BioSpectrum
the business of Bi
24 years of leveraging the business of Bio
www.biospectrumindia.co

IMTech starts genome sequencing of novel coronavirus

20 April 2020 | News

Viruses have higher mutation rate compared to that of microbes and their genetic material keeps on changing quickly as they replicate rapidly



After the Centre for Cellular and Molecular Biology (CCMB) and the Institute of Genomic and Integrated Biology (IGIB), one more institute of the Council of Scientific and Industrial Research (CSIR) has started whole-genome sequencing of novel coronavirus.

Chandigarh-based Institute of Microbial Technology (IMTech) has taken up the task of large-scale genome sequencing of the virus.

Viruses have higher mutation rate compared to that of microbes and their genetic material keeps on changing quickly as they replicate rapidly.

Dr Sanjeev Khosla, Director, IMTech said, “These genome sequencing samples will be submitted to international recognized repository. The complete genome sequence information will enable researchers to gain insights about the origins of the virus, the different types of strains circulating in India and how it has spread across the length and breadth of our country. The genomic resource obtained from this sequencing will also allow identification of new targets for diagnosis and drugs for COVID-19.”

Whole-genome sequencing is a method used to determine the complete DNA sequence of a specific organism’s genome. As the Institute is known for its specialization in microbial and genomic research, CSIR-IMTech will perform sequencing of the SARS-Cov-2 RNA genome isolated from clinical samples.

So far, 9000 samples have been sequenced internationally as per Global Initiative on Sharing All Influenza Data (GISAID) — a public platform started by the WHO in 2008 for countries to share genome sequences. The genomic resource obtained from this sequencing will also allow identification of new targets of diagnosis and drugs for COVID-19.

“We have already started clinical testing of samples and now by embarking on this mission to sequence viral strains, we will be better equipped to understand the nature of this virus, which has caused a global pandemic”, Dr. Sanjeev Khosla added.

CSIR-IMTech will be using its experience in portable, real-time and direct genome sequencing to study the chemical modification in SARS-Cov-2 strains from India.