quite difficult to make," he said.

"It will rely on the good graces of the Gates Foundation, the World Bank and the World Health Organisation's Expanded Vaccine Initiative to make sure this vaccine is made available as cheaply as possible to all the countries in the developing world that want to use it."

Final-stage clinical trials of the vaccine showed it to be 100 percent effective at preventing infection with the types of human papilloma virus (HPV) that are included in the vaccine, which are together responsible for about 70 percent of cervical cancer.

The results of the Phase III trials were announced in October 2005 by international pharmaceutical company Merck & Co. which is developing the product.

"It's very rare, almost unheard of, to achieve a 100 percent efficacy rate in any treatment, so the results are truly wonderful," Professor Frazer said.

"It's the first time in the world that a vaccine designed to prevent cancer has been developed, and it has happened right here in Australia.

"It's very encouraging to see such great results coming out of Australian research, and developed in conjunction with Australian company CSL, and international pharmaceutical company Merck & Co.

"It's sad that Dr Jian Zhou, who was my research partner, passed away before the work was publicly recognised."

UQ's Acting Vice-Chancellor Professor Paul Greenfield congratulated Professor Frazer on his award and said the University was extremely proud of him.

"Professor Frazer is not only a dedicated, world-leading scientist, he is also an outstanding member of the University and wider Australian community," Professor Greenfield said.

"Through his research he has achieved something remarkable, something that no other scientist has ever achieved – a vaccine to prevent cancer.

"We are very proud to be able to call him a colleague and a friend.

“He truly is a great Australian.”

Cervical cancer is one of the few human cancers known to be directly caused by a viral infection.

HPV strain types 16 and 18 lead to the development of cervical cancer, a disease that is the second leading cause of cancer among women.

More than 500,000 cases are diagnosed annually and it kills an estimated 275,000 women around the world every year.

Other types of the HPV virus cause genital and skin warts. The HPVs that convey a high risk of cervical cancer are contracted by up to an estimated 30 percent of sexually active women.

Professor Frazer said the vaccine, now known as Gardasil™ and Cervarix™, would only protect women who were not infected with HPV, but he hoped to change this in the future.

His major focus now is to develop a vaccine to treat existing infection.

“If you fund medical research good things come out the other end – maybe not directly and immediately but they’ll come,” he said.

Media: for more information or to arrange an interview, contact CICR Business Manager Anton Sanker (telephone 0412 057 512) or Chris Saxby at UQ Communications (telephone 07 3365 2479, email c.saxby@uq.edu.au).

Images of Professor Frazer can be downloaded at <http://omc.uq.edu.au/images/Frazer/> Photo: Chris Stacey, The University of Queensland.