No. DSIR/MS/2018/05

Government of India Ministry of Science & Technology Department of Scientific & Industrial Research MONTHLY SUMMARY FOR THE CABINET (For the month of **May 2018**) (Part-I Unclassified)

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

MAJOR ACHIEVEMENTS DURING THE MONTH OF MAY, 2018:

DEPARTMENTAL ACTIVITIES

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

- 14 in-house R&D units of industries were granted recognition as well as registration certificates.
- 95 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 SIRO were granted recognition as well as registration certificate.
- 20 SIROs were granted renewal of recognition and 08 were granted renewal of registration certificates.

Public Funded Research Institution (PFRIs) Registration and Renewal of PFRIs

• 02 PFRI were granted renewal of registration.

AUTONOMOUS BODY

1. Council of Scientific & Industrial Research (CSIR)

1.1 Hon'ble Vice-President of India visited CSIR-IIIM

The Hon'ble Vice-President of India, Shri M. Venkaiah Naidu visited CSIR-IIIM, Jammu and addressed the scientists and other staff. He said that the "quality of research in the country's research institutions determines the pace of a nation's development. If we want to transform our country into a knowledge economy, into a country that harnesses the power of knowledge to transform people's lives, we must focus more sharply on research, which is the springboard of human progress". Suggesting that there should be regular interaction between the research institutes across the country, he asked the scientists to develop drugs to cure diabetes and prevent diseases like Malaria, Chikungunya and Dengue etc. The Vice-President also visited research facilities of the Institute.

1.2 CSIR-CSIO : Developed Smart Electricity Meter

CSIR-CSIO, Chandigarh has developed a Smart Electricity Meter which is first of its kind, indigenous and self-monitoring. The new meter costs five times less than the existing meters and is best suitable for Indian climates. This meter gives a real-time hourly reading as well. It has the provision to record, import and export (bi-directional) energy using sophisticated industrial protocols. The technology has been transferred to M/s Atsuya Technologies, Mumbai.

1.3 CSIR-CSMCRI : Process Developed to Convert Sugar Waste to Fertiliser

CSIR-CSMCRI, Bhavnagar has developed a process to separate the main source of pollution- (potash) and biodegradable organic matter from distillery spent–wash or vinasse. This technology will not only help distilleries to comply with the Central Pollution Control Board's mandate of zero liquid discharge (ZLD) but also meet, up to a tenth of India's potassium based fertilizer requirements, now entirely met through imports. The process yields 10 tonnes of complex organics, 2.5 tonnes of potassium nitrate and 75,000-80,000 litres of recycled water from one lakh litre of spent-wash.

1.4 CSIR-NCL : TB drug breakthrough

CSIR-NCL, Pune has developed a new drug with improved stability to treat tuberculosis (TB) in association with the School of Chemistry, University of Hyderabad. The research was done to ensure a clear way of developing a stable formulation of 4-FDC (4 drugs fixed dose combination) for treating tuberculosis. The pharmaceutical cocrystal of INH namely, INH-Caffeic acid and INH-Vanillic acid, were used to improve the stability of 4-FDC.

1.5 CSIR-IICT: Process Developed to Convert Water Hyacinth into Manure

CSIR-IICT, Hyderabad along with Khar Energy Optimizers using a process of Accelerated Anaerobic Composting (AAC) generated wealth out of waste by converting water hyacinth into manure for farming. Around 100 tonne of useful organic soil conditioner has been prepared, which can be used for farming with water hyacinth removed from Kapra Lake, Hyderabad.

1.6 CSIR-IIIM : Aroma Mission Launched

CSIR-IIIM, Jammu launched CSIR-Aroma Mission in Leh for socioeconomic upliftment of farmers and development of aroma industry in J&K. The mission envisages cultivation of different location-specific, high value aromatic cash crops over 5,000 hectares of area across the country. The mission was also launched in Sonitpur district, Assam.

1.7 CSIR Intellectual Property

Patents Filed		Patents Granted	
India	Abroad	India	Abroad
22	22	11	11

The Patent position for this month is given below:

1.8 Honors & Awards

- (i) Dr. Sakya Sen of CSIR-NCL, Pune has received INSA Young Scientist Medal, 2018.
- (ii) Dr. Shakeel Ahmed, Dr. Srinagesh, Dr. Subash Chandra, Dr. Nepal Chandra Mondal and Dr. Sahebrao Sonkamble, Scientists, CSIR- NGRI, Hyderabad have received National Geo Science Award for the year 2017 instituted by the Ministry of Mines.

1.9 Significant Events

(a) Conferences, Workshops Organized

- (i) CSIR and its constituent Laboratories celebrated National Technology Day with invited lectures, exhibitions, open day etc.
- (ii) CSIR-CFTRI, Mysuru has organized an International workshop on 'Nutriconcept: Innovative food and innovative food concepts and technologies for global nutrition and business' in association with the University of Turku and Natural Resource Institute, Finland for two days.
- (iii) CSIR-CMERI, Durgapur has organized 10 days training programme on Hands-on-Skill Development Manufacturing & Assembly of Small Tractor for the students of NHIT, Durgapur.
- (iv) CSIR-IIIM, Jammu laboratories have organized: Swachhata Pakhwada Diwas as a part of the Swaccha Bharat Mission of the Government of India.
- (v) CSIR-IIP, Dehradun has conducted a three-day summer residential programme for science students of Kendriya Vidyalaya under the Jigyasa programme of CSIR.

(b) Agreements/Memorandum of Understanding Signed

- (i) CSIR-CLRI, Chennai has signed an MoU with Tirupur Corporation, Tamil Nadu for the preparation of Detailed Project Report for building a biocompressed Natural Gas Bio-Gas (bio-CNG) bottling plant where organic degradable wastes generated in the city would be converted into CNG that could be used to run automobiles.
- (ii) CSIR-IICT, Hyderabad has signed an MoU with: (a) Greater Hyderabad Municipal Corporation for implementation of novel high rate biomethanation technology that is a sustainable and remunerative option for waste management for the generation and usage of biogas for combined heat and power (CHP) applications; (b) National Institute for Research in Tuberculosis (NIRT), Chennai for collaboration in TB drug discovery from

synthetic and Natural resources and to extend the instrumentation facility mutually thereby publishing papers and generating IPR benefitting both the institutions; and © M/s.Ahuja Engineering Services Pvt. Ltd for the implementation of CSIR-IICT's AGR Technology and demonstration of the Technology as a sustainable and remunerative option for waste management through the generation.

PUBLIC SECTOR ENTERPRISES

1. National Research Development Corporation (NRDC)

NRDC has been assigned technologies on 'Non-invasive quantitative estimation of – (i) Billirubin in human body (ii) Haemoglobin in human body (iii) Oxygen content in human body by S.N. Bose Institute of Basic Sciences, Kolkata. NRDC has also licensed a technology on 'Bti based Mosquito Larvicide' to M/s Maa Bhagwati Biotech, Wardha, M/s Arghos International, Kolkata and M/s Som Phytopharma, Hyderabad. NRDC has collected a premia of Rs. 30.00 Lakh from licensing of this technology during May, 2018. NRDC has also collected a royalty of Rs. 0.70 Lakh during May, 2018 on account of commercialization of technologies assigned to NRDC by public funded research organizations and others.

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 manufactured electronic components/systems/ SPV products worth Rs.1587.18 Lakhs and realized sale of such items worth Rs.1596.40 Lakhs during May, 2018.
