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DBT lays emphasis on bio-based circular carbon economy through bio-manufacturing

24 February 2023 | News

DBT envisages to bring together scientific and technological advancement towards achieving a major goal of the Departmentâ??s vision of BioE3 (i.e. Biotechnology for Economy, Environment and Employment) for green, clean and prosperous India



India's bioeconomy is poised to touch $300 billion by 2030 and with its rising innovation and scientific temper, India is set to join the global wave of a new industrial revolution. This was stated by Union Minister of State (Independent Charge) Science & Technology Dr Jitendra Singh while speaking as the chief guest at the “National Consultation Meeting on Bio-manufacturing to build a Draft Policy Framework on Bio-manufacturing”, in New Delhi.

In his address, Secretary, Department of Biotechnology (DBT), Dr Rajesh Gokhale said, "In context of Prime Minister Modi’s vision to make India a ‘Net Zero’ carbon economy’ by 2027, we expect a paradigm shift towards a bio-based circular carbon economy, by adopting an integrated and inclusive approach of Bio-manufacturing".

Dr Gokhale informed that the pilot-scale based bio-manufacturing units will employ fermentation using enhanced microbial cell factories (and sugar/biomass/waste-based raw material) to manufacture bio-based products as an alternative to chemical products across various industrial sectors. Some of these sectors include, food additives, biopharmaceuticals, biogenic dyes, bulk chemicals, animal feed products,flavours/fragrances, biomaterials, agri-bio products, etc.

Dr Alka Sharma, Senior Advisor, DBT underlined that through this approach, an innovative ‘plug and play’ model of manufacturing for Industry 4.0 is being proposed. She said, the backbone of this initiative comprises advanced tools of biotechnology including synthetic biology, genome editing,metabolic engineering, etc.