

**No. DSIR/MS/2022/01**  
Government of India  
Ministry of Science & Technology  
Department of Scientific & Industrial Research  
**MONTHLY SUMMARY FOR THE CABINET**  
(For the month of **January, 2022**  
(Part-I Unclassified)

**Major achievements during the month of January, 2022:**

**Council of Scientific & Industrial Research (CSIR)**

**New Technologies/Processes Developed/Transferred**

- CSIR-CDRI licensed the technology for a rapid fracture-healing agent (IND S007-1500) to M/s Troikaa Pharmaceuticals Ltd, Ahmedabad.
- CSIR-CECRI licensed the following technologies:
  - Technology for the Manufacture of Four Coat Paint schemes consisting of Epoxy Polyurethane paint systems for concrete structures to M/s Krishna Conchem Products Private Limited, Mumbai
  - Technology for Manufacture of Epoxy Polyurethane Paint for coating on Concrete Structures to M/s Fosroc Chemicals (India) Pvt. Ltd., Bangalore.
- CSIR-CFTRI transferred the following technologies:
  - Process for the manufacture of Instant mushroom soup mix to M/s LMN Enterprises, Srirangapatna Taluk, Mandya - 571438.
  - Technology for preparing Desiccated coconuts to Ms. G. Tejaswini, Hassan-Mysore Road, Holenarasipura.
- CSIR-CIMFR transferred the technology for making Improved Soft Coke to M/s. Royal Industries, Varanasi, UP.
- CSIR-CMERI transferred the technology for making Intelligent UVC LED Sterilizer Unit to M/s Enthu Technology Solutions India Pvt. Ltd, Coimbatore, TN.
- CSIR-NCL signed a licensing agreement with SKYi Innovations LLP, Pune for 'Process for synthesis of Hyperbranched Polycarbonate'.

**Collaborations/Agreements/MoUs Signed (National)**

- A MoU was signed by the Directors of CSIR-IIIM and AIIMS Jammu in the presence of the Hon'ble MOS(IC) S&T and ES, Dr Jitendra Singh. Both the institutions will work towards closer scientific collaborations.
- CSIR-NEERI and CSIR-CCMB are collaborating to conduct environmental surveillance of sewage and waste water by sampling across various pan-India locations.
- CSIR-CDRI MoUs:
  - With Guru Ghasidas Vishwavidyalaya, Koni, Bilaspur to explore possible collaborative research programs in specific fields of interest.

- With BLDE (Deemed to be University), Karnataka to explore for possible collaborative research programs in specific fields of interest.
- Sponsored Agreement with M/s. Airth Research Private Limited, New Delhi executed for “Antimicrobial testing of air filters”.
- CSIR-CFTRI MoUs:
  - With UPL Limited, Mumbai for initiating collaborative R&D projects on grain storage management and strategies for helping farmers;
  - With Prayoga Institute of Education Research, Bengaluru for facilitating experimental science learning and augmenting the JIGYASA activities.
- CSIR-CIMFR signed a Bilateral Agreement with NTPC Limited Coal Sampling Work
- CSIR-CMERI signed an MoU with CDAR, Mizoram for design, development, installation and commissioning of 200 kg/day capacity prototype of fish drying system at Tuiral, Aizawl, Mizoram
- CSIR-CRRI signed MoU with Rites Limited for Jointly taking up Infrastructure Development Projects of Mutual Interest.
- CSIR-IHBT MoUs:
  - MoU with Deputy Commissioner, Lahaul & Spiti, Himachal Pradesh for livelihood promotion and rural development in Lahaul & Spiti District, Himachal Pradesh.
- CSIR-IICT MoUs with :
  - Fermenta Biotech limited, Mumbai for Microbial screening of transaminase enzyme for target substrate.
  - Bharat Biotech Ltd for Optimization and Demonstration of chromatographic-free process for the synthesis of Imidazoquinoline Gallamide.
  - Mylan Labs Ltd for Antiviral Mission CSIR: Discovery & Pre-clinical Development of Antivirals for COVID-19 & other diseases.
  - Nutrigene Biosciences Private Limited for Collaboration in R&D activities in the area of drug molecules.
  - Cipla Foundation (CF) have signed an agreement in January 2022, to conduct “Orientation-cum-training Programme for M. Sc. (Chemistry) students from the North-Eastern (NE) States” under the Corporate Social responsibility (CSR) from this academic year."
- CSIR-IIIM: MoU has been signed between CSIR-IIIM Jammu and AIIMS Jammu to collaborate on related matters of mutual interest that may emerge over time. The purpose of the cooperation is to promote collaborative research, development and to facilitate the exchange of ideas, the development of new knowledge and to enhance high quality research acumen. The major thrust areas of the understanding on which the parties will cooperate are:
  - a) Research and Development in the area of mutual interest
  - b) Under taking collaborative projects
  - c) Skill and capacity-building /development
  - d) The dissemination of knowledge
  - e) Linkage with entrepreneurs, start-ups for joint mentoring and incubation

- CSIR-NBRI and Fragrance and Flavour Development Centre (FFDC), Kannauj signed and MoU for working in different areas of expertise leading to advancement in research and development.
- CSIR-NIO signed an MoU with Keshava Deva Malaviya Institute of Petroleum Exploration (KDMIPE-ONGC) to develop a long term joint working partnership in the areas relating to the structure and evolution of the continental margins of India and the adjacent deep ocean basins.

### **Collaborations/Agreements/MoUs Signed (International)**

- CSIR and Institut Pasteur signed an MoU towards advancement in Human Health. CSIR and Institut Pasteur would be jointly researching and focusing on emerging and reemerging infectious diseases and inherited disorders and enable delivery of effective and affordable healthcare solutions not only for the people of India and France but for the global good. The MoU provides for developing potential scientific and technological cooperation and networking in advanced and emerging areas of Human Health between scientists and institutes/laboratories of CSIR and Institut Pasteur and its international network.
- CSIR-IHBT signed and MoU with Plant Health Institute of Montpellier, France for a project entitled “Role of viral and host factors in circulative transmission of tomato begomoviruses by *Bemisia tabac*”.
- CSIR-IIP signed an MoU with GTC Vorro Technology LLC, United States of America on Plastics recycling and bio-feedstock processing into fuels or petrochemicals.

### **Patents Update**

Patents Filed		Patents Granted		Patent Prosecutions	
India	Abroad*	India	Abroad*	Indian	Foreign
08	09	05	03	19	69

\*Data reported to IPU during the said period and may increase later during national phase entries

### **High impact S&T services offered**

- CSIR-CCMB provided Molecular Diagnostics Services for 105 families comprising 113 samples.
- CSIR-IIP carried out Physico-chemical characterization of New UCO sample received from NRL for the Bitumen Studies.
- CSIR-IIP offered Testing services for gaseous fuels (ASTM D7833, D5504), liquids fuels (D6730, UOP744, D5623, D4815, D6584 and IP 391), engine oils (ASTM D3524, D3525), lubricating oils (ASTM D7419), waxes (ASTM D5442), GC-MS and HRMS of petroleum fuels and general chemicals.

## **Outreach Activities (Jigyasa, Skill Development, and others)**

- CSIR-CCMB
  - Organized Milo CCMB session with Dr GSN Reddy on Exploring Extremophiles.
  - 2-week Young Innovators Program for 20 school students of Hyderabad. Dr Raghunand Trirumalai gave a talk entitled 'Resisting Antibiotic Resistance'.
  - Origami Session: Making of DNA Model to school students as a part of CCMB Young Innovator's Programme 2022.
- CSIR-CECRI:
  - One-week Online Skill Development Training Programme on "Basics of High-Resolution Imaging Techniques and their Applications to Science and Technology" was conducted during 17.01.2022 - 21.01.2022 at CSIR-CECRI. A total of 40 candidates registered for the programme.
  - One-week Online Faculty Development Program was jointly conducted by CSIR- CECRI and Dr. Umayal Ramanathan College for Women on "Tools and Techniques in Characterization of Compounds" during 17.01.2022 - 21.01.2022. A total of 723 candidates participated.
  - JIGYASA Lectures
    - Portable fuel cells for electronic applications on 03.01.2022
    - Self-assembly of nanoparticles on 06.01.2022.
    - Microbiologically influenced corrosion (MIC): Tiny bugs, Big problems on 12.01.2022.
    - Electrochemical Science and Technology for societal welfare on 20.01.2022.
  - A training programme was conducted for students of the Atal Tinkering Lab (ATL) on how to write scientific articles and publish in journals
  - An ATL Webinar talk was delivered by Dr. A. Pandikumar on Powering the world by sunlight.
  - JIGYASA - Vigyan Jyoti programme in association with JNV, Mahe for promoting STEM based education for girl students was also celebrated as a part of Azadi Ka Amrit Mahotsav, National Girl Child Day on 27.01.2022.
- CSIR-CFTRI: Under Skill Development Initiative Online Workshop on Intellectual Property with Emphasis on Food Processing for Entrepreneurs/ Startups was held on January 19, 2022 in which 48 participants attended.
- CSIR-CRRI conducted three days regular online training programme on "Design, Construction and Quality Control in Rigid Pavements" during January 19-21, 2022. It was attended by 51 participants from various parts of India.
- CSIR-CSIO JIGYASA activities:
  - Webinar by Prof. Vijayamohan K Pillai, FNA, FASc, Chair, Chemistry and Dean (R&D), Indian Institute of Science Education and Research(IISER).
  - Webinar by Dr. Avishek Shah (Scientist, CSIO Chandigarh) on Introduction to Nanotechnology.
  - Webinar by Dr. Neha Sardana (Assistant Professor, IIT Ropar) on Nanotechnology : Nature to Applications.
  -

- CSIR-IHBT:
  - Course entitled “Quality Control Biologists” in Life Science sector is being organized under Skill development program,
  - Under “Jigyasa” Programme 59 (9th-10th) students from Amar Shanti Model Public School, Sihoti (Khundiyan), Distt. Kangra (H.P.), accompanied by 08 teachers visited CSIR-Institute of Himalayan Bioresource Technology, Palampur (H.P.) on 04.01.2022.
  - A Virtual Tour at CSIR-IHBT and a lecture on "Plant Adaptation to Climate Change" organised for 30 (B.Tech Biotechnology) Students and Faculty members of Horticulture and Forestry, Neri, Hamirpur, Himachal Pradesh on 22.01.2022."
- CSIR-IICT:
  - Under CSIR Integrated Skill Initiative, a skill development training program on "Advanced Synthetic Organic Chemistry Training" was conducted during the month for a period of 4 weeks up to 28th Jan 2022 through offline mode.
  - Under CSIR Integrated Skill Initiative, an Upskilling for a period of 3 months to Post Graduate students in Chemistry from Indrashil University, Gujarat was commenced on 1st January 2022 and around 21 students are participating in this upskilling programme through offline mode.
  - An Orientation cum Skill Training programme for a period of 3 months was commenced to Post Graduate Students in Chemistry from North Eastern states of India through hybrid mode Under Corporate Social Responsibility sponsored by CIPLA foundation. Around 50 students are participating in this programme."
- CSIR-IIIM: CSIR Jigyasa Mahotsav: Boot camp 1 on agrotechnology for school students was organised on 12-01-2022.
- CSIR-IIP: Contributed to organize two boot camps for school students as part of the Azadi Ka Amrit Mahotsav celebration, under Jigyasa Program. An Online Training Course organized for Indian Oil Corporation Limited (IOCL) Engineers on Petroleum Refining Technologies during 3rd January to 14th January, 2022
- CSIR-NBRI: Dr. Manish Bhojar, Senior Scientist, CSIR-NBRI, Lucknow delivered an online talk about "Fundamentals of Intellectual Property Rights: Indian perspective" for 9 to 12th class students of KV Aliganj, KV, Jhalwa, Allahabad, KV, AMC, Cannt, Lucknow, KV, Kanpur and KV, Raebareli. A total of 95 students and 05 teachers participated in the event.
- CSIR-NIO: The Tech-Demo of Green Mussel Culture was officially inaugurated by Shri. Parimal Rai, IAS, Chief Secretary,. Govt. of Goa in the august presence of Prof. Sunil Kumar Singh, Director, CSIR-NIO and other officials of CSIR-NIO and Govt. of Goa on 26th January, 2022 at Verem, Village Panchayat, Reis-Magos, Goa. This Skill Training Programme has been initiated as a part of CSIR Integrated Skill Initiative.

## **Conferences, Seminars/Webinars organized**

- CSIR-CFTRI organized a Webinar on Innovations and Advancements in Food Protection and Grain Storage, January 5th, 2022.
- CSIR-HRDC organized the following programmes:
  - Programme on ISO/IEC-17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories.
  - Awareness Programme on Gender Sensitization and Sexual Harassment of Women at Workplace: Prevention, Redressal and procedures

## **Visit of high level dignitaries to the Institute/Laboratory**

Dr. Jitendra Singh, Hon'ble Minister of S&T visited CSIR-NPL on the occasion of the Platinum Jubilee celebrations.

Dr. Jitendra Singh, Hon'ble Minister of S&T inaugurated India's first Open Rock Museum in CSIR-NGRI

Dr. Jitendra Singh, Hon'ble Minister of S&T was the Chief Guest of the First Foundation Day Function at CSIR-NIScPR

## **COVID related developments**

- CSIR-4PI Supercomputing resources have been extensively used by CSIR-IGIB for Omicron simulations. Three proposals have been selected under COVID CSIR-AMD Research Engagement (CARE) and awarded access to the AMD donated COVID Supercomputer.
- CSIR-CCMB:
  - Strategy for RT-PCR based detection of Omicron variant of SARS-CoV-2 virus
  - Covid sample- Total of 2463 were tested and 3884 samples sequenced
- CSIR CDRI developed an indigenous RT-PCR based diagnostic kit 'INDICov - Om' to specifically detect COVID-19 Omicron Variant. Currently, it is under validation by the ICMR.
- CSIR-CFTRI: A total of 43488 samples were tested at the CSIR-CFTRI Covid Testing Centre.
- CSIR-IHBT: Diagnostic testing of COVID-19 suspected samples in the state of Himachal Pradesh is going on regular basis

## **Details of events celebrated to mark India@75 or Azadi Ki Amrut Mahotsav / 75 Years of Indian Independence**

- CSIR-CCMB: Organized session on Health and Comics making for CSIR Jigyasa Vigyan Mahotsav.
- CSIR-CGCRI: On the occasion of Azadi ka Amrut Mahotsav, World Hindi Day Special Discourse was delivered By Prof. Sambhunath, famous critique and former Director of Central Hindi Directorate, Agra and Director, Bharatiya Bhasa Parishad, Kolkata On 10-01-2022.

- CSIR-NIO: CSIR-National Institute of Oceanography (NIO), Dona Paula celebrated its 57th Foundation Day on Saturday, 1st January 2022. The NIO Foundation Day lecture was addressed by His Excellency, Shri P. S. Sreedharan Pillai, Governor of Goa. Earlier during the day, the institute conducted its felicitation programmes at the hand of the Director, Prof. Sunil Kumar Singh. The program was conducted on an online platform. During the month the institute conducted regular talks every thursday on the occasion of Azadi ki Amrit Mahotsav.

#### **Any other item of significance**

- Dr Jitendra Singh, Minister of State (Independent Charge) Science & Technology; Minister of State (Independent Charge) Earth Sciences; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space released CSIR's newly developed disinfection technologies. The same is being installed to combat pandemic in railway coaches, AC buses, closed spaces etc.
- CSIR-CCMB's Dr G R Chandak and CSIR-IICB's Dr Suvendra Nath Bhattacharyya have been selected for Sun Pharma Science Foundation Research Award-2021. While Dr Chandak won the prize under the Medical Sciences-Clinical Research category, Dr. Bhattacharyya won the prize under the Medical Sciences-Basic Research category.

### **DEPARTMENTAL ACTIVITIES**

DSIR's mandate is to promote Industrial Research and Development besides technology promotion, development and utilization. In order to promote and nurture Research and Development in the country, Industrial R&D Promotion Programme of the department gives recognition and registration to in-house R&D units of industries, not for profit Scientific and Industrial Research Organizations (SIROs), Public Funded Research Institutions (PFRIs) and periodically renews these recognition / registration under the respective Government Notifications (as amended from time to time), by virtue of which these organizations are able to obtain Customs duty exemptions, Goods & Service Tax (GST) concessions and Weighted tax deductions on R&D by Industry (under section 35(2AB) of IT Act). This scheme helps in encouraging industrial R&D in the country.

#### **Industrial R&D Promotion Programme Recognition/ Registration and renewal of In-house R&D in Industry**

- 31 in-house R&D units of industries were granted renewal of recognition as well as renewal of registration certificates.

## **PUBLIC SECTOR ENTERPRISES**

### **Central Electronics Limited (CEL)**

CEL is an enterprise under DSIR having an objective to commercially exploit the indigenous technologies developed by National Labs and R&D institutions in the country. CEL has developed a number of products for the first time in the country through its own R&D efforts and it continues to emphasize its leading role in the area of solar photovoltaic systems, electronic gadgets for Railway and other strategic electronic equipment/components among others.

- The company manufactured electronic components/systems/SPV products worth Rs. 2363.52 Lakhs during January, 2022.
- Sale of items worth Rs.2624.86 Lakhs was realized during January, 2022.

### **National Research Development Corporation (NRDC)**

NRDC continues to lay emphasis on broadening and strengthening the technology resource base by nurturing long term relationships with R&D institutions as well as universities, technical organizations, industries and also individual inventors.

- NRDC has licensed two technologies and has been assigned three technologies by two organisations /institute during January, 2022.
- NRDC has collected premia of Rs.21.00 Lakhs and royalty of Rs.154.75 Lakhs from respective technologies during January, 2022.

\*\*\*\*\*