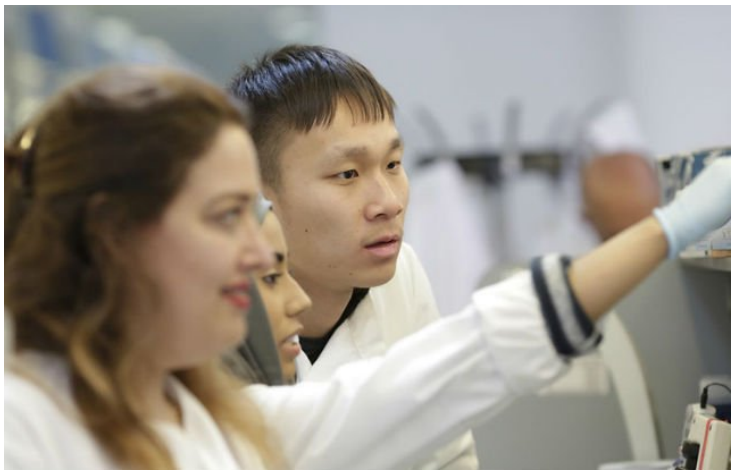
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ASIA EDITION

UK, China develop pancreatic cancer vaccine system

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Personalised vaccine system that could ultimately delay the onset of pancreatic cancer



Researchers from Queen Mary University of London and Zhengzhou University have developed a personalised vaccine system that could ultimately delay the onset of pancreatic cancer.

The study provides strong proof-of-concept for the creation of a vaccine for cancer prevention in individuals at high risk of developing this disease and to slow down tumour growth in patients who are affected by it.

The study reports the team's work with a pre-clinical model using mice. The research was published recently in Clinical Cancer Research, a journal of the American Association for Cancer Research.

To make the vaccine, researchers took cells from mice and turned them into pancreatic cancer cells by adding two errors into their genetic code. These errors, or mutations, are known drivers of pancreatic cancer. The team then infected these cells with viruses, which have an important role in the vaccine system. Not only do the viruses kill the cells to remove their ability to form tumours within the body, but they do so in a way that activates the immune system against these cells.

As the cells die following injection into the subject, they release antigens specific to these pancreatic cancer cells, priming the immune system to recognise the initiation of cancer and prevent its development within the body.

By injecting these virus-infected cells into mice that were destined to develop pancreatic cancer, the team were able to delay the onset of disease, doubling their survival time when compared with mice who did not receive the vaccine.

The genetic makeup of cancer varies from individual to individual. That means treatments that are effective for one patient's cancer may not be effective against another's.

The team will now look at different ways of improving the regime – including increasing the number of vaccinations or combining the vaccine with other therapies such as immunotherapies.

The research was funded by the Chinese Ministry of Science and Technology and Zhengzhou University.