

No. DSIR/MS/2017/05
Government of India
Ministry of Science & Technology
Department of Scientific & Industrial Research
MONTHLY SUMMARY FOR THE CABINET
(For the month of **May, 2017**)
(Part-I Unclassified)

**Ministry / Department : Department of Scientific and Industrial Research
(DSIR)**

MAJOR ACHIEVEMENTS DURING THE MONTH OF May, 2017:

DEPARTMENTAL ACTIVITIES

1. Industrial R&D Promotion Programme

Recognition/ Registration and renewal of In-house R&D in Industry

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

Scientific and Industrial Research Organization (SIROs)

Recognition/ Registration and Renewal of SIROs

- 05 SIROs were granted recognition and 03 were granted registration certificates.
- 86 SIROs were granted renewal of recognition and 27 were granted registration certificates.

Public Funded Research Institute (PFRIs)

Registration and Renewal of PFRIs

- 02 PFRIs were granted renewal of registration certificates.

Fiscal Incentives for Scientific Research

- 08 industries were approved for issuance of form 3 CM under Section 35(2AB) of IT Act under weighted tax deduction.
- 50 reports in form 3CL submitted to CCIT under Section 35(2AB) of IT Act for weighted tax deduction on industrial R&D involving a total amount of Rs.129338.67 lakhs.

AUTONOMOUS BODIES

1. Council of Scientific & Industrial Research (CSIR)

1.1 Developed New Gold Reference Standard 'Bharatiya Nirdeshak Dravya (BND 4201)' by CSIR-NPL, BARC and IGM

CSIR-NPL, New Delhi jointly with Bhabha Atomic Research Centre (BARC) and India Government Mint (IGM), a unit of Security Printing and Minting Corporation of India Ltd., Delhi have developed India's own standard gold bar which is 99.99% pure and weighs 20gm. It has been called Bharatiya Nirdeshak Dravya (BND 4201) which can be used to check the purity of gold biscuits, coins and jewellery. This means that there is no need to import gold bars to check the purity of ornaments. While the bars would be made by the IGM, technical aspects such as measurement would be done by the BARC and certifying the purity of the bars would be the responsibility of the CSIR-NPL.

1.2 CSIR - NAL Developed Airboat to help De-Weed Water Bodies

CSIR-NAL, Bengaluru has developed an airboat that can be deployed for the cleaning up of polluted water bodies. The airboat has air propulsion systems which push it forward and the power is generated from air instead of water to prevent the engine from getting jammed. The powerful propellers can easily push forward the floating weeds and plants to one corner of the water bodies and therefore ideal for cleaning of polluted lakes.

1.3 Developed High Strength Fly Ash based Geo-Polymer Concrete for Road Construction by CSIR-CBRI, Roorkee and NTPC-NETRA

CSIR-CBRI, Roorkee and NTPC-NETRA (NTPC Energy Technology Research Alliance) have jointly developed high strength fly ash based geo-polymer concrete for construction of road as per IRC (Indian Road Congress) specifications. The road first of its kind in India has been laid at CSIR-CBRI using fly ash generated by NTPC, Dadri. The geo-polymer based road will not require water for its curing as required by cement concrete road and also paves the way for bulk utilization of fly ash.

1.4 CSIR's Anti-Diabetic Ayurvedic Drug 'BGR-34' developed by CSIR-CIMAP and CSIR-NBRI, Lucknow

Anti-diabetic ayurvedic drug BGR-34, developed by CSIR-CIMAP, Lucknow and CSIR-NBRI, Lucknow has found a place among the 20 top branded drugs manufactured by multinational pharma companies, according to a survey conducted by the All Indian Origin Chemists and Distributors (ALOCD). This is for the first time that an ayurvedic drug has been placed at the 14th rank in the drugs list dominated by the allopathic medicines.

1.5 CSIR-NCL Developed New Bone Graft Substitutes

CSIR-NCL, Pune has developed two new bone graft substitutes, which would better augment and regenerate bones graft substitutes, regenerate bones lost due to any disease or injury. These will also be used for persons with congenital defects.

1.6 CSIR launched 'TECHINDIACSIR' Portal

CSIR has launched a new technology portal 'techindiacsir' to show-case its technologies, knowledge base, skills and services. The portal describes success stories of products and Intervention based on CSIR technologies. The listings are classified laboratory-wise as well as industrial sector-wise.

1.7 CSIR-CDRI Found Molecule to Reduce Body Weight

CSIR-CDRI, Lucknow has found that curcumin, an active ingredient in turmeric, can be chemically tweaked to make a molecule that could potentially prevent bodyweight gain and also to lower the cholesterol. A new derivative has been prepared by chemically modifying curcumin, whose absorption is several folds higher in a living system than of curcumin itself. This derivative seems to be a very promising molecule.

1.8 Setting up of Tungsten Extraction Pilot Plant at CSIR-NML

A Tungsten Extraction Pilot Plant has been setup at CSIR-NML, Jamshedpur which has been sponsored by Defense Research & Development Organization (DRDO) through Defense Metallurgical Research Laboratory (DMRI), Hyderabad. Tungsten is strategic metal and finds critical application in defense, mining, communications and various other sectors.

1.9 Key Achievements of CSIR Highlighted

Union Minister for Science & Technology and Earth Sciences and Vice President CSIR, Dr. Harsh Vardhan addressed media on the Key Initiatives and Achievements of the Ministries, CSIR and DSIR during the last three years.

1.10 CSIR Intellectual Property

The Patent position for this month is given below:

Patents Filed		Patents Granted	
India	Abroad	India	Abroad
29	23	8	31

1.11 National Technology Day Celebrations

The National Technology Day was celebrated in constituent laboratories of CSIR through seminars, exhibitions, invited expert Lectures, invited talks, etc.

1.12 Significant Events

(a) Conferences, Workshops Organized

- (i) CSIR-CCMB, Hyderabad, has organized a Medical Student Research Training (MedSRT) programme to enhance academic and technical skills of medical students in modern and clinical research.
- (ii) CSIR-IIP, Dehradun has organized: (i) a two day workshop on Bio fuels at CSIR Science Centre, New Delhi (ii) a two-day Symposium on "Shaping

the Energy Future: (SEFCO-2017)”. SEFCO-2017 provided forum for exchange of information, knowledge, experience and networking opportunities in the field of energy efficiency, energy conversion and technologies and alternate fuels for upgrading sources of energy for future generations in this perspectives with industry partnership. As a part of the event CSIR-NAL showcased its technologies and engineering design capabilities followed by one to one interaction with industry representatives.

(b) Agreements/Memorandum of Understanding Signed

- (i) CSIR, New Delhi has signed an MoU with Confederation of Indian industry (CII) to form “Make in India Technology Development and Deployment Venture”. The MoU was signed in the presence of Dr. Harsh Vardhan, Hon’ble Minister for Science &Technology and Earth Sciences and Vice President CSIR.
- (ii) CSIR has signed an MoU with the Mauritius Oceanography Institute for research and education in marine sciences and technology.
- (iii) CSIR-CMERI, Durgapur has signed an MoU with NIT, Patna for undertaking collaborative R&D activities.
- (iv) CSIR-IGIB, New Delhi has inked a deal with the All India Institute of Medical Sciences (AIIMS), Delhi for a collaborative research in the areas of rare diseases and application of genomics to aid clinical decisions.
- (v) CSIR-NGRI, Hyderabad has signed an agreement with NRDC for marketing of the inventions, patents, formulations and know-how processes developed by the institute.

(c) Honour & Awards

Dr. Dinesh Jagadeesan, Scientist, CSIR-NCL, Pune has been awarded Indian National Science Academy (INSA) Medal for Young Scientist, 2017 in the area of Chemical Sciences.

2. Consultancy Development Centre (CDC)

2.1 Plan Projects

Content Development for the Course-Certificate Programme in Technology Management: The agency M-Power Energy India (P) Ltd. has submitted the Inception Report. The Inception Report has been accepted by the Project Review Committee.

2.2 Funded Projects

Study on “Need based interventions for better marketability of Handicraft Clusters in Uttar Pradesh (Wooden crafts in Nagina and Zari/ Zardozi crafts in Varanasi) for Development Commissioner (Handicrafts) – Inception Report Part II including Need Assessment Report and format of Questionnaire was finalized in the Project Review Committee Meeting held in May, 2017 for submission to Development Commissioner (Handicrafts).

PUBLIC SECTOR ENTERPRISES

1. National Research Development Corporation (NRDC)

- National Research Development Corporation (NRDC) has been assigned ten technologies by CSIR-CSMCRI, Bhavnagar and seven technologies by CSIR-CSIO, Chandigarh. The details are given below :

S No.	Technologies Assigned by CSIR-CSMCRI, Bhavnagar
1	Preparation and applications of non-hazardous brominating reagent
2	Preparation of industrially important organo-bromo compounds using brominating reagent
3	Cultivation technology for commercial scale farming of <i>Kappaphycus alvarezii</i> , a principal source of κ -carrageenan
4	Processes for the production of seaweed liquid fertiliser from brown seaweed
5	Production of food grade agar from cultivated <i>Gracilaria edulis</i> / <i>G. debilis</i>
6	Integrated processes for simultaneous production of sap and κ -carrageenan from fresh seaweed
7	Continuous electro-deionization based system for production of ultrapure water
8	Preparation of low sodium salts of botanic origin
9	Preparation of molecular biology grade agarose from Indian seaweed suitable for nucleic acid separation
10	A cost-effective process for production of high purity solar salt in solar salt works
	Technologies Assigned by CSIR-CSIO, Chandigarh
1	Development of Water Quality Monitoring Watchdog Pod
2	“VIBHRA: Virtual Intelligent Techniques for Rehabilitation of Persons with Motor Disability”
3	Production Technology of Plastic Aspheric Precision Lens for Indirect Ophthalmoscopy (GAP 0295)
4	Postural Stability Assessment System
5	Earthquake Warning System for Metro Rail
6	Air assisted electrostatic sprayer (AAESS)
7	Low Cost Oxygen Monitor (LCOM)

- NRDC has licensed three technologies and collected a premia of Rs.6.50 Lakh from licensing of these technologies during May, 2017. The details are as given below :

Sr. No.	Licensee	Technology	Rs
1	M/s.Raja G Enterprises, Salem	A Micronutrient Composition for Cardamom and a process for its preparation	2,50,000
2	M/s.Linga Chemicals, Madurai	A Micronutrient Composition for Cardamom and a process for its preparation	2,00,000
3	M/s.Linga Chemicals, Madurai	A Micronutrient Composition for pepper and a process for its preparation	2,00,000
		Total	6,50,000

2. Central Electronics Limited (CEL)

Central Electronics Limited continued its activities in the area of solar photovoltaic systems, electronic gadgets for Railway and other electronic equipment/components etc. The company has manufactured electronic components/systems/ SPV products worth Rs.1254.22 Lakhs and realized sale of such items worth Rs.1204.52 Lakhs during May, 2017.
