

No. DSIR/MS/2018/09
Government of India
Ministry of Science & Technology
Department of Scientific & Industrial Research
MONTHLY SUMMARY FOR THE CABINET
(For the month of **September 2018**)
(Part-I Unclassified)

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

MAJOR ACHIEVEMENTS DURING THE MONTH OF SEPTEMBER, 2018:

DEPARTMENTAL ACTIVITIES

1. Industrial R&D Promotion Programme

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

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

Scientific and Industrial Research Organization (SIROs)

Recognition/ Registration and Renewal of SIROs

- 01 SIRO was granted recognition as well as registration certificate.

Public Funded Research Institution (PFRIs)

Registration and Renewal of PFRIs

- 09 PFRIs were granted renewal of registration.

Fiscal Incentives for Scientific Research

- 05 industries were approved for issuance of form 3 CM under Section 35(2AB) of IT Act under weighted tax deduction.
- 57 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.55357.96 Lakhs.

AUTONOMOUS BODY

1. Council of Scientific & Industrial Research (CSIR)

1.1 CSIR Celebrated Foundation Day

Dr. Harsh Vardhan, the Hon'ble Minister of Science & Technology and Earth Sciences, Environment, Forest and Climate Change and Vice President, CSIR was the Chief Guest on CSIR's 76th Foundation Day function at Vigyan Bhawan, New Delhi on 26th September, 2018. While addressing the gathering he apprised that CSIR has been ranked ninth amongst India's 1207 autonomous public research and development organizations and has opened avenues for people by developing several technologies. He informed about the

diversified research areas of CSIR laboratories. Dr Harsh Vardhan urged former scientists of CSIR to join in a national mission and resolve to address the unsolved problems of the country through science.

The Foundation Day Lecture on 'Artificial Intelligence and Humanity' was delivered by Dr S.K. Saraswat, Member, NITI Aayog.

1.2 Awards

Prof Ashutosh Sharma, DG, CSIR announced the prestigious Shanti Swarup Bhatnagar awards for Science & Technology for the year 2018 during the CSIR foundation day function. Dr Saraswat, Member, NITI Aayog gave away the CSIR Awards on the occasion namely, 5 CSIR Technology Awards for the year 2018, one G.N. Ramachandran Gold Medal for Excellence in Biological Science and Technology for the year 2018, 3 CSIR Young Scientists Award for the year 2018, 5 CSIR Innovation Awards for School Children for the years 2018, 1 Diamond Jubilee Technology Award each for the years 2015 & 2016 and 1 Award for S&T Innovation for Rural Development for the year 2016.

1.3 CSIR-CCMB : Launched Website for Atal Incubation Centre (AIC)

CSIR-CCMB, Hyderabad has started a website on Atal Incubation Centre (AIC-CCMB). The AIC website will be a platform for giving the public an idea of the work done in the area of biotechnology and life-sciences startups. The website features information on facilities, partners and the companies incubating with CSIR-CCMB, Hyderabad.

1.4 CSIR-NEERI : Developed Air Purification Device Called WAYU

CSIR-NEERI, Nagpur has developed a device called Wind Augmentation Purifying Unit (WAYU) that has one fan and filter for sucking and removing particulate matter. It also incorporates two ultraviolet lamps and 500g of activated carbon charcoal coated with special chemical titanium dioxide. The device is capable of purifying air in an area of 500 sqm. Dr. Harsh Vardhan, the Hon'ble Union Minister of Science & Technology and Earth Sciences inaugurated the device for use at traffic junctions at ITO intersection and Mukarba Chowk in Delhi.

1.5 CSIR Intellectual Property

The Patent position for this month is given below:

Patents Filed		Patents Granted	
India	Abroad	India	Abroad
16	15	10	12

1.6 Honors & Awards

(a) Dr. Shanti Swarup Bhatnagar Prizes for Science & Technology-2018

The following awards were announced during the CSIR Foundation Day Celebrations:

- (i) Biological Sciences

Dr. Ganesh Nagaraju, Indian Institute of Science (IISc), Bengaluru and Dr. Thomas Pucadyil, Indian Institute of Science Education and Research (IISER), Pune.

(ii) Chemical Sciences

Dr. Rahul Banerjee and Dr. Swadhin Kumar Mandal, Indian Institute of Science Education and Research (IISER Kolkata), Mohanpur.

(iii) Earth, Atmosphere, Ocean and Planetary Sciences

Dr. Madineni Venkat Ratnam, National Atmospheric Research Laboratory, Tirupati and Dr Parthasarathi Chakraborty, CSIR-NIO, Goa.

(iv) Engineering Sciences

Dr. Amit Agrawal and Dr. Ashwin Anil Gumaste, Indian Institute of Technology Bombay, Powai, Mumbai.

(v) Mathematical Sciences

Dr. Amit Kumar, Indian Institute of Technology, Delhi and Dr. Nitin Saxena, Indian Institute of Technology, Kanpur.

(vi) Medical Sciences

Dr Ganesan Venkatasubramanian, National Institute of Mental Health and Neurosciences, Bengaluru.

(vii) Physical Sciences

Dr. Aditi Sen De, Harish-Chandra Research Institute, Allahabad and Dr. Ambarish Ghosh, Indian Institute of Science, Bengaluru.

(b) CSIR Technology Awards -2018

Following were the awards given away on the occasion of CSIR Foundation Day:

(i) The Technology Award for Life Sciences:

Awarded to CSIR-IMTECH, Chandigarh for developing 'Clot Busters for Thrombolytic Therapy'.

(ii) The Technology Award for Physical Sciences including Engineering:

Awarded to CSIR-IICT, Hyderabad for 'Technology Transfer for Commercial Plants of 4000 MT per year of para-tert-butyltoluene and 3000 MT per year of para-tert-butylbenzoic acid'.

(iii) The Technology Award for Innovation:

Awarded to CSIR-CGCRI, Kolkata for 'An Innovative Technology for Manufacturing of Specialty Material for Immobilization of High Level Radioactive Waste'.

- (iv) The Technology Award for Business Development and Technology Marketing: Awarded jointly to CSIR-CIMFR, Dhanbad and CSIR-IIP, Dehradun for 'Significantly Enhancing the Business and Marketing of their respective Knowledgebase'.
- (v) The "Certificate of Merit" under the CSIR Technology Award
- CSIR-CIMAP, Lucknow has won the "Certificate of Merit" under the CSIR Technology Awards 2018 in the category of Life Sciences for 'Ocimum Based Technological Interventions to Facilitate Industrial Growth, Societal Health and Rural Prosperity'.
 - CSIR-CIMFR, Dhanbad has won the "Certificate of Merit" for 'Mine Transport Surveillance System' and CSIR-CSIO, Chandigarh has won the "Certificate of Merit" under the CSIR Technology Awards 2018. in the category of Physical Sciences including Engineering for 'Aviation Cockpit Display Validation Platform'.
 - CSIR-IICT, Hyderabad has has won the "Certificate of Merit" under the CSIR Technology Awards 2018 in the category of Innovation for 'Innovative, Low cost Membrane Systems as Import Substitutes for Production of Medical Grade Water and Resource Recovery'.

(c) CSIR Young Scientists Award -2018

The CSIR Young Scientist Awards (YSA) are given to scientists below the age of 35 years in 5 disciplines of Science & Technology (S&T) with the objective to recognize in-house excellence. In the year 2018, three scientists were selected for Young Scientist Awards, one from Chemical Sciences and two from Engineering sciences. Following are the awardees:

(i) Chemical Sciences:

Dr. Naveen Kumar Chandrasekaran, CSIR-CECRI, Karaikudi;

(ii) Engineering Sciences:

Dr. Abhiram Hens, CSIR-CMERI, Durgapur and Dr. Niraj Kumar, CSIR-CEERI, Pilani.

(d) CSIR Innovation Award for School Children- 2018

The following students have been awarded the prizes as given below:

(i) First Prize:

Shivani Kumari, Puja Kumari, Kumari Nandini Singh, Gyan Mishra and Chandra Mohan of Prarambhika School, Postbalua Ahemadpur, Maner, Patna for developing Sustainable load distributor.

(ii) Second Prize

- Chandra Mohan, Aman Kumar, Abhishek Kumar, Rohit Raj and Vishal Kumar of Prarambhika School, Postbalua Ahemadpur, Maner, Patna for

developing Re-enforcement of roofs and road by homemade slab; and

- Rohan Gupta and Kushagra Kasturia of DAV Public School, Sreshtha Vihar, Delhi for developing Dream toilet with automatic cleaning & flush.

(iii) Third Prize

- Gyanig Kumar of DAV Public School Chandrasekharapur Bhubaneswar for developing V-bikes;
- Shashank Bewoor and Pavan S. Byahatti of Dr. GV Joshi Rotary English Medium High School and Govt. Sr Bommai HS Gokul, Hubballi, Karnataka for preparing a method using *Acacia pycnantha*'s ripen pod as a nature's friendly liquid cleaning agent for stain removal; and
- Ravi Prakash of Guru Gobind Singh Public School Bokaro steel city, Jharkhand for developing Multi-purpose water filtration technique.

(iv) Fourth Prize

- Aditya Chauhan and Anmol Rathi of Bhavan's R.K. Sarva Vidya Mandir, Raipur, C.G for developing a Scientific Approach to Clean and Prevent Salivary Ejections;
- Swastik Prajapati, Gaurav Kumar Mehto and Yaman Kumar of Govt. Multi-Purpose Hr. Sec. School, Dayalband, Bilaspur for developing Moksha- a method for reducing river pollution;
- Ishnoor Singh of Delhi Public School, Gurgaon, Haryana for developing Ignis home automation system; and
- V. Dhanush Kumar of Govt. Hr. Sec. School, Kotagiri, Tamilnadu for developing a hearing aid.

(v) Fifth Prize

- S. Shareen, T. Vibishinil and M. Ellakiya Lakshmi of Kaligi Rnaganathan Montfordmat Hr. Sec. School, Perambur Chennai for developing Automatic Dug/bore well Irrigation System;
- R. Yuvadhanshini and G. Pavithra S. Kuzhalini of Kaligi Rnaganathan Montfordmat Hr. Sec. School, Perambur Chennai for developing Automatic Electric Power – Saving-On/Off Highways' Street Light; and
- Shreya Raju, Om Shelat, Ira Sidhu and Soumya Juneja of Shiv Nadar School, Gurgaon, Haryana for developing Esplanade-a smart traffic management system.

(e) **G. N. Ramachandran Gold Medal for Excellence in Biological Science and Technology 2018**

Prof. K. Muniyappa, Indian Institute of Science, Bangalore.

(f) **CSIR Diamond Jubilee Technology Award (CDJTA)**

- (i) M/s Jubilant Life Sciences Ltd., Noida has won the award for the year 2015

for development of “a commercially viable process to prepare highly pure niacinamide via 3-cyanopyridine route by using in-house developed catalyst”;

- (ii) CSIR-CLRI has won the award for the year 2016 for developing a “Waterless Chrome Tanning Technology” while avoiding the conventionally used pickling process.

(g) CSIR Award for S&T Innovations for Rural Development (CAIRD)

CSIR-IIP, Dehradun has won the award for the year 2016 for ‘Development and Wide Popularization of Eco-Friendly & Efficient Jaggery Plant’.

1.7 Significant Events

(a) Conferences, Workshops Organized

- (i) CSIR-NEERI, Nagpur has organized a business meet to strengthen the partnership with slaughterhouses and dairy industries for environmental protection. CSIR-NEERI, Nagpur has organized India International Science Festival-2018 outreach programme. Hon’ble Minister of State for Home Affairs Shri Hansraj Ahir was the Chief Guest.
- (ii) CSIR-IHBT, Palampur has organized a workshop in collaboration with the Department of Industries on ‘Startup Sensitization and Ideation’.
- (iii) CSIR-NML, Jamshedpur has organized training programme on ‘Mineral Characterization and Beneficiation’ to mining delegates from Mining Mineral Resources, Democratic Republic of Congo.
- (iv) CSIR-IIIM, Jammu has organized a National Conference-cum-Industry-Academia Meet on ‘Opportunities and Challenges in Fermentation Based Industrial Processes (IAMF), 2018’.

(b) Agreements/Memorandum of Understanding Signed

- (i) CSIR-NGRI, Hyderabad has signed an MoU with Atomic Minerals Directorate (AMD) for uranium exploration in different parts of the country.
- (ii) CSIR-NIO, Goa has signed an MoU with Department of Biotechnology (DBT), New Delhi for continuing the project work in Marine Bioinformatics under the Biotechnology Information System (BITS) programme.

2. Consultancy Development Centre (CDC)

- Certificate Programme on Franchise Scheme – Certificate Programme in Management Consulting was conducted by Dronocharya Group of Institutions, Greater Noida from 25th to 28th September, 2018.
- “Building Capacities for Consultancy Development & Knowledge Management with Partner Institution (KMPI)”: Memorandum of Understanding has been signed between CDC and JCE Management Service Pvt. Ltd, New Delhi.

PUBLIC SECTOR ENTERPRISES

1. National Research Development Corporation (NRDC)

- NRDC has been assigned twenty five technologies by Tejpur University, Assam. List of technologies is placed at Annexure 'A'. NRDC has also licensed technologies on (i) Powder Duster to M/s Eigislac Control India Pvt Ltd (ii) Wireless expandable Bathythermograph conductivity temperature and depth profile system to M/s Norinco Pvt. Ltd and (iii) Ocean Drifter Buoy with INSAT communication to M/s Norinco Pvt. Ltd.
- NRDC has collected a premia of Rs. 5.05 Lakh from licensing of the technologies during September, 2018. NRDC has also collected a royalty of Rs. 21.24 Lakh during September, 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 1169.23 Lakhs and realized sale of such items worth Rs.1318.61 Lakhs during September, 2018.

Annexure -A

Sr. No.	Technologies by Tejpur University, Assam
1	A portable optical fiber instrument for instant petrol purity detection
2	Designed 2d graphitic sheet for viscous oil removal using magnet
3	Integrated and automated set up for preparation and vending of panipuri
4	Toxin-epitope based detection of species-specific snake envenomation
5	Synthetic anticoagulant peptides derived from Naja naja snake venom
6	A smokeless multifunctional and multipot solid fuel stove
7	Magnetic secondary nanostructure as contrast agent for Magnetic resonance imaging
8	Selective para-hydroxylation of substituted aromatic hydrocarbons using H ₂ O ₂ catalyzed by waterborne hyperbranched polyurethane/carbon quantum dot nanocomposite”
9	Smartphone based system for detection and measurement of chemical and biological species in liquids
10	A Two Way Ratchet
11	Intelligent Helmet
12	Novel Soil Conditioners
13	Casein Nanoparticles for Colon Targeted Controlled Delivery of Biologically Active Agents in Foods
14	Microwave mediated processing of turmeric
15	Anticoagulant actives and synergistic anticoagulant composition and method of producing the same
16	A Synthetic hyperbranched epoxy surgical sealant and a process for preparation thereof.
17	Nanocatalyst for bio oil production
18	Mesoporous secondary nanostructures as multifunctional heavy metal scavenger
19	A tough synthetic low dielectric hyperbranched epoxy thermoset and a process of preparation thereof.
20	Multifunctional nanoparticles, methods of synthesis thereof, and methods of biomedical uses thereof.
21	Eco friendly dry chilli spray from Bhot Jalakia of Assam
22	Digital Occupancy Meter for Commercial Passenger Vehicles
23	Single step process for synthesis of polyaniline nanofiber reinforced polymer nano composites
24	Vehicle on board alignment detection and correction system (For Mac Pherson and Double Wishbone type)
25	A Reduced Size Linearly Tapered 3dB (Half Power Splitter) Multimode Interference (MMI) Coupler