

Indian SARS-CoV-2 Genomics Consortium (INSACOG)

January 1, 2021

In news

Indian SARS-CoV-2 Genomics Consortium (INSACOG) has been launched recently

Background

In the backdrop of the emergence of a newly identified variant of the novel SARS-CoV-2 Virus in the UK, South Africa and some other parts of the world, the Government has taken action to accelerate Virus Surveillance, Genome Sequencing and Characterization.

What is SARS-CoV-2 Virus?

- Referred to as SARS-CoV-2 VUI 202012/01 (Variant Under Investigation, year 2020, month 12, variant 01), has been identified through viral genomic sequencing in the United Kingdom (UK). It is also known as lineage B.1.1.7
- It is defined by multiple spike protein mutations (deletion 69-70, deletion 144, N501Y, A570D, D614G, P681H, T716I, S982A, D1118H) present.
- Over the last few weeks, the UK has faced a rapid increase in COVID-19 cases
- It is correlated with a significant increase in the rate of COVID-19 infection in England; this increase is thought to be at least partly because of mutation N501Y inside the spike glycoprotein's receptor-binding domain, which binds to the ACE2 receptor in humans.

Key features of the Indian SARS-CoV-2 Genomic Consortium (INSACOG)

- The Indian SARS-CoV-2 Genomic Consortia (INSACOG) has been launched.
- Coordinated by the Department of Biotechnology (DBT) along with MoH&FW, ICMR, and CSIR , the strategy and roadmap of the National SARS CoV2 Genome Sequencing Consortium (INSACOG) has been prepared.
- The overall aim of the proposed Indian SARS-CoV-2 Genomics Consortium is to monitor the genomic variations in the SARS-CoV-2 on a regular basis through a multi-laboratory network.
- This vital research consortium will also assist in developing potential vaccines in the future.
- The consortium will ascertain the status of new variant of SARS-CoV-2 (SARS-CoV-2 VUI 202012/01) in the country, establish a sentinel surveillance for early detection of genomic variants with public health implication, and determine the genomic variants in the unusual events/trends (super-spreader events, high mortality/morbidity trend areas etc.).
- INSACOG is a consortium of 10 labs namely DBT-NIBMG Kalyani, DBT-ILS Bhubaneswar, ICMR-NIV Pune, DBT-NCCS Pune, CSIR-CCMB Hyderabad, DBT-CDFD Hyderabad, DBT-InSTEM/ NCBS Bengaluru, NIMHANS Bengaluru, CSIR-IGIB Delhi, and NCDC Delhi.
- INSACOG will have a high level Inter-Ministerial Steering Committee which will provide guidance and oversight to the consortium specially for policy matters and it will have a Scientific Advisory Group for scientific and technical guidance.
- The Indian SARS-CoV-2 Genomics Consortium (INSACOG) will monitor the genomic variations on a regular basis through the multi-laboratory network.
- Knowledge generated though this vital research consortium will also assist in developing diagnostics and potential therapeutics and vaccines in the future.