

### **Biotechnological interventions to Make-in-India and ‘Start-up-India’ a Success**

Biotechnology, as a subject has emerged as an integral part of the Indian bio-economy worth 44.47 billion USD in 2017. The Department of Biotechnology (DBT) along with Biotechnology Industry Research Assistance Council (BIRAC) is playing a crucial role in the implementation and delivery of the flagship programs of the Government of India’s ‘Make-in- India’ and ‘Start-up-India’ initiatives.

Some of the major initiatives taken by DBT to promote entrepreneurship development among youth include biotechnology industry facilitation cells, incubation centers, startups, biotech companies, etc. Such programmes help in building, and promoting Indian biotech ecosystem in healthcare, agriculture, industrial biotechnology, and medical research.

The DBT assigned the responsibility of establishing biotechnology industry facilitation cell to BIRAC to ensure establishment and growth of start up’s in different states of India. The Cell at BIRAC is involved in the multiple communication and outreach activities regarding disseminating various DBT initiatives. Besides, the DBT has made numerous efforts to establish multiple startups, small and medium enterprises, and companies. The DBT was involved in framing the guideline for Make-in-India Action Plan 2.0, and was involved in creation of product commercialization unit at the BIRAC.

The DBT along with other research organizations of the country is highly involved in promotion of new enterprises and support existing industry in the secondary agriculture sector as well. Department is also involved monitoring of newly established incubation centers, and respective schemes such as BioNEST, BIRAC’s regional centers, equity funding schemes etc.

The DBT is also highly involved in establishing and promotion of Start-up-India’s initiative that mainly aim at building of strong eco-system for nurturing innovation and startups in the country to drive sustainable economic growth and generation of employment opportunities.

Some of the major activities carried out by DBT under **Start-up-India initiative includes establishment of 35** Bio-incubation centers with advance facilities across the India. The DBT and BIRAC established first international incubator for clean energy under Mission Innovation. The DBT also aims at creation of global opportunities for partnering countries.

The department supports six bio-clusters for promotion of innovations for critical growth of biotechnology entrepreneurship in the country. It also promotes world class bio-manufacturing hub by creating a technology development and translation network across the country through establishment of bioclusters, incubators, technology transfer centers etc.

The department has provides AcE- and SEED fund to provide capital assistance to start-ups and act as a bridge between promoters' investment and venture/angel investors. At BIRAC, the first facilitation of innovation and regulations for start-ups and innovators hub has been created to attend and resolve the uncertainties of start-ups, entrepreneurs, researchers, academicians etc. The department also organizes workshops to help innovators in resolving their regulatory and market authorization issues.

The department has successfully helped in commercialization of 14 technologies/products, filing of 11 patents, establishment of 87 new start-ups & entrepreneurs, and has so far supported four bio-incubators.

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