

# 20,000 GENOMES TO BE SCANNED FOR CANCER STUDY

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

The Department of Biotechnology (DBT) plans to scan nearly 20,000 Indian genomes over five years, in a two-phase exercise, and develop diagnostic tests that can be used for cancer.

The first phase involves sequencing the genomes of nearly 10,000 Indians to capture the biological diversity of the country, Renu Swarup, Secretary-DBT, told *The Hindu* .

In the next phase, about 10,000 “diseased individuals” would have their genomes sequenced. These data would be compared using machine learning to identify genes that can predict cancer risk, as well as other diseases that could be significantly influenced by genetic anomalies.

While 22 institutions, including those from the Council of Scientific and Industrial Research (CSIR) and the DBT would be involved in the exercise, the data generated would be accessible to researchers anywhere. This would be through a proposed National Biological Data Centre, envisaged in the ‘Biological Data Storage, Access and Sharing Policy’ that is still in the early stages of discussion.

“Genomics research is a major thrust area for us. What is unique about this programme, called the Genome India Initiative, is its scale. The deliverables are genomic-based diagnostics that can be affordably made available through a lab,” Dr. Swarup added. The programme is expected to launch in October, with an estimated budget of Rs. 250-350 crore for phase 1.

The Pune-based National Centre for Cell Sciences — also involved in the project — will collect samples of microbiome from the human gut. The diversity of the bacterial samples is at the frontier of global research, and scientists have said there is an intimate connection between the genome, the gut microbiome and disease.

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