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IIT-D to design next-generation vaccine against COVID-19 & dengue

16 February 2023 | News

Gives promising results in animal trial phase



Since the onset of the COVID-19 outbreak, scientists from around the world have been studying the disease and its epidemiology to develop effective vaccines. The development of a vaccine that can overcome disadvantages including the stability of the materials used, limited immune response, and side effects, e.g., blood clotting, and provide a durable immune response will offer better protection from the deadly COVID-19 virus.

Researchers from the Indian Institute of Technology Delhi (IIT-D) have taken a step forward towards next-generation vaccine for COVID-19. Unlike currently used vaccines, which use synthetic materials or adenovirus to package and deliver antigens, the IIT-D researchers used the body's own immune cells in developing a nano-vaccine.

This naturally derived nano-vaccine developed by the researchers could have several advantages over currently approved vaccines. It will minimise the chance of blood clotting, which was otherwise observed in vaccinated individuals.

Prof. Jayanta Bhattacharyya, Centre for Biomedical Engineering, IIT Delhi, said, "This approach to vaccination can be used for various other infectious diseases, such as dengue."

The Indian Council for Medical Research (ICMR) has approved a research grant to the group for the development of a nano-vaccine against dengue.