



## Bharat Biotech leads a CSIR-NMITLI supported project to develop human antibodies for COVID-19 therapy

**Hyderabad, India, May 8, 2020:** The Council of Scientific and Industrial Research (CSIR) under its flagship programme NMITLI has sanctioned a project to develop human monoclonal antibodies as therapy for COVID-19 infections.

The project is being led by Bharat Biotech, a leading manufacturer of vaccines and bio-therapeutics as well as supplier of products to over 65 countries in the world. This programme brings together academia - National Centre for Cell Science (NCCS), Pune and Indian Institute of Technology, Indore and industry - PredOmix Technologies, Gurgaon and Bharat Biotech in a collaborative mode for a public health emergency.

Although efforts are underway for the development of drugs and vaccines for controlling the COVID-19 pandemic, these are slow and expensive processes with uncertainties. Therefore, an alternate therapeutic regimen for early deployment is critical.

The present project aims at such an alternate therapeutic regimen by generating highly effective and specific human monoclonal antibodies that are capable of neutralizing the SARS-CoV2 virus. Such virus-neutralizing antibodies can block the spread of infection by binding to the virus and rendering it ineffective. Monoclonal antibody therapy is a highly effective and safe method.

Expressing his happiness on receiving CSIR-NMITLI approval of the project, **Dr. Krishna Ella, Chairman & Managing Director Bharat Biotech** said, "The purpose of vaccination is to protect the healthy against future infections and it alone may not provide the complete solution. We feel the monoclonal antibody therapy will provide a viable option."

"The question is of how to treat those individuals who are already infected? plus, we do not yet know how effective an anti-SARS-CoV2 vaccine will be in the elderly people and those with co-morbidities. Given the large number of Indians suffering from hypertension, diabetes, and heart diseases, this becomes an important issue." Dr. Ella added.

Talking about the novel antibodies approach to deal with COVID19 Pandemic Dr. Ella stated, "While both Israel and The Netherlands have recently announced the development of virus-neutralizing antibodies, our approach is to develop a powerful cocktail of neutralizing antibodies that can also simultaneously block mutational variants of the virus. We are fast-tracking the development process, to make the antibodies available within the next 6 months and thus improve the treatment efficacy".

Bharat Biotech has excelled in identifying potential viral threats, and have successfully developed 10 different Viral vaccines. As a Pandemic Vaccines frontrunner, the company has delivered more than 5 billion doses of viral vaccines including Anti Rabies vaccines.

As an innovative company, Bharat Biotech continues to solve Public Health and Virulent Disease burden with new vaccines and therapeutic approaches, on its own, and through Public-Private Partnerships.

**Supplementary information:** Plasma therapy has shown some promise. However, inherent problems associated with this approach severely limit its wider use. Large scale deployment of this therapy is limited by the availability of the volume of plasma. Additionally, convalescent plasma also contains other biologically active molecules such as clotting factors and inflammatory cytokines, which may be contraindicative for COVID-19 management. Finally, the need to carefully screen convalescent plasma for the presence of other infections that could be unwittingly transferred to the recipient poses yet another hurdle.

**Monoclonal antibodies Products:** Over 60 such Monoclonal antibodies have already been developed against viruses such as human cytomegalovirus, herpes simplex virus, HIV-1, Ebola virus, and SARS virus. Several of these are currently in clinical trials, and an antibody against the respiratory syncytial virus is in the market for prophylactic use in children (Palivizumab).

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