

Year End Review: Department of Biotechnology (DBT)

March 1, 2021

Indian Science Congress (ISC), 2019 held at Jalandhar

- Indian Science Congress (ISC) 2019 was inaugurated by Prime Minister Shri Narendra Modi on 3rd January. The 106th Session of Indian Science Congress, 2019 was held from January 3-7, 2019 at Lovely Professional University, Jalandhar, and Punjab.
- During the Congress, significant lectures from three Nobel Laureates; 20 Plenary Sessions & several sectional symposia with top authorities from DRDO, ISRO, DST, ICAR, CSIR, ICMR, AICTE, NAAC, UGC, ISCA, the USA, UK Universities, were attended by nearly 30,000 participants. More than fifteen thousand delegates participated at this scientific meet.

MoU signed for Inter-Ministerial Cooperation for Promotion and Facilitation of Agricultural Biotechnology Research and Education:

- The DBT and ICAR entered into a Memorandum of Understanding (MoU) on 15th January, 2019 for much-needed emphasis on multi-disciplinary R&D activities and nurturing innovations in Agricultural Biotechnology Research and Education.

Chief Executive of UK Research and Innovation addresses Prime Minister's Science, Technology and Innovation Advisory Council (PM-STIAC):

- On 16th January, the Chief Executive of UK Research and Innovation, Professor Mark Walport, during his two-day visit to Delhi, at the invitation of Principal Scientific Adviser to the Government of India, Professor

K. Vijay Raghavan met and addressed the Prime Minister's Science, Technology and Innovation Advisory Council (PM-STIAC).

One Health India Conference, 2019 held:

- Two-day long One Health India Conference, 2019 was inaugurated on 18th February in New Delhi. The Department of Biotechnology (DBT), Ministry of Science and Technology in partnership with the Departments of Agriculture Research and Education (DARE) and Animal Husbandry, Dairying & Fisheries (DAHDF), Ministry of Agriculture & Farmers' Welfare; the Departments of Health Research (DHR) and Health & Family Welfare (DHFV), Ministry of Health & Family Welfare, hosted the "One Health India Conference". The conference aimed to launch India's new One Health Initiative – an inter-sectoral approach to tackling the most urgent health threats in India as well as in low and middle income countries across South and South East Asia and Sub-Saharan Africa.

Department of Biotechnology celebrates its 33rd Foundation Day:

- The Department of Biotechnology in the Ministry of Science and Technology, Government of India, celebrated its 33rd Foundation Day in New Delhi on 26th February with the theme as "Celebrating Biotechnology: Building Indian as an Innovation Nation". On the occasion, Union Minister for Science & Technology, Dr. Harsh Vardhan gave away the Biotechnology Research Innovation and Technology Excellence (BRITE) awards.
- The Minister announced key missions at the foundation day ceremony including Atal JaiAnusandhan Biotech Mission – Undertaking Nationally Relevant Technology Innovation (UNaTI), which is expected to transform Health, Agriculture and Energy sectors during the next 5

years. This mission included GARBH-ini – A Mission to promote Maternal and Child Health and develop prediction tools for preterm birth, IndCEPI – A Mission to develop affordable vaccines for endemic diseases, Development of Biofortified and Protein Rich wheat – contributing to POSHAN Abhiyan, Mission on Antimicrobial Resistance for Affordable Diagnostics and Therapeutics and Clean Energy Mission – Innovative Technology interventions for Swachh Bharat.

Cabinet approves five years' extension of Biomedical Research Career Programme:

- The Union Cabinet, chaired by the Prime Minister Shri Narendra Modi, on 27th March approved the continuation of the Biomedical Research Career Programme (BRCP), and Wellcome Trust (WT)/DBT India Alliance beyond its initial 10-year term (2008-09 to 2018-29) to a new five year phase (2019-20 to 2023-24) with Department of Biotechnology (DBT) increasing its commitment to two times that of WT.

Government and IIT-Delhi to set up a Centre of Excellence for Waste to Wealth Technologies:

- The Principal Scientific Advisor to the Govt of India, Prof K. Vijay Raghavan and Director, IIT Delhi, Prof V. Ramgopal Rao signed a Memorandum of Understanding on 2nd May, in New Delhi for setting up a Centre of Excellence for Waste to Wealth Technologies for implementation of sustainable, scientific and technological solutions for waste management, through validation and deployment of available technologies for transformation of waste to wealth.
- Launch of electronic collection facility of Non-Tax Receipts of Survey of India The electronic collection facility for the costs of maps and other publications will now be available at all the sale counters of Survey

of India (SoI).

- This will help students, researchers and other customers to buy what they would need using credit/ debit cards etc.

Drones to undertake Large scale Mapping of Village areas in Maharashtra:

- Survey of India, the national mapping agency of the country under the Min of Science & Technology has signed an MoU with Department of revenue & Land records, Govt of Maharashtra to undertake the Large scale Mapping of Village Gaothan (Aabadi) areas in the State of Maharashtra using drones.

India joins the Global Antimicrobial Resistance Research and Development Hub:

- India joined the Global Antimicrobial Resistance (AMR) Research and Development (R&D) Hub as a new member on 12th September.
- This expands the global partnership working to address challenges and improve coordination and collaboration in global AMR R&D to 16 countries, the European Commission, two philanthropic foundations and four international organisations (as observers).

National Centre for Clean Coal Research & Development inaugurated at Bengaluru:

- Union Minister of Science & Technology, Dr. Harsh Vardhan, inaugurated the National Centre for Clean Coal Research and Development at Indian Institute of Science (IISc)-Bengaluru on 16th September.
- Government of India through Department of Science & Technology, has set up the National Centre for Clean Coal Research and Development (NCCCR&D) as a national level consortium on clean coal R&D, led by the Indian Institute of Science (IISc)-Bengaluru.

Government launches 'UMMID' initiative to tackle inherited genetic diseases of new born babies:

- The Union Minister for Science & Technology, Earth Sciences and Health & Family Welfare, Dr. Harsh Vardhan on 23rd September launched UMMID (Unique Methods of Management and treatment of Inherited Disorders) initiative and inaugurated NIDAN (National Inherited Diseases Administration) Kendras.

India and Netherlands launched the second phase of the LOTUS-HR (Local Treatment of Urban Sewage streams for Healthy Reuse plant) as a part of joint collaboration:

- During the visit of His Majesty King Willem-Alexander and Her Majesty, Queen Maxima of the Kingdom of the Netherlands a joint launch of the second phase of the Local Treatment of Urban Sewage streams for Healthy Reuse (LOTUS-HR) program was done by the Union Minister for Science & Technology, Earth Sciences and Health & Family Welfare Dr. Harsh Vardhan on 5th October.
- The launch programme was held during the visit of Netherlands King & the Queen to the India-Netherlands water laboratory at the Barapullah drain in Delhi.

5th India International Science Festival held in Kolkata from 5th to 8th November, 2019:

- The Prime Minister Narendra Modi inaugurated via video conference, the 5th India International Science Festival at Kolkata on 5th November.
- Addressing on the occasion, the Prime Minister said the theme of the festival "RISEN: Research, Innovation and Science Empowering the Nation" reflects the aspirations of 21st century India. He said science and technology has a major impact on society, and therefore the government is providing the Institutional Support for both Invention and Innovation. Advocating for a strong

ecosystem supporting Science and Technology, he said every effort is being taken to support innovation in the country.

India's first-ever global Mega-Science exhibition, 'Vigyan Samagam', inaugurated at the Science City in Kolkata (4th November):

- This multi-venue Science Exhibition, after its successful journey in Mumbai and Bengaluru, opened to the public in Kolkata from 4th November till December 31, 2019.
- The Department of Atomic Energy (DAE), Department of Science and Technology (DST), the funding agencies of these projects and the National Council of Science Museums (NCSM), Ministry of Culture, who are venue partners and having expertise in design and hosting such exhibitions, have joined hands to organize this prestigious Science Exhibition.

3-day Global Bio-India Summit, 2019 inaugurated (21st November):

- Union Ministers Dr. Harsh Vardhan and Shri Dharmendra Pradhan also inaugurated the Global Bio-India Exhibition.
- Global Bio-India is one of the largest biotechnology stakeholders conglomerates being held in India for the first time. Over 3,000 delegates from around 25 countries and over 15 states of India are participating in the mega event.

First Indigenous Fuel Cell System developed by CSIR launched on CSIR Foundation Day on 26th September 2019:

- The President of India, Shri Ram Nath Kovind, on 26th September unveiled the first Indigenous High Temperature Fuel Cell System developed by Council of Scientific and Industrial Research (CSIR) in partnership with Indian

industries under India's flagship program named "New Millennium Indian Technology Leadership Initiative (NMITLI)" on the occasion of CSIR Foundation Day in New Delhi.

- A unique example of Public-Private Partnership (PPP) among CSIR's three Laboratories [CSIR-NCL, Pune; CSIR-NPL, New Delhi & CSIR-CECRI, Karaikudi (Chennai Center)] and two Indian industries; M/s Thermax Limited, Pune and M/s Reliance Industries Limited, Mumbai exemplified exploiting materials of science developments at CSIR laboratories into practice by Industry.

CSIR conducts Whole Genome Sequencing of over 1,000 Indians for Biomedical Applications:

- The CSIR has conducted Whole Genome Sequencing of 1,008 Indians from different populations across the country.
- Whole genome data will be important for building the knowhow, baseline data and indigenous capacity in the emerging area of Precision Medicine.

CSIR signs MoU with KVIC on promotion of honey production Khadi outlets to also display CSIR products on 5th December:

- The Council of Scientific & Industrial Research (CSIR) has entered into a Memorandum of Understanding (MoU) with the Khadi and Village Industries Commission (KVIC) to leverage the expertise available in CSIR with the effort of KVIC for promotion of honey production and also to enable wider outreach of the CSIR technologies and products.

HPCL & CSIR have developed BND

- HPCL and CSIR-NPL released 26 Petroleum BNDs (Bharatiya Nideshak Dravya or Indian Reference Material) coinciding with the occasion of World Metrology Day.
- These will be of immense use for BS VI fuels and will save foreign exchange through import substitution for

Certified Reference Materials (CRMs).

- This will provide traceability for all vital parameters of Petroleum products testing and certification comprising 13 physical properties, 2 Physicochemical properties and 11 Chemical properties, including BND for sulfur content measurement at lower concentrations which will be of immense use for BS VI fuels.

CSIR-IICT has signed a global licensing pact with Sun Pharma

- CSIR-IICT has signed a global licensing pact with Sun Pharma for patents on dermatology, ophthalmology and oncology. Sun Pharma will pay upfront and milestone linked payments upto Rs 240 crore and royalties to CSIR-IICT from commercialization.

Joint Workshops conducted by CSIR and Fraunhofer, Germany

- Series of workshops were conducted between CSIR and Fraunhofer Institute, Germany towards Indo – German collaboration in Research and Innovation towards leapfrogging in Frontier Technologies.

CSIR-NEERI, Nagpur launched the Indian air quality Interactive Repository or IndAIR

- CSIR-NEERI, Nagpur launched the Indian air quality Interactive Repository or IndAIR which has archived approximately 700 scanned materials from pre-internet era (1950-1999), 1215 research articles, 170 reports and case studies, 100 cases and over 2,000 statues, to provide the history of air pollution research and legislation in the country. Such a repository on the subject of air pollution is one of the first in the world.

CSIR-TKDL (Traditional Knowledge Digital Library) signs Agreement with Asian Agri History Foundation

- An agreement with Asian Agri History Foundation, at Pant

Nagar was signed by TKDL for cooperation related to digitization and inclusion of information on traditional Indian agriculture and allied domains

Zero Waste Potash technology developed by CSIR-CSMCRI

- The efforts of CSIR scientists from CSIR-CSMCRI who have developed a technology for recovery of valuable potash from spent wash and saves foreign exchanges and prevents hazardous spent wash being discarded .