MISSION TO SEQUENCE GENES OF A 'LARGE GROUP' OF INDIANS

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

India is planning a major mission to sequence the genes of a "large" group of Indians — akin to projects in the U.K., China, Japan and Australia — and use this to improve health and buck a global trend of designing "personalised medicine".

This was among the key decisions taken by the Prime Minister's Science, Technology and Innovation Advisory Council (STIAC) at its first meeting on Tuesday.

The Health and Family Welfare Ministry and the Biotechnology Department will be closely associated with the project.

Ever since the Council of Scientific and Industrial Research in 2009 announced that it had sequenced the genome of an Indian, then making India one of six countries to achieve such a feat, several research labs have analysed genes from Indians for disease susceptibility. However, no compendium of genes that differentiate Indian populations from, say, Caucasian or African genomes exist.

A group of Indian scientists and companies are involved with a 100k GenomeAsia project, led by the National Technological University (NTU), Singapore, to sequence the whole genomes of 100,000 Asians, including 50,000 Indians.

"Our lifestyle, our environment and the genes we inherit all combine to make us what we are. The diversity of Indians and of our environment requires a large-scale study of human genomes, of our lifestyle in health and disease and the use of healthy — and disease — samples to understand the impact on health," said a press statement from the STIAC.

K. Vijay Raghavan, Principal Scientific Adviser and Chair of the council, said the genome initiative would have to move at two different levels.

"Sequencing genomes and linking to human health and disease as a research initiative, and doing this on a much larger scale, so it has a direct impact on public health. As the first level starts, the second will be put in place, speedily."

The Council acts as a coordinator between several Ministries to work on projects and missions and is scheduled to meet once a month, he said.

Key programmes, such as a deep ocean mission, to facilitate ocean science and technologies to help with India's strategic interests and an Artificial Intelligence and quantum computing mission were also discussed.

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