

## Biotechnology & Health:

### India Launches Biofoundry Network to Boost Bioeconomy

On September 2, 2025, the Department of Biotechnology (DBT) and the Biotechnology Industry Research Assistance Council (BIRAC) launched India's first Biofoundry Network. This initiative, which is part of the BioE3 Policy (Biotechnology for Environment, Economy & Employment), aims to transform the country's biotechnology landscape and help India achieve a \$300 billion bioeconomy by 2030.

The network is a national platform designed to accelerate advanced biomanufacturing. It will integrate 21 cutting-edge bio-enabler facilities across the country, providing shared infrastructure and expertise to startups, small and medium-sized enterprises (SMEs), industries, and academic institutions. These hubs will support pilot and pre-commercial scale projects in various sectors, including:

**Health:** Precision biotherapeutics, next-generation cell and gene therapies, and mRNA-based medicines.

**Agriculture:** Sustainable agriculture, smart proteins, and functional foods.

**Environment:** Carbon capture and marine biotechnology.

The initiative is seen as a crucial step for India to become a global leader in advanced biomanufacturing, reducing its dependence on foreign imports and creating high-skilled jobs. The Minister of State for Science and Technology, Jitendra Singh, noted that unlike in the IT sector where India was a decade late, it is

among the first to launch an institutionalized policy in advanced biomanufacturing.

### Key Research & Development News

**Cancer and Diabetes Research:** A collaborative study by researchers from IIT Madras and Denmark has discovered how two specific genetic variants can work together as "switches" to activate hidden metabolic pathways. This breakthrough, based on research in yeast, has significant implications for personalized medicine and could lead to new diagnostic tests and drug targets for complex diseases like cancer and diabetes.

**ALS Drug Development:** The field of drug development for Amyotrophic Lateral Sclerosis (ALS) is seeing a renewed focus with increased investment in biotech companies and government-supported collaborative efforts. This comes after a challenging period with setbacks in treatment options for the neurodegenerative disease.

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## MCQS

**1. What is the primary goal of India's newly launched Biofoundry Network?**

- a) To import advanced biotech machinery from other countries.
- b) To export Indian agricultural products.
- c) To accelerate advanced biomanufacturing and help India achieve a \$300 billion bioeconomy by 2030.
- d) To provide free healthcare services to rural populations.

**Answer: c)**

The news states that the Biofoundry Network is part of the BioE3 Policy and aims to transform India's biotechnology landscape by accelerating advanced biomanufacturing to meet the target of a \$300 billion bioeconomy by 2030.

**2. The Biofoundry Network will provide shared infrastructure to which of the following?**

- a) Only government-funded research labs.
- b) Only large, multinational corporations.
- c) Startups, SMEs, industries, and academic institutions.
- d) Only foreign researchers.

**Answer: c)**

The text specifies that the network is a national platform that will provide shared infrastructure and expertise to startups, small and medium-sized enterprises (SMEs), industries, and academic institutions, fostering collaboration and innovation.

**3. According to the news, what is a key takeaway from the collaborative study on genetic variants by researchers from IIT Madras and Denmark?**

- a) That single-gene mutations are the sole cause of complex diseases.
- b) That environmental factors have no role in disease progression.
- c) That two specific genetic variants can work together as "switches" to activate hidden metabolic pathways.
- d) That all diseases are incurable.

**Answer: c)**

The news highlights a major breakthrough from the study: the discovery of how two specific genetic variants can act as "switches" to activate previously hidden metabolic pathways, which has significant implications for treating complex diseases like cancer and diabetes.

**4. What is the name of the policy under which the Biofoundry Network was launched?**

- a) Bio-Revolution Policy.
- b) Green Growth Policy.
- c) BioE3 Policy.
- d) Make in India Policy.





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**Answer: c)**

The news report explicitly states that the Biofoundry Network initiative is part of the BioE3 Policy, which stands for Biotechnology for Environment, Economy & Employment.

**5. Why is the field of drug development for Amyotrophic Lateral Sclerosis (ALS) seeing renewed focus?**

- a) A new, highly effective drug has recently been approved.
- b) Increased investment in biotech companies and government-supported collaborative efforts.
- c) The disease has been cured, and research is no longer needed.
- d) The number of people with ALS has decreased significantly.

**Answer: b)**

The text indicates that the renewed focus on ALS drug development is due to increased investment in biotech companies and the establishment of government-supported collaborative efforts to accelerate research and development in this area.



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