

In the News

CSIR Hosts Startup Conclave 2025

Catalysing Innovation, Connecting Ecosystems



The three Hyderabad-based CSIR labs, CSIR-Indian Institute of Chemical Technology (CSIR-IICT), CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB) and CSIR-National Geophysical Research Institute (CSIR-NGRI), jointly organised the Startup Conclave Hyderabad 2025, which commenced on 22 April 2025 at the Zaheer Memorial School Grounds in CSIR-IICT. In alignment with the clarion call of “Startup India, Standup India” given by the Honourable Prime Minister Shri Narendra Modi to cultivate a startup

ecosystem and foster innovation across the country, the two-day conclave aimed at promoting innovation and entrepreneurship in India’s research and technology ecosystem.

The event was inaugurated by Dr Jitendra Singh, the Honourable Union Minister of State (Independent Charge) for Science and Technology, MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Vice-President, CSIR, who emphasised the importance of nurturing a startup ecosystem in India.

“The first service you can do for society is to channel your passion and creativity into building a startup,” Dr Jitendra Singh remarked, stressing the importance of early industry linkage for startup success.

In his address, Dr Singh highlighted India’s capability to conduct research and support innovation and entrepreneurship — a shift that he said has happened in the last decade. He stated that the congregation is a visual as the Hon’ble Prime Minister Shri Narendra Modi envisioned. “The government is open to broader integration and is forthcoming in supporting innovation,” he said.

From just 50 startups in 2014, India now boasts nearly 10,000, with around 3,000 young entrepreneurs benefiting from the Aroma Mission in Jammu and Kashmir. “The first service you can do for society is to channel your passion and creativity into building a startup,” Dr Singh remarked, stressing the importance of early industry linkage for startup success.

Agri-startups, he noted, are playing a transformative role in Indian agriculture. An example is the Pheromone Application Technology developed by CSIR-IICT. Another notable initiative is the Purple Revolution in Jammu & Kashmir, spearheaded by Dr Srinivasa Reddy, Director, CSIR-IICT.



Calling Hyderabad a city with a thriving innovation ecosystem, Dr Singh said it was the ideal location to host the conclave. Memorandum of Understanding (MoU) and Technology Transfers were exchanged between different companies and the three CSIR host institutes in the presence of the Hon’ble Minister.

In his address, Dr Srinivasa Reddy, Director, CSIR-IICT, said, “This conclave is a reflection of the direction we must take — one where research drives entrepreneurship, and entrepreneurship in turn fuels further research”. He added, “Hyderabad is a melting point of pharma, biotech, IT sectors and startups.”

Dr Vinay Nandicoori, Director, CSIR-CCMB, remarked, “The startup conclave is a reflection of the ongoing collaborations between industry and academia in Hyderabad, and this will only become more vibrant in the coming years”.

Dr Prakash Kumar, Director, CSIR-NGRI, added, “CSIR-NGRI researches Earth’s structure, earthquake hazards, and resource exploration (hydrocarbons, groundwater, minerals). The current focus includes the assessment of Himalayan earthquake hazards and nationwide geothermal mapping. These initiatives offer collaboration opportunities for startups in hazard mitigation, geothermal energy, CCUs, AI/ML, and groundwater, fostering innovation and contributing to India’s economic growth.”

In his guest address, Shri Eatala Rajender, Hon’ble Member of Parliament, stated, “Startups in Hyderabad have an advantage of utilising scientific expertise and government initiatives to help them thrive”.



Various sessions in line with the theme were conducted, featuring startup stories by representatives of various companies who shared insights about their journey, including Shivani Rai, Executive, Chief of Staff (Business & Strategy), GreenworksBio Products Private Limited, Mr Suresh Susurla, Founder, Startoon Labs and Dr CSV Kiran, Vice President (R&D Strategy), Skyroot Aerospace.

An exhibition pavilion at the conclave highlighted technologies of the host institutions and startups that were incubated at these labs or were spin-offs from the technologies of these labs. Dr. Jitendra Singh visited the exhibits, who interacted with the startups and researchers who presented their technologies and products.

Eminent personalities, including Hon'ble Member of Legislative Assembly Shri Bandari Laxma Reddy and leading industry partners, among others attended the conclave. It is estimated that more than a thousand people gathered for the conclave.

The two-day Startup Conclave Hyderabad 2025 concluded on 23 April, bringing together professionals from various sectors to share insights, network and explore collaboration opportunities.

Hon'ble Member of Parliament, Shri Konda Vishweshwar Reddy, was the Chief Guest of the event. In his address, he remarked, "The exhibits not only impressed me but also made me proud as an Indian". He also stated that India is grooming a new generation of scientists and engineers, guided by Prime Minister Modi's broad vision through initiatives like Startup India and Standup India. "We are connecting the entire ecosystem together," he added. He stated, "Many startups today are focused solely on commercial success. However, research requires us to unlearn and approach ideas with an open mind."

The second day of the conclave featured startup success stories that shared insights about their journey, including Mr Kiran KK, Managing Director, Kaashyap Energy Infrastructures Private Limited; Dr Vanita Uppada, Scientific Lead, Phyx44; Mr Anandh Mathew, COO and Co-Founder, Caliche; and Dr Chandak, Founder, Lightening Lives LLP.

It also included startup pitches by various companies working across areas like Agritech, AI, and Healthcare. A panel discussion on "Challenges and Opportunities in Startup Ecosystems" was moderated

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by Dr Ramjee Pallela, COO, AIC-CCMB. Panellists explored key challenges such as identifying the right time to initiate industry dialogues, aligning innovation with societal and market needs, and overcoming India's risk-averse mindset. They stressed the importance of customer validation, the need to build strong MVPs with user input, and the role of perseverance in sustaining a startup journey. Discussions also focused on entering deep science and pharmaceutical sectors, the change in entrepreneurial mindset over recent years, and how incubators and government initiatives

support the startup ecosystem through fellowships and funding.

An exhibition pavilion highlighting technologies of the host institutions and startups that were incubated at these labs or were spin-offs from the technologies of these labs was also exhibited. Hon'ble Minister Shri Konda Vishweshwar Reddy interacted with the startups and researchers who presented their technologies and products.

The conclave brought together entrepreneurs, investors, industry leaders, researchers, policymakers and students.

BRS COP 2025 Side Event on “Management of Persistent Organic Pollutants in India: Findings of India NIP Update Project”



The Stockholm Convention is an international treaty ratified by 187 countries. The objective of the convention is the protection of human health and the environment from the adverse effects of Persistent Organic Pollutants (POPs). The Government of India (GoI) signed

the Stockholm Convention (SC) on POPs in May 2002 and ratified it on 13 January 2006. The Ministry of Environment, Forest, and Climate Change (MoEFCC) is the focal point of the convention. CSIR-National Environmental Engineering Research Institute (CSIR-NEERI), Nagpur, was

nominated by MoEFCC as the Stockholm Convention Regional Centre (SCRC) in 2010, which was accepted by the Conference of the Parties meeting (COP-4) held in Geneva in 2011. Since then, CSIR-NEERI has actively worked in close collaboration with international agencies such as UNEP, UNDP, WHO, UNIDO, etc., on several projects in the field of chemicals and waste. CSIR-NEERI also provides technical assistance to MoEFCC and CPCB in matters related to the Basel, Rotterdam, Stockholm (BRS), and Minamata Conventions.

Currently, CSIR-NEERI is implementing a GEF-funded project, viz. "Review and update of national implementation plan on POPs". India takes up this project to fulfil the country's obligation to the Stockholm Convention. As per the mandate of the Convention, parties are mandated to take appropriate measures to minimise the release of POPs or phase out hazardous chemicals from production, use, import/export, etc. Also, it is crucial to manage POPs containing waste such as end-of-life vehicles, plastics, E-waste, etc., in an environmentally sound manner to minimise the release of unintentionally produced POPs such as dioxins and furans. To disseminate the findings/ insights of the project to a wider global audience, CSIR-NEERI, in association with MoEFCC, Dept of Chemicals and Petrochemicals, GoI, CPCB, CSIR-NIIST, CSIR-IITR and HIL India Ltd, organised a side-event on 01 May 2025 on the sidelines of COP 2025 meetings in Geneva.

The meeting was chaired by Mr Amit Raj, Director, MoEFCC and Dr S Venkat Mohan, Director, CSIR-NEERI, welcomed the participants and addressed about the various research activities taken up by NEERI to provide policy support to the Government of India. Mr Amit Raj, in his opening remarks, spoke on the various regulatory and policy decisions taken by the GoI for the implementation of the conventions. He congratulated CSIR-NEERI for organising such a side event for the first time in India. Er Bharat Sharma, Member Secretary, CPCB, spoke on implementing several waste management rules in India, such as municipal solid waste, plastic waste, construction and demolition waste, hazardous waste, e-waste, end-of-life vehicles management, and battery waste management rules. Circular economy principles have been incorporated into these rules to minimise hazardous chemicals and GHG emissions and maximise material recovery and reuse.

Dr Rajendra Tappar, HIL India Ltd, spoke on the alternatives to DDT for disease vector control. India stopped using DDT for malaria control in 2024 and switched to safe and environmentally friendly neem-based and sustainable alternative approaches. This is a remarkable milestone in implementing the Stockholm Convention in India. Dr A Ramesh Kumar, CSIR-NEERI, spoke on some of the hazardous additives present in single-use plastics, which are not required for SUPs due to their short life span.

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During the fortnight, cleanliness drives were conducted across the premises. DG, CSIR, along with all officers and staff of the Headquarters, enthusiastically participated in the cleanliness drive.

He emphasised the need for policy change and standards for plastic additives. Dr KP Prathish, CSIR-NIIST, in his presentation, showed a considerable reduction in the dioxins and furans emissions due to the improvement in the waste management, co-processing of hazardous waste, and the efforts

taken due to the implementation of “Swachh Bharat Mission”.

The event was attended by fifty participants from various countries in person and over sixty participants online, and was moderated by Dr A Ramesh Kumar. The event was organised with the generous support of UNEP.

CSIR Observes Swachhata Pakhwada 2025



The Council of Scientific and Industrial Research (CSIR) observed Swachhata Pakhwada 2025 from 1 to 15 May 2025 at its Headquarters in New Delhi and across all its constituents' laboratories/institutes/units, as part of the Government of India's flagship Swachh Bharat Mission, aimed at realising Mahatma Gandhi's dream of a clean and hygienic India. The “Swachhata Pakhwada” is a concept inspired by the Prime Minister's vision. The Pakhwada was organised in accordance with the Calendar of Swachhata Pakhwada 2025

issued by the Cabinet Secretariat, Government of India.

The Swachhata Pakhwada 2025 commenced on 1 May 2025 with a pledge-taking ceremony at CSIR Headquarters. The Swachhata pledge was led by Dr N Kalaiselvi, Director-General, CSIR, and Secretary, DSIR, in the presence of Shri Mahendra Kumar Gupta, Joint Secretary (Admin), CSIR, and Shri Chetan Prakash Jain, Financial Advisor, CSIR and all CSIR HQ's employees. The collective reading of the pledge reaffirmed CSIR's commitment to the values of cleanliness, discipline, and civic



responsibility, and set the tone for the activities that followed over the fortnight. The event witnessed enthusiastic participation and was a strong motivational start to the Pakhwada.

During the fortnight, cleanliness drives were conducted across the premises. DG, CSIR, along with all officers and staff of the Headquarters, enthusiastically participated in the cleanliness drive. During the event, the hardworking Safai Mitras were felicitated for their tireless year-round efforts to maintain cleanliness.

Special efforts were made to clear construction debris and dispose of scrap. Further, efforts were made to clear pending e-files in the e-office. Heads of Divisions mobilised their teams for this effort, and the IT Division provided hands-on training sessions on e-file parking and closure. As Pakhwada placed particular emphasis on canteen cleanliness, the Civil Section and the canteen staff revamped the facility, greatly enhancing the user experience. Other activities, such as air conditioning cleaning and water purifier cleaning, have also been carried out.

For the first time, a Photography Competition was introduced as part of the Pakhwada at CSIR Hqrs, an initiative of DG, CSIR,

to promote creative engagement with the theme of cleanliness. Alongside this, other competitions such as slogan writing, painting and kavita paath helped raise awareness in a participatory manner.

The Pakhwada concluded on 15 May 2025 with a valedictory function led by the DG, CSIR. Winners of various competitions were acknowledged and felicitated. In her address, DG, CSIR, emphasised that Swachhata is not just a campaign, but a way of life that must reflect in both physical and digital workspaces. She urged all employees to sustain the Pakhwada's momentum and integrate cleanliness into the organisational culture.

The end-to-end implementation of Swachhata Pakhwada 2025 at CSIR HQ's was coordinated by Shri Mayank Mathur, Chief Scientist and Nodal Officer for Swachhata Activities, and Dr AS Nirmala Devi, Principal Scientist and Deputy Nodal Officer, along with Standing Swachhata Committee Members Dr P Rama Rao, Ms Deepti Sharma Dullu, Shri Vinod, and Shri Avinash Kumar.

The successful observance of Swachhata Pakhwada 2025 at CSIR underlines the institute's continued commitment to the national Swachh Bharat Mission and fostering a clean, efficient, and responsible work environment.

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CSIR-IIIM Adopts ATL Schools



An Atal Tinkering Lab provides activity-based learning in the identified schools across the country, where young minds can give shape to their ideas for societal problems.

As a part of Scientific Social Responsibility (SSR), CSIR-Indian Institute of Integrative Medicine (CSIR-IIIM), Jammu, has adopted 30 Atal Tinkering Laboratories (ATL) schools in Jammu and Kashmir, which NITI Aayog supports. An Atal Tinkering Lab provides activity-based learning in the identified schools across the country, where young minds can give shape to their ideas for societal problems. It also fosters entrepreneurship and innovation, enabling more than 3 million students from grades VI to XII to acquire a problem-solving, tinkering and innovative mindset.

Pertinently, under the CSIR-Atal Incubation Mission (AIM) initiative, NITI Aayog's ATL and CSIR Jigyasa are working on organising science workshops, interaction with scientists, outreach programmes and many other activities. In line with this, CSIR-IIIM has organised a three-day science workshop for 15 Atal Tinkering Laboratories (ATL) schools in the Jammu

region. Around 60 students from various schools in the Jammu region, like Jammu, Udhampur, Doda, Kishtwar, Hiranagar, Miran Sahib, Dadwara, and Reasi, have registered for this workshop.

The three-day workshop was specifically designed with exciting biology and chemistry experiments related to the coursework and will provide hands-on experience working in various institute laboratories. Dr Zabeer Ahmed, Director, CSIR-IIIM, inaugurated this workshop.

In his presidential address, Dr Zabeer Ahmed referred to PM Shri Narendra Modi's call for "Viksit Bharat Sankalp Yatra" and emphasised that academic activities must be aligned with the practical. He urged that the young minds, who are the future of the Nation, must come forward and adopt science as their career and contribute to the nation's journey towards "Viksit Bharat" @2047. Dr Ahmed further said that it is indeed a matter of privilege and responsibility to host students of

ATL schools and will extend them full support in the field of science and technology.

Dr Asha Chaubey, Sr Principal Scientist & HoD FMB Division, Nodal scientist Jigyasa programme, welcomed the students and their faculty members and briefed them about the activities planned during the workshop and encouraged the students to actively participate in

such activities to be carried out during the workshop.

The event was attended by Heads of the Division, scientists, research scholars, students and others. The formal vote of thanks was presented by Dr Qazi Naveed Ahmad, HoD, Natural Products and Medicinal Division, while Ms Vidushi Abrol conducted proceedings of the event.

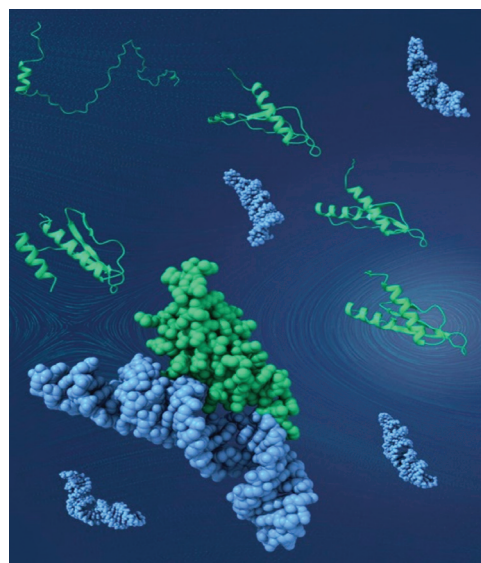
R&D

CCMB Scientists Discover How Protein's Agility Allows it to Bind Multiple Partners

Scientists at the CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB), Hyderabad, have shown that proteins do not always rely on their fixed three-dimensional shape for function. Still, their structures are flexible so that they can sometimes move to carry out multiple tasks.

Two structurally identical plant proteins exhibit varied substrate specificity because one of them is more flexible, according to a study published in the *Journal of the American Chemical Society*. The flexible protein can bind with a greater spectrum of substrate RNA molecules by dynamically rearranging itself to fit the shape of the molecular partners without sacrificing stability, which is essential for gene regulation.

Using a powerful technique called Nuclear Magnetic Resonance (NMR) spectroscopy, coupled



The artwork depicts the various structures that the RNA-binding protein (the largest structure at the left corner) can bind

with sophisticated computational methods, scientists detected tiny populations of protein structures, just 1%, that switch into different shapes for short periods. These rare shifts are vital for recognising

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“Our results reveal nature’s originality in designing a unique approach to grant promiscuity to a few proteins,” said Debadutta Patra and Jaydeep Paul, joint first authors of the study.

different RNA forms and help explain how plants manage complex gene control using fewer proteins.

“What we have shown is that a protein’s ability to change shape, even slightly, can be just as important as its structure,” said Dr Mandar V Deshmukh, lead author of the study. “By capturing the fleeting, dynamic states of these proteins, we’ve shown that their ability to rearrange their structure transiently by flexing and adjusting mid-interaction gives them a functional edge in complex cellular environments. This enables organisms to regulate genes efficiently under varying conditions. This could change the way we think about designing new medicines or improving plant traits.”

The study shows how subtle changes in a protein’s sequence,

within just a few non-active site amino acid residues, can lead to significant differences in function, emphasising the need for a combined study of both structure and dynamics, particularly for proteins that are drug targets.

“Our results reveal nature’s originality in designing a unique approach to grant promiscuity to a few proteins,” said Debadutta Patra and Jaydeep Paul, joint first authors of the study.

This study offers a plausible explanation for how plants fine-tune RNA processing without expanding their protein repertoire, especially in the absence of adaptive immunity. These findings have the potential to pave the way for new advances in medicine, agriculture, and biotechnology by helping scientists to design proteins that can multitask more efficiently.

Lectures & Workshops

CSIR-NCL Hosts Dr LK Doraiswamy Memorial Lecture 2025



CSIR-National Chemical Laboratory (CSIR-NCL), Pune, organised the prestigious Dr LK Doraiswamy Memorial Lecture.

Prof. Man Mohan Sharma, Emeritus Professor of Eminence, ICT Mumbai, and a Padma Vibhushan Awardee, delivered

the lecture on the topic “Advances in Separation Technologies.”

Dr Ashish Lele, Director, CSIR-NCL, in his introductory remarks, spoke about the importance of this lecture in remembering the legacy of Dr LK Doraiswamy, a pioneer in chemical engineering. He introduced the Chief Guest, Prof. Man Mohan Sharma, to the audience. He elaborated on the seminal role played by Prof. MM Sharma in guiding the Indian chemical industry for the past six decades and also mentoring thousands of young chemical engineers who have graduated from ICT.

Prof. Man Mohan Sharma initiated his talk focusing on the continuous advancements in chemical engineering, with particular emphasis on separation technologies. He highlighted the momentous progress in distillation, particularly in areas like reactive distillation and the use of divided wall columns, which have drastically improved energy efficiency and capital expenditures. Prof. Sharma stressed that while distillation is a core process in the chemical industry, new techniques, such as using heat pumps and ion-exchange resins as catalysts, have significantly transformed the sector, leading to more sustainable and efficient operations.

Prof. Sharma elaborated on the ongoing evolution of extraction and adsorption technologies. He discussed how reactive extraction has made significant strides, particularly

in the recovery of high-value chemicals in the petrochemical industry. He also explored the advancements in adsorptive separation technologies, such as the use of zeolites and Metal-Organic Frameworks (MOFs). These materials, with their immense surface areas and selective adsorption properties, are revolutionising processes like alkene-alkane separation and catalytic reactions. Prof. Sharma’s enthusiasm for these developments reflected the immense potential they hold for reducing energy consumption and improving process efficiency.

Prof. Sharma also highlighted recent breakthroughs in membrane separation and crystallisation technologies. He highlighted how advances in nano-filtration and the development of membranes that can withstand extreme conditions have made a significant impact on industries like pharmaceuticals and organic chemicals. He discussed the role of crystallisation in producing high-quality chemical products, emphasising the need for precise control over factors like particle size, polymorphism and solubility. Prof. Sharma talked about the importance of innovation in improving both the efficiency and sustainability of chemical processes and urged the scientific community to continue exploring novel solutions to meet the challenges of the future.

The event saw the presence of esteemed scientists, researchers, academicians, and industry professionals. The lecture was

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also streamed live, allowing a wider audience to benefit from the insights shared by Prof. Sharma. CSIR-NCL continues to remain at the

forefront of scientific excellence, organising such distinguished lectures to inspire and educate the next generation of researchers and professionals.

CSIR-NEERI Holds a Brainstorming Workshop on Carrying Capacity of Water Resources



The event is expected to play a crucial role in strengthening sustainable water resource planning and management by integrating scientific expertise with policy-driven solutions.

CSIR-National Environmental Engineering Research Institute (CSIR-NEERI), Nagpur, organised a 'Brainstorming Workshop on Carrying Capacity of Water Resources' on 21 March 2025. In the inaugural session, Dr Avinash Dhakne, Member Secretary, Maharashtra Pollution Control Board (MPCB), emphasised the significance of the event and expressed his intention to implement its outcomes to aid in the conservation of water resources in Maharashtra. He highlighted the need to preserve our ecosystem as a crucial aspect of water conservation. He further stated that certain parameters must be considered for sustainable development and looked forward to deriving effective solutions through this session.

Dr Sukumar Devotta, Former Director, CSIR-NEERI, stated that carrying capacity is multidimensional; however, in many cases, specific aspects are emphasised, while factors such as biodiversity and socio-economics are often overlooked. He emphasised that historical data plays a crucial role in carrying capacity studies. He explained that the carrying capacity of a small area can be interdependent on multiple parameters. Dr Devotta cautioned that CO₂ concentration has risen from 380 ppm to 426 ppm. He advocated for carrying capacity studies to assess whether the world can sustain a 2°C temperature rise. He further pointed out that many developing countries, including India, face water scarcity and emphasised the need to effectively

manage water resources. He observed that industrial water consumption accounts for only 10% of total usage, whereas greater focus should be placed on other sectors, particularly agriculture, to enhance water conservation efforts.

Dr RN Singh, Former Director, CSIR-NEERI, highlighted the perspectives of modelling carrying capacity in water resources. He explained how the concept of carrying capacity has evolved from mechanics to ecology. He mentioned that the current focus is on algorithmic models. He emphasised that mathematical thinking is essential for studying the carrying capacity. He asserted that translating ideas into mathematical equations is key to effectively studying the carrying capacity.

Dr CV Chalapati Rao, Former Chief Scientist, CSIR-NEERI,

shared his experiences and contributions in carrying capacity studies. Dr Paras Pujari, Chief Scientist & In-Charge, Water Resource, provided an overview of the brainstorming session. In his welcome address, Dr S Venkata Mohan, Director, CSIR-NEERI, highlighted how CSIR-NEERI has evolved with multidisciplinary expertise and continues to combat emerging environmental issues.

Panel discussions on stakeholders' and experts' perceptions of carrying capacity were held following the inaugural session. This event is expected to play a crucial role in strengthening sustainable water resource planning and management by integrating scientific expertise with policy-driven solutions.

Dr Shalini Dhyani, Principal Scientist, CSIR-NEERI, conducted the proceedings.

Events

CSIR-AMPRI Celebrates National Technology Day & its 45th Foundation Day

CSIR-Advanced Materials and Processes Research Institute (AMPRI), Bhopal, celebrated National Technology Day (11 May) & 45th CSIR-AMPRI Foundation Day (14 May) on 14 May 2025. Dr G Satheesh Reddy, Former Chairman, DRDO & Scientific Adviser to the Defence Minister, Government of India; Chairman, Governing Body, Aeronautical

Development Agency (ADA), graced the event as the Chief Guest.

In his opening remarks, Dr Thallada Bhaskar, Director, CSIR-AMPRI, talked about the history of the institute, its objectives and change in the mandate of the institute from Regional Research Laboratory to Advanced Materials and Processes Research Institute. He also outlined

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Dr G Satheesh Reddy, Former Chairman, DRDO, emphasised that the country cannot be Atmanirbhar if it is not self-reliant in materials and processes. He encouraged the use of our natural resources and knowledge to achieve self-reliance.

the current areas of research at the institute, technology transferred and their technology readiness levels. He also highlighted some of the technologies like Indigenous Raman Spectrometer, radiation shielding tiles, open and closed cell metal foams, water filter, cement-free concrete, and many more.

Dr Asokan Pappu, Chief Scientist, CSIR-AMPRI, spoke about the details of the programme. He also discussed the different areas of research of the institute from the date of its establishment till date. He emphasised the importance of celebrating National Technology Day & CSIR-AMPRI Foundation Day.

Dr Mohd Akram Khan, Chief Scientist, CSIR-AMPRI and Coordinator of the programme, introduced the Chief Guest, discussing his honours and achievements. CSIR-AMPRI Documentary video was played during the programme.

Addressing the gathering, Dr G Satheesh Reddy discussed the success of Operation Sindoor and the indigenous technologies used during this operation. He further highlighted and appreciated the capabilities of our armed forces, scientists, start-ups, and industrialists that contributed to this success. Dr Reddy emphasised that the

country cannot be Atmanirbhar if it is not self-reliant in materials and processes. He encouraged the use of our natural resources and knowledge to achieve self-reliance. He further stressed the need for a common platform where all institutes, organisations, and industries working in the area of materials can come together to discuss the nation's needs and prioritise pressing issues. He said that the first element of Atmanirbharta is achieving self-reliance in materials, whereas the second involves developing advanced processes. CSIR-AMPRI plays a critical role in both of these areas, as it focuses on the development of novel materials. Dr Reddy highlighted that such advancements are essential for transforming our country into a Viksit Bharat.

Dr Manisha Dubey, Senior Hindi Officer, moderated the programme. Dr Sandeep Singhai, Senior Principal Scientist, proposed the vote of thanks.

During his visit, Dr G Satheesh Reddy visited various Laboratories/Facilities of CSIR-AMPRI, viz. Metallic Foam & MMC Materials, Bamboo Baithak, Hybrid Composites & SODAR Exhibits, Smart Materials Actuators, Electrochemical Additive Manufacturing, Sensors &

Biosensors, Metal 3-D Additive Manufacturing, Semi-automated Hot Press & X-Ray Radiation Shielding.

Dr G Satheesh Reddy also planted a sapling on this occasion under the “Swachhata Pakhwada” campaign.

Stakeholders Meet for Dissemination of CSIR Technologies in Andaman and Nicobar Islands



Prof. Ranjana Aggarwal, Director, CSIR-NIScPR, emphasised the event's aim of utilising CSIR technology to enhance the Andaman & Nicobar region's potential and improve its socioeconomic profile.

The Andaman and Nicobar Islands, known for their unique geography and ecological richness, face various challenges in different sectors such as agriculture, fisheries, water resources, healthcare, and disaster management. Although they have potential for sustainable development, but limited infrastructure, underutilisation of natural resources, and the lack of access to modern technologies hinder the growth of the region. However, with the application of innovative solutions, these

challenges can be addressed effectively.

To facilitate this, a three-day stakeholders' meet was organised to discuss and disseminate CSIR technologies to address the region's specific challenges. The event was jointly organised by CSIR-National Institute of Science Communication and Policy Research (NIScPR), New Delhi, Unnat Bharat Abhiyan (UBA)-National Coordinating Institute, IIT Delhi, Vijnana Bharati (VIBHA), and Jawaharlal Nehru Rajkeeya Mahavidyalaya (JNRM) from 11-13 March 2025, at JNRM in Port Blair.

The Chief Guest, Ms Pallavi Sarkar, remarked that the event is a landmark in introducing scientifically validated technologies to the Andaman & Nicobar region.

The main aim of the Meet was to showcase CSIR technologies that are tailored to the socio-economic and ecological context of the region, facilitate dialogue among stakeholders, build collaborations and encourage partnerships for technology implementation, and provide capacity building through technology demonstrations and presentations.

The meeting follows an earlier event held in January 2024 and aimed to further explore the potential application of CSIR technologies to foster sustainable development in the region. The event was graced by a distinguished panel of experts.

The Chief Guest of the programme was Ms Pallavi Sarkar, IAS, Secretary (Agriculture/Animal Husbandry Coordinator CS Office) ED (ANIIDICO) and Guest of Honour Dr Eknath B Chakurkar, Director ICAR-CIARI; Prof. Ranjana Aggarwal, Director, CSIR-NIScPR; Dr Sridevi Annapurna Singh, Director, CSIR-CFTRI; Dr Ajit Kumar Shasany, Director, CSIR-NBRI; Dr Pradeep Kumar Singh, Project Director, UBA; Shri Sreeparasad Kuttan, organising secretary, VIBHA and Principal in charge, JNRM; also graced the occasion. Scientists from various CSIR labs and NIOT, representatives from NABARD, and as many as 150 representatives from various SHGs participated in this meet.

Prof. Ranjana Aggarwal emphasised the event's aim of utilising CSIR technology to enhance the Andaman & Nicobar region's potential and improve its

socioeconomic profile. She noted the significant participation of women at the event and discussed the roles of CSIR, UBA, and VIBHA in delivering S&T solutions for rural capacity building. Prof. Aggarwal extended gratitude to CSIR labs and NIOT for their engagement alongside CSIR-NIScPR.

Dr KC Joshi emphasised the crucial role of technology in rural development to unlock the potential of the region.

Ms Pallavi Sarkar remarked that the event is a landmark in introducing scientifically validated technologies to the Andaman & Nicobar region. Ms Sarkar urged stakeholders to engage in technology dissemination sessions with scientists to transform local natural resources into value-added products, which may be promoted for the international market. She stressed the need to identify and catalogue technologies that support socioeconomic development of the region, and she further encouraged collaboration between the scientific community and traditional knowledge to enhance products. Besides, she also noted the importance of promoting forest-based, animal-based, sea-based, and coconut and honey-related products on an international scale.

Dr Eknath B Chakurkar highlighted the need for collaboration between scientific research institutions and local authorities for sustainable development in the Andaman and Nicobar Islands. He further noted ICAR-CIARI's prior partnerships with UBA and VIBHA. Dr Chakurkar

also discussed secondary agriculture, including businesses like Amul butter and Arica net plate production. He encouraged stakeholders to take full advantage of the opportunity to engage with scientists present at the event.

Dr Sridevi Annapurna Singh mentioned the importance of CSIR-CFTRI technologies for enhancing value-added food products in the region. She noted key technologies developed by CSIR-CFTRI, like Amul milk powder, spice oils, and instant mixes. She further emphasised the importance of adopting indigenous technologies for rural development. She mentioned coconut-based technologies as a focus for discussion, given the region's coconut availability, and outlined various training programmes, incubation centres, and support initiatives by CSIR-CFTRI for rural capacity building.

Dr Kandimuthu welcomed dignitaries and introduced Padmashri Ms Panchimal Nariyal Amma and Smt. Meenamal, who work at the grassroots level in the Andaman & Nicobar regions.

Dr Ajit Kumar Shasney discussed the importance of technology and the event to the audience. He later highlighted the efforts of CSIR labs in translating rural technologies from lab to land. Specifically, Dr Kumar mentioned the impact of organic khaad and bacteria-based solutions developed by CSIR-NBRI, which could replace urea and pesticides in the Andaman & Nicobar region.

Dr PK Singh discussed the pan-India activities of UBA and



collaborations with CSIR-NIScPR. He urged students interested in rural development to engage with UBA projects, which are offered twice a year. He also highlighted initiatives to promote faculty and student involvement in rural development.

Shri Sreepasad MK mentioned VIBHA, emphasising its role in improving rural livelihoods through 38 chapters across various Indian states. He further discussed the importance of the event and the unique opportunities it offers to stakeholders.

Dr Yogesh Suman, Chief Scientist, CSIR-NIScPR, New Delhi, presented the activities undertaken for rural development through S&T interventions in the project 'Creating livelihood opportunity through CSIR Technologies using UBA and VIBHA Network'. Dr Yogesh Suman also proposed the vote of thanks.

Ms Kamachi Chellammal, Andaman's 'Nariyal Amma' and Padma Shri awardee, also participated in the event. The scientist visited their agricultural farms to map suitable technologies for their region. The programme was followed by various technical sessions discussing technologies from different CSIR labs.

Dr Sridevi Annapurna Singh, Director, CSIR-CFTRI, mentioned the importance of CSIR-CFTRI technologies for enhancing value-added food products in the region.

CSIR-NIScPR and CNRS Organise Indo-French Seminar on Open Science

“This seminar marks an important step towards fostering international collaboration and advancing the sharing of scientific research for all sections of society,” says Prof. Ranjana Aggarwal, Director, CSIR-NIScPR.



Glimpses of Indo-French Seminar

The CSIR-NIScPR, New Delhi, in collaboration with the CNRS-Department for Open Research Data, Open Science, Publications, Research Data and High Performance Computing, Paris (CNRS-DDOR), organised a two-day Indo-French Seminar on “Open Horizons: Integrating Open Access, Open Data, and Computational Innovation” from 5 to 6 March 2025

at CSIR-NIScPR, Satsang Vihar Campus, New Delhi.

This significant seminar was organised to deliberate on how India and France are taking a stride towards open access, open data and open science; how digital technologies and open source platform offer great promise in implementing an information-driven approach to advance science, promote collaborations,

increase transparency and utilise tools for partnerships between science and society. The seminar was attended by researchers, scientists, and policymakers from India and France.

The inaugural session was attended by esteemed dignitaries from India and France, with Dr Antoine Petit, Chairman and CEO, CNRS, France; Prof. Ranjana Aggarwal, Director, CSIR-NIScPR; Prof. Nitin Seth, Director, Indo-French Centre for the Promotion of Advanced Research (CEFIPRA); and Dr Srinivasa Reddy, Director, CSIR-IICT on the dais.

“We are delighted to organise this event with CNRS, France, to promote open science and research data sharing,” said Prof. Ranjana Aggarwal, setting the tone for the conference. Describing the relevance of the event, she said, “This seminar marks an important step towards fostering international collaboration and advancing the sharing of scientific research for all sections of society.” She also mentioned the “One Nation One Subscription” initiative of the Indian Government and its role in providing open access to a larger number of stakeholders.

Prof. Nitin Seth recollected how they started with 1-2 calls annually to now with several dedicated partnerships in S&T between the two countries. He also shared his views about the expectations from this seminar. “Open access made scientific knowledge accessible, it brings a lot of opportunities”, shared Dr Srinivasa Reddy. He also mentioned the collaborations



CEFIPRA has had with CSIR-IICT over the last several years.

Dr Antoine Petit, Chairman and Dr Sylvie Rousset, Senior Scientist & Head, Open Research Data Department (DDOR) gave a brief on CNRS and DDOR. Dr Kasturi Mandal, CSIR-NIScPR, and Dr Sylvie Rousset provided the overview of the two-day seminar, including topics of discussion and takeaways from the sessions.

The first session during the seminar was on “Policies for Open Access, Open Science in France and India,” which was chaired by Prof. Vivek Kumar Singh from NITI Aayog. Dr Marin Dacos, French Ministry of Higher Education, highlighted the benefits and policies of open science in France. Dr Remya Haridasan, from the PSA Office, Govt of India, discussed the “One Nation One Subscription” (ONOS) initiative in India, wherein he detailed its impact on science dissemination and the challenges faced during implementation. Other speakers included Dr Sylvie Rousset and Mr Mukesh Pund.

The second session was on “Open Access: A Diversity of Routes,” which was chaired by Prof. Anirban Chakraborti. During the session, Dr Bénédicte Kuntziger spoke about the HAL repository’s growth. Dr Françoise Rousseau described negotiation

Dr Remya Haridasan, from the PSA Office, Govt of India, discussed the “One Nation One Subscription” (ONOS) initiative in India.

Events

Dr Françoise Rousseau described negotiation strategies with major publishers to support open science.

strategies with major publishers to support open science. Dr Subbiah Arunachalam provided an overview of open-access progress in India. Dr Geetha Vani Rayasam presented on the open source's role in drug discovery.

Dr Laurence El Khouri chaired the third session, which expanded on the theme of the second session under "Open Access: A Diversity of Routes (Part II)". Dr Lidia Borrell-Damian discussed the Diamond Action Plan for open access. Whereas Prof. Rajeswari Raina emphasised the need for a global perspective on open access. Dr Raphael Tournoy addressed the importance of Overlay Journals. Day one concluded with a Q&A session and a felicitation of the guests and speakers.

The second day of the India-France seminar on Open Science and Research Data concluded successfully with discussions on computational innovation, research evaluation, and open data sharing. Sessions included "R&D in Computational Innovation and Open Source Software,"

which was chaired by Dr Avinash Kshitij, Principal Scientist, CSIR-NIScPR, featuring speakers such as Prof. Roberto Di Cosmo from INRIA and Dr Sridhar Gautam from ICAR.

This was followed by a session on "Reforming the Evaluation of Research," featuring presentations from Dr Lidia Borrell-Damian and others on assessing research methods. The "Open Data Sharing" session included insights from Ms Alka Misra, Deputy Director General, NIC; Dr Marin Dacos, and Dr Naresh Kumar, Chief Scientist, CSIR-NIScPR, on data initiatives.

A panel discussion during a session was also conducted with experts on the future of Open Science and Data. The seminar concluded with a valedictory session, where Dr Naresh Kumar summarised the discussions, and Prof. Anirban Chakraborti from JNU emphasised a balanced approach to Open Science. Mr Mukesh Pund, Chief Scientist, CSIR-NIScPR, gave a vote of thanks, expressing gratitude to all participants.

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