Scientists in Singapore have found a way to use a particular virus to deliver therapy to damaged brain cells in patients suffering from Alzheimer's and Parkinson's disease, they said on Saturday.

Researchers at the Institute of Bioengineering and Nanotechnology (IBN) are relying on the virus to deliver DNA to the cells in hopes of reversing the effects of the debilitating diseases.

"One type of virus, the adenovirus, could get to the cells, but it elicits a strong immune response from the body, so it's not suitable," Dr. Wang Shu told The Straits Times.

The 12-member team then focused on a virus originally found in insects, said Wang, the head of IBN's Gene Delivery Group.

The baculovirus is used in labs to grow protein such as human growth factors or hormones, Wang explained. It is not a virus that usually affects humans, so the scientists introduced a specific string of human DNA into the baculovirus to enable it to penetrate the human cell.

The engineered baculovirus can travel up the long nerve fibres and deliver their therapeutic genes into the target neuron cells in the brain, Wang told the newspaper.

"We are essentially cheating the nerve fibres into thinking that the virus is a bunch of proteins, and so it is carried all the way into the brain," she said. The group has taken out U.S. patents on its method.