

Another CSIR lab to start genome sequencing of novel coronavirus

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New Delhi, April 16 (India Science Wire): 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. “These genome sequencing samples will be submitted to international recognised repository” said Dr Sanjeev Khosla, Director, IMTech while speaking with India Science Wire. 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” said Dr Khosla.

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.

Dr. Sanjeev Khosla, Director, CSIR-IMTech, said, “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.” 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. (India Science Wire)

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