

ONE LAKH GENOME, DNA SEQUENCING DONE FOR COVID-19 SO FAR BY DBT AND 5 COVID19 BIOREPOSITORIES WITH 57,000 SAMPLES WERE MADE AVAILABLE TO ACADEMIA AND INDUSTRY FOR R&D AND PRODUCT DEVELOPMENT: DR JITENDRA SINGH

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

Union Minister of State (Independent Charge) Science & Technology; Minister of State (Independent Charge) Earth Sciences; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh today informed that one lakh Genome and DNA sequencing has been done for COVID-19 so far by the Department of Bio-Technology (DBT) and 5 COVID19 Biorepositories with 57,000 samples were made available to academia and industry for R&D and Product development.

The Minister was presiding over a high level meeting to review the current status of COVID-19 research, development of vaccines and other protocols as well as the contribution made in this direction by each of the Autonomous Institutions of the Department of Biotechnology located in different parts of the country.



Ashok Chandra Panda, Minister, Science and Technology Department, Govt. of Odisha and Manish Sisodia, Deputy Chief Minister and Minister in-charge of Higher Education, Government of Delhi also attended the meeting on behalf of Institute of Life Sciences (ILS), Bhubaneswar and National Institute for Plant Genome Research, (NIPGR), New Delhi.

Dr Jitendra Singh announced that “A Vaccine Testing and Research Facility will come up at the second campus of the Rajiv Gandhi Centre for Biotechnology (RGCB) and this center will also have a BSL 3 facility which is capable of handling airborne viruses like Covid-19. This facility will be the first of its kind in South India. The Minister also said that RGCB will be developed as a hub for research and testing of multiple vaccines such as cancer vaccine and those for infectious diseases, including Covid-19. “This will bring huge recognition for RGCB in the specific area of vaccine research and development.” The Minister also lauded the RGCB’s

model of supporting both innovative research and Biotechnology incubation facilities.



Secretary, Department of Biotechnology, Dr Rajesh Gokhale informed that taking note of the unprecedented scenario of the COVID19 pandemic, DBT prepared a roadmap early on with a focus on diagnosis, treatment and most importantly, prevention. It has supported 100 projects in the thematic areas of vaccines, diagnostics and therapeutics, besides enabling 7 vaccine candidates by industry and 8 candidates by academia. DBT under Mission COVID Surksha also supported 5 vaccine candidates, 19 clinical trial sites, 6 facilities for immunogenicity assays and animal challenge models and facility augmentation for Covaxin production.

Institute of Life Sciences (ILS), Bhubaneswar informed that it is one of the three institutes in the country that has established and characterized 22 virus cultures including Delta and Delta Plus. ILS has also established a Biorepository for 3000 COVID-19 clinical samples containing serum, plasma, saliva, blood, urine and stool as a National Resource Centre for research by academia and Start-ups for commercial product developments. ILS has done important work on COVID testing (more than 3 lakhs RT-PCR tests), 9000 genome sequencing of the samples collected from Odisha, Jharkhand, Chhattisgarh, Bihar, and Maharashtra and immune-profiling of symptomatic and asymptomatic COVID patients. In addition, ILS has also developed virus cultures for COVID-19, and established an Animal Biosafety Level 3 platform, a drug discovery platform, and an immunogenicity platform to aid the COVID research. Dr Jitendra Singh suggested use of these platforms by academic institutions, private industries, and start-ups.

Head of the Centre for DNA Fingerprinting & Diagnostics, (CDFD) Hyderabad said that INSACOG (Indian SARS CoV-2 Genomics) Consortium with a chain of 38 laboratories focused on genomic surveillance of SARS CoV-2. CDFD, Hyderabad is a key institution of INSACOG network and has carried out genome sequencing of more than 5,000 genomes. It was also one of the first institutes in the country to carry out research on Delta and Delta Plus variants.

Dr Jitendra Singh appreciated the Institute of Bioresources & Sustainable Development (IBSD), Imphal for all the Covid-19 related activities performed not only in the state of Manipur but also in the other NER states including Sikkim, Meghalaya and Mizoram. He also stated that IBSD has been instrumental in co-operating with the state Government since the outbreak of the pandemic. Apart from establishing COVID testing centers in Manipur, the Centre also supported Mizoram, Meghalaya in testing facilities and Genome Sequencing projects. The Centre developed Banslochan (bamboo extract product) and its use increased more than 30 percent during COVID due to its immune booster properties.

National Institute for Plant Genome Research, (NIPGR) New Delhi plans to establish 4

Translational Centers in the country and explore plant genome project related to COVID.

Heads and Directors of Rajiv Gandhi Centre for Biotechnology (RGCB), Thiruvananthapuram, Centre for DNA Fingerprinting & Diagnostics, (CDFD), Hyderabad, Institute of Life Sciences (ILS), Bhubaneswar, National Institute for Plant Genome Research, (NIPGR), New Delhi, Institute of Bioresources & Sustainable Development (IBSD), Imphal took part in today's meeting.

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