

Science & Innovation Lab

Department of Biotechnology (DBT)

Have you ever wondered how vaccines are made, how crops become disease-resistant, or how scientists create medicines that heal our bodies? Behind many such innovations in India stands the Department of Biotechnology (DBT), a powerhouse of life sciences research that connects biology with technology to solve real-world problems.

Birth of a New Science

It was established in 1986 under the Ministry of Science and Technology, Government of India. Its goal is to use biological knowledge to improve human health, agriculture, the environment, and industry. Biotechnology, in simple terms, means using living systems (like cells, plants, and microorganisms) to create useful products. From vaccines and biofertilizers to genetic research, DBT supports hundreds of scientists across India to make life better through biology.

From Labs to Farms and Hospitals

The DBT's work touches almost every aspect of life. In healthcare, it supports the development of affordable vaccines, diagnostic kits, and cancer therapies. During the COVID-19 pandemic, DBT-backed research played a vital role in developing vaccines and testing technologies in record time.

In agriculture, the department promotes research on genetically improved crops that can withstand drought, pests, and diseases, ensuring food security for millions. It also encourages the use of biofertilizers and biopesticides, reducing the need for harmful chemicals and helping farmers protect the soil.

In the environment sector, DBT works on using microbes to clean up pollution, a process known as bioremediation.

Nurturing Young Scientists

The Department of Biotechnology doesn't just fund research — it builds future scientists. Through programs like the Biotechnology Ignition Grant (BIG) and Star College Scheme, it supports students, researchers, and start-ups to bring new ideas to life. Many young innovators have launched biotechnology-based solutions through DBT's initiatives, proving that science can be both creative and impactful.

Building a Healthier Tomorrow

Biotechnology is one of the fastest-growing fields in the world, and India's Department of Biotechnology ensures that this growth benefits everyone. Blending life sciences with innovation, it helps farmers grow better crops, doctors save more lives, and industries go green.

For young scientists, DBT's story is an inspiring reminder that science isn't just about understanding life; it's about improving it. Every test tube, petri dish, and microscope under DBT's guidance holds the promise of a healthier, smarter, and more sustainable India.

