

COVID-19

Relevant for: Science & Technology | Topic: Biotechnology, Genetics & Health related developments

A transmission electron microscopic image of an isolate from the first U.S. case of COVID-19, formerly known as 2019-nCoV, with the spherical viral particles, colourised blue, containing cross-sections through the viral genome, seen as black dots. Handout illustration image obtained on February 27, 2020 courtesy of the Centers for Disease Control and Prevention. | Photo Credit: [AFP](#)

China isolated the [novel coronavirus](#) (SARS-CoV-2) from a patient and shared the first whole genome sequence data of the virus with the Global Initiative on Sharing All Influenza Data (GISAID) on January 11. This allowed scientists from across the world to study the genome data to know more about the virus origin and develop diagnostics.

As on March 4, 23 countries, including Nepal, Vietnam and Cambodia, have [shared](#) 159 genome sequence data. At 65, China has deposited the most number of genome sequences followed by the U.S. (16), Australia (10), Japan (9) and Singapore and South Korea (eight sequences each).

Also read | [The SARS-CoV-2 is mutating, say scientists](#)

However, till date, India has not shared even one genome sequence data. The first COVID-19 patient in India, a medical student who had returned from Wuhan, was confirmed on January 30 by the Pune-based national Institute of Virology (NIV). Two more adults from Kerala too had tested positive students and were laboratory confirmed by NIV about a month back.

Even in 2015 [H1N1 outbreak](#) when 42,592 cases and 2,990 deaths were reported from India, the full genome sequence data was not shared with the WHO reference laboratories or deposited in public databases.

Also read | [Shanghai lab that first sequenced coronavirus genome shut down](#) | [What is the source of the new SARS-like disease reported in China?](#)

“Virus genome sequencing is transforming epidemiological investigations, as we are seeing in real-time with the novel coronavirus outbreak. Sequencing provides a platform to rapidly identify unknown or unexpected pathogens, identify the origins of an outbreak, and track transmission patterns,” Dr. Nathan Grubaug, Assistant Professor of Epidemiology (Microbial Diseases) at Yale School of Public Health says in a [release](#).

“Sequencing the genome of novel coronavirus will help us to know where the virus came from and how the virus has spread. For instance, by sequencing the genome of the virus isolated from an Indian patient, it will become possible to know if the virus had come from China or any other country,” says Gautam Menon, professor of physics and biology at Ashoka University, Sonapat, Haryana and the Chennai-based Institute of Mathematical Sciences.

According to Prof. Menon, genome sequencing will help in tracing contacts and give a clear picture of whether the virus has undergone mutations to make it more virulent or less.

Also read | [WHO to not call novel coronavirus by official name](#)

“India has only to gain and nothing to lose by sharing the sequence data. In a rapidly evolving

pandemic-like situation, it is imperative that nations share genome sequence data quickly and to the fullest,” Prof. Menon says.

“Without sequencing the genome of the virus we won’t know where the virus came from. The European clade [for instance] is developing, which is distinctly different from China,” says Dr. Shahid Jameel, CEO of the Wellcome Trust/DBT India Alliance.

[Watch | COVID-19 — Dos and don’ts from the Health Ministry](#)

When contacted, Dr. Balram Bhargava, Director-General of ICMR did not want to comment.

You have reached your limit for free articles this month.

Register to The Hindu for free and get unlimited access for 30 days.

Already have an account ? [Sign in](#)

Sign up for a 30-day free trial. [Sign Up](#)

Find mobile-friendly version of articles from the day's newspaper in one easy-to-read list.

Enjoy reading as many articles as you wish without any limitations.

A select list of articles that match your interests and tastes.

Move smoothly between articles as our pages load instantly.

A one-stop-shop for seeing the latest updates, and managing your preferences.

We brief you on the latest and most important developments, three times a day.

*Our Digital Subscription plans do not currently include the e-paper ,crossword, iPhone, iPad mobile applications and print. Our plans enhance your reading experience.

Why you should pay for quality journalism - [Click to know more](#)

Please enter a valid email address.

Brush baby, brush

Subscribe to The Hindu now and get unlimited access.

Already have an account? [Sign In](#)

Sign up for a 30-day free trial. [Sign Up](#)

To continue enjoying The Hindu, You can turn off your ad blocker or Subscribe to The Hindu.

[Sign up for a 30 day free trial.](#)

END

CrackIAS.com