

No. DSIR/MS/2017/04
Government of India
Ministry of Science & Technology
Department of Scientific & Industrial Research
MONTHLY SUMMARY FOR THE CABINET
(For the month of **April, 2017**)
(Part-I Unclassified)

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

MAJOR ACHIEVEMENTS DURING THE MONTH OF APRIL, 2017:

DEPARTMENTAL ACTIVITIES

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

- 17 in-house R&D units of industries were granted recognition as well as registration certificates.
- 132 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**

- 03 SIROs were granted recognition and 02 were granted registration certificates.
- 86 SIROs were granted renewal of recognition and 33 were granted registration certificates.

**Public Funded Research Institute (PFRIs)
Registration and Renewal of PFRIs**

- 01 PFRI was granted registration certificate.
- 07 PFRIs were granted renewal of registration certificates.

AUTONOMOUS BODIES

1. Council of Scientific & Industrial Research (CSIR)

1.1 CSIR-CCMB : Developed Non-Invasive Early Test for Pregnancy in Cattle

CSIR-CCMB, Hyderabad has developed an ELISA based kit for detection of pregnancy tests in cattle by using a sample of dung. The newly developed method can reveal the pregnancy at an early stage as compared with existing methods. CSIR-CCMB has identified a biomarker, a metabolite, which is found in high concentrations in dung within 3-4 weeks of pregnancy. When

the dung sample is tested using the ELISA method, there is a colour change to indicate presence of the specific metabolite. Further, the paper-based microfluidic kit being developed is constructed so as to enable reading out the result. Timely detection of pregnancy in cows and buffaloes is important to maximize reproduction and milk production.

1.2 CSIR-CLRI & CSIR-CSMCRI : Method to Convert Tannery Residual Salt

CSIR-CLRI, Chennai and CSIR-CSMCRI, Bhavnagar have developed a new economical method that converts waste residual salt into saleable raw material. The residual salt produced by tanneries was stocked near the Common Effluent Treatment Plant (CETP) to prevent untreated effluents from polluting the water bodies. It is a mixture of sodium chloride and sodium sulphate produced by tanneries (used during rawhide stage) which poses a major environmental hazard. A pilot plant is being set up at salt farms in Bhavnagar after successful lab testing trials.

1.3 CSIR-NEIST : New Iris (Flower) Species Discovered

CSIR-NEIST, Jorhat has discovered IRIS (flower) species in Manipur which is annually offered during the new year-Cheiraoba in April. The flower is known as Kombirei in local tongue. This mauve-blue flower, *Iris Laevigata* Fisch found in the marsh areas of Manipur has flowering period of about 15 days in the first half of April every year.

1.4 CSIR-NBRI & Kumaun University : Process to Convert Wild Legume Into Edible Dal

CSIR-NBRI, Lucknow and Kumaun University, Nainital have jointly found a method to reduce condensed tannins in a wild variety of legume crop called Winged Beans (*P. tetragonolobus*), also called Goa beans making its grains edible and nutritive.

1.5 CSIR-NBRI : Developed CSIR-NBRI App for Information on Air Pollution

CSIR-NBRI, Lucknow has developed an android-based mobile application, ENVIS-CSIR-NBRI Green Planner, for information on different plants that reduce air pollution. The application, which is available for free on Google Play, offers a green planner for academics, government officials, students and common public.

1.6 CSIR-CFTRI : Launched White & Brown Teff Grain varieties to suit Indian Conditions

CSIR-CFTRI, Mysuru has launched its latest superfood, called Teff. It is an agro-technology which suit Indian conditions for both white and brown varieties of Teff grains. Teff has well-balanced protein with all essential amino acids, and is particularly rich in albumin proteins, which is a vegetarian equivalent of egg whites.

1.7 CSIR Intellectual Property

The Patent position for this month is given below:

Patents Filed		Patents Granted	
India	Abroad	India	Abroad
10	10	6	5

1.8 Significant Events

(a) Conferences, Workshops Organized

- (i) CSIR-IIP, Dehradun has organized: (a) training programme on 'Indian Road Traffic and Energy Efficiency – Challenges and Opportunities' for Officers of Ministry of Road Transport and Highways (MORTH), New Delhi for four days; and (b) 4th International Scientific Conference on Material Cycles and Waste Management in collaboration with CSIR-CBRI, Roorkee, Japan Society of Material Cycles and Waste Management, Korean Society of Waste Management, Indian Institute of Technology, Delhi, and International Society of Waste Management, Air & Water at India Habitat Centre, New Delhi.
- (ii) CSIR-NEERI, Nagpur jointly with Maharashtra Pollution Control Board (MPCB) and IIT-Bombay has organized a two-day workshop on air quality in ten cities of Maharashtra with thrust on defining priorities, removing obstacles and finding solutions to the pollution problems.
- (iii) CSIR-NAL, Bengaluru has organized one day Industry Meet jointly with NALTech & SIATI was the giant step taken by the CSIR-NAL to reach out to industries. CSIR-NAL offered industries various business opportunities in partnership and collaborative mode and also creating start-ups/incubators 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-CLRI, Chennai has signed an MoU with All India Skins and Hides Merchants Association to initiate the trials of the technology sodium chloride and sodium sulphate found in waste in common effluent treatment plants (CETP)".
- (ii) CSIR-CSIO, Chandigarh has signed an MoU with NRDC for commercialization of its Intellectual Property (IPs) and Technologies. The agreement is said to facilitate the marketing of inventions/innovations, patents, formulations, know-how/process developed by CSIR-CSIO for a mutual transfer of its technologies to various industries.
- (iii) CSIR-IIP, Dehradun has signed MoU with: (i) ONGC Energy Centre Trust, New Delhi on 'Thermochemical Hydrogen Generation through Partially Open-Loop SI Process Involving H₂S Incineration: H₂S Incineration to SO₂; and (ii) Institute of Bioresources and Sustainable Development (IBSD), Imphal, Manipur on Loktak lake biomass (para-grass) based biorefinery for

fuels and chemicals: Value addition through biotechnology and thermochemical platform.

(c) Honour & Awards

- (i) CSIR-CLRI, Chennai has received FICCI R&D Award - 2017 for developing Waterless Chrome technology.
- (ii) Dr. Anil Koul, Director, CSIR-IMT, Chandigarh has been awarded 'Sun Pharma Science Foundation Award' (also known as 'Ranbaxy Research Award') for the year 2017 for his role in discovery and development of a novel drug against resistant Tuberculosis- SIRTUOTM.
- (iii) Dr. Rajeev Garg, Scientist, CSIR-CRRI, New Delhi and Associates have been jointly awarded Innovation Award of the year 2014 by NRDC, New Delhi for their Innovation entitled 'Design and Development of an Indigenous Mobile Bridge Inspection Unit (MBIU)'.

2. Consultancy Development Centre (CDC)

- 2.1 Software feature enhancement of CDC website and conversion of same in Hindi : The agency has completed Responsive Feature in CDC Website which was reviewed and accepted by Project Review Committee (PRC) .
- 2.2 Study on “Status of Languishing Handicrafts in Clusters of Agra & Barabanki in the state of Uttar Pradesh (UP) and strategy for the revival by Development Commissioner (Handicrafts), Ministry of Textile : Final report has been submitted Development Commissioner (Handicrafts).

PUBLIC SECTOR ENTERPRISES

1. National Research Development Corporation (NRDC)

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

Sr. No.	Technology	Name of Lab / University
1	Head-Up Display (HUD)	CSIR-CSIO
2	Bore Sighting tool	CSIR-CSIO
3	Night Driving Filter	CSIR-CSIO
4	Ferro Fluid based liquid cooling system	CSIR-CSIO
5	Myoelectric arm	CSIR-CSIO
6	Surgical microscope for eye surgery	CSIR-CSIO
7	Electronic Knee	CSIR-CSIO
8	Iodine Value Meter	CSIR-CSIO
9	Rice Grading System	CSIR-CSIO
10	Portable energy audit tool	CSIR-CSIO

- NRDC has licensed four technologies and collected a premia of Rs.35.10 Lakh from licensing of these technologies during April, 2017. The details are as given below :

Sr. No.	Licensee	Technology	Rs
1	Labh & Sons, Delhi	Evaporative cooling Apparatus ressistance to vector breeding	10,000
2	Ridhi Sidhi Medicare	Ayush-82	1000000
3	Ridhi Sidhi Medicare	Ayush-SG	1000000
4	Ridhi Sidhi Medicare	Anti-Arthritis Herbal Formulation	1500000
		Total	3510000

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.506.85 Lakhs and realized sale of such items worth Rs.317.43 Lakhs during April, 2017. The company has bagged Hindustan Ratan PSU Award in the category of 'Best Turnaround Strategy' in April, 2017.
