

Government of India
Ministry of Science and Technology
Department of Biotechnology

Monthly Cabinet Summary, August - 2018

1. Important policy decisions taken and major achievements during the month:

- i. The Department has been coordinating Mission Innovation for accelerated innovation in Clean Energy. To further strengthen the programme, the Department has signed **Memorandum of Understanding (MoU) with International Energy Agency (IEA) on Enhancing Innovation for the Clean Energy Transition** on August 30, 2018 in the presence of Hon'ble Minister, for Science & Technology and Earth Sciences, Environment, Forest and Climate Change, Dr. Harsh Vardhan. The MoU aims to deepen co-operation in clean energy innovations to accelerate the research, development and demonstration (RD&D) of clean energy technologies in India and recognize the need to support the generation of data for policy making and improve knowledge of good policy practice for innovation in India and around the world.
- ii. Dr. Harsh Vardhan, Hon'ble Minister of Science and Technology and Earth Sciences, dedicated **new campuses of National Institute of Animal Biotechnology (NIAB)**, established at Gachibowli, Hyderabad and **Center for DNA Fingerprinting and Diagnostics (CDFD)**, established at Uppal, Hyderabad to the nation on 11th and 12th August 2018, respectively.
- iii. Through DBT and BIRAC funding a **diagnostic test for TB meningitis** with nearly 100% sensitivity and about 91% specificity has been developed jointly by AIIMS, New Delhi and THSTI, Faridabad. This high affinity DNA aptamer-based diagnostic test for TB meningitis has been patented by AIIMS and THSTI and licensed to AptaBharat Innovation Pvt. Limited, a THSTI spinoff. This test can be used in near future for the rapid diagnosis of TB meningitis and will bridge the current diagnostic gap for the disease.
- iv. Considering AMR as global public health threat, a **working group meeting on Antimicrobial Resistance (AMR)** was held on 17th August 2018. The committee chaired by Secretary, DBT recommended to foster R&D in the area of development of new antibiotics and alternatives to antibiotics like therapeutic antibodies, phage therapy and anti-biofilm products.
- v. An **MoA was signed between Combating Antibacterial Resistant Bacteria (CARB-X), United States and Centre for Cellular and Molecular Platforms (C-CAMP), Bangalore** on 30th August 2018, to provide scientific, business and technical support to CARB-X funded projects in India. Recently, C-CAMP has been selected as an AMR Accelerator for projects funded by CARB-X which is the world's largest public-private partnership devoted to early development of antibacterial R&D.
- vi. Eighteen Indian scientists in partnership with **International Wheat Genome Sequencing Consortium (IWGSC)** through financial support by the Department of Biotechnology (DBT) successfully completed the sequencing of Wheat genome. This was reported in the International Journal "Science" in August 2018 issue. An insurmountable task of deciphering Bread wheat genome which is hexaploid and five times larger than the human genome and 40 times larger than rice has been realized.
- vii. The **first meeting of Scientific Sub-Committee of 'National Technical Board on Nutrition' (SSC-NTBN)** was held on 2nd August 2018 and the Committee gave technical recommendations on the following guidelines: a) Infant and Young Child Feeding (M/o WCD, GoI); and b)

Prevention of Malnutrition and Community Based Management of Severe Acute Malnutrition (M/o WCD, GoI).

- viii. **Indo-Sweden Collaboration:** As a follow-up of the visit of Prime Minister of India to Sweden on April 16-17, 2018 and also based on the Joint Declaration issued by both the countries on India-Sweden Innovation Partnership for a sustainable future, a three member delegation comprising of DBT and BIRAC officials led by Secretary, DBT visited Stockholm, Sweden from 20th-22nd August 2018. During the visit, discussions were held on Sweden-India Innovation Partnership with various agencies i.e. VINNOVA, Swedish Research Council, Ministry of Enterprise and Innovation and Ministry of Education and Research to understand their policies, Triple Helix model of innovation. The delegation also visited Upsala Bioclusters, Innovation Clusters and Test Beds.
- ix. The **EU-India call on “Next Generation Influenza Vaccine to protect citizens worldwide”** on 26th July, 2018 was launched on August 28th, 2018 at New Delhi by Secretary, DBT and The Ambassador of the European Union to India. This call aims at further advancing the next generation influenza vaccine candidate(s) with improved efficacy and safety, duration of immunity, and reactivity against an increased breadth of influenza strains. The launch was followed by two sequential “Information sharing and preparatory events” held at New Delhi and Hyderabad on 28th & 30th August, 2018, respectively. Aim of these events was to create awareness about the scope and expected impact of the call, regulatory perspectives, guidelines for consortium formation and proposal submission requirements. Bringing researchers and fueling possible collaborations was another goal of these events.
- x. A **workshop for North East Region Teachers** under the DBT supported BliSS programme titled “**Swachh Bharat programme**” was held in New Delhi. Forty-four (44) teachers from NER schools attended the Workshop. The teachers also visited Delhi Public School, RK Puram and NIPGR, New Delhi. This Educational programme brought together teachers, educators, trainers and scientists to share ideas on improving science education at school level and motivate students for undertaking studies on Environment and Science, using modern tools and techniques.
- xi. The First meeting of Reconstituted Task Force on Human Developmental and Disease Biology-Maternal and Child (HDDDB) was held on August 2-3, 2018. The committee recommended that research in the area of **Maternal & Child Health** should include basic research in biology of pregnancy and gestation and post-natal development in addition to the translational aspects. The committee also suggested developing comprehensive programmes focusing on Health Trajectories and Extreme Phenotypes.
- xii. The 167th meeting of **Review Committee of Genetic Manipulation (RCGM)** was held and considered 79 applications including information items. After deliberation on each application, appropriate decision was taken by the RCGM.
- xiii. The Department has constituted **10 Institutional Biosafety Committees** during the period under report.
- xiv. Comments were communicated to DSIR on 3 applications received for recognition of their R&D units.
- xv. The Department has recommended **3 patent applications for prior art search and 8 patents for maintenance**, to the empanelled patent attorneys. Meeting of Patent Facilitation Committee was held on 24.8.2018 wherein the Committee discussed on Empanelment of fresh IPR Attorneys/Firms/Institutions to undertake IP protection activities on behalf of DBT.

xvi. Autonomous Institutions of the Department of Biotechnology:

a. Centre for DNA Fingerprinting and Diagnostics (CDFD), Hyderabad-Achievements of the month :

- The new campus of CDFD was inaugurated by Dr Harsh Vardhan, Hon'ble Minister, Ministry of Science and Technology, Earth Sciences, Environment, Forest and Climate change, Govt. of India on 12.08.2018.
- The institute organized following lectures/meetings/symposia:
 1. A lecture by Dr Quasar Salim Padiath, University of Pittsburgh, USA on "The nuclear lamina and the regulation of cellular function, development and disease.
 2. A lecture by Dr. Sreenivas Chavali, MRC Laboratory of Molecular Biology Cambridge, UK on "When Nature Stammers: Function, regulation and evolution of repeat containing proteins".
 3. A talk on Life Sciences and Careers by Dr. Smita Jain, Associate Director, India Bioscience, Bangalore.
 4. A lecture by Dr Arjumand Ghazi, Univ. of Pittsburg, USA on "Fat, Fertility and Immunity in an Aging Worm".
- During the month CDFD has received 8 cases for DNA Fingerprinting services and 180 samples for genetic diagnostic services. Five Basmati Rice sample for adulteration analysis were also obtained.
- Four papers were published in peer reviewed journals.

b. Center of Innovative and Applied Bioprocessing (CIAB), Mohali - Achievements of the month :

- CIAB has organized an Industry Academia Meet with National Agri-Food Biotechnology Institute (NABI) and Punjab State Council for Science & Technology (PSCST) on 20-08-2018 at CIAB, Mohali under Secondary Agriculture Entrepreneurial Network initiative of Biotechnology Industry Research Assistance Council (BIRAC), GOI. Primary goal of this meet was to interact with various Food Processing Industries and Entrepreneurs across Punjab State to identify the unmet need and possible gaps in their processes as well as to explore the possible opportunities with respect to infrastructure and technologies of both CIAB & NABI institutions. More than 20 industrialist/ entrepreneurs attended this meeting and interacted with scientists of CIAB, NABI, and PSCST.
- CIAB has published a research paper on the Metagenomic analysis of geothermal water reservoir sites to explore carbohydrate-related thermostzymes with focus on lignocellulosic biomass processing.

c. Institute for Stem Cell Science and Regenerative Medicine (inStem) - Achievements of the month :

- The Institutional Human Ethics Committee meeting was held on August 7, 2018 and different research projects involving human participants were discussed and approved as per the relevant ICMR guidelines.
- The Bangalore Biocluster of which inStem is a member, organized an orientation programme to welcome students selected to the PhD program on August 1, 2018.

d. Institute of Life Sciences, Bhubaneswar - Achievements of the month :

- The institute has obtained significant leads using Zebrafish models of human kidney diseases

and tumour angiogenesis in the area of kidney organogenesis and function, functional genomics of uncharacterized proteins, and tumour angiogenesis and vascular targeting.

e. National Agri-Food Biotechnology Institute (NABI), Mohali -Achievements of the month :

- One publication on identification of iron transporters belonging to the family of yellow stripe like proteins was accepted for publication.

f. National Institute of Immunology, New Delhi-Achievements of the month :

- The Institute's efforts to do high quality basic research have yielded 7 publications in reputed journals.
- NII has admitted 1 student for the six month project training programme.
- NII has initiated the process of creating central facility of the major instruments available in the institute.
- The institute organized following lectures/meetings/symposia:
 1. The seminar by Prof. Gourisankar Ghosh, University of California, San Diego, USA on "New insights into DNA binding by NF- κ B".
 2. The seminar by Dr. S. Parashuraman, Institute of Protein Biochemistry, National Research Council of Italy, Naples, Italy on "Organization of the Golgi apparatus determines its glycan output".
 3. NII and NASI Allahabad, jointly organized the Professor V. P.Sharma Memorial Lecture on "Drug Discovery: NME Translation from Synthesis to Clinical Use" Drug".

g. National Brain Research Institute, Manesar - Achievements of the month :

- A team of scientists working on identifying novel drug targets for viral infection by Japanese encephalitis virus (JEV) have shown that HSP60 can be a potential therapeutic target for the amelioration of various neuro-inflammatory and neurodegenerative diseases. This study also provides an understanding of complex signaling mechanism involved in neuro-inflammation. This study was published in the month of August.

h. National Institute of Plant Genome Research, New Delhi - Achievements of the month :

- NIPGR scientists have published six research articles/book chapters. These articles address the role of host transcription factors and epigenetic modifications in plant-virus interactions and understanding the moisture stressed tomato plant interaction with wilt disease-causing pathogen.
- The Institute scientists have predicted 33 major intrinsic proteins (*MIP*) genes in *Brachypodium distachyon* through genome-wide analysis. This work will help to understand the evolutionary and biological importance of *MIP* genes, whose proteins are membrane channel for maintaining water homeostasis and allow permeability to small molecules across the membrane, in grasses.
- The institute organized following lectures/meetings/symposia:
 1. The annual symposium SciEfflux 2018 was organized which consists of presentations by the Ph.D. scholars of the Institute.
 2. A scientific lecture on 'Organization of the Golgi Apparatus Determines its Glycan Output' delivered by a renowned scientist from IBP (Istituto Biochimica Proteine), Naples, Italy.
 3. To promote interaction between young researchers of various DBT-NCR cluster institutes, a one-day symposium has been organized in the Institute on August 31, 2018. More than 300 participants attended the symposium.

- Two scientists of the Institute, have been awarded with J.C. Bose Fellowship of DST and Prof. B. K. Bachhawat Memorial Young Scientist Lecture Award 2018 NASI, in recognition of their innovative ideas.
- Institute has conducted a one day brainstorming session, with 15 experts from across the country on Invasive Plant species.
- A team of NIPGR scientists visited various Agricultural Research Council stations and Universities in South Africa to develop/implement collaborative projects and student exchange programme.

i. National Centre for Cell Science (NCCS), Pune -Achievements of the month :

- Eight articles in reputed journals were published by NCCS, Pune. These included articles are on wound healing in diabetic mice, mechanistic studies in cancer cells, Onychomycosis, Nanocapsules for Enzyme-Triggered Drug Release, Insights into the phylogeny of false-branching heterocytous cyanobacteria.

j. Regional Centre for Biotechnology (RCB), Faridabad – Achievements of the month :

- A research article on Bent conformation of a backbone pilin N-terminal domain supporting the three-stage pilus assembly mechanism was published. This work will provide useful insight into mechanism of infection by various infectious bacteria.

k. National Institute of Animal Biotechnology (NIAB), Hyderabad - Achievements of the month :

- The NIAB Campus was inaugurated by Dr. Harsh Vardhan, Hon'ble Union minister of Science and Technology, Earth Science, Environment, Forest and Climate Change, Govt. of India on 10th August 2018.
- Lectures delivered were by NIAB scientists in MHRD- Global Initiative on Academic Network (GIAN) Transgenic Animal technology: Basics and Methods from 19th July to 1st August 2018 at School of Life Science, HCU Hyderabad.
- Invited talks were delivered by NIAB scientists in the conference “Understanding Host-Pathogen Interactions in Post Genomic Era” at the University of Hyderabad on 18th Aug 2018
- Distinguished lecture by Dr. T. Rajendra Kumar, Edger L and Patricia Makowski Professor, University of Colorado was organized.
- An article on repurposing of Thioridazine (TDZ) as an anti-inflammatory agent was published.
- A scientist was appointed at the post of Scientist E.

l. Rajiv Gandhi Centre for Biotechnology (RGCB), Thiruvananthapuram- Achievements of the month :

- Five peer-reviewed publications emerged from the institutes during the month. These included articles on recombinant Alphaviruses, transcriptional regulators in *Mycobacterium tuberculosis*, modulating insulin receptor signalling as a therapeutic strategy for cancer.

2. Important policy matters held up on account of prolonged inter- ministerial consultations: NIL

3. Compliance of Cabinet/Cabinet Committee decision:

No. of COS decisions pending for compliance	Proposed action plan/time lines for compliance of COS decisions	Remarks
NIL	NA	NA

4. No. of cases of ‘sanction for prosecution’ pending for more than three months: NIL

5. Particulars of cases in which there has been a departure from the Transaction of Business Rules or established policy of the Government: NIL

6. Status of implementation of e-Governance:

Total No. of files	Total No. of e-files
2221	132

7. Status of Public Grievances:

No. of Public Grievances redressed during the month	No. of Public Grievances pending at the end of the month
25	83

8. Information on the specific steps taken by the Ministry/ Department for utilization of the Space, Technology based tools and application in Governance and Development: NIL

9. (i) Confirmation that the incumbency details of all posts in the Ministry/Department and its organizations falling under the purview of the ACC have been updated on AVMS: It is confirmed that the incumbency details of the posts in the Ministry/ Department and its organizations following under the purview of the ACC have been updated on AVMS and are placed at Annexure-1.

(ii) Status regarding compliance of the directions of ACC: It is also confirmed that the directions of ACC are complied with.

(iii) Status of cases where recommendations from PESB have been received but the proposals are yet to be submitted to the ACC Secretariat: Nil

(iv) Status of Government e-Marketplace (GeM) usage: A procurement incurring expenditure of Rs. 26,07,277/- was made through GeM portal.
