

Institute of Genomics and Integrative Biology

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In news

To better understand the genomic variation in the strains of SARS-CoV2 in the state, the government of Kerala has tied up with CSIR-Institute of Genomics and Integrative Biology

NextGen' sequencing

The genome sequencing uses an approach called 'NextGen' sequencing, in which 1000s of individual genomes can be simultaneously analysed, rare variations picked up and occasionally, SARSCoV2 missed by the gold standard RTPCR test, detected

About CSIR Institute of Genomics and Integrative Biology

- It is a scientific research institute devoted primarily to biological research.
- It is a part of Council of Scientific and Industrial Research (CSIR), India.
- It was established in 1977 as the Center for Biochemical Technology with a primary focus on biochemical research, but has since shifted its research focus to integrative biology.
- The Functional Genomics Unit was established in 1998 with the focus shifting from chemical to genomics research.
- The institute was renamed "Institute of Genomics and Integrative Biology" in 2002.

Its role in tackling COVID- 19 pandemic

- Researchers at the institute reported the first high-throughput next-generation sequencing based approach for

detection and genetic epidemiology of SARS-CoV-2.

- This approach has been extensively used to understand the genetic epidemiology of SARS-CoV-2 in the state of Kerala, which has significantly influenced policy and preparedness in the state to curb the spread of the epidemic.
- Researchers at the institute also reported the first cases of COVID-19 reinfection in the country apart from identifying a novel clade of SARS-CoV-2 in India named I/A3i
- Researchers at CSIR-IGIB **also developed the test called FELUDA based on CRISPR gene editing** which is highly efficient and fast to combat the testing capacity of the country and has been approved by the Drugs Controller General of India.