

No. DSIR/MS/2022/03
Government of India
Ministry of Science & Technology
Department of Scientific & Industrial Research
MONTHLY SUMMARY FOR THE CABINET
(For the month of **March, 2022**
(Part-I Unclassified)

Major achievements during the month of March, 2022:

Council of Scientific & Industrial Research (CSIR)

New Technologies/Processes Developed/Transferred

- CSIR-CDRI developed the following processes and patent applications were filed.
 - Process for preparation of Phthalazinone derivatives and uses thereof.
 - Process for preparation of Nintedanib and its derivatives .
 - Heterocyclic iodonium compounds as broad-spectrum antibacterial agents .
- CSIR-CMERI developed a Rotocopter for Agriculture Applications
- CSIR-CSIO developed SmartVent: Smart Low Cost Ventilation Solution to Improve Indoor Air Quality and Comfort
- CSIR-IIP developed a new formulation of LPG sweetening catalyst for supply security in the Middle East Market. The project is being done in collaboration with BPCL
- CSIR-CRRI transferred the technology on “Development of the Expansive Mortar for Silent Cracking of Stones” to M/s Asia Pacific Export, Jodhpur on March 17, 2022. An Improved formulation has been developed exhibiting enhanced performance over the existing products in the market in a cost-effective manner.
- CSIR-CECRI transferred the technology on High Performance Moisture Compatible Corrosion Resistant Protective Coating System to M/s. Sunanda Speciality Coatings Pvt. Ltd., Mumbai.
- CSIR-CFTRI transferred the technology on Coffee flakes based mouth freshener to Mr. Muhammed Ishakh. P, S/o Aboobacker, Parayodath (H), Kolamangalam, Bavappadi, Valanchery(PO), Malappuram (Dt), Kerala .
- CSIR-CFTRI transferred the technology on Mustard / Rapeseed integrated processing to M/s Jharkhand State Livelihood Promotion Society, Rural Development Department, Government of Jharkhand, Itki Road, Hehal, Ranchi , Jharkhand.
- CSIR-CMERI licensed its technology on Biomass Bricating Technology to Siya Instruments, Udaipur, Rajasthan.
- CSIR-CSIO transferred its technology on Standalone UV Air Disinfection System for Rooms and Spaces to M/s Omniscient Treatment Technologies Pvt. Ltd., Nagpur.

- CSIR-CFTRI: A patent entitled "A process for the preparation of Bacillus Antimicrobial Peptide (BAMP) useful for food industry" was transferred to an Industry.
- CSIR-CSIO transferred its technology on Digital Grain Moisture Analyser to M/s Agnext Technologies Pvt. Ltd., Mohali.

Collaborations/Agreements/MoUs Signed (National)

- A Tripartite MoU was signed between Ministry of Ayush, CSIR, and ICAR for collaboration in areas of common interest and promote and facilitate research and development, validation, and deployment of agri-technologies related to medicinal plants. The MoU was signed by Vaidya Rajesh Kotecha, Secretary, Ministry of Ayush, Dr. Trilochan Mohapatra, Director General, ICAR and Secretary, Department of Agricultural Research and Education, and Dr. Shekhar C. Mande, Director General, CSIR and Secretary, DSIR in the presence of senior officials from the three organizations in New Delhi.
- CSIR-CCMB entered into an agreement with Mankind Pharma Limited, Delhi for co-development of "Early detection of pregnancy Technology in cattle and buffaloes for commercialization of point-of-care device based on Pregnancy detection Technology, developed and owned by CSIR-CCMB.
- CSIR-CBRI signed an agreement with Uttar Pradesh Rajkiya Nirman Nigam Limited (UPRNN), Noida, Gautam Budh Nagar on February 4, 2022 to undertake the work Quality Assurance and Structural Stability Test of Transit Hostels at Gautam Buddha Nagar Police Line & Residential Office Complex at Ministry of Agriculture, Pusa Campus, New Delhi.
- CSIR-CCMB signed an MoU with LVPEI & IITH for research program entitled 'Biomimetic hydrogel for the treatment of blinding corneal diseases'.
- CSIR-CCMB signed an MoU with VITM (an organization of National Council of Science Museums for Establishment of Mobile Science Exhibition (MSE) bus on the theme 'In your Genes- decode and deter genetic disorders'.
- CSIR-CECRI signed an MoU with Tata Chemicals Society for Rural Development (TCSR), Mithapur on Construction of Building for Housing Electrochemical Performance Evaluation Equipment.
- CSIR-CFTRI signed an MoU with Mahatma Gandhi University, Kottayam, Kerala on 24.03.2022 for collaborations in meeting emerging scientific and technological challenges of the society.
- CSIR-CGCRI signed an MoU with Ministry of Electronics and Information Technology (MeitY) on 10-3-2022 to explore commercialization of sensors technologies in the area of structural and geo-technical instrumentation and industrial process control monitoring and to establish a centre of innovation & a manufacturing eco-system for sensors (CIMES) for industrial IoT.
- CSIR-CGCRI signed two MoUs signed with Clay Craft (I) Pvt. Ltd, Jaipur under CSR Scheme for development of indigenous technology for manufacturing of single fired white translucent oxidation porcelain crockery by Naroda Centre and Utilization of fired bone-china crockery waste for value added products by Khurjah Centre respectively.

- CSIR-CIMFR signed an agreement with NTPC Limited, New Delhi for Coal Sampling Work on 01.03.2022.
- CSIR-CSMCRI signed a Technical Services Project agreement with Gujarat Maritime Board, Gandhinagar for “Long term assessment of ecology and environment of Alang-Sosiya Ship Recycling Yard, Gujarat as per the directives of National Green Tribunal (NGT)”.
- CSIR-IGIB signed an Mou with Government Institute of Medical Sciences, Greater Noida, UP on 21-03-2022 for a) Genomics approaches towards understanding the mutations and biology of Hemoglobinopathies, Rare cardiac genetic diseases and development of approaches for rapid diagnosis or screening of Infectious diseases such as HCV and COVID19. b) Collaborative research in area of application of genomics in clinical practice in specific areas related to genetic diseases and genetic traits with special emphasis on diseases and traits prevalent in the region. c) Collaborative research and training on Genomics, Bioinformatics and data analysis."
- CSIR-IHBT signed an MoU for Installation of the distillation unit under CSIR Aroma Mission-II with:
 - Vishavpujita Gram Sangathan, Chameti, P.O. Kuhna, District Kangra (HP) on 02.03.2022
 - Own War Farmer Producer Company Limited, Village Mubarakpur, Tehsil Nawanshahr, District Shaheed Bhagat Singh Nagar, Punjab on 29.03.2022
 - The Laughing Flower Co-operative Multipurpose Society Ltd. Madina, Village Madina, District Rohtak Haryana on 29.03.2022
- CSIR-IICT the following MoUs:
 - With for KHAR Energy Optimisers for Development of process knowhow for waste utilization technologies (a) Biomass to Bio-Char and (b) Waste plastic to Fuel Oil.
 - With Shiva Performance Materials Ltd. for Development of catalytic process for the preparation of isobutyro phenone and cyclohexanoyl phenone
 - With BGP Healthcare Private Limited for Process Development for the Preparation of Hydrogenated Soya PC (95%) from Soya Lecithin Powder.
 - With BPCL R&D Centre for Development of biomethanation process for the generation of biogas and bio-manure from lignocellulosic biomass for.
 - With Clean-Seas India for Performance evaluation of Pyrolysis Plant (1.3 ton/day) for converting plastic waste to oil and Hydrogen and improving its efficiency.
 - With Sanzyme Biologics Limited for Exploratory study on supercritical carbon dioxide extraction of fatty materials from the raw materials supplied by client.
 - With Uquifa India Pvt Ltd for Collaboration in R&D activities in the area of APIs.
 - With Symbiosis Institute of Business Management, Hyderabad, collaboration to organize & conduct Project management programmes for capacity building in S&T project management area of faculty & staff engaged in R & D institutes improving organizational efficiency.
- CSIR-IIIM signed an MoU with Technology Information Forecasting and Assessment Council (TIFAC), New Delhi and Sher-e-Kashmir University of

Agricultural Sciences and Technology of Kashmir (SKUAST-Kashmir) on 24th March 2022 for addressing issues related to Apple and Saffron crops.

- CSIR-NBRI signed an MoU with Delhi Development Authority for Amrut Biodiversity Park.
- CSIR-NIIST signed the following MoUs:
 - With M/s Archaid Architects, Bangalore for Solar potential analysis of Dome and Flat-panel PV.
 - With M/s Vittal Agro Industries, Kasargod for Implementation of a sustainable bio-energy based model effluent treatment plant for desiccated coconut industries.
 - With M/s Vazhakulam Agro and fruit Processing Company Ltd, Ernakulam for Setting up biodegradable products unit from pineapple wastes.

Collaborations/Agreements/MoUs Signed (International)

- CSIR-IIP signed an MoU with Kellogg Brown & Root LLC, USA for Utilization of CSIR-IIP's facilities for, Pilot plant testing, Promotion of identified technologies and any other areas of mutual interest.

Patents Update

Patents Filed		Patents Granted		Patent Prosecutions	
India	Abroad*	India	Abroad*	Indian	Foreign
38	29	17	17	32	113

*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 diagnostic services for 125 families comprising 128 samples.
- CSIR-CMERI carried out Condition Assessment of Stacker and Replacer SR-1 and SR-2" for M/s Vedanta, VGCB, Vishakhapatnam
- CSIR-IHBT provide quality planting material of aromatic marigold seed (25 kg), lavender (5000 rooted plants) scented geranium (5000 rooted plants) to different organizations.
- CSIR-NEERI implemented green technology for integrated & sustainable development and capacity building of a low- income village in Uttar Pradesh. CSIR-NEERI also carried out the inspection of grossly polluting industries (GPIs) in River Ganga and Yamuna Basin. The Institute was also involved in sustainable water resource management through conservation and utilization plan for the rivers of Gadchiroli District, Vidarbha Region Maharashtra.
- CSIR-NCL determined the redox potential of several molecules that are developed for skin care applications by LoReal
- CSIR-NGRI carried out Airborne Electromagnetic Surveys in arid regions of NW Indian i.e., parts of Rajasthan and Gujarat under an MoU with Ministry of Jal Shakti and Central Ground Water Board.

Outreach Activities (Jigyasa, Skill Development, and others)

- CSIR-4PI organized a training programme on "Advanced Training on High Performance Computing, Cyber Security and Data Science" from 21-25 March 2022.
- CSIR-CBRI organised a training program on Retrofitting of Buildings for Engineers of H.P. Government during 28 March to 2 April 2022.
- CSIR-CCMB organized a Hands on Training programme from 14th to 17th March 2022 on "Basic Techniques in Cell and Molecular Biology" for undergraduate students of Bhavan's Vivekananda College of Science, Humanities and Commerce, Sainikpuri, Secunderabad, sponsored under DBT-Star college scheme and eight students had participated in the Programme.
- CSIR-CCMB organized a short term course from 21-25 March 2022, on "Basic Techniques in Animal cell culture", for Masters in Life Sciences and Allied areas and six people had participated in the Programme.
- CSIR-CDRI organized the Vigyan Jyoti Program for 51 girl students along with 04 faculty of Jawahar Navodaya Vidyalaya, Pipersand, & Kendriya Vidyalaya RDSO, Lucknow (UP) on 29th March, 2022.
- CSIR-CECRI organized One-week Online Skill Development Training Program conducted on "Paints and Coatings for Corrosion Protection" during 07.03.2022 - 11.03.2022.
- CSIR JIGYASA 2.0 Programme Chintan Shivir—a brainstorming meeting with Internal & External stakeholders & Task Force Committee was held on 12 - 13 March, 2022 at CSIR - NEIST, Jorhat in hybrid mode.
- CSIR-CFTRI organized science quiz and demonstrated food processing techniques to 56 students and 11 teachers of Kendriya Vidyalaya and Jawahar Navodaya Vidyalaya under the Jigyasa programme.
- CSIR-CMERI organized the following Skill Development Programmes (SDPs):
 - SDP on Wire Arc Additive Manufacturing and Rapid Prototyping; Feb 28 - Mar 04, 2022.
 - SDP on CAD Training and Sheet Metal Forming Fabrication (for MSME and Startups); Mar 01-04, 2022.
 - SDP on Basic Finite Element Analysis and CFD Analysis of mechanical components; Mar 02-04, 2022.
 - Hands on short term training on "Robot Building" hardware (Mechanical, Electronics) & Programming.
 - Hands-on training for sensors & actuators in Robotics & Automation applications from 13th-16th & 22nd March 2022.
 - Hands-on training on CNC #machining & programming was conducted at CSIR-CMERI from March 21st-25th, 2022.
 - SDP on Analytical Techniques and Instrumentation for Water Quality Assessment; Mar 22-23, 2022.
 - SDP on Renewable Energy Systems & CFD applications held between 28th-30th March, 2022.
 - SDP on Pit Bottom Buffer Installation Norms and its Safety Aspects; Mar 28-30, 2022 (in-situ training).

- Jigyasa programme: Lecture by Scientists on 'Solar Tree' and 'Municipal Solid Waste' and demonstration of technologies to students of Jawahar Navodaya Vidyalaya on March 09, 2022.
- CSIR-IGIB: Rashtriya Prakriti Parikshan Program under CoE Ayurgenomics and Ayush Mission: Mar 06, 2022 to Mar 07, 2022.
- CSIR-IHBT:
 - Under CSIR-Integrated Skill Initiative, a five days capacity building programme on “Bioprospecting natural products for human health and socio-economic development” under UGC-STRIDE was conducted. 30 Ph.D. & Post Graduate students and 4 faculty members of Maharishi Dayanand University (M.D.U.), Rohtak and All India Institute of Ayurveda, New Delhi participated from 7-11.03.2022.
 - On 28.03.2022 a group of 11 students (B.Sc Medical) and 1 faculty member from Govt. Degree College Naura, Distt. Kangra (HP) visited CSIR-IHBT Palampur. The students were acquainted with the latest techniques, methods and instruments used in biological science research.
- CSIR-IICT:
 - A skill Development Training on Water purification & Analysis for a period of one month was conducted for Chemical Engineering Students at CSIR-IICT from 6th March 2022 to 5th April 2022.
 - A Skill Development Training on "Basic cell and Molecular Biology Laboratory Application Training" for a period of 8 weeks commenced on 21st March 2022 under CSIR-Integrated Skill Initiative. The programme will end on 13th May 2022.
 - A Skill Development Training on Analytical Food Chemistry was conducted under CSIR-Integrated Skill Initiative at CSIR-IICT in online mode from 21-23, March 2022 followed by hands on training from 28th March- 1st April 2022.
- CSIR-IIIM:
 - Hands-on Workshop on Advanced Techniques in Natural Products & Medicinal Chemistry', sponsored by DST-SERB's Accelerate Vigyan from 15-22 March 2022 and supported by CSIR-Skill Development Initiative.
 - Two days online workshop on upstream and downstream processing Techniques in fermentation was organised from 28th – 29th March, 2022.
 - Three Day Workshop on “Gene Cloning and Cell Culture Techniques in Anti-Cancer Drug Discovery was organised from 14th-16th March 2022
 - Two Days online Skill Development Program on Intellectual Property Rights (IPR) was organised from 07th- 08th March 2022 under CSIR Skill Development Initiative.
- CSIR-IIP: "Under the 'Jigyasa' program a Five-day Residential Research Programme in Science was organized from 21st-25th Mar 2022 at CSIR-Indian Institute of Petroleum, Dehradun. Two students of class 10 from The Doon School, Dehradun joined the Biochemistry & Biotechnology Laboratory and Engines After Treatment lab respectively to participate in the actual scientific work going on in the research laboratories. Under Skill Development

Program an online Skill Development workshop was organised for drivers during March 2022.

Workshop on 'Fuel Conservation'

March 02-03,2022 (online) Two students of class 10 (I) Mr. Arkh Rishi Goyal and (II) Mr. Samarth Chaudhary from The Doon School, Dehradun joined the Biochemistry & Biotechnology Laboratory under Dr. Sunil K. Suman and Engines After Treatment lab under Mr. M.K. Shukla respectively to participate in the actual scientific work going on in the research laboratories. "

- CSIR-NBRI:
 - "CSIR-NBRI organized following Skill Development Training Programmes,
 - Home Gardening from 23-25th March 2022 (3-days). A total of 11 persons (5 male+6 female) participated.
 - Bonsai Technique, 28th March 2022, 19 persons (10 male+9 female) participated.
 - Dehydrated Floral Craft, 29th March 2022, 11 persons (4 male+ 7 female) participated.
 - Under JIGYASA programme Dr. Dr. Aditi Gupta, Senior Scientist CSIR-NBRI has delivered following two lectures,
 - The secret life of plants: Lessons for climate-smart agriculture, on 04.03.2022, at Kendriya Vidyalaya Barabanki. Approx. 110 students of XI and XII class and Principal, teachers were participated in the event.
 - Climate-smart agriculture and their prospects in future, on 09.03.2022, at Kendriya Vidyalaya Barabanki, approx. 70 students of XI and XII class and principal, teachers were participated in the event.
 - Under JIGYASA programme Dr. Vinay Kumar Sahu organized science game activity for students of Kendriya Vidyalaya Barabanki on 09.03.2022."
- CSIR-NGRI held the fifth edition of Advanced Training Program on Analytical Geochemistry'-A CSIR-Integrated Skill Initiative Program during 7 to 16 March, 2022. Thirty Seven Ph.D students programs have attended the training from all corners of the country.

Major conferences, seminars/webinars organized

- CSIR-NIScPR organized a National Seminar on Science Communication. Prof K. VijayRaghavan, Principal Scientific Adviser to Govt. of India, Dr Shekhar C. Mande, Director-General, CSIR, Prof. Ranjana Aggarwal, Director, CSIR-NIScPR, Dr Sharmila Mande, Chief Scientist, TCS Research, Prof Venugopal Achanta, Director, CSIR-NPL were among the noted speakers and guests at the seminar. The Seminar was organized in hybrid mode at the CSIR-NPL auditorium, New Delhi and its central theme was "Nurturing Science Communication – Motivating Science Communicators". Fifteen institutions engaged in science communication came together on a single platform to share their views and ideas for strengthening the science communication efforts.
- CSIR-4PI, Bengaluru along with GBPNIHE, Kullu and District Disaster Management Authority, Kullu, HP, organized International Conference on

Extreme Weather Events under Changing Climate (ICEWECC-2022) from 10th-11th March 2022 at GBPNIHE, Kullu in hybrid mode.

- CSIR-CDRI organized the 8th International Conference on Current Trends in Drug Discovery Research (CTDDR) 2022 during 12-14th March, 2022 on the theme: Ageing Associated Metabolic and CNS Disorders.
- CSIR-CFTRI organized a National Workshop on Bifidobacterial Probiotics: Supplementation through fermented foods on 24th March 2022.
- CSIR-URDIP organized a Workshop on Infringement Analysis and Remedies for TIFAC (Technology Information Forecasting and Assessment Council) Women Scientists & PGDP (Post Graduate Diploma in Patinformatics) scholars

Visit of high level dignitaries to CSIR Institutes/Laboratories

- CSIR-CBRI: Mr. Hans Jacob Frydenlund, Ambassador of Norway to India; Ms Marit Marie Strand, Counsellor for Cooperation, Norway Embassy; Dr Vivek Kumar, Senior Advisor, Norway Embassy and Dr Rajinder K Bhasin, Regional Manager Asia/Technical expert, Norwegian Geotechnical Institute (NGI) visited CSIR-CBRI, Roorkee on March 24, 2022 and interacted with scientists. Discussions were held on futuristic collaborations in the areas of common interests which includes newer cementitious materials, wastes utilization, positive energy buildings, tunnelling etc.
- CSIR-IHBT: Sh. Virender Kanwar, Hon'ble Minister of Rural Development, Panchayati Raj, Agriculture, Animal Husbandry & Fisheries, Government of Himachal Pradesh visited Himachal's first Tulip Garden on 06.03.2022
- CSIR-IICT: Shri Kishan Reddy, Hon'ble Union Minister for Culture and Tourism visited CSIR-IICT on 27 March 2022 as a part of Azadi ka Amrut Mahotsav. The Hon'ble Minister addressed the Science Leaders Conclave.

COVID related developments

- CSIR-CCMB tested 3549 COVID-19 samples and sequenced 4168 samples.
- CSIR-IIP tested 4398 samples and produced 200 litres of hand sanitizer.
- CSIR-NCL provided SARs-CoV2 (COVID-19) viral genome sequencing and variant identification service for samples obtained from hospitals in Pune region. Average number of samples sequenced per week is around 200.
- CSIR-NCL carried out environmental surveillance for monitoring of SARS-CoV-2 from Pune sewer sheds is ongoing activity with monthly 70-80 sewage samples and weekly reporting to Pune Municipal Corporation.

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

The following CSIR Success Stories Webinars were organized to mark the Azadi ka Amrut Mahotsav celebrations

Date	Title	Institute
07 March 2022	<p>Role of CSIR Labs in Entrepreneurship in India – Part 1</p> <p>https://www.youtube.com/watch?v=ggaPXO7Ib2Q&list=PLxOObh_wALetBmNpZMIIBpZSIMw1GDle2&index=5</p> <p>Role of CSIR Labs in Entrepreneurship in India – Part 2</p> <p>https://www.youtube.com/watch?v=ljw9s6HgUog&list=PLxOObh_wALetBmNpZMIIBpZSIMw1GDle2&index=4</p>	CSIR-CCMB
10 March 2022	<p>Diabetic Footwear: Research, Design and Development</p> <p>https://www.youtube.com/watch?v=3OqN7Oxy2Uo&list=PLxOObh_wALetBmNpZMIIBpZSIMw1GDle2&index=3</p>	CSIR-CLRI
30 March 2022	<p>Membrane Desalination Technology</p> <p>https://www.youtube.com/watch?v=Bts77DavI_k&list=PLxOObh_wALetBmNpZMIIBpZSIMw1GDle2&index=2</p>	CSIR-CSMCRI
31 March 2022	<p>Indigenous development of Bio-jet Fuel</p> <p>https://www.youtube.com/watch?v=LyKRIWFG780&list=PLxOObh_wALetBmNpZMIIBpZSIMw1GDle2&index=1</p>	CSIR-IIP

Any other item of significance

- CSIR-IHBT was awarded first prize in cut-flower and rare plants categories at Flower Show of State level Holi Mahotsav Palampur 2022. Tulips got the best exhibit flower of the show. The flower show was organized by State Department of Horticulture, Himachal Pradesh.

- The CSIR-CRRI with the help of Ministry of Steel and NITI Aayog have laid the first its kind road in Surat. The road is made of 100 percent steel slag. The road is more durable than conventional roads.
- At Wings India in Hyderabad, CSIR-NAL exhibited 1:3 scaled down model of High Altitude Platform (HAP). Powered by solar panels coupled with Li ion batteries, HAPs will fly at 20,000 kms, and are expected to herald new Era of communication. CSIR-NAL also demonstrated the Beyond Visual Line of Sight drones. These have anti-collision sensors that are useful in agriculture, to deliver supplies in remote locations.
- CSIR-NAL's HANSA-NG successfully completed sea level trials at Puducherry from 19th February to 5th March, 2022. The aircraft was flown to Puducherry covering 140 nautical miles in one and half hours at a cruising speed of 155 km/hr on 19th February 22. The objectives of sea level trials were to evaluate handling qualities, climb / cruise performance, balked landing, structural performance including positive & negative G, power plant and other systems performance.

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

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

Scientific and Industrial Research Organisation (SIROs)

Recognition/ Registration and renewal of SIROs

- 07 SIROs were granted recognition and 05 were granted registration certificates.
- 105 SIROs were granted renewal of recognition and 60 were granted renewal of registration certificates

Public Funded Research Institution (PFRIs)

Registration and Renewal of PFRIs

- 16 PFRIs were granted renewal of registration certificates.

DSIR Central Sector scheme 'Industrial Research and Development (IRD)' comprise of the four sub-schemes i.e (i) Promoting Innovations in Individuals, Start-ups and MSMEs (PRISM), wherein financial assistance is extended to independent innovators for converting innovative ideas into demonstrable working models / prototypes / processes that may take the form of new or improved products, processes, or services; and assist them to become incubatees / techno-entrepreneurs, (ii) Patent Acquisition and Collaborative Research and Technology Development (PACE), wherein support shall be provided to industries and institutions for development and demonstration of innovative technologies,(iii)Building Industrial R&D and Common Research Facilities (BIRD), wherein support shall be provided for creation of Common Research and Technology Development Hubs for use by entrepreneurs and industries and (iv) Access to Knowledge for Technology Development and Dissemination (A2K+) wherein studies and conferences in up-coming areas of industrial research shall be taken up besides undertaking a Technology Development and Utilization Programme for Women (TDUPW).

(i) Promoting Innovations in Individuals, Start-ups and MSMEs (PRISM) :
Successfully completed three projects.

(ii) Patent Acquisition and Collaborative Research and Technology Development (PACE) program:

The project "Development of controlled release (CR) formulation of Natural Highly purified Human Chorionic Gonadotropin (hCG)" was supported to M/s Sanzyme Pvt. Ltd in collaboration with Institute of Chemical Technology, Mumbai was completed in March, 2022.

(iii) Building Industrial Research & Development - Common Research Facilities (BIRD-CRF) program - The scheme focuses on creation of Common Research and Technology Development Hubs (**CRTDH**) for micro, small and medium enterprises.

- **CRTDH - CCMB, Hyderabad:** had organized a networking session on 4th March'22 at to interact with seasoned investor to understand the nuances of fund raising. Founders of MSMEs leveraged the opportunity to understand various opportunities to expand their operations. Also "Women's Day Celebrations" was organized on 8th March, 2022 to share the stories of some successful women in the area of Life-sciences & Healthcare.
- **CRTDH – IIT, Kharagpur** organized "Menstrual health and hygiene awareness week" In this direction awareness program was organised to make rural women aware about the importance of using sanitary napkins and menstrual hygiene. 200 leaflets were distributed in the villages. Also awareness about cervical cancer was spread among the

women. This programme was led by Community Health Workers (CHWs) and Gynaecologists.

- **CRTDH – CDRI, Lucknow:** conducted 2 days webinar for increasing awareness, sensitizing MSMEs, building capacity and skilling personnel on the topic “Tablet Manufacturing Aspects for MSME and Academic Research Projects” by an eminent speaker. The topics included were development of tablet formulations and its processes, packaging, stability, tablet coating, quality by design, common problems during scale up, productivity and cost, pharmaceutical equivalence and bioequivalence and export registration and regulatory concerns etc.

(iv) Access to Knowledge for Technology Development and Dissemination (A2K+) - The sub-scheme has four components viz: (i) ‘Technology Development and Utilization Programme for Women (TDUPW)’ (ii) ‘Support to Studies’ (iii) ‘Support to Events’ (seminars, workshops, conferences, exhibitions etc.) and (iv) Technology Development and Demonstration Programme (TDDP).

- **A2K+ Support to Events:** Department has supported two days national seminar under its A2K+ program to M/s. Jaipuria Institute of management, Lucknow. The national seminar on Ayush Healthcare Sector: Opportunities & Challenges was organized on 26 & 27th March, 2022. The two days seminar had Ayush Exhibition, Hackathon and exposition. The seminar was aimed to (i) create awareness about the scope of emerging Ayush healthcare sector, (ii) spread information, education and communication, (iii) promote quality Ayush healthcare Product and services and (iv) come up with solutions for burning problems in health sector in the country.
- **A2K+ Support to Studies:**
Four new studies initiated under the themes suggested by Inter Ministerial stakeholders:
 - i. Readiness and Interest of Organizations for Adopting Emerging Technologies like AI and ML by Rajiv Gandhi Institute of Petroleum Technology (RGIPT), Amethi.
 - ii. Machine Learning in Mechanics: Current Status and Future Prospects by Indian Institute of Technology, Tirupati
 - iii. “Developing a framework for assessing innovation readiness, research intensity and technology resilience of firms” to ABV-Indian Institute of Information Technology and Management, Gwalior.

- iv. “Integrating AI, AR and VR in learning models and their impact” by IIT, Hyderabad

Three new studies were initiated under the theme ‘Techno-commercial assessment of TRL-6 and above technologies developed in India in academia, research labs and industry’ in 3 different sectors:

- i. “Techno commercial assessment of TRL-6 and above technologies developed in India in academia, research labs and industry” by Indian Institute of Technology, Jammu (Sector- Material and Manufacturing).
- ii. Techno-commercial assessment of TRL-6 and above technologies developed in India in academia, research labs and industry by Technology Information, Forecasting and Assessment Council (TIFAC), New Delhi (Sector- Medical Sciences and Healthcare & Pharmaceutical and Chemicals)
- iii. Techno-commercial assessment of TRL-6 and above technologies developed in India in academia, research labs and industry by IIT Roorkee (Sector - Manufacturing & Electronics and Telecommunication)

- **A2K+ Technology Development and Utilization Programme for Women (TDUPW):**

- i. Program Division celebrated International Women’s Day on 8th March 2022 under the theme announced by the United Nations “Gender equality today for a sustainable tomorrow” wherein four women speakers of high accomplishments and great success in different fields of life enriched the participants with their thoughts on women empowerment. Head, TDUPW program during the welcome address shared the vision and objectives of TDUPW program towards women empowerment by creating economic opportunities through technology intervention. In keynote address Secretary, DSIR shared perspective of role of women in society and science.
- ii. A desk study report “Social & Economic contributions of Women in Manipur” catalyzed and prepared under a TDUPW program supported project was prepared and released.
- iii. Provision for accepting online application through service plus portal has been integrated with DSIR website.
- iv. One new project: "Dehydrated Flowers and Foliages for Women Empowerment" by CSIR-NBRI, Lucknow initiated.

- v. Two projects have been successfully completed under TDUPW program:
 - o Skill up-gradation of women potters in fabricating fine terracotta pottery products in Tirunelveli District Tamil Nadu undertaken by Centre for social Development, Kanyakumari District, TN.
 - o Technical Skill Training in the field of Assembly of Scientific instruments and their quality control undertaken by Instrument Design Development and Facilities Centre (IDDC), Ambala Cantt., Haryana.
- vi. 305 Women Beneficiaries were trained under various TDUPW projects towards technology up-gradation, product value addition, financial literacy and marketing during the month of March 2022.

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. 5334.88 Lakhs during March, 2022.
- Sale of items worth Rs.7057.64 Lakhs was realized during March, 2022.
- Successfully commercialized & billed sintered RADOME to RCI, Bangalore.

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 been assigned one new technology 'Indigenous Rain Gauge System' developed at National Institute of Ocean Technology (NIOT), Chennai and has licensed one technology on 'Potassium Humate from Lignite' to industry for commercial exploitation during March, 2022.
- NRDC has collected premia of Rs.10.00 Lakhs and royalty of Rs.52.7 Lakhs from respective technologies during March, 2022.
