

Government of India
Ministry of Science and Technology
Department of Biotechnology

SUB: Cabinet Summary for November-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 Expenditure Finance Committee (EFC) chaired by Secretary, Department of Biotechnology (DBT) recommended implementation of the India COVID-19 Vaccine Development Mission “COVID Suraksha” at a total cost of Rs.900.0 crore for a period of 12 months. The mission programme is now duly approved by Hon’ble MoHFW, MoES and MoST. The mission will be implemented by Biotechnology Industry Research Assistance Council (BIRAC), New Delhi. Expression of interest (EoI) for vaccine development will be released soon.

- ii. **National Expert Group on Vaccine Administration for COVID-19 (NEGVAC):**

DBT also participated in a meeting of the NEGVAC Sub Group-II on Logistics and Distribution of COVID Vaccine held on 24th November 2020. During the meeting BIRAC disclosed about two startups, developing the technologies / products for vaccine delivery during COVID time and beyond.

DBT also participated in a virtual meeting held on 28th November, 2020 to review the status of actions taken by NEGVAC and the Task Force for Research on Corona vaccine.

- iii. **Vaccine Expert Committee (VEC):** In a fourth meeting of the COVID-19 Vaccine Expert Committee (VEC) held on 5th November, 2020, the progress of COVID-19 vaccine development in DBT-BIRAC supported proposals of Gennova Biopharmaceuticals Ltd, Biological E. Ltd, Cadila Healthcare and Serum Institute of India Ltd was reviewed. The Cell-based assays for adaptive immune responses against COVID-19 and vaccination were also discussed.

- iv. **Partnerships for Accelerating Clinical Trials (PACT) initiative:** The Department of Biotechnology has initiated the ‘Partnerships for Accelerating Clinical Trials (PACT) initiative’. Under the PACT programme, DBT in association with Ministry of External Affairs aiming to strengthen capacities for facilitating phase III clinical trials of COVID vaccines in neighboring / friendly nations. Under the initiative, the following activities have been taken:

- a. Training for strengthening clinical trial research capacity in neighboring countries, under the aegis of the Ind-CEPI Mission.
- b. Facilitating phase III clinical trials of Indian COVID vaccines in neighboring and friendly countries.

The training was attended by participants from Afghanistan, Bangladesh, Bhutan, Maldives, Mauritius, Nepal and Srilanka. Four Sessions on 'Good Clinical Practice' was organized on 9th, 16th, 23rd and 29th October'2020 with 75, 90, 60 and 88 participants respectively. Two sessions on 'Ethical Considerations in Clinical Research' were organized on 6th & 13th November, 2020 with 116 and 88 participants respectively. In addition, two sessions on 'Good Clinical Laboratory Practice' were organized on 20th and 27th November, 2020 with 73 and 68 participants respectively.

- v. **National Technical Advisory Group on Immunization-Standing Technical Subcommittee (NTAGI-STSC):** The Department participated in meetings of the COVID-19 Working Group (WG) organized by NTAGI and held on 2nd November, 16th November and 20th November'2020. In a STSC group meeting held on 24th November, 2020, the committee was updated about the activities and actions taken in COVID-19 working group.
- vi. **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. Three modules of the first series of training on 'Good Clinical Practice' were successfully completed. Senior Representatives from Nepal, Maldives, Bangladesh, Mauritius, Srilanka, Bhutan and Afghanistan have participated in the sessions.
- vii. The Department participated in a meeting of Standing Committee on Chemicals and Fertilizers (2020-21), held on 23rd November, 2020, for examining the subject 'Status of COVID-19 Vaccine Production in India'. During the meeting, DBT presented an update on Status and Efforts for COVID-19 Vaccine Production in India.
- viii. DBT City/Regional clusters (21) for Covid-19 sample testing has been established. So far, 20.22Lakh samples have been tested.
- ix. Under the DBT-BIRAC joint call for Covid-19, out of 17 projects recommended, 15 projects have been sanctioned for diagnostic development.
- x. Under the First Hub initiative, session for COVID-19 was conducted on 6th & 20th Nov.2020 and over 15 queries clarified. Representatives from Central Drugs Standard Control Organization (CDSCO), Indian Council of Medical Research

(ICMR), National Institute of Biologicals (NIB), Government eMarketPlace (GeM), Kalam Institute of Health Technology (KIHT), Bureau of Indian Standard (BIS), Pathways, Funding Opportunities, Public Procurement, in-vitro diagnostics (IVD) testing and validation, Standards and Specifications, Manufacturing and testing infrastructure support.

2. International Cooperation

A. Indo-EU Cooperation: In a virtual joint panel mid-term review meeting held on 9-10th November, 2020, the committee of representatives of European Union (EU), Department of Science & Technology (DST) and Department of Biotechnology (DBT) jointly recommended seven projects under water cooperation-2017.

3. Biosafety and Regulation:

A. RCGM activities: The division had conducted two meetings of Review Committee of Genetic Manipulation (RCGM) on 12.11.2020 (193th) and 26.11.2020 (194th). In total, 65 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.

A meeting of the Expert Committee containing RCGM experts was held on 23.11.2020 to deliberate on the Covid-19 vaccine application for PCT study waiver.

During the month 21 Institutional Biosafety Committee were constituted on IBKP portal.

B. DGFT Cases: The comments of the Department were communicated to DGFT on 03 applications seeking permission for export of SCOMET (Special Chemicals, Organisms, Materials, Equipment and Technologies) items.

4. Dr. Renu Swarup, Secretary, DBT and Dr. N.K. Ganguly, Former Director-General ICMR, jointly inaugurated the 'Center for One Health' at National Institute of Animal Biotechnology (NIAB), Hyderabad on 3rd November'2020 with a motto of 'Animal health for Human Welfare'.
5. Five new bio-design centers were recommended by DBT's Apex board meeting held on 26th November'2020.
6. 31 Public Grievances were redressed. Procurement of Goods and Services for Rs.5.7492Lakh has been carried out through Government eMarket (GeM). 230 new e-files have been generated.

II. AUTONOMOUS INSTITUTIONS

A. Covid related activities:

- i. Center for Diagnostics and Fingerprinting (CDFD), Hyderabad has tested 30,443 Covid-19 samples so far.
- ii. Institute of Bioresources & Sustainable development-Jawaharlal Nehru Institute of Medical Sciences (IBSD-JNIMS) Covid-19 testing laboratory at Imphal, Manipur has tested 2628 samples so far. IBSD has independently tested two districts of Manipur- Kangpokpi and Pherzawl district.
- iii. National Center for Cell Sciences (NCCS), Pune - Machine learning algorithms were used to identify peptides which have been shown strong binding affinity against the main protease of SARS-CoV-2, Mpro. A MoU was signed with Gennova Biopharmaceuticals Limited, Pune for further testing of the peptides.
- iv. National Brain Research Centre, Manesar, Haryana scientists find out that a drug - Methotrexate (MTx) dampens SARS-COV2-S1 mediated IL-6 expression and therefore, can be useful in developing a repurposed drug.
- v. Translational Health Science and Technology Institute (THSTI), Faridabad – The Infectious Disease Diagnostics Lab (I-LAB) has performed 6994 Covid-19 sample testing, while THSTI's laboratory performed 53496 RT-PCR tests. These tests have been performed on the samples received from ESIC Hospital, Faridabad and Palwal, Haryana.

B. 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 second batch of training was started on 25th November'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.

C. Patents filed/Granted:

- i. Center of Innovative and Applied Bioprocessing (CIAB), Mohali – A patent for developing a process for the production of cellulose nanofibers was granted (Patent No. 350694, Patent Appl. No.201711039715).
- ii. Institute for Stem Cell Science and Regenerative Medicine (inStem), Bengaluru – A patent titled as “Substituted Lithocholic Acid and Methods Thereof” by Srujan

Marepally, Porkizhi Arjunan, Gokulnath Mahalingam, Praveen Kumar Vemula, Alok Srivastava was filed with an application no.: 202041047355.

- iii. National Center for Cell Sciences (NCCS), Pune – Two Indian patents filed are as follows -
 - a. A patent titled as 'A Novel Chimeric Protein Kinase C as an Immunomodulator' by Dr. Shailza; Kosey, Dipali; Mol, Milsee with an application No: PCT/IN2019/050115.
 - b. Another patent titled as 'Novel Antiviral Drug Compounds and Composition thereof' by Dr. Debashis Mitra; Jay Trivedi with an application no.: PCT/IN2019/050375
- iv. National Institute of Animal Biotechnology, Hyderabad – Two Indian patents filed are as follows -
 - a. Aptamers for binding to snake venom, its paper-based rapid screening, and uses thereof by Pankaj Suman, Komal Birader, T Yathirajarao with an application no. 202041048600.
 - b. Rapid and differential detection of cobra and krait venom using monoclonal antibody by Pankaj Suman, L Sai Keerthana, Sherin Kaul and T Yathirajarao with an application no. 202041050355.

D. Technology developed/transferred:

- i. At National Center for Cell Sciences (NCCS), Pune, two technologies i.e. 'A Novel Chimeric Protein Kinase C as an Immunomodulator' and 'Novel Antiviral Drug Compounds and Composition thereof' is developed. A technology related to Monoclonal antibody (mAb) development was transferred to Bharat Biotech as a part of collaborative project funded by CSIR-NMITLI.
 - ii. At Institute for Stem Cell Sciences & Regenerative Medicine, Bengaluru – A G-fab technology developed. The technology has been shown to inactivate viruses including SARS-CoV-2 & the influenza virus (H1N1 flu), and bacteria up to 99.9%. The technology is now transferred to 'Color Threads', Tirupur, Tamilnadu. Further, an incubatee at the Centre for Cellular and Molecular Platforms (C-CAMP), has enabled the rapid development of a germicidal fabric called, G-fab 99+ antiviral. Van Heusen is now marketing these G99+ masks in both online (e-commerce) and offline.
- E. Center for Diagnostics and Fingerprinting (CDFD), Hyderabad - CDFD services division analyzed 6 samples of DNA Fingerprinting, 160 samples for genetic diagnostic services, 28 Basmati Rice sample for adulteration analysis and 3 samples for DNA Fingerprinting of Rice hybrids.

F. In total, 12 MoU/MoA/MTA was signed by the institutions.

G. In total, the number of publications appeared was 59. The meetings/Seminars/Lectures/webinars organized were 58.

- H. Under the SAHAJ initiative – the infrastructure used by 4979 users and the revenue generated, including the CoVID-19 users is Rs.49.64Lakh through services provided.

III. PUBLIC SECTOR UNDERTAKINGS (PSUS)

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

i. Covid-19 related:

- a. Blackfrog and Alfa corpuscles, BIRAC supported Startups, showcased for evaluation and possible adoption for Immunization program.
- b. Startup technologies catering for last mile delivery and supporting Covid-19 vaccine mass immunization were showcased during Panel-6 discussion in the International Virtual Conference on “Supply Chain Challenges of Covid-19 Vaccines: Indian Imperative” 20th Nov, 2020. The conference was organized by a consortium of Global Bio-supply Chain Association of Life Sciences, Biotech & Pharma Industries and Academic Institutions.

ii. Important Meetings/Decisions:

- a. **Stakeholder Meeting for establishing Technology Clusters:** A Stakeholders' discussion meeting organized by Make in India Facilitation Cell and chaired by Dr. Renu Swarup, Secretary, DBT on 12th Nov.' 2020 to discuss the strategy for drawing an action plan for establishing Technology Clusters across the country.
- b. **Global Bio-India:** A joint stakeholder meeting was held on 12th Nov 2020 with representatives from Department of Biotechnology (DBT), Biotechnology Industrial Research Assistance Council (BIRAC) and Confederation of Indian Industries (CII). It was decided to organize virtually the 2nd edition of Global Bio-India in the first quarter of 2021.
- c. **Biotechnology Ignition Grant (BIG) Conclave 6.0:** The 6th edition of BIRAC's BIG Conclave: 'Resilience Redefined' was held virtually from 27th -28th November 2020. The event was attended by 550+ BIG grantees and 8 BIG partners along with recently added 11 BIG Associate Partners.

iii. Awards/Results/Announcements:

- a. BIRAC & SRISTI (Society for Research and Initiatives for Sustainable Technologies and Institutions) organized SITARE-Gandhian Young Technological Innovation Award Ceremony 2020 on 5th November 2020. Honorable Dr. Harsh Vardhan, MoHFW, MoES and MoST presented the 21 awards and 27 appreciations in two categories of the programme.
- b. Dozee, a BIRAC supported startup has won Economic Times (ET) Innovation Awards 2020 for developing a contactless health monitor that converts any bed into a step-down ICU.

- c. BIRAC supported and women-led, three startups namely Thanmatra Innovations Pvt. Ltd., Seragen BioTherapeutics Private Limited and Empathy Design Labs won UN Women's and MyGov's COVID-19 Shri Shakti Challenge.

B. Bharat Immunologicals & Biologicals Corporation Ltd. (BIBCOL): BIBCOL supplied 8.0million doses of bOPV & 480Liters of Sanitizer.

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