

Zydus Cadila launches a fast tracked programme to develop vaccine for the novel coronavirus, 2019-nCoV (COVID-19)

Adopting a two-pronged approach, a DNA based vaccine and a live attenuated recombinant measles virus vectored vaccine to combat the virus

Ahmedabad, India, 15 February 2020

Zydus Cadila, an innovation-driven, global pharmaceutical company, announced that it has initiated an accelerated research programme with multiple teams in India and Europe developing a vaccine for the novel coronavirus, 2019-nCoV (COVID-19) based on two approaches.

The first approach deals with development of a DNA vaccine against the major viral membrane protein responsible for the cell entry of the novel coronavirus, now called COVID-19. The plasmid DNA would be introduced into the host cells, where it would be translated into the viral protein and elicit a strong immune response mediated by the cellular and humoral arms of the human immune system, which play a vital role in protection from disease as well as viral clearance.

The second approach deals with development of a live attenuated recombinant measles virus vectored vaccine against COVID-19. The recombinant measles virus (rMV) produced by reverse genetics would express codon-optimised proteins of the novel coronavirus and will induce long-term specific neutralizing antibodies, which will provide protection from the infection.

Speaking on the development, Chairman of the Zydus Group, Mr. Pankaj R. Patel said, “There is an urgent and pressing need to develop a safe and efficacious vaccine that can prevent the spread of this deadly virus. Our researchers are working to bring a speedy solution to this most devastating outbreak in recent times.”

The group’s Vaccine Technology Centre in India which is working on the plasmid DNA vaccine also has wide ranging capabilities in developing and manufacturing different vaccines for unmet needs. The group was the first to develop and indigenously manufacture the vaccine to combat Swine Flu during outbreak in 2010.

The group’s research arm in Europe, Etna Biotech is working on measles reverse genetics technology which has been used earlier to successfully develop the SARS-vaccine. The vaccines developed through this platform are safe, efficacious and large doses can be manufactured for which Zydus already has production facilities in place.

The company’s robust manufacturing facilities for producing recombinant antigens and measles containing vaccines would enable rapid ramping up of the production for both vaccine candidates, once the proof-of-concept is established.

The Novel Coronavirus outbreak which started in December 2019 has so far infected over 67000 people and has claimed over 1500 lives.

About Zydus

Zydus Cadila is an innovative, global pharmaceutical company that discovers, develops, manufactures and markets a broad range of healthcare therapies, including small molecule drugs, biologic therapeutics and vaccines. The group employs nearly 25000 people worldwide, including 1400 scientists engaged in R & D, and is dedicated to creating healthier communities globally. www.zyduscadila.com

Zydus' vaccine research programme

The Vaccine Technology Centre (VTC) is the vaccine research centre of the Zydus Group. The group has two state-of-the-art R & D Centres, one located in Catania, Italy and the other in Ahmedabad, in the western part of India. The group has been developing vaccines for the basic vaccine programmes such as Diphtheria, Pertussis, Tetanus, Haemophilus Influenzae type B, Hepatitis B, Measles, Mumps, Rubella, Varicella, Influenza and Typhoid fever. In addition, it is developing new vaccines such as Human Papilloma Virus, Leishmaniasis, Malaria, Haemorrhagic Congo Fever, Ebola and Japanese Encephalitis.