

Ministry of Science & Technology



Union Minister Dr Jitendra Singh says, Bio-Economy and Space Economy are going to spearhead India's future growth story

Announcing the GenomeIndia Flagship Programme of 10,000 Genome Sequencing in New Delhi, Dr Jitendra Singh said, India's bio-economy has grown 13 folds in the last 10 years from \$10 billion in 2014 to over \$130 billion in 2024

Dr Jitendra Singh described 10,000 genome sequencing as a watershed moment for India, as it will lead to genetic based remedies, besides giving a big boost to public healthcare system in the country

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There is pressing need for finding Indian solutions to Indian problems as India emerges as a frontline nation in the comity of scientifically advanced countries: Dr Jitendra Singh

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Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh today said, Bio-Economy and Space Economy are going to spearhead India's future growth story, with India's economic growth already being highest in the world today at more than 6%.

Announcing the GenomeIndia Flagship Programme of 10,000 Genome Sequencing, Dr Jitendra Singh said, ever since this government took over under the leadership of Prime Minister Narendra Modi, India's bio-economy has grown 13 fold in the last 10 years from \$10 billion in 2014 to over \$130 billion in 2024. He added that the Biotechnology Sector has seen a rapid growth in the last 10 years and India is now being rated among top 12 bio-manufacturers in the world.



Dr Jitendra Singh said, there are several success stories which have made tremendous contribution to India's bio-economy like Mission COVID Suraksha, Indian Biological Data Centre which is the first repository of life sciences data established in the Regional Centre for Biotechnology, Faridabad and Indian SARS-CoV-2 Genomic Consortium (INSACOG).

The Minister said, in the interim budget of 2024-25, Govt has announced new scheme of Bio-manufacturing and bio-foundry to be implemented by the Department of Biotechnology (DBT), for promoting green growth and the new programme will provide environment friendly alternatives such as biodegradable polymers, bio-plastics, bio-pharmaceuticals and bio-agri-inputs. This scheme will also help in transforming today's consumptive manufacturing paradigm to the one based on regenerative principles, he added.

Referring to Prime Minister Narendra Modi conducting a thorough review of the progress made in the Gaganyaan Mission and conferring astronaut wings upon 4 astronauts today, Dr Jitendra Singh said, like Bio-economy, India's Space Economy is also opening up new vistas.



Dr Jitendra Singh said, the current size of the Indian Space Economy is estimated around \$8.4 billion (around 2-3% of global space economy) and it is expected that with the implementation of the Indian Space Policy 2023, \$44 billion Indian space economy can be achieved by the year 2033.

Coming back to the GenomeIndia Project, Dr Jitendra Singh described this as a watershed moment for India, as it will lead to genetic based remedies, besides giving a big boost to the public healthcare system in the country.

Dr Jitendra Singh said, Genome study or sequencing is going to determine the future healthcare strategies across the world, both therapeutically and prophylactically. He said, there is a pressing need for finding Indian solutions to Indian problems as India emerges as a frontline nation in the comity of scientifically advanced countries.

Dr Jitendra Singh lauded DBT for the ambitious goal to identify and catalogue the genetic variations of diverse Indian populations by sequencing the whole genome of 10,000 healthy individuals from 99 communities, representing all major linguistic and social groups, across the country.



The Minister said, India's population of 1.3 billion is made up of over 4,600 diverse population groups, many of which are endogamous (Matrimony in Close Ethnic Groups) and these groups have unique genetic variations and disease-causing mutations that cannot be compared to other world populations. Hence the need of the hour was to create a database of Indian reference genome, for gaining insights about these unique genetic variants and use the information to create personalized drugs for the Indian population, he added.

In his address, Secretary DBT, Dr Rajesh Gokhale said that the department in the last ten years has ventured into various cutting edge areas in biotechnology. He said, DBT has created a firm niche biotechnology space and is promoting R&D and technological developments by nurturing a robust research and innovation ecosystem across the country.

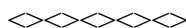
The Department has contributed in strengthening all the diverse aspects of Biotechnology through Policy Reforms and the most significant has been establishment of Apex organization- Biotechnology Research and Innovation Council (BRIC) by subsuming its 14 Autonomous Institutions Resources. The current effort of “Restructuring of DBT-AIs” is towards maximizing socio-economic outcomes from public funded research towards achieving the National goals of *Atmanirbhar Bharat*, *Make-in-India* and *Vigyan se Vikas*.

In her address, Advisor, DBT, Dr Suchita Ninawe said, the “Reference Genome for Indian Population” created under the project will lead to a better understanding of the nature of diseases and specific interventions essential for various ethnic groups. The GenomeIndia will place India on the world map of genome research and will collectively facilitate future large-scale human genetic studies for researchers across the globe.

Joint Coordinators of the GenomeIndia, Prof Y Narahari and Dr K Thangaraj said in their presentations that beyond the sheer scale of sequencing and establishing a Reference Genome, the creation of a biobank housing 20,000 blood samples at the Centre for Brain Research, coupled with data archiving at the Indian Biological Data Centre exemplify the project's commitment to transparency, collaboration, and future research endeavours. The data is being stored at the Indian Biological Data Centre (IBDC) set up by Department of Biotechnology, Government of India at the Regional Centre for Biotechnology (RCB), Faridabad.



GenomeIndia is a consortium of 20 national institutes exemplifies the significance of collaborative, nation-wide, mission-oriented scientific partnerships, and visionary funding by the Department of Biotechnology, Government of India.



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