

Sanofi, GSK Start Phase 2 Trial of Their COVID-19 Vaccine

Sanofi and GSK announced the initiation of a new Phase 2 study with 720 volunteers aged 18 and over to select the most appropriate antigen dosage for Phase 3 evaluation of their adjuvanted recombinant protein COVID-19 vaccine candidate.

In parallel to the new Phase 2 study and recognizing the global emergence of new SARS-CoV-2 variants and their potential impact on vaccine efficacy, Sanofi has commenced development work against new variants, which will be used to inform the next stages of the Sanofi/GSK development program. The new Phase 2 trial is a randomized, double-blind, multi-centre dose-finding study conducted in adults aged 18 years of age and older to evaluate the safety, reactogenicity, and immunogenicity of two injections given 21 days apart. The trial will include equal numbers



of adults 18 to 59 years and those 60 years and above. Three different antigen doses with a fixed dose of adjuvant will be tested in a total study population of 720 volunteers, in the United States, Honduras, and Panama. Results of the Phase 2 trial will inform the Phase 3 protocol.

Venkaiah Naidu Calls for National Campaign to Promote Healthy Lifestyle

Vice President M Venkaiah Naidu called upon the people, particularly the youth, to adopt a healthy lifestyle and avoid sedentary living and junk food given the growing incidence of non-communicable diseases in the country.

Addressing the scientists of the Centre for DNA Fingerprinting and Diagnostics after visiting its facilities in Hyderabad, he said that a few years ago, WHO data has attributed 61 percent of all deaths in India to NCDs like heart disorders, cancer, and diabetes. Naidu called for arresting this trend by mounting a massive national campaign on the importance of adopting a healthy lifestyle and food habits.

Referring to the burden of genetic diseases, the Vice President asked the scientists to develop simpler and cost-effective methods for the diagnosis of various genetic diseases to help in better patient management. He lauded CDFD for identifying novel genetic mutations for more than 10 disorders in India, including the identification of four new genes, which would be helpful in genetic counselling and management of diseases.



Vice President M Venkaiah Naidu

India Host to 7,569 Corona Mutants: Study

In India alone, over 7,569 coronavirus variants have been analysed since the pandemic virus was first recognized in Wuhan. According to a research publication by a team of scientists from the city-based Centre for Cellular and Molecular Biology (CCMB), there are 7,569 variants in circulation in the country. CCMB scientists alone have far provided an analysis of over 5,000 coronavirus variants and how they have evolved.



“The novel variants that are worrying many countries globally have been identified with only a low prevalence in India so far. These include variants with immune-escape E484K mutation and the N501Y mutation with a higher transmission rate. However, their apparent low prevalence might be simply because not enough sequencing has been done. More coronavirus genomes need to be sequenced across the country to accurately identify the emergence of these and other new variants,” said Dr. Rakesh Mishra, director, CCMB.

CSIR Inks MoU with Bill & Melinda Gates Foundation to Promote Health Research

Bill & Melinda Gates Foundation and Council of Scientific and Industrial Research (CSIR), India have signed a Memorandum of Understanding (MoU) to support the development, conduct, and promotion of health research in India. Gates Foundation and CSIR will work together to identify opportunities to initiate scientific and technological collaborations. These will focus on developing and testing new preventions, therapies, and interventions that can help to solve major health concerns that affect India and other developing countries.

As per the MoU, areas of research collaboration would include genetic diseases that impact infant and neonatal mortality; new diagnostics and devices for infectious disease and environmental surveillance; development of cost-effective processes for drug, vac-



cines, biologics, and diagnostics manufacturing; novel microbiome-directed foods; the socio-economic impact of science and technological tools; and other areas of health and development.



Cure.fit Acquires Fitternity to Build a Fitness Network

Cure.fit has acquired gym aggregator Fitternity, in line with its plans to become the country's largest gymming franchisee. This acquisition will give Cure.fit a collective user base of 3 million, targeting 5,000 gyms across 20 cities.

"With Fitternity on board, Cure. fit will improve existing offline gyms, bring them up to speed with better technology, and focus on empowering them to adjust to the post-Covid scenario amid changing consumer expectations," MukeshBansal, co-founder, Cure.fit said in a statement.

Govt Says India has Sent Over 229L COVID-19 Vaccine Doses to Various Countries

India provided over 229 lakh doses of coronavirus vaccines to various countries out of which 64 lakh doses have been supplied as grant assistance and 165 lakh on a commercial basis, the Ministry of External Affairs (MEA) said. MEA Spokesperson AnuragSrivastava said India will continue to take forward the global vaccine supply initiative and cover more countries in a phased manner.

Srivastava said consignments of coronavirus vaccine doses were supplies as gifts to Bangladesh (20 lakh), Myanmar (17 lakh), Nepal (10 lakh), Bhutan (1.5 lakh), the Maldives (1 lakh), Mauritius (1 lakh), Seychelles (50,000), Sri Lanka (5 lakh), Bahrain (1 lakh), Oman (1 lakh), Afghanistan (5 Lakhs), Barbados (1 Lakh) and Dominica (70,000). He said countries that received vaccines on a commercial basis are Brazil (20 lakh), Morocco (60 lakh), Bangladesh (50 lakh), Myanmar (20 lakh), Egypt (50,000), Algeria (50,000), South Africa (10 lakh), Kuwait (2 lakh) and UAE (2 lakh). In the com-



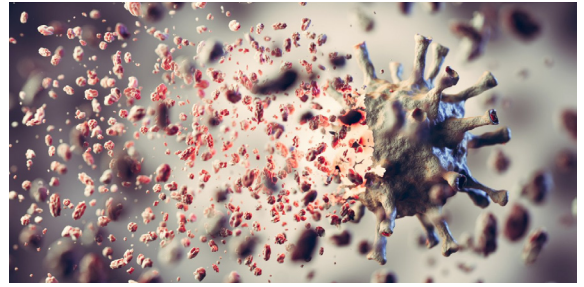
ing weeks, vaccines will be supplied to more countries in Africa, Latin America, CARICOM, and the Pacific Island states, he said.

Some Recovered COVID-19 Patients Suffer Due to Inflamed Thyroid Gland

For most people, infection with SARS-CoV-2 leads to mild, short-term symptoms, acute respiratory illness, or possibly no symptoms at all. However, every month since the COVID-19 pandemic began in Mumbai; doctors have noticed at least four recovered patients return within four to eight weeks after discharge with complaints of fever, neck pain, body ache, and difficulty in swallowing, among others. Some even lose five to 10 kilos in that period.

After doing tests by doctors

across the world, they have revealed that the ACE2 receptor that SARS-CoV-2 uses to infect the body is present on the respiratory systems, such as the thyroid and adrenal gland. The doctors have diagnosed it as subacute thyroiditis, a painful inflammation of the thyroid gland, which plays a major role in regulating the body's metabolism and growth. Though subacute thyroiditis is self-limiting



and the patient does not need life-long anti-thyroid medication, the link between subacute thyroiditis and coronavirus is not fully understood.

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IIT-M Researchers Working on Effective Drugs against HIV/AIDS

Indian Institute of Technology Madras (IIT-M) researchers are working to pave the way to effective drugs for treating HIV/AIDS. Using molecular dynamics simulations, the research team has shown that introducing electrostatic interaction sites on potential drug molecules can enhance the efficacy of the antiviral drug against HIV. This research was led by Prof Sanjib Senapati, Department of Biotechnology, IIT Madras, along with his research scholars, Mohammed

Ahsan and Chinmai Pindi. The results have been published in the Journal of the American Chemical Society – Biochemistry. Prof Senapati, said, "Current inhibitors that target HIVPR make use of 'van der Waal's forces' to attach themselves to the protease molecule. Given that these forces are weak, the efficacy of the drug is variable and the virus will soon become resistant to them." One of the routes that drug developers work on is to attack is HIV-1 protease (HIVPR), an essential enzyme that is used by the AIDS virus for growth and maturation. Drug designers have aimed at developing efficient inhibitors of the enzyme.

The molecular dynamics (MD) simulation studies conducted by IIT Madras researchers showed the presence of a strong and asymmetrical electric charge in the active site of the HIVPR. If a drug molecule can be designed with a complementary charge, so that it can bind tightly with this active site through electrostatic attraction, it can permanently deactivate/inhibit the enzyme. "Current drugs lack this electrostatic complementarity. This must be investigated because it is well-known that electrostatic forces between molecules are much stronger than van der Waals forces," added Prof Senapati.



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