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JNTBGRI TO PLAY KEY ROLE IN SEQUENCING OF INDIAN SPECIES

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

Back to basics: The digital repository of genome sequences will help in biodiversity conservation. | Photo Credit: Getty Images/iStockphoto

The Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) here is gearing up to play a key role in a nationwide project to decode the genetic information of all known species of plants and animals in the country.

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The Institute has been selected as one of the Biological Knowledge and Resource Centres of the Indian Initiative on Earth BioGenome Sequencing (IIEBS). It will join hands with other premier research institutes to utilise cutting edge technologies for genome sequencing. The Union Department of Biotechnology has allotted 143.89 lakh for JNTBGRI to take up the project.

The whole genome sequencing of 1,000 species of plants and animals will be taken up in the initial phase of IIEBS to be completed over a period of five years at an estimated cost of 440 crore. The National Institute of Plant Genome Research, New Delhi is the coordinating centre for the nationwide project involving a total of 24 institutes.

JNTBGRI Director R. Prakashkumar said the project was part of the Earth BioGenome Project, an international initiative to catalogue life on the planet. "This will eventually lead to the generation of the genetic blueprint of all living forms," he said.

Described as a "moonshot for Biology", EBP aims to sequence the genetic codes of all of earth's eukaryotic biodiversity over a period of 10 years. The digital repository of genome sequences is expected to provide the critical infrastructure for better understanding of ecosystems and conservation of biodiversity as well as the development of new treatments for infectious and inherited diseases, agricultural products, biomaterials and biological fuels.

Dr. Prakashkumar said India's participation in the EBP would provide a boost for the field of genomics and bioinformatics within the country. "The project will enable collection and preservation of endangered and economically important species. The decoded genetic information will also be a useful tool to prevent biopiracy," he said.

With over 5,000 plant species in its field gene bank and conservatories, JNTBGRI has a major role in conserving the endemic flora of the Western Ghats.

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