

Government of India
Ministry of Science and Technology
Department of Biotechnology

SUB: Cabinet Summary for October-2020

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

1. MEDICAL BIOTECHNOLOGY

A. COVID related Initiatives:

- i. **The Indian COVID-19 Vaccine Development Mission entitled Mission “COVID Suraksha”:** The Department has organized a meeting on 23rd October, 2020 for the Expenditure Finance Committee (EFC) to consider the proposal for "The Indian COVID-19 Vaccine Development Mission entitled Mission “COVID Suraksha” under the Chairmanship of the Secretary, Department of Biotechnology (DBT). The meeting was attended by the representatives of NITI Aayog, Office of the Principal Scientific Advisor to the Government of India, Department of Expenditure, Ministry of Health and Family Welfare, Indian Council of Medical Research, Council of Scientific and Industrial Research and Department of Science and Technology.
- ii. **National Expert Group on Vaccine Administration for COVID-19 (NEGVAC):** DBT participated in a meeting of the National Expert Group on Vaccine Administration for COVID-19 (NEGVAC) on 10th October 2020 held under the chairpersonship of Dr. V.K. Paul, Member (Health), NITI Aayog and Sh. Rajesh Bhushan, Secretary (H&FW) as co-chairperson.
- iii. **Covid-19 Working Group (NTAGI-STSC):** The Department participated in the First Meeting of the Vaccine Cost Effectiveness Analysis (CEA) Working Group as well as fifth, sixth & seventh meeting of COVID-19 Working Group of NTAGI.
- iv. **COVAX Advance Market Commitment (AMC):** The Department participated in the Gavi COVAX Advance Market Commitment (AMC) group briefing held on 20th October, 2020. During the meeting, updates on Gavi Board decisions; AMC design and cost-sharing; World Bank Funding; CEPI updates on vaccines and country readiness for vaccine use as well as procurement were provided.
- v. **India Centric Epidemic Preparedness (IndCEPI):** India launched a training programme for “Strengthening clinical trial research capacity in neighboring countries”. The programme will help neighboring countries and LMICs (Low and Middle Income Countries) to build capacities for COVID-19 vaccine trials. Four modules of the first series of training on Good Clinical Practice were organized on 9th, 16th, 23rd & 29th October, 2020.
- vi. **COVID Appropriate Behavior:** A virtual meeting chaired by Hon'ble MoHFW, MoES & MoS&T and attended by Senior Officers of DBT and Directors of DBT's Autonomous Institutes (AIs) & PSUs was organized on 13th

October, 2020 to discuss "COVID Appropriate Behavior" as well as the progress made on COVID-19 support activities of DBT and its AIs.

- vii. **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 16.32Lakh samples have been tested.
- viii. **World Bank Round Table on COVID-19 Vaccine:** The Department participated in the World Bank Round Table on COVID-19 Vaccine on 5th October, 2020. During the meeting an update on COVID-19 Vaccine development and manufacturing was discussed.
- ix. **First Hub: Facilitation Of Innovation and Regulations for Start-Ups and Innovators:** FIRST HUB is a facilitation unit set up by DBT at BIRAC to address the queries of Innovators. The sessions for COVID-19 was conducted on 9th & 23rd Oct'2020 and over 16 queries clarified. Representatives from CDSCO, ICMR, NIB, GeM, KIHT, BIS, DBT and BIRAC were available to take queries on Regulatory Pathways, Funding Opportunities, Public Procurement, IVD testing and validation, Standards and Specifications, Manufacturing and testing infrastructure support.
- x. Five new biodesign centers were presented to the DBT Apex board.

2. International Cooperation

A. **Indo-UK Cooperation:** The Department of Biotechnology (DBT), New Delhi in collaboration with UK Research and Innovation (UKRI), through the Medical Research Council (MRC) and Economic and Social Research Council (ESRC), UK launched "*UK-India Covid-19 Partnership Initiative*" on 27th October, 2020 to support collaborative research for understanding the severity of COVID-19 in South Asian populations in India and UK.

In addition, DBT and the British Council, UK held a Joint Selection Panel meeting on 26th October, 2020 to finalize about the applications for Newton-Bhabha Fund "Researcher Link Workshop".

B. **Indo-France:** DBT's signed MoA with CNRS France is approved for implementation.

C. **Indo-Bangladesh:** The Department organized a visit of the Indian delegation comprising of representatives of Biotechnology Industry Research Assistance Council (BIRAC), Clinical Development Service Agency (CDSA), Faridabad; Indian Council of Medical Research (ICMR) and Bharat Biotech International Limited to Bangladesh during 17-18th October, 2020 for discussing a road map to initiate Phase-III clinical trial of COVID-19 vaccine in Bangladesh.

3. Biosafety and Regulation:

A. RCGM activities: The division had conducted three meetings of Review Committee of Genetic Manipulation (RCGM) on 01.10.2020 (190th), 15.10.2020 (191st) and 29.10.2020 (192nd). In total, 80 Biopharma and 13 Agriculture applications were considered in the RCGM meetings. These applications include Import/Export/Transfer/Receive, information items and Pre-clinical toxicity studies for Biopharma, while Import/Export/Transfer/Receive, Event selection Trial, Biosafety Research Level-I trial, and report of Biosafety Research Level-I trial for Agriculture. After deliberation on each application, appropriate decision was taken by the RCGM.

The following meetings of the Sub Groups to examine updating the risk group for viruses, bacteria, fungi and protozoa were organized for submitting inputs to Expert Committee to Review & Update Risk Groups of Microorganisms. A first meeting of the subcommittee on Viruses, Parasites/Protista, Bacteria & Fungi were held on 7th, 9th, 14th & 19th Oct.'2020 respectively.

During the month 36 Institutional Biosafety Committee were constituted on IBKP portal.

B. DGFT Cases: The comments of the Department were communicated to DGFT on import of Drosophila (model organism) genetic lines for research and educational purposes on 5 cases.

4. North East region activities: The following activities are taken by the Department-

A. A call for proposal on "DBT's Initiative on Chemical Ecology of the North East Region (NER) of India" was announced with an aim to bring together researchers in complementary disciplines (biology, crop and soil sciences, entomology, horticulture, forestry, microbiology, pathology, biochemistry, molecular biology and natural-products chemistry) for exploring the role of chemical signals in shaping the unique ecosystems of the NER through studying interactions at the molecular level and discovering novel molecules.

B. A call for proposal on "Development and Utilization of Bio resources of North East Region for Generating Livelihood Security and Entrepreneurship" was announced with an aim of promoting sustainable development and utilization of the unique bio resources of NER and linking it with socio-economic upliftment of the region.

II. AUTONOMOUS INSTITUTIONS

A. Covid related activities:

i. Center for DNA Fingerprinting & Diagnostics (CDFD), Hyderabad: CDFD has tested 26795 COVID-19 samples in total.

ii. Translational Health Science and Technology Institute (THSTI), Faridabad – The Infectious Disease Diagnostics Lab (I-LAB) has performed 5272 Covid-19 sample testing, while THSTI's laboratory performed 43400 RT-PCR tests. These

tests have been performed on the samples received from ESIC Hospital, Faridabad and Palwal, Haryana.

THSTI bioassay lab has been selected as one of the seven centralized network labs in the world to facilitate COVID-19 vaccine development by CEPI; the only Indian lab to be given this recognition.

iii. Regional Centre for Biotechnology, Faridabad – A computational study performed by Prof. Deepak Nair predicted that the antibiotics named polymyxin b and tiglicyline may inhibit RNA synthesis activity of nsp12 from SARS-CoV-2. These antibiotics should be tested for their ability to inhibit virus replication in cell culture

iv. Institute of Bioresources & Sustainable development-Jawaharlal Nehru Institute of Medical Sciences (IBSD-JNIMS) Covid-19 testing laboratory at Imphal, Manipur has tested 2127 samples so far. IBSD is independently testing two districts of Manipur- Kangpokpi and Pherzawl district.

v. Institute of Life Sciences, Bhubhaneswar, Odisha has completed a milestone of 100000 Covid-19 samples testing for the State of Odisha.

vi. National Brain Research Centre, Manesar, Haryana scientists have modeled optimal lockdown strategies for SARS-CoV2 mitigation considering the size of the population being put under lock down, the available hospital infrastructure (e.g. number of beds), infection duration, and mobility within the population (due to schools, workplaces etc). The study can be accessed at <https://www.medrxiv.org/content/10.1101/2020.07.31.20165662v1>

B. North East initiative: Institute of Bioresources and Sustainable Development (IBSD), Mizoram node in collaboration with Mizoram Science, Technology & Innovation Council (MISTIC), GoMizoram conducted an “Outreach and Sensitization program on Bamboo Biosilica as an additional source of income for bamboo shoot collectors in Mizoram” on 21 October 2020 at Directorate of Science and Technology Conference Hall, Aizawl.

C. Skill Development:

i. National Institute of Immunology (NII), New Delhi - A training programme funded by Bill & Melinda Gates foundation and coordinated by Foundation for Innovative New Diagnostics (FIND) organization and spearheaded by four different Institutes, namely National Institute of Immunology (NII); Tata Fundamental Research Institute (TIFR), Bombay; TIFR-Hyderabad and PanIIT Alumni Reach for India Foundation (PARFI) is initiated to train ~50 Lab Technicians in the Modern techniques of Molecular Biology necessary for detecting SARS-nCov2 virus. The first batch of training was started on 5th October’2020. The trainees are Lab Technicians with MLT diplomas and from various parts of Bihar. Bihar State Health Society, Patna coordinated the selection on behalf of Bihar government and paid for their travel from respective locations to NII and back. The training has two phases. First phase was online classes for five days. Second part was the two weeks hands on training in advanced molecular biology tests.

ii. Translational Health Science and Technology Institute (THSTI), Faridabad has trained the staff of ESIC hospital Faridabad, SHKM Govt. Medical College, Nalhar, and SGT Hospital Gurugram in handling and processing samples for COVID-19 testing for real-time PCR-based diagnostics.

D. Center for DNA Fingerprinting & Diagnostics (CDFD), Hyderabad: CDFD has received 9 case for DNA Fingerprinting services and 121 samples for genetic diagnostic services. 48 Basmati Rice sample for adulteration analysis was processed.

E. Patents filed/Granted:

i. National Institute of Immunology (NII), New Delhi - Dr. Agam P. Singh has filed a patent on 'Novel antiparasitic agents based on piperazine and uses thereof (Indian Patent Application no. 202011043767 filed on October 08, 2020)'.

ii. Center of Innovative and Applied Bioprocessing (CIAB), Mohali – Two patents have been granted to the institution –

a. A Process of Withania Somnifera (Ashwagandha) biomass based production of solanesol and uses thereof. Indian Patent No. 347864. Patent Appl. No. 3201/DEL/2015.

b. Corn fiber and dairy whey in any form or its derivatives process of its production and uses thereof. Indian Patent application no. 201811000749, Patent no. 348500

iii. Institute of Life Sciences, Bhubhaneswar, Odisha - The institute has filed/granted the two patents –

a. Dr. SK Das filed Patent on "Whole cell livestock vaccine for respiratory diseases". European Patent Application No: EP20198730.2 b

b. Chattopadhyay S, Kumar A, Subudhi BB, Mishra P. was granted a patent on 'A composition for inhibition of infection caused by Chikungunya virus (CHIKV)', Application No. 1292/KOL/2014 of 12. 12. 2014.

F. In total, 9 MoU/MoA was signed by the institutions.

G. In total, the number of publications appeared was 70. The meetings/Seminars/Lectures/webinars organized were 55.

H. Under the SAHAJ initiative – the infrastructure used by 1005 users and the revenue generated, including the CoVID-19 users is Rs.13.792Lakh through services provided.

III. PUBLIC SECTOR UNDERTAKINGS (PSUS)

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

i. **Covid related activity:** Apex meeting for BIPP, SBIRI and PACE schemes was held on 14th October, 2020 wherein new proposals received under 49th call of BIPP, 42nd call of SBIRI and the DBT-BIRAC joint call on "Anti- SARS-CoV-2 /nCoV-2 Virus Studies using Botanical Ingredients and Traditional Formulations" were presented. During the meeting, 3 proposals under BIPP, 7

proposals under SBIRI and 1 proposal under the joint call were recommended for support.

- ii. A new joint call was launched on 'COVID 19-Therapeutics' in collaboration with DBT on 15th October 2020 in the areas of Novel molecules, Drug repurposing, Combination therapy for synergistic effects, Biologics, Cell-based products & Gene Therapy products, Stem cells and Exosomes & novel Drug Delivery Systems.

iii. **Awards/Results/Announcements:**

- a. DBT-BIRAC's supported Clean Tech Demo Park was launched at Barapulah Drain Site, Sun Dial Park, Delhi by Dr. Harsh Vardhan, Hon'ble MoHFW and MoS&T and Sh. Anil Baijal, Lt. Governor, Delhi on 8th October 2020. The Demo Park would be managed by the Clean Energy International Incubation Centre (CEIIC), a public-private-partnership incubator set up jointly by DBT, BIRAC and Tata Power.
- b. BIRAC supported Medtech startup InAccel Technologies Pvt. Ltd. & Coco Labs has raised a Pre-series-A funding of \$1.5 million from Mount Judi Ventures for their respiratory assistive device i.e. Saans & secondary infection preventive VAPCare device.
- iv. Thematic review of projects related to "Energy, Environment, Industrial Biotechnology and Secondary Agriculture" was held on 1st October 2020.
- v. BIRAC beneficiary interaction meetings with Expert committee constituted for review of BIRAC were organized on 10th and 13th October 2020.

B. Bharat Immunologicals & Biologicals Corporation Ltd. (BIBCOL): BIBCOL supplied 0.22 million doses of bOPV & 625Liters of Sanitizer.

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