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CSIR News

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CSIR Celebrates 76th Foundation Day

"CSIR today is a 38-laboratory strong organisation, the oldest and most diverse in the country – from agriculture to aerospace, medicine to biofuel and instrumentation to time management," says **Dr. Harsh Vardhan**

THE Council of Scientific and Industrial Research (CSIR) celebrated its 76th foundation day on 26 September 2018 in Vigyan Bhawan, New Delhi, with great fervour and enthusiasm in the presence of a large number of young innovators, school children, young scientists and members of the CSIR

Prof. Ashutosh Sharma, DG-CSIR and Secretary, DST felicitating Dr. Harsh Vardhan

Hon'ble Minister Dr. Harsh Vardhan during his address

Prof. Ashutosh Sharma, DG, CSIR, during the welcome address

family.

Keeping in mind the contributions of CSIR scientists for the benefit of the society, Dr. Harsh Vardhan, Hon'ble Minister for Science & Technology, Earth Sciences, and Environment, Forest & Climate Change and Vice President, CSIR, appealed to former scientists of CSIR to join the national mission to resolve the unresolved problems of the nation through science. Addressing the gathering, Dr. Vardhan said, the laboratories under CSIR should proactively involve those scientists who were part of its family, as "scientists never retire". "CSIR ranked ninth in the world amongst 1207 public research institution of the world," said Dr. Vardhan. He also said that Indian scientists were among the best in the world.

Dr. Harsh Vardhan with Indian Air Force team, which carried out the successful test flight of the indigenously developed SARAS aircraft

Dr. Harsh Vardhan further called on the CSIR community to "take a resolve on this Foundation Day, to diagnose the problems that remained unresolved during these 70 years; define specific goals and targets; make a team; develop a management plan and finally a mechanism to monitor the implementation of the action on a year-to-year basis.

He also said that during the past four and a half years, his visits to all the 38 laboratories of CSIR and interactions with the scientists have led him to firmly believe that Indian scientists are among the best in the world and the labs are comparable and in some fields ahead of similar institutions elsewhere in the world.

Earlier, Prof. Ashutosh Sharma, Secretary Department of Science & Technology and DG, CSIR, in his welcome address said, "In ancient Indian tradition the 75 years indicate one 'Prashasan', but in case of an organisation like CSIR, it represents the maturity, stability and wisdom." CSIR is a driver, catalyst in the growth of socio-economic development, he added.

"CSIR is a repositioned organisation fully aligned with the national vision, policies & initiatives. Relevant and target oriented R&D is the backbone of the re-energised CSIR," added Dr. Ashutosh.

He later announced the Shanti Swarup Bhatnagar (SSB) Awards 2018, the highest multidisciplinary science awards in India. Thirteen scientists were selected for the award, which carries a prize money of Rs. 5 lacs and a citation.

Dr. Vijay Kumar Saraswat, Member,

Dr. Harsh Vardhan with Indian Air Force team, which carried out the successful test flight of the indigenously developed SARAS aircraft

NITI Aayog and Chancellor, Jawaharlal Nehru University, delivered the CSIR Foundation Day Lecture on "Artificial Intelligence (AI) and Humanity". He discussed various aspects of Artificial Intelligence and its effects on society and humanity as a whole.

Dr. Saraswat also presented the CSIR Annual Awards in various categories including Innovation Awards for School Children, Young Scientists Awards, Technology Awards, Diamond Jubilee Technology Award, Award for S&T Innovation for Rural Development, GN Ramachandran Gold Medal for Excellence in Biological Sciences and Technology & Commendation Award to the Indian Air Force team that carried out the successful test flight of the indigenously developed SARAS aircraft on 24 January 2018.

The annual event recognised exceptional contributions of CSIR scientists as well as school children, who developed solutions to several issues being faced by the society. These included a device for load distribution for labourers; toilet with automatic cleaning and flush; smart bike with advanced features to prevent triple riding, drunken driving and speed driving; herbal liquid cleaning agent; multi-purpose water filtration technique; cell-phone modified as hearing aid, etc.

Dr. Sanjay Kumar, Head, HRDG, proposing the vote of thanks

During the event, a short film on the journey of CSIR achievements was also screened. The film gave a message that CSIR always focuses on developing cutting-edge technologies for the industry and also that CSIR has committed itself to contribute to national development by making technologies affordable and available for the benefit of the masses.

Dr. Sanjay Kumar, Head, HRDG and Director, CSIR-IHBT, Palampur,

Foundation Day Lecture

Dr. Vijay Kumar Saraswat, Member, NITI Aayog, delivering his lecture

Dr. Sarawat said "Science has really benefitted by the efforts of CSIR and we are proud of what CSIR has done for the last 76 years."

Delivering the CSIR Foundation Day lecture on Artificial Intelligence and Humanity, Dr. Vijay Kumar Saraswat, Member, NITI Aayog and Chancellor, Jawaharlal Nehru University, congratulated the awardees for their outstanding contributions and CSIR for completing 76 glorious years in the field of science and technology. "Science has really benefitted by the efforts of CSIR and we are proud of what CSIR has done for the last 76 years," he said.

Dr. V.K. Saraswat is a scientist of international renown and an accomplished researcher with more than four decades of experience spanning over several fields and areas in both basic and applied sciences of defence research. Apart from being a scientist, he is a rare combination of an innovator, technologist and visionary. He is also leading the "Methanol Economy Mission" to meet India's requirement of alternative fuel for energy and transportation thereby reducing our crude oil imports.

Artificial Intelligence (AI) is a branch of computer science dealing with simulation of intelligent behaviour in computers as well the capability of a machine to imitate intelligent human behaviour. Dr. Saraswat during his lecture discussed the various aspects of Artificial Intelligence as well as its effects and application.

He further explained how AI technologies mimic the human abilities to sense, think and act. He said that AI encompasses multiple technologies that can be combined to sense, think and act as well as to learn from experiences and adapt over time.

Dr. Saraswat also mentioned the various elements of AI which have been under research like machine learning, language processing, speech, etc. Besides this, he also

explained the difference between Artificial Intelligence and Human Intelligence.

He said AI is growing and enumerated a brief history of AI, taking it from the first step of "Reasoning" to the last step of "Strong AI" (a self-aware machine with ideal thoughts, feelings, concrescence and consciousness) which does not exist yet.

Dr. Saraswat also focussed on Artificial Intelligence technology challenges like requirement of large volume of data, especially for modern neural net AI approaches; AI programs typically can only do one task; AI programs can be difficult to understand and verify after programming; and cyber security which is one of the issues as far as AI is concerned.

Dr. Saraswat also mentioned some high profile examples of AI like autonomous vehicles such as drones and self-driving cars; Medical diagnosis; Creating art like poetry; Playing games, etc. He also shared some recent news items on AI to enumerate how society is being changed by Artificial Intelligence.

Dr. Sarawat further said that AI encourages a gradual evolution in the job market which, with the right preparation, will be positive. AI will enhance the efficiency, lifestyle and throughput and people will work better with the help of AI. The unparalleled combination of human and machine will become normal in the workforce in the future, he added.

Later he also discussed the advantages and disadvantages of AI in areas like autonomous weapon, autonomous industry, autonomous decision-making and artificial super-intelligence. He also talked about a few of the debatable ethical issues associated with AI including removing human responsibility, devaluing human skills, eroding human self-determination, etc.

Finally, he left the audience with several unanswerable questions that will hopefully point the right direction to make AI a useful tool for the public domain.

Dr. Sarawat said that AI encourages a gradual evolution in the job market which, with the right preparation, will be positive. AI will enhance the efficiency, lifestyle and throughput and people will work better with the help of AI.

CSIR Foundation Day Function 2018 Awards

- **CSIR Young Scientist Awards 2018**
- **G N Ramachandran Gold Medal 2018**
- **CSIR Innovation Award for School Children 2018**
- **CSIR Technology Awards 2018**
- **SSB Awards 2018**
- **CSIR Award for S&T Innovations for Rural Development (CAIRD) 2016**
- **CSIR Diamond Jubilee Technology Awards (CDJTA) 2015 & 2016**

CSIR Young Scientist Awards 2018

The Council of Scientific & Industrial Research introduced, in 1987, a scheme of awards for Young Scientists in the CSIR system in order to promote excellence in various fields of science and technology. The awards are known as 'CSIR Young Scientist Awards'. CSIR scientists, below 35 years of age, as reckoned on 26 September (CSIR Foundation Day) of the preceding year, are eligible for the Award. These awards are given annually in the following fields:

- Biological Sciences
- Chemical Sciences
- Earth, Atmosphere, Ocean and Planetary Sciences
- Engineering Sciences
- Physical Sciences (including instrumentation)

Each award consists of a citation, a cash prize of rupees fifty thousand and a plaque. CSIR Young Scientist Awardees are also entitled to a research grant of rupees five lakh per annum for a period of five years and an honorarium of rupees seven thousand and five hundred per month till the age of 45 years.

The award winners this year are:

Dr. Naveen Kumar Chandrasekaran

The CSIR Young Scientist Award for the year 2018 in Chemical Sciences has been awarded to Dr. Naveen Kumar Chandrasekaran of CSIR-Central Electrochemical Research Institute (CERI), Karaikudi, for his contributions in developing electro-catalysts for

conversion of CO_2 to valuable products and superhydrophobic, smart coatings for detection and prevention of corrosion.

Dr. Abhiram Hens

The CSIR Young Scientist Award for the year 2018 in Engineering Sciences has been awarded to Dr. Abhiram Hens of CSIR-Central Mechanical Engineering Research Institute (CMERI), Durgapur, for his outstanding contributions to classical molecular dynamics and computational fluid dynamics based studies of boiling, evaporation and thin film dewetting.

Dr. Niraj Kumar

The CSIR Young Scientist Award for the year 2018 in Engineering Sciences has been awarded to Dr. Niraj Kumar of CSIR-Central Electronics Engineering Research Institute (CEERI), Pilani, for his outstanding contributions in the development of pseudo-spark based high current density electron beam source and slow wave oscillator.

G N Ramachandran Gold Medal for Excellence in Biological Sciences & Technology 2018

CSIR instituted a Gold Medal in 2004 in the fond memory of Prof. G N Ramachandran, a pioneer of protein chemistry & the founding father of structural biology in India, for recognising excellence in the interdisciplinary subject/field of Biological Sciences & Technology.

The winner this year is:

Prof. K. Muniyappa

The G N Ramachandran Gold Medal for Excellence in Biological Science and Technology for the year 2018 has been awarded to Prof. K. Muniyappa of Indian Institute of Science, Bengaluru, for elucidating homologous recombination pathway of M. tuberculosis, mechanism of genetic exchange and identification of drug targets for treating tuberculosis.

The G N Ramachandran Gold Medal for Excellence in Biological Science and Technology for the year 2018 has been awarded to Prof. K. Muniyappa of Indian Institute of Science, Bengaluru.

CSIR Innovation Award for School Children-2018

CSIR announced the Diamond Jubilee Invention Award for School Children on 26 April 2002 in order to enhance creativity amongst school children. The day is also celebrated as the 'World Intellectual Property Day' throughout the world. The objectives of this competition are to capture creativity and innovativeness amongst school children and create awareness about IPR. From the year 2011, the Award has been renamed as 'CSIR Innovation Award for School Children.

During the last fifteen years, i.e. from 2002 to 2018, 5991 proposals were received for these Awards from various parts of the country and 114 inventions/innovations were selected for various prizes by High-Level Awards Selection Committee.

In the year 2016, 2017, 2018 the competition has been renewed with an intervening training-cum-awareness programme. CSIR received 983 innovation proposals which were screened. The award comprises a cash prize, trophy and a certificate.

33 children were awarded for 13 innovations – one First Prize, two Second Prizes, three Third Prizes, four Fourth Prizes and three Fifth Prizes.

The award winners this year are:

First Prize (Rs. 1,00,000/-)

Sustainable Load Distributor for Labourers

Students of class V, VII AND VIII, Shivani Kumari, Puja Kumari, Kumari Nandini Singh, Gyan Mishra and Chandra Mohan, Prarambhika school, Ahemadpur, Maner, Patna have proposed a device for labourers. The device improves the working condition of labourers at construction sites and factories preventing the workers from occupational hazards and minimizing high blood pressure. For making this device three types of spring such as stainless spring, pure iron spring and thin metal iron spring are used and for safety foam and cloth have been used as a cushion.

Second Prize (Rs. 50,000/-)

Re-Enforcement of Roofs and Road by Homemade Slab

Students of class of VIII and IX standard, Chandra Mohan, Aman Kumar, Abhishek Kumar, Rohit Raj and Vishal Kumar, Parambhika School, Ahemadpur, Maner, Patna have developed an innovative method for making homemade slab which is prepared by using coconut fibres or paddy or wheat straw mixed with calcium oxide or jaggery used as binding material and water. Pressure bearing capacity of different types of slabs (made using paddy, wheat straw, and coconut fibres slab) has been tested. Less poisonous gases emit in making of the homemade slab as compared to the concrete slab.

Dream Toilet with Automatic Cleaning and Flush

This innovation is dedicated to the Clean India Mission. Students of class IX standard, Rohan Gupta and Kushagra Kasturia, DAV Public School, Sreshtha Vihar, Delhi, have developed an innovative method for making a dream toilet with automatic cleaning and flush system. The innovative design and method works on the principle of the pressure difference. This proposal also proposed a device for automatic cleaning of washrooms by sensor enabled cleaning car.

Third Prize (Rs. 30,000/-each)

V- Bikes

A student of class XI, Gyanig Kumar, DAV Public School Chandrasekharpur, Bhubaneswar, Odisha, devised a smart bike having advanced features to prevent triple riding, drunken driving and speedy riding. The smart bikes also have a GPS and a GSM module system, which transfer the location of the biker to the ambulance and police in case of medical or safety emergency.

Acacia pycnantha's Ripen Seed Pod as Nature's Friendly Liquid Cleaning Agent for Stain Removal

Students of class IX, Shashank Bewoor and Pavan S. Byahatti of Dr. G.V. Joshi Rotary English Medium High School, Hubali, Karnataka, have proposed a method for preparing herbal cleaning agent and sanitizer from *Acacia pycnantha*, commonly known as Golden Wattle tree. Fully ripened seed pods were cut into small pieces grinded into the water to obtain herbal cleaning agent and sanitizer. Different surfaces like clothes,

glass, plastic steel and wood were taken for testing this herbal sanitizer.

Multi-Purpose Water Filtration Technique

A student of class XI, Ravi Prakash, Guru Gobind Singh Public School, Bokaro steel city, Jharkhand, has proposed a multi-purpose water filtration technique in which hair, wool and microstructure cuticles used for water filtration. Cuticle cells enabled device creates a very solid grip from one direction and creates a slippery surface from the opposite direction, which makes suitable for filtration of water.

Fourth Prize (Rs. 20,000/-each)

A Scientific Approach to Clean and Prevent Salivary Ejections

Students of class XI, Aditya Partap Singh and Anmol Rathi, Bharatiya Vidya Bhavan's R.K. Sarda Vidya Mandir, Raipur, Chhattisgarh, have proposed a device to overcome the problem of different diseases happening due to spit or saliva on road. In the proposed invention, two layers of sheet are prepared with the machine which will help to clean and prevent people from spitting.

Moksha

Students of class XI, Swastik Prajapati, Gaurav Kumar Mehto and Yaman Kumar, Govt. Multipurpose Higher Secondary School, Bilaspur, Chhattisgarh, have proposed a method to overcome the river pollution problem happening due to cremation a ritual for Hindus. In this proposal body'ash management is done through the filtration process. Moksha has been developed in such a manner that the body ash does not mix with the river water and deposits over the river bed. It helps to increase underground water level and helps in plantation.

IGNIS Home Automation System

A student of class XII, Ishnoor Singh, Delhi Public School, Gurgaon, has proposed a device that provides a complete solution for remote control of all electronic appliances. This device consists of easy to install nodes that can be used to control any switch. These devices are so small that they can be installed in the switch cavity. Each device is designed to control up to four appliances. Its response is very fast i.e. 5 sec. The device does not need any battery to operate, a simple power converter allows it to operate from the AC power of the same source.

Cellphone Hearing Aid

A student of class X, V. Dhanush Kumar, Govt. Hr. Sec. School, Kotagiri, Tamil Nadu, has proposed a hearing aid. The device is a simple modified cell phone. The wire which goes to the speaker is cut and the connection is given to a small motor using a short wire. The motor's knob is kept between the front teeth and by biting the metal pin of the motor the vibration that the sound makes is conducted to the brain with the help of nerves and brain is able to understand the sound very clearly without the use of ears.

Fifth Prize (Rs. 10,000/- each)

Automatic Dug/Borewell irrigation System

Students of class IX, S. Shareen, T. Vibishini and M. Ellakiya Lakshmi, of Kaligi Ranganathan Montfordmat Hr.

Sec. School, Perambur, Chennai has provided uniform water to the field by using "Automatic tube well or dug well irrigation system". The invention is designed in such a way so that extra water flow can be controlled to the field for irrigation providing uniform water to the field.

Automatic electronic power-saving ON/OFF Highway Streetlight

Students of class IX, R. Yuvadarshini, G. Pavithra and S. Kuzhalini, Kaligi Ranganathan Montfordmat Hr. Sec. School, Perambur, Chennai, have proposed an innovation to overcome the problem of light wasted on highways at night. In this invention, ten lamps are used at a distance of 200 metres with a single sensor. As the vehicle comes in the vicinity of the first sensor the lights of the particular range will switch ON and as the vehicle goes away from the range of the first sensor the lights of the particular range will switch OFF. If there is no vehicle on the highway at night, the lights of the lamps are put off.

Esplanade

A student of class X, Shreya Raju, Om Shelat, Ira Sidhu and Soumya Juneja, Shiv Nadar School, Gurugram, Haryana have proposed a smart traffic management system. By using various formulas and processes, "Canny Edge Detection" is used to attain structural information from the image and convert it into black and white pixels of the traffic. Microcontroller based traffic light control is used for data update and display. Wireless transmission will make the system localised and will allow to keep a direct check on all lights, in case of any fault in connectivity. A chip will be installed in all emergency vehicles, so that when they come in the vicinity of the light, it automatically becomes green and the vehicle does not have to wait in traffic.

As the vehicle comes in the vicinity of the first sensor the lights of the particular range will switch ON and as the vehicle goes away from the range of the first sensor the lights of the particular range will switch OFF.

CSIR Technology Awards 2017

Given annually, the CSIR Technology awards were instituted in 1990 to encourage multi-disciplinary in-house team efforts and external interaction for technology development, transfer and commercialisation. Each award carries a cash prize of Rs. 2 lakh, a plaque and a citation. The categories of awards are:

1. **Life Sciences**
2. **Physical Sciences including Engineering**
3. **Innovation**
4. **Business Development and Technology marketing**
5. **Most Significant CSIR Technology of the Five Year Plan Period**

The last of these is awarded once in five years, previously coinciding with the erstwhile five year plan periods, to a technology proven in the marketplace for at least five years. The award was last conferred in 2015 with a cash prize of Rs. 5 lakh, a plaque and a citation.

CSIR Technology Award for Life Science-2018

CSIR-Institute of Microbial Technology (CSIR-IMTECH), Chandigarh, won the technology award for 'Clot Busters for Thrombolytic Therapy'

The institute team has designed and developed a state-of-the-art new-generation clot-buster drug. The Clot Specific Streptokinase (CSSK), a novel patented thrombolytic biopharmaceutical therapeutic protein drug is unique in its functions.

CSIR Technology Award for Innovation-2018

CSIR-Central Glass & Ceramic Research Institute (CSIR-CGCRI), Kolkata, has won the technology award for 'An Innovative Technology for Manufacturing of Specialty Material for Immobilization of High-Level Radioactive Waste'

The institute has developed, implemented and commercialised speciality materials that have become the ultimate choice for management of radioactive waste in a closed nuclear fuel cycle. These are of preferred sizes with stringent physical, chemical and mechanical specifications.

CSIR Technology Award for Business Development and Technology Marketing-2018

CSIR-Central Institute of Mining and Fuel Research (CSIR-CIMFR) and CSIR-Indian Institute of Petroleum (CSIR-IIP) have jointly won the award for 'Significantly Enhancing the Business and Marketing of their respective Knowledgebase'

CSIR-CIMFR has exerted a continuous effort to add new clients by organising several sessions, and industry meets, and operationalising new business mechanisms. This has led to a sustainable and consistent growth of over seven times in its External Cash Flow (ECF) in a period of last five years and makes the laboratory as the topmost earner of ECF among all CSIR laboratories.

WWDuring the last three years, CSIR-IIP has undertaken more than 157 projects for providing technical assistance/support to the industries. Recently, CSIR-IIP has commercialised six major technologies against global competition and its business covers national and international clients, including those from the strategic sector.

CSIR Technology Award for Physical Science including Engineering-2018

CSIR-Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad, has won the technology award 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'

The institute has developed technologies for the continuous production of Para-tert-butyltoluene (PTBT) and Para-tert-butylbenzoic acid (PTBBA) and transferred the patented technologies to M/s Vinati Organics Limited, Mumbai (VOL).

Certificate of Merit CSIR Technology Award for Life Sciences-2018

CSIR-Central Institute of Medicinal and Aromatic Plants (CIMAP), Lucknow, has won the technology award for 'Ocimum Based Technological Interventions to Facilitate Industrial Growth, Societal Health and Rural Prosperity'

CSIR-CIMAP has developed superior varieties of Ocimum that meet the farmers' as well as the concerned industry needs. In addition, the laboratory has developed technologies for the biosynthesis of high-value compounds from Ocimum. With this advancement, now Ocimum can be grown all around the year, even under residual moisture conditions during crop rotations, in winter and also in rainfed regions.

Certificate of Merit CSIR Technology Award for Innovation-2018

CSIR-IICT (Indian Institute of Chemical Technology), Hyderabad, has won the technology award for 'Innovative, Low-Cost Membrane Systems as Import Substitutes for Production of Medical Grade Water and Resource Recovery'

The CSIR-IICT team has designed a fully automated, cascaded reverse osmosis system with post-treatment, as an inexpensive substitute for the production of ultrapure water for medical, laboratory and biochemistry applications. The systems are highly compact and available with 25–40 Lit/hr and 250–500 Lit/hr capacities, with minimal installation costs.

Certificate of Merit CSIR Technology Award for Physical Sciences including Engineering-2018

CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad, has won the technology award for 'Mine Transport Surveillance System'

The institute has developed a 'Mine Transport Surveillance System (MTSS)' in association with Ministry of Electronics and Information Technology. The system helps in controlling unauthorised transportation of mineral from mines, accurate and fool-proof weighing by proper positioning of trucks and controlling overloading, periphery surveillance of mine boundary, on-line monitoring and surveillance of mining activities as well as improving safety, production and productivity of opencast mines.

Certificate of Merit CSIR Technology Award for Physical Sciences-2018

CSIR-Central Scientific Instruments Organisation (CSIO), Chandigarh, has won the technology award for 'Aviation Cockpit Display Validation Platform'

CSIR-CSIO's Comprehensive Technology Package of Aviation Cockpit Display Validation Platform (ACDVP) is a state-of-the-art technology solution, first-of-its-kind, that provides optical harmonization, mechanical and electrical/electronic functionality testing and error correction in one single technology package for Optronics technologies used for defence and strategic applications.

Shanti Swarup Bhatnagar Prize (SSB) for Science & Technology 2018

Shanti Swarup Bhatnagar Prize for Science and Technology was instituted in the year 1957, in the memory of late Dr. (Sir) Shanti Swarup Bhatnagar, FRS, the founder director of the Council of Scientific & Industrial Research (CSIR). The SSB Prize is awarded each year on the basis of conspicuously important and outstanding contributions to human knowledge and progress, made through work done primarily in India during the five years, preceding the year of the prize.

Any citizen of India engaged in research in any field of science and technology up to the age of 45 years is eligible to be nominated. Overseas Citizen of India (OCI) and Persons of Indian Origin (PIO) working in India are also eligible. The SSB Prize, comprising a citation, a cash award of Rupees five lakh and a plaque, is given

to each person selected for the award in the following disciplines:

- Biological Sciences
- Chemical Sciences
- Earth, Atmosphere, Ocean and Planetary Sciences
- Mathematical Sciences
- Medical Sciences
- Physical Sciences
- Engineering Sciences

The recipients of the Shanti Swarup Bhatnagar Prize for Science and Technology are:

Biological Sciences

Dr. Ganesh Nagaraju
Department of Biochemistry
Indian Institute of Science
Bengaluru 560 012

Dr. Thomas Pucadyil
Biology Division
Indian Institute of Science Education and Research
(IISER Pune), Pune 411 008

Chemical Sciences

Dr. Rahul Banerjee
Department of Chemical Sciences
Indian Institute of Science Education and Research
(IISER Kolkata), Mohanpur 741 246

Dr. Swadhin Kumar Mandal
Department of Chemical Sciences
Indian Institute of Science Education and Research
(IISER Kolkata), Mohanpur 741 246

Earth, Atmosphere, Ocean and Planetary Sciences

Dr. Madineni Venkat Ratnam
Aerosols, Radiation and Trace Gases Group
National Atmospheric Research Laboratory
Gadanki, Tirupati 517 502

Dr. Parthasarathi Chakraborty
Geological Oceanography Division
CSIR National Institute of Oceanography
Dona Paula, Goa 403 004

Engineering Sciences

Dr. Amit Agrawal
Department of Mechanical Engineering
Indian Institute of Technology Bombay
Powai, Mumbai 400 076

Dr. Ashwin Anil Gumaste
Department of Computer Science and Engineering
Indian Institute of Technology Bombay
Powai, Mumbai 400 076

Mathematical Sciences

Dr. Amit Kumar
Department of Computer Science and Engineering
Indian Institute of Technology Delhi
Hauz Khas, New Delhi 110 016

Dr. Nitin Saxena
Department of Computer Science and Engineering
Indian Institute of Technology Kanpur
Kanpur 208 016

Medical Sciences

Dr. Ganesan Venkatasubramanian
Department of Psychiatry
National Institute of Mental Health and Neurosciences
Hosur Road, Bengaluru 560 029

Physical Sciences

Dr. Aditi Sen De
Physics Division
Harish-Chandra Research Institute
Chhatnag Road, Jhunsi
Allahabad 211 019

Dr. Ambarish Ghosh
Centre for Nano Science and Engineering
Indian Institute of Science
Bengaluru 560 012

CSIR Award for S&T Innovations for Rural Development (CAIRD) 2016

CSIR instituted the CSIR Award for S&T Innovations for Rural Development (CAIRD) in the year 2006 to recognise and honour outstanding S&T innovations that have helped transform the lives of rural people or alleviated the drudgery of the rural people.

The award is given to an innovation that has created a paradigm shift in standards of quality of life of the rural people or demonstrated competitive advantage and positive user response or helped in generating of rural employment in the country

and shown a new way of conducting business to achieve social and economic transformation in the rural areas. The award consists of a cash prize of Rs. 10 lakh, a citation and a shield.

Applications for the award are invited through a press advertisement and personal letters. A two-tier stringent selection process is in place for selecting the awardee. At the first level screening, the most deserving applications are shortlisted by a committee of eminent experts representing diverse disciplines. At the second level, the shortlisted applications are considered by a high-level expert's expert committee comprising eminent/technologists for the selection of the winner.

The award is normally presented every year on 26 September, the CSIR Foundation Day, every year.

The award winner this year is CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun. CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun, has received the award for Development and Wide Popularisation of Eco-Friendly & Efficient Jaggery Plant.

CSIR-IIP developed eco-friendly and energy efficient Jaggery Plant (Gur Bhatti) to revive the traditional Jaggery industry by making the business profitable and protect the environment. The low-cost techniques applied in the improved plant reduced the emissions to significant levels and improved the overall thermal efficiency of the plant.

CSIR Diamond Jubilee Technology Awards (CDJTA) 2015 & 2016

CSIR launched an annual Diamond Jubilee Technology Award on 26 September 2002 in commemoration of its Diamond Jubilee celebrations to encourage scientists, engineers and technologists to develop innovative technologies and products that are amongst the best in the world and enhance India's image. The award acknowledges most outstanding technological innovation that has brought prestige to the nation.

The award is given to a technology that is developed in the country by Indian innovators and meets the highest global standards. Technologies leading to commercially successful products, processes and services, which give India a sustainable competitive advantage, are considered for the award. The award consists of a cash prize of Rs. 10 lakh, a citation and a shield.

Applications for the award are invited through a press advertisement and personal letters. A two-tier stringent selection process is in place for selecting the awardee. At the first level of screening, the most deserving applications are shortlisted by a committee of eminent experts representing diverse disciplines. At the second level, the shortlisted applications are considered by a high-level expert committee comprising eminent experts/technologists for the selection of the winner.

The committees are chaired by an eminent expert. The award is announced on 26 September, the CSIR Foundation Day, every year.

The winners of the year are:

1. **Jubilant Life Sciences Ltd., Noida**
   CSIR Diamond Jubilee Technology Award for the year 2015 is conferred on Jubilant Life Sciences Ltd. for development of "A commercially viable process to prepare highly pure niacinamide via 3-cyanopyridine route by using in-house developed catalyst".

2. **CSIR-Central Leather Research Institute (CSIR-CLRI), Chennai**
   CSIR Diamond Jubilee Technology Award for the year 2016 is conferred on CSIR-Central Leather Research Institute for developing "Waterless Chrome Tanning Technology" while avoiding the conventionally used pickling process.

Foundation Day Celebrations

CSIR Foundation Day and Hindi Month Celebrated at CSIR-NISCAIR

Dr. Satyanarayan Jatiya, Hon'ble Member of Parliament, Vice-Chairman, Committee of Parliament on Official Language, graced the occasion as the Chief Guest; (on his left) Dr. Manoj Kumar Patairiya, Director, CSIR-NISCAIR and Dr. Nisha Mendiratta, Adviser & Head, National Council for Science & Technology Communication (NCSTC), DST; (on his right) Prof. Yatish Agarwal, Dean, School of Medical and Para-Medical Sciences, Guru Gobind Singh Indraprastha University, Mr Vijay Kishore 'Manav', poet & former Feature Editor, *Hindustan*, and Dr. Pankaj Agarwal, Deputy Registrar, Guru Gobind Singh Indraprastha University

The CSIR-NISCAIR, New Delhi, celebrated the 76th anniversary of the foundation of the CSIR on 28 September 2018. A combined function of the CSIR Foundation Day Celebration and conclusion of the Hindi Month Celebration was organised by CSIR-NISCAIR at the AP Shinde Symposium Hall, NASC Complex, New Delhi.

Dr. Satyanarayan Jatiya, Hon'ble Member of Parliament, Vice-Chairman, Committee of Parliament on Official Language graced the occasion as the Chief Guest. Dr. Pankaj Agarwal, Deputy Registrar, Guru Gobind Singh Indraprastha University; Dr. Nisha Mendiratta, Adviser & Head, National Council for Science & Technology

Communication (NCSTC), DST; Mr Vijay Kishore 'Manav', poet & former Feature Editor, *Hindustan*; and Prof. Yatish Agarwal, Dean, School of Medical and Para-Medical Sciences, Guru Gobind Singh Indraprastha University, were the Guests of Honour on the occasion. The function was presided over by Dr. Manoj Kumar Patairiya, Director, CSIR-NISCAIR.

Dr. R.S. Beniwal, Chief Scientist, CSIR-NISCAIR, briefed about the various events held during the Hindi Month celebrations including Quiz Competition, Essay Writing, Samachar Vachan, Painting Competition, etc., organised during the month of September.

In his opening remarks, Prof. (Dr.) Manoj Kumar Patairiya, Director, CSIR-NISCAIR, congratulated the NISCAIR family on the occasion of the Foundation Day of CSIR and Hindi month celebration at CSIR-NISCAIR.

He said that CSIR-NISCAIR plays a major role in promoting the Hindi by various mediums including a monthly magazine *Vigyan Pragati*, a monthly newsletter *CSIR Samachar*, and a science journal *Bhartiya Vaigyanik Evam Audyogik Anusandhan Patrika (BVAAP)*. Apart from that, a quarterly magazine Navsanchetna, which has won the first prize twice from the Nagar Rajbhasha Karyalaya Samiti, is also published, he added.

Further, he informed about the 4th India International Science Festival (IISF 2018) which was to be held in Lucknow from 5-8 October 2018 in which CSIR-NISCAIR was entrusted with the responsibility to organise an event called International Science Literature and Film Festival (ISLFF) that seeks to hold deliberations on scientific information dissemination through various media such as print, electronic, cultural and science-based films.

Chief Guest, Dr. Satyanarayan Jatiya, Hon'ble Member of Parliament and Vice-Chairman, Committee of Parliament on Official Language, said that in the name of development, many changes are taking place in our

Opening remarks by Dr. Manoj Kumar Patairiya
Director, CSIR-NISCAIR

Dr. Satyanarayan Jatiya, Hon'ble Member of Parliament and Vice-Chairman, Committee of Parliament on Official Language

society including changes in relationships, customs and languages too. He added that because of development we should not move away from our roots, rather we should strengthen it further. He said that we should feel proud of communicating in Hindi as it is our National language.

Address by Dr. Nisha Mendiratta, Department of Science and Technology (DST)

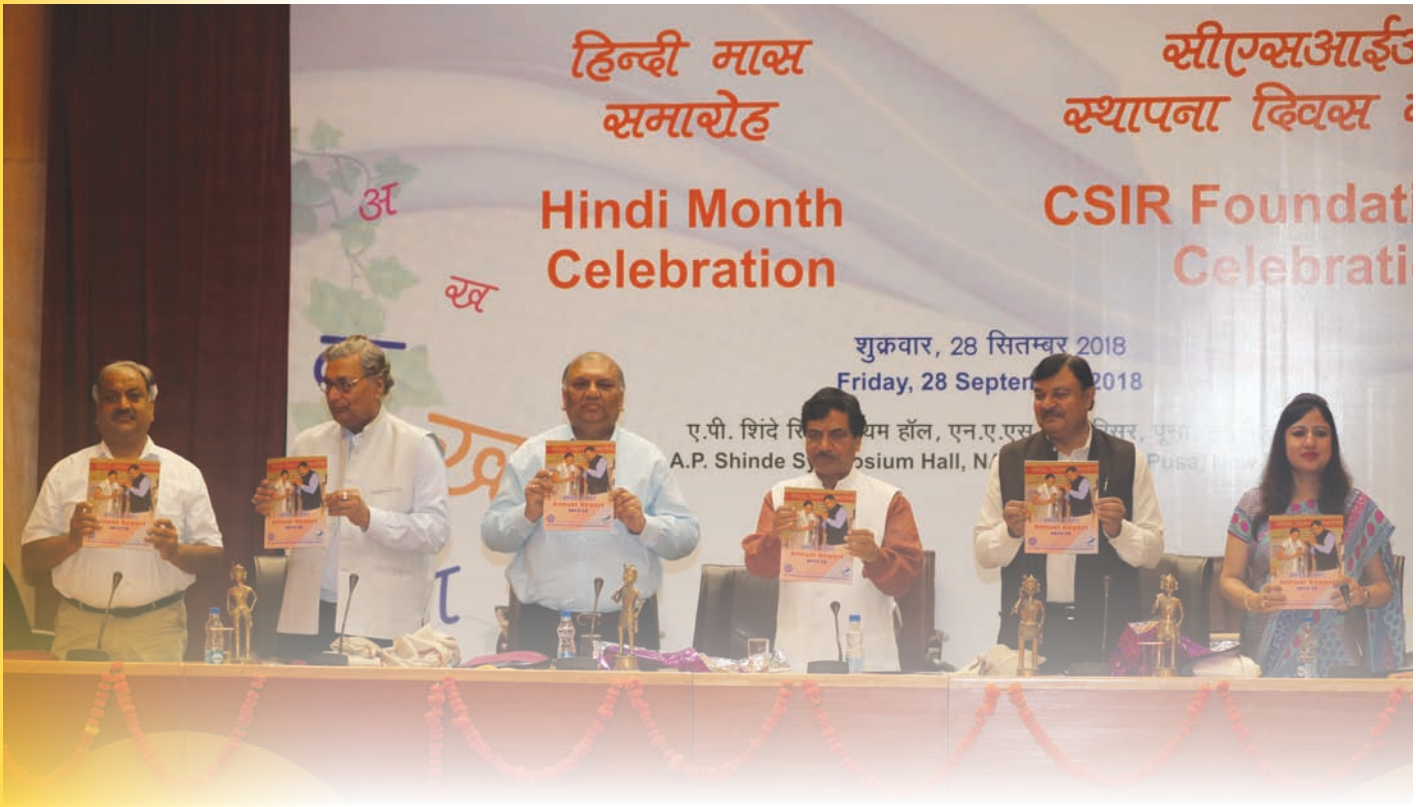
Dr. Nisha Mendiratta in her address highlighted the efforts made by the Department of Science and Technology (DST) and informed that to promote science in Hindi DST is soon going to start a science channel named DD Science in which scientific facts in Hindi language will be featured. She also emphasised that while science-based advancements were the major cause of climate change and pollution, only science could give solutions to these prevailing problems in which science organisations like CSIR could play a vital role.

Addressing the gathering Dr. Yatish Agarwal said that Hindi language is the carrier of rich cultural and literature base. He said that we should accept this whole heartedly that Hindi is our national language and we must work with devotion towards the nation. He also complimented CSIR-NISCAIR for making efforts for the promotion of Hindi language through its various publications.

Later, Mr Vijay Kishore 'Manav' entertained everyone with his poetry and humorous jokes.

Dr. Yatish Agarwal

Mr Vijay Kishore 'Manav'



Release of *CSIR-NISCAIR Annual Report 2017-2018*

Dr. R.S. Beniwal, Chairperson proposed the vote of thanks

The *CSIR-NISCAIR Annual Report 2017-2018* was also released on this occasion. CSIR-NISCAIR also followed the trend of honouring the retirees of the institution on the occasion.

The function concluded with a lively cultural programme put up by the staff of CSIR-NISCAIR and their wards, followed by a prize distribution ceremony. Prizes were awarded to the winners and participants of various events such as Painting, Quiz and Debate competitions, Sports events, etc. Dr. R.S. Beniwal, Chairperson of the 2018 CSIR Foundation Day function, proposed the vote of thanks.

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