BioSpectrum
the business of Bi
24 years of leveraging the business of Bio
www.biospectrumindia.co

Strong follow-on funding shows growing maturity of TechBio

31 January 2026 | Views | By Suraj Nair, Lead, TechSprouts, Ankur Capital

India is emerging as a powerful hub for deep science and biotechnology, driven by favourable geopolitics, a large domestic market, strong pharmaceutical and chemicals infrastructure, and supportive government policies. With initiatives such as the $12 billion Research, Development and Innovation (RDI) Fund, the BioE3 policy, and regulatory support for advanced genetic technologies, the country is positioning itself for rapid innovation-led growth. A growing talent pool, returning global expertise, expanding pharma GCCs, and capital-efficient manufacturing further strengthen Indiaâ??s advantage. Together, these factors create a strong foundation for globally competitive, sustainable science-driven enterprises.



India’s biotech industry is currently undergoing a long awaited shift from being the generics capital of the world to an innovation hub. More than $900 million have been invested into cutting edge IP led startups in therapeutics, diagnostics and industrial biotech over the last seven years, according to Ankur Capital’s Deep Science Tech Report 2025. The journey of deep science biotechnology driven startups in India began in the early 2010’s with companies such as String Bio, Bugworks and Zumutor Biologics pushing the boundaries to develop novel drugs and agri inputs using synthetic biology and precision fermentation. While their journey has been long and hard and yet to see large outcomes, they laid the foundations for cutting edge innovations in biotechnology emerging from India for the world.

Today, many of the first generation biotech startups in India have raised follow on funding including the likes of Bugworks, Zumutor, String Bio, EyeStem Research, Pandorum Technologies, Ahamunne Biosciences, Immunito AI, MolBio Diagnostics.

ImmunoACT, which received approval for India’s first CAR-T cell therapy, raised follow-on funding from Laurus Labs. MolBio has also filed for an IPO, marking a significant milestone in their journey. These developments have led to the emergence of a new crop of innovative startups such as D-Nome, Bacalt Biosciences, CRISPR-Bits, Lemnisca who are building globally competitive technologies and products.

While overall VC funding into techbio startups in India has seen a dip in 2024 and 2025 following the COVID-19 boom, reflecting global sentiments, there are encouraging signs from the ecosystem as we discuss below.

Convergence of technologies and market forces

Biomanufacturing Revolution

Large industrial manufacturing processes have always struggled with poor yields, functional limitations and lack of sustainable solutions, be it the $978 billion global specialty chemicals industry, or the $250 billion global pharmaceutical drugs, small molecules, antibodies, ADCs, peptides going off patent by 2030. Biotechnology processes, deemed as a sustainable alternative have not been economical and scalable, as evidenced by the failures of the first generation of biofuel companies. They have challenges with expensive feedstock and downstream processing, and underperforming strains.

This is however changing, thanks to the convergence of AI, synthetic biology and protein design and automation. Protein Large Language Models (LLMs)—such as ESM and AlphaFold—have evolved from purely sequence or structure predictions to functional capabilities, enabling the design of proteins and enzymes with superior specificity and stability. Simultaneously, AI and automation is allowing companies to create "digital twins" of bioprocesses. These digital models predict strain behaviour and yields, optimising the journey from the lab to commercial scale, thereby accelerating the scale up journey. This technological leap is enabling Indian startups to tackle the global industrial biomanufacturing market. For instance, String Bio has developed a proprietary microbial platform that converts methane into proteins and peptides, addressing a $100 billion opportunity in animal feed and human nutrition.

Democratising Healthcare through Point-of-Care Diagnostics

The Indian healthcare system is a classic case of decentralised healthcare systems that limit access to quality diagnostics, similar to most Low and Middle-Income Countries (LMICs). There is a need for accurate, affordable and point of care (POC) early screening or diagnostics solutions across infectious diseases, oncology and rare diseases. While Polymerase Chain Reaction (PCR) is the gold standard for accuracy, it traditionally requires expensive thermal cycling machines and skilled personnel, limiting its use at the point of care. Startups are using breakthrough enzyme engineering to create room-temperature, isothermal assays and CRISPR-based tests that do not require thermal cyclers.

A prime example is D-NOME, which has developed the world's first room-temperature PCR technology with rapid sample extraction. This innovation aims to disrupt the $40 billion POC diagnostics market by offering lab-grade accuracy for infectious diseases without the heavy infrastructure. Additionally, startups are using multi-omics and AI to discover novel biomarkers, such as microRNA, to improve early disease detection, especially for oncology.

Why India, Why now?

India stands at a unique intersection of favourable geopolitics, large market opportunities, a burgeoning talent pool, a large pharmaceutical infrastructure and favourable government policies. India currently holds 4 per cent of the global specialty chemicals industry with a significant increase in demand expected over the next few years as the world. The country also boasts a huge pharmaceutical industry gearing up for the next phase of innovation as novel drugs go off-patent.

The Government of India recently launched the $12 billion Research, Development and Innovation Fund (RDI) to accelerate private sector participation in the Indian deep science tech ecosystem. This fund will catalyse the deployment of capital through various private sector agencies such as venture capital funds into innovative deep science startups in the country. The new BioE3 policy aims to accelerate India's bioeconomy to $300 billion by 2030 by setting up a network of biomanufacturing facilities for pilots and scale up. India is slowly accepting and approving trials for new genetically edited crops with Site-Directed Nuclease (SDN) 1 and 2 edits now being considered non-GMO.

Apart from domestic talent, there is an inflow of returning talent to the country with exposure of having worked in global pharmaceutical and biotech companies. Pharmaceutical Global Capability Centers (GCCs) have grown 2.5x in five years, with 23 of the top 50 pharma companies driving core drug discovery functions from India. Finally, developing biotechnology driven processes in India offers significant capital efficiencies.

Challenges and the road ahead

While funds are catalysed and pilot infrastructure is set up, a key pillar for innovation remains the universities and research labs across the country, which need to be incentivised to commercialise their cutting edge research. India's R&D spend as a percentage of GDP hovers around 0.6-0.7 per cent, a very low number compared to many developed and developing economies. Moreover, this is heavily reliant on public funds, with very little private sector or industry participation. In this regard, the Anusandhan National Research Foundation (ANRF), set up in 2023 will play a key role in catalysing investments into India's R&D ecosystem. Secondly, commercial talent from large industries needs to join hands with startups and help accelerate the commercial and scale up journey. India needs a culture of innovation and commercialisation to prosper which will be the foundation needed to build globally competitive deep science and biotech startups.

This foundation along with the unique convergence of technology maturity, market forces and India advantage will present a unique opportunity for Indian startups and industries to develop cutting edge sustainable technologies and products for the future.

Suraj Nair, Lead, TechSprouts, Ankur Capital