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Bill Gates gives Duke Univ $2.9 mn to make HIV vaccine

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Singapore: Duke University has received a grant of up to $2.9 million from the Bill & Melinda Gates Foundation to produce an HIV vaccine candidate that will be tested in humans.

The investigational vaccine is the product of recent research focused on designing HIV outer coat molecules that selectively bind to the right kind of antibodies to create a more lasting immune response.

"We are grateful to the Bill & Melinda Gates Foundation to provide the funding for this important next step of our research," said Dr Barton Haynes, director, Duke Human Vaccine Institute. "Our strategy is to develop vaccines that bind to neutralizing antibodies and avoid inducing less effective, non-neutralizing antibodies that are frequently seen in natural infections and with previous vaccine candidates. This funding will help speed our progress."

Dr Haynes said that the vaccine candidate, a man-made lipid termed a liposome, is designed to mimic a virus particle. The synthetic virus-like particle will be made of lipids that are similar to those in the membrane of the virus itself, and will include a piece of the HIV outer envelope that binds to the sought-after neutralizing antibodies.

"The liposome vaccine is a promising candidate because it both mimics the virus itself, and because it is inexpensive to produce," said Dr Munir Alam, a professor of medicine and pathology at Duke who led the effort to develop the vaccine candidate.

"The studies funded with this grant will be the first of several successive studies required in animal models and humans for the development of immunization regimens targeted at inducing broadly neutralizing antibodies," Dr Haynes said. "This step is precisely what is needed to speed the development of a successful vaccine."

The grant will cover three years, beginning with the formulation of the investigational immunogen, followed by animal studies and culminating in production of the vaccine for use in a phase one trial involving human participants.