

Government of India
Ministry of Science and Technology
Department of Biotechnology

SUB: Cabinet Summary for September-2020

I. Important policy decisions taken and major achievements are as follows:

1. MEDICAL BIOTECHNOLOGY

A. COVID related Initiatives:

- i. **Third meeting of the COVID-19 Vaccine Expert Committee:** In a meeting held on 25th September 2020, the progress of projects being supported by DBT-BIRAC for COVID-19 vaccine development was reviewed.
- ii. **Third meeting of the Covid-19 Working Group (NTAGI-STSC):** The third meeting of the Covid-19 Working Group (NTAGI-STSC) was held on 28th September, 2020, the surveillance, vaccine guidelines and Covid-19 vaccine parameters and technical information on vaccine development, pre-clinical and clinical data of Serum Institute of India Pvt Ltd were discussed.
- iii. **COVAX Advance Market Commitment (AMC):** The Department participated in the COVAX Advance Market Commitment (AMC) group consultation 24 September 2020. During the meeting, an update about the COVAX Facility; an overview of COVAX vaccine portfolio; information on vaccine research and the prequalification processes to assure safety and efficacy; timelines and next steps were provided
- iv. **India Centric Epidemic Preparedness (IndCEPI):** India launched a training programme for “Strengthening clinical trial research capacity in neighbouring countries”. The programme will help neighboring countries and LMICs (Low and Middle Income Countries) to build capacities for COVID-19 vaccine trials. The first orientation was conducted on 22nd September, 2020, which was attended by representatives of Nepal, Maldives, Bangladesh, Mauritius, Srilanka, Bhutan, Afghanistan and Indian Ministry of External Affairs, Department of Biotechnology, Biotechnology Research Assistance Council (BIRAC) and MEA, DBT, BIRAC and Clinical Development Service Agency (CDSA). The training programme will extend for about 6-8 weeks.
- v. **DBT City/Regional Clusters for Covid-19:** The City /Regional clusters are being established in a Hub and Spoke model to scale-up testing of COVID-19 samples in government institutions across the country. The Hubs are Government laboratories approved by respective Ministries /Departments (DBT, DST, CSIR, DAE, DRDO, ICAR etc) as per ICMR guidelines. So far 21 City /Regional clusters have been established and over 12 lakh samples have been tested.

2. International Cooperation

- A. **Indo-EU Cooperation:** The Department of Biotechnology has partnered with the European Commission to co-fund collaborative research under “Green Deal: Building a low-carbon, climate-resilient future” work programme of Horizon 2020. Joint proposals are invited in the area of clean energy, circular economy, sustainable farm-to-fork strategies, toxic-free environment, restoring biodiversity, and restoring ecosystem services. Championing India's commitment towards combating climate change and conserving biodiversity; these funding opportunities will help generate essential knowledge for attaining Sustainable Development Goals.
- B. **Indo-Sweden:** 26 proposals have been received in response to the Indo-Sweden joint call on “Artificial intelligence for advancing healthcare across both the countries”. The proposals are evaluated by technical advisory committee.
- C. **Mission Innovation India:** The Department of Biotechnology (DBT) is the nodal agency supporting & coordinating clean energy national efforts via Mission Innovation (MI) India Unit. 5th virtual mission innovation ministerial (MI-5) meeting organized by Kingdom of Saudi Arabia on 23rd September'20 agreed on doubling public sector for clean energy innovation activities, to build mission and innovation platform, to develop public-private mission alliances, enhanced Innovation Platform to provide access to the key and robust insights for policymaking, facilitate collaboration to exchange knowledge, rapidly accelerate investments in clean technology solutions and action oriented role of youth.

3. Biosafety and Regulation:

- A. **RCGM activities:** The division had conducted the 188th RCGM meeting on 03.09.2020 and the 189th RCGM meeting held on 17.09.2020. During the meetings, the Committee considered 71 applications (57 Biopharma and 14 Agriculture related) including information items submitted by the various applicants. 26 COVID related applications were processed under Fast track mode. After deliberation on each application, appropriate decision was taken by the RCGM.

During the month 41 Institutional Biosafety Committees were constituted on IBKP portal.

The revised Handbook for Institutional Biosafety Committees (IBSCs), 2020; was notified on September 02, 2020 (<http://dbtindia.gov.in/latest-announcement/ibsc-handbook>, <https://ibkp.dbtindia.gov.in/Content/Rules>).

First Interactive Session for Biosafety Regulations Awareness-Raising of Institutional Biosafety Committees (IBSCs) was hosted by the Division on 24.09.2020.

- B. **DGFT Cases:** The comments of the Department were communicated to DGFT on four applications seeking permission for export of SCOMET (Special Chemicals, Organisms, Materials, Equipment and Technologies) items.

4. The number of public grievances redressed were 30 and pending are 37.

5. Under Human Resource Development programmes, Ramalingaswami Re-entry

Fellowship (19), HarGovind Khurana (HGK)-Innovative Young Biotechnologist Award (IYBA, 3), Tata Innovation Fellowship (8), Sri-Ramachandran (SRC)-National Bioscience Award for career development (4) and Janaki Ammal (JA)-National Women Bioscience award (4) awards/fellowships were granted.

II. AUTONOMOUS INSTITUTIONS

A. Covid related activities:

i. Center for DNA Fingerprinting & Diagnostics (CDFD), Hyderabad: CDFD has tested more than 7724 COVID-19 samples.

ii. Translational Health Science and Technology Institute (THSTI), Faridabad has performed >44000 COVID-19 tests on the samples received from BK Hospital, Faridabad and Palwal. The total number of COVID-19 tests performed in THSTI Lab (RT-PCR) is 44680 and through THSTI's I-LAB are 4121. I-LAB visited B K Hospital and Nimka Jail, Faridabad.

iii. National Centre for Cell Sciences (NCCS), Pune, is a COVID testing center since April, 2020, to facilitate COVID surveillance. This center tested over 1500 samples from Maharashtra in August, taking the total number of samples tested at NCCS to over 24000 samples. In a Biobank of blood cells and plasma, 116 patient samples have been preserved so far.

As a part of the DBT's pan-India initiative for sequencing 1000 viral genomes for understanding the genetic variation of the SARS-CoV-2 virus, NCCS, 90 good quality sequences from COVID-positive patients were obtained from the Pune, Satara and Nashik districts. The Sequence analysis indicates that there is a possibility of region-specific evolution of the virus genome during the lockdown period.

B. North East initiative: Institute of Bioresources and sustainable development (IBSD), Manipur has recently established Centre of Excellence for Phytopharmaceuticals. IBSD is extensively working on exploration and documentation of large number of medicinal plants of NE India for scientific intervention for the characterization of bioactive compounds having antiviral and other therapeutic activities. The institute is establishing phyto-markers library as standard reference compounds for evaluation of phytopharmaceuticals.

C. Skill Development:

i. National Institute of Immunology (NII), New Delhi - 20 candidates have joined the PhD programme of the Institute for the academic year 2020-21.

ii. Regional Centre for Biotechnology (RCB), Faridabad has entered into a Financial Activities Contract with UNESCO, Delhi for two of its upcoming research intensive activities i.e. a) One-week hands-on training course in Recombinant Protein Production and Purification, b) IUBMB focused meeting on Biochemistry & Molecular Biology of RNA viruses. The UNESCO will provide 18000USD for this activity.

D. Center for DNA Fingerprinting & Diagnostics (CDFD), Hyderabad: CDFD has received 3 case for DNA Fingerprinting services and 86 samples for genetic diagnostic services. 72 Basmati Rice sample for adulteration analysis was processed.

E. National Institute of Plant Genome Research (NIPGR) – The scientists have highlighted a roadmap to strengthen small millet cultivation, such as identifying varieties suitable for particular environments and targeting trait improvement using genetic and genomic approaches.

F. Patents filed:

- i. National Institute of Immunology (NII), New Delhi - Sengupta S (2020) DNA damage dependent microRNA signature for cancers, methods and uses related thereto. (International PCT Application PCT/IN2020/050776 filed on September 4, 2020)
- ii. Center of Innovative and Applied Bioprocessing (CIAB), Mohali - A patent has been granted on “An improved process for production of food grade 6-O-ascorbyl esters by chemical esterification of L-ascorbic acid with various fatty acids and their simple purification”. Indian Patent Appl. No. 201811000397. Indian Patent No. 346078
- iii. Translational Health Science and Technology Institute (THSTI), Faridabad - The institute has filed the two patents –
 - a. A patent application titled “Engineered Hiv-1 Envelope Immunogen” has been filed in South Africa on 02.09.2020 based on the Indian patent application no. 201911036660
 - b. Indian Patent Application No. 202011039696 “Immunoassay for Detection of Coronaviridae” filed on 14th September 2020

G. Technology(Developed/Transferred/Commercialized):

- i. Regional Centre for Biotechnology (RCB) - A startup company Biocredence, incubated at BBB has commercialized a product “Restorative Cordyceps”, a medicinal mushroom.
- ii. Translational Health Science and Technology Institute (THSTI), Faridabad has developed a panel of Aptamers for diagnosing Coronavirus disease (referred to as “COVID-19”) and associated know-how (Technology), which can be used to develop testing kits to diagnose COVID-19 in humans (Products). This technology is transferred to Cambrain Bioworks LLP, Bengaluru.

H. In total, 14 MoU/MoA was signed by the institutions.

I. In total, the number of publications appeared was 59. The meetings/Seminars/Lectures organized were 30.

J. Under the SAHAJ initiative – the infrastructure used by 6888 users and the revenue generated, including the CoVID-19 users is Rs.31.369Lakh through services provided.

K. National Institute of Immunology (NII), New Delhi organized a Fit India Freedom Run on 5th Septemeber 2020.

- L. National Centre for Cell Sciences (NCCS), Pune has supplied a total of 23 cell cultures to 14 organizations so far, including national research organizations, a medical college, a University and a private company.

III. PUBLIC SECTOR UNDERTAKINGS (PSUS)

A. Biotechnology Industry Research Assistance Council (BIRAC), New Delhi

- i. **Covid related activity:** A joint call announced by BIRAC and DBT on “*Anti-SARS-CoV-2 /nCoV-2 Virus Studies using Botanical Ingredients and Traditional Formulations*” earlier, an Area Review Panel meeting for 74 proposals out of the total 230 proposals received was evaluated on 16th September 2020. 5 proposals were selected for next round of evaluation by Technical Expert Committee (TEC). TEC recommended one proposal for consideration by APEX committee.
- ii. Under the SBIRI programme, a stable, effective insecticidal formulation from the *Hydnocarpus* seed oil to control agricultural and forest insect pests has been developed. The toxicity and eco-toxicity studies were completed and will be submitted to CIB/RC for the registration purpose.
- iii. **Webinars organized -**
 - a. BIRAC in association with Social Alpha and Clean Energy International Incubation Centre (CEIIC) organized a special webinar on “SoCH Detailed Application: What and How to Write” on September 18, 2020.
 - b. BIRAC’s IP & Technology Management Group along with KIIT-Technology Business Incubator (KIIT-TBI) organized a webinar on “Understanding the strategies to safeguard the IP Innovations” on 16th September, 2020.
- iv. **Awards/Results/Announcements:**
 - a. BIRAC supported Startup Blackfrog Technologies Pvt. Ltd. received the Forbes Marshall Award conducted by the Confederation of Indian Industries (CII).
 - b. BIRAC supported startup Pandorum Technologies, a company focused on Tissue technology and Regenerative medicine has risen over INR41 crore in Pre-Series B funding from BTB Ventures, Karnataka Trustee Company and several others.
 - c. BIRAC supported innovation Dozee, an AI Healthcare startup raised INR 12.5crore during the JioGEN NEXT programme (A programme backed by Reliance Jio).

B. Bharat Immunologicals & Biologicals Corporation Ltd. (BIBCOL): BIBCOL produced 27.10 million doses of Bovine Oral Polio Vaccine (bOPV) & 840 Liters of Sanitizer and supplied 25.0 million doses of bOPV & 641Liters of Sanitizer.

C. Indian Vaccine Corporation Ltd. (IVCOL): Nil