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What's Inside

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CSIR Floriculture Mission

Advancing High-Value Agriculture and Rural Prosperity

In a concerted effort to unlock the economic potential of India's floriculture sector, the Council of Scientific and Industrial Research (CSIR) has launched the CSIR Floriculture Mission. This is a pan-India initiative aimed at promoting scientific cultivation of high-value flowers, strengthening rural livelihoods, and supporting import substitution. Anchored by multiple CSIR laboratories, the mission focuses on developing quality planting material, standardising agro-technologies, and enabling market linkages for floriculture-based enterprises.

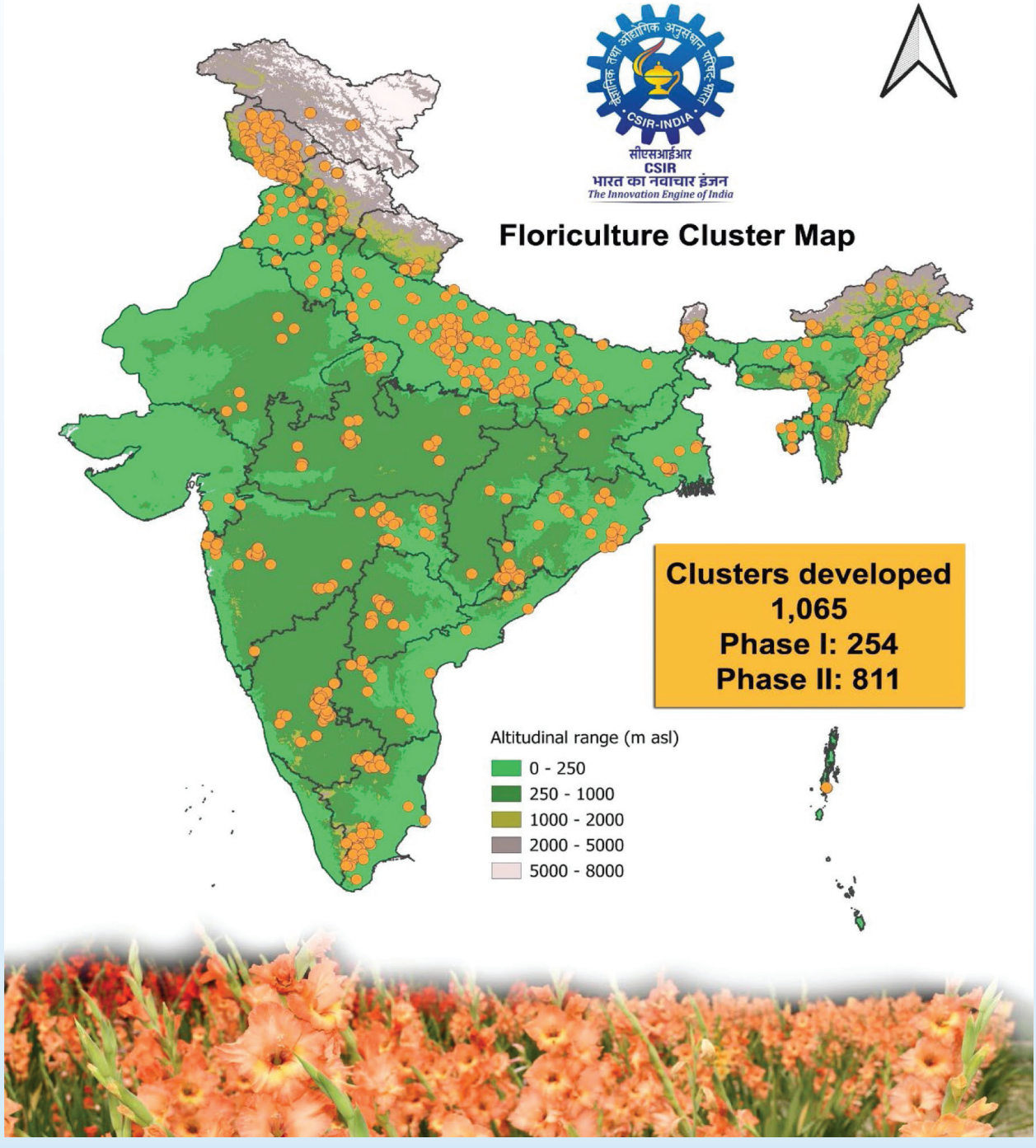
The initiative targets region-specific cultivation of commercially important flowers such as marigold, rose, gerbera, gladiolus, and tuberose, along with the extraction of value-added products like essential oils, natural colours, and floral extracts. By introducing improved varieties and scientific cultivation practices, the mission is helping farmers enhance productivity, diversify income sources, and transition towards high-value agriculture.

A key feature of the mission is its emphasis on end-to-end support, from quality planting material and cultivation protocols to post-harvest management and value addition. Demonstration sites have been established across diverse agro-climatic zones, enabling farmers to adopt location-specific technologies and best practices. Training and capacity-building programmes are equipping farmers, self-help groups, and rural youth with the skills required for commercial floriculture.

The mission is also fostering entrepreneurship by facilitating technology transfer and encouraging start-ups in floriculture value chains, including nursery development, floral processing, and bouquet and decorative product manufacturing. Efforts are being made to strengthen supply chains and reduce dependence on imported flowers, particularly for the domestic market.

By integrating science, skill development, and market-oriented approaches, the CSIR Floriculture Mission is emerging as a catalyst for rural economic growth. It not only promotes sustainable agriculture but also positions India to become a competitive player in the global floriculture market, while generating employment and enhancing farmer incomes across the country.

CSIR Floriculture Mission



Contributed by Science Communication and Dissemination Directorate (SCDD), CSIR, New Delhi.
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Dr Jitendra Singh Inaugurates BioNEST at CFTRI, Focusing on Food Startups

Union Minister for Science and Technology Dr Jitendra Singh inaugurated the BIRAC-BioNEST Incubation Centre at CSIR-Central Food Technology & Research Institute (CSIR-CFTRI), Mysuru, on 3 April 2026 and reviewed an exhibition of Startup-driven technologies and products, positioning the institute's incubation ecosystem as a key platform for bridging laboratory research with commercial applications.

Designed as a state-of-the-art facility with dedicated incubation suites and shared infrastructure, the BioNEST Incubation Centre is expected to boost Food Startups, support advanced research, scale-up validation and regulatory facilitation in food bioprocessing and biotechnology, enabling conversion of scientific ideas into market-ready solutions.

As of March 2026, the BioNEST facility has supported 26 Startups, including physical and hybrid incubates as well as graduated ventures — with several already achieving product commercialisation. Incubated companies have collectively filed 12 patents and contributed to research publications, reflecting a growing emphasis on innovation aligned with market outcomes.

The Startups operate across emerging domains such as nutraceuticals, precision fermentation, probiotics and postbiotics, CRISPR-based technologies and botanicals, indicating a shift towards high-value, science-driven segments within the food and biotechnology sectors.

During his interaction with entrepreneurs and stakeholders, Dr Jitendra Singh underlined that while starting a venture has become easier,

sustaining it requires continuous value addition, market access and stronger industry linkage. He called for deeper engagement between research institutions and the private sector, and emphasised aligning innovation with consumer demand, including in ready-to-eat and convenience food segments.

The Minister also highlighted the government's push to expand private sector participation in emerging technology areas, pointing to new funding mechanisms and institutional support frameworks aimed at accelerating research, development and innovation. He stressed that scientific institutions must enhance outreach through digital platforms and targeted communication strategies to improve awareness and adoption of technologies, while also encouraging convergence across sectors such as biotechnology, space and specialised nutrition.

The event also saw the signing of four Memoranda of Understanding and the launch of two products developed at CFTRI, signalling continued industry engagement and commercialisation of in-house technologies. Officials said such collaborations are critical for scaling innovations and strengthening linkages with micro, Small and Medium Enterprises (MSMEs).

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Marking the institute's 75th year, a set of publications documenting its research legacy and technological contributions was released, including a coffee table book, a compendium of research and development achievements, a photo journey and a collection of traditional recipes. A commemorative postal cover and picture postcard were also unveiled to mark the milestone.

The exhibition functioned as a live demonstration of the institute's lab-to-market pipeline, showcasing technologies, processed food products, and startup innovations developed at CFTRI and by its licensees. With over 450 technologies developed and transferred to

thousands of licensees, the institute has emerged as a key national hub for food research, industry collaboration and enterprise development.

Officials said the BioNEST ecosystem is increasingly drawing national and international interest, with startups participating in global programmes, achieving commercial milestones and technology transfers, and attracting attention from strategic sectors such as defence for specialised food applications.

The developments collectively signal a shift from a research-led approach to a market-linked food innovation ecosystem, with CSIR-CFTRI positioning itself as an integrated platform combining scientific research, incubation support and industry collaboration to drive the next phase of growth in India's food processing sector.

On the same day, 3 April 2026, India's millet push received a dual institutional boost as the Centre moved to scale both technology and grassroots capacity, with Union Minister for Science and Technology Dr Jitendra Singh highlighting that millet recipes developed with Indian technology are being served by international food chains, including McDonald's.

The Centre is now working on developing similar sustainable food recipes from "Kalari", a

popular cheese product originating from Udhampur in J&K, the Minister informed.

During a visit to the country's first dedicated "Centre of Excellence" for Millets at the Central Food Technology & Research Institute, Dr Jitendra Singh observed that the innovations from this Centre have already entered global food chains, and will now be complemented by a new residential training ecosystem to expand its reach nationwide.

Earlier, the Minister performed the Bhoomi Pooja for 30 single occupancy hostel facility under the Rashtriya Krishi Vikas Yojana (RKVY), marking the start of a capacity-building expansion aimed at trainees, farmers, Farmer Producer Organisations (FPOs) and self-help groups, even as he positioned

the institute's millet ecosystem as a model for converting traditional crops into scalable, market-ready products.

The upcoming hostel complex at the MG Halli campus will include facility for around 50 participants, accommodation, and kitchen and dining infrastructure, and is expected to be completed within a year. The facility is designed to support residential training programmes, enabling participation from across the country, particularly for those unable to afford accommodation, and strengthening skill development in food processing, entrepreneurship and value addition.

Officials said the project addresses a growing demand for structured training, with the institute already conducting dozens of programmes annually for farmers, entrepreneurs and industry stakeholders. The residential format is expected to significantly enhance participation and outcomes by allowing hands-on, immersive training aligned with the government's Skill India and livelihood generation initiatives.

Positioning millets at the centre of India's food and nutrition strategy, Dr Jitendra Singh described the Centre of Excellence at CFTRI as "possibly the first of its kind globally", developed at a time when India has led the international millet movement, including the United Nations' declaration of the International Year of Millets. He said the institute has demonstrated how traditional grains can be transformed into modern food products that are "rich in iron and protein, yet taste-friendly", with adoption by global food chains reflecting their commercial viability and consumer acceptance.

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During his visit to the Centre of Excellence on Millets, Dr Jitendra Singh reviewed the facility's integrated processing infrastructure, which includes seven processing lines and a dedicated laboratory enabling end-to-end primary and secondary processing of all major millets. The centre is equipped with specialised lines for cleaning, dehulling, polishing and sorting, as well as for producing value-added products such as flakes, extruded items, baked goods and semolina. It also incorporates technologies that extend the shelf life of millet flour from about one month to nearly ten months, significantly enhancing commercial viability. With automated operations and a processing capacity ranging from 300 kg to 1,000 kg per hour, the facility is designed to support farmers, self-help groups and startups in developing market-ready millet-based products.

The millet facility, supported by ₹20 crore under RKVY, integrates advanced processing technologies capable of handling all nine varieties of millets within a single system. With a cleaning capacity of 60–70 tonnes per day and milling capacity of 12–15 tonnes per day, it produces a range of value-added outputs including flour, semolina (sooji and rava) and bran, while ensuring higher nutrient retention, improved shelf life and industrial-scale efficiency in a hygienic, automated environment.

Dr Jitendra Singh emphasised that the next phase of growth lies in expanding the commercial and entrepreneurial ecosystem around such technologies. He called for stronger outreach, including digital dissemination and targeted engagement with startups and MSMEs, particularly in emerging segments such as ready-to-eat and "carry-home" food products tailored to changing urban consumption patterns.

Noting that institutions like CFTRI have already developed hundreds of technologies with high levels of commercial adoption, the Minister said

the focus must now shift to ensuring wider market access and last-mile delivery. He stressed that scientific innovation must move beyond laboratories to directly support livelihoods, especially through partnerships with farmers, women's groups and small enterprises.

The twin initiatives unveiled on Friday — a globally benchmarked millet innovation platform and a dedicated residential training facility — together signal a more integrated approach to food policy, linking research, skill development and enterprise creation. While the millet centre provides the technological backbone for value-added, nutrition-driven products, the hostel facility is expected to expand the pool of trained stakeholders capable of adopting and scaling these innovations on the ground.

With global attention turning towards climate-resilient crops and sustainable nutrition, millets are emerging as a strategic focus area for India's food economy. The CFTRI model, combining scientific research, industry linkage and grassroots capacity-building, is being positioned as a template for translating this opportunity into both economic growth and nutritional outcomes.

Adapted from PIB

CSIR-IIIM & JKEDI Join Hands to Strengthen Startup Ecosystem in J&K

CSIR-Indian Institute of Integrative Medicine (CSIR-IIIM), Jammu, and its Technology Business Incubator (IIIM-TBI) on 31 March 2026 reinforced their commitment to building a robust startup ecosystem in the Union Territory through closer collaboration with Jammu and Kashmir Entrepreneurship Development Institute (JKEDI), focusing on innovation, incubation, and commercialisation of research-driven ideas. The initiative aims to integrate startups with advanced scientific infrastructure, mentorship networks, and funding opportunities, creating a strong pipeline of technology-based enterprises in the Union Territory.

Khalid Jahangir, Secretary Industries & Commerce and Director JKEDI, with his team, joined this deliberation from Jammu and Kashmir Entrepreneurship Development Institute (JKEDI), while Dr Zabeer Ahmed, Director CSIR-IIIM, with the IIIM TBI team, represented the CSIR-IIIM Jammu and discussed the expertise and modalities for institutional connect.

Director CSIR-IIIM, Dr Zabeer Ahmed, during his initial remarks, emphasised that the scientific and resource potential of the region is the real strength, stating that Jammu and Kashmir is home to over 1,500 medicinal plant species, many of which remain unexplored. The Institute is involved in captive cultivation, domestication, agro-technologies development, processing and cutting-edge research for phytopharmaceuticals and pre-clinical drug discovery, he added. He said the institute is committed to providing full support to startups by offering access to its advanced infrastructure, including GLP-certified labs, Fermentation Pilot Plants, NABL-accredited Quality Control and Quality Assurance, cGMP facilities, analytical facilities at the Institute and its innovation complexes. "Our focus is to convert innovative ideas into impactful, market-ready products. We are opening our facilities to startups and ensuring 24×7 support for entrepreneurs working in critical sectors like healthcare, biotechnology, and aromatic plants," he said. He also proposed linking startups from Jammu and Kashmir with national innovation hubs, including CSIR's innovation complex in Mumbai, to enhance industry exposure and facilitate market access. Dr Ahmed underscored

the need for a strong institutional connection for providing end-to-end support to the budding startup.

Speaking at the programme, Secretary, Industries & Commerce and Director JKEDI, Khalid Jahangir, stressed the need for strong institutional partnerships to enable startups to access research labs, prototyping facilities, and expert mentorship. He said that Jammu & Kashmir currently has around 1,400 startups, with a growing shift towards technology-based ventures, biotechnology, and food processing. He highlighted that under the Startup Policy, the government has already disbursed over ₹1.25 crore in seed funding to selected startups, while more proposals are under active consideration. He added that the selection process is rigorous, involving multi-stage evaluation by experts from academia, industry, and government. "Building a robust startup ecosystem requires a network of institutions working together. Formal collaborations through MoUs will play a key role in strengthening innovation and ensuring that startups can scale effectively," he said. Jahangir further informed that JKEDI is actively supporting startups through incubation, mentorship programmes, market linkages, and exposure to national-level platforms. He noted that several startups from the region are now engaging with venture capital firms and are at various stages of securing institutional funding. Highlighting future prospects, he said that Jammu and Kashmir is at a critical stage where sustained support could lead to the emergence of high-growth startups and even unicorns in the coming years.

"Our focus is to convert innovative ideas into impactful, market-ready products. We are opening our facilities to startups and ensuring 24×7 support for entrepreneurs working in critical sectors like healthcare, biotechnology, and aromatic plants," said Director CSIR-IIIM, Dr Zabeer Ahmed.

Dr Saurabh Saran provided an overview of IIIM-TBI, stating that the incubator has supported over 100 startups, with several developing market-ready products in sectors like herbal healthcare, nutraceuticals, and biotechnology. He said the incubator provides end-to-end support, including business validation, technical mentorship, infrastructure access, and industry linkages. Dr Saran noted that Jammu and Kashmir's unique biodiversity and geographical advantage make it an ideal hub for startups in biotech, agritech, and healthcare sectors, adding that collective efforts could help the region produce its first unicorn in the near future. He also highlighted CSIR-IIIM's ongoing missions such as the Aroma Mission and floriculture initiatives, which have already generated livelihood opportunities and are now being integrated with startup development for value addition and commercialisation.

Irtif Lone, I/C CIIBM at JKEDI, presented an overview of the Startup Policy, highlighting that the policy aims to establish J&K as a leading startup ecosystem by 2027. He informed that the policy focuses on key sectors such as agriculture, food processing, healthcare, tourism, renewable energy, and handicrafts, while also promoting inclusivity by supporting women entrepreneurs and other underrepresented groups. He added that JKEDI has trained over 15,000 entrepreneurs over the years, with a high percentage of successful enterprises. He also highlighted the establishment of incubation centres, co-working spaces, mentorship networks, and financial support systems, including seed funding and venture capital facilitation.

The programme concluded with a vote of thanks presented by Dr Vidushi Abrol, Business Manager, IIIM-TBI, who acknowledged the contributions of all stakeholders and participants for making the event successful.

R&D

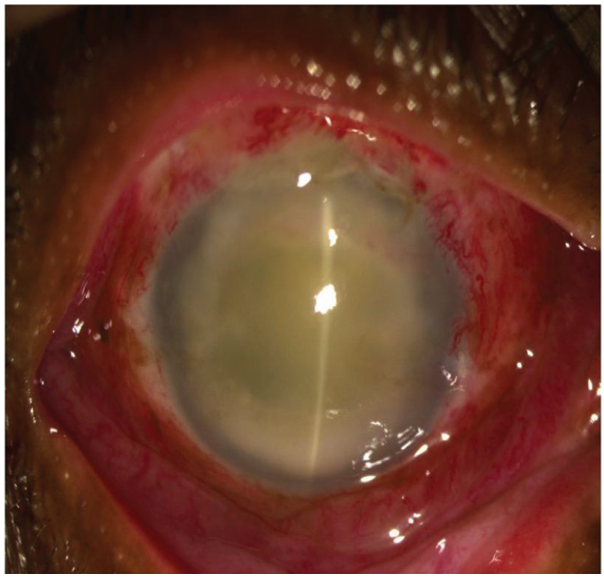
Study Urges Microbiology-guided Diagnosis and Treatments, and Genomic Surveillance in Hospitals

Researchers from the CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB), Hyderabad, and the LV Prasad Eye Institute (LVPEI) came together in a unique collaborative study that uncovered alarming levels of Antimicrobial Resistance (AMR) in bacteria causing eye infections. The study, published in *Communications Biology*, represents one of the most comprehensive genomic analyses of eye pathogens from India to date. Dr Karthik Bharadwaj and Dr Divya Tej Sowpati from CSIR-CCMB and Dr Joveeta Joseph from LVPEI led the study.

CSIR-CCMB researchers led the genomic and bioinformatics analyses, and LVPEI researchers contributed in clinical expertise, patient samples, and microbiological characterisation — bringing together cutting-edge genomics with real-world clinical insights. "To understand and solve a problem like AMR, it is essential for clinicians and scientists come together and contribute through their expertise. This is not a problem to be solved with model organisms but rather with real patient samples," said Dr Vinay K Nandicoori, Director, CSIR-CCMB.

The team isolated bacteria from the patient samples and tested them with known antibiotics. They found more than 45% of isolates were multidrug-resistant, and included both Gram-positive and Gram-negative bacterial pathogens. "We found samples with vancomycin-resistant Staphylococcus aureus and extensively-drug resistant (XDR)-Klebsiella pneumoniae strains involved in eye infections. These findings are worrying because they can spread their AMR genes to other bacteria too. Also, these pathogens can infect other parts of our bodies," said Dr Bharadwaj, clinician-scientist at CSIR-CCMB. Through whole genome sequencing, they have also identified new AMR-associated bacterial mechanisms and mutations in this study.

From a clinical standpoint, the study underscores the urgent need to re-evaluate current treatment practices. It is common that a clinician starts treatment based on their best judgements before laboratory results are available. Since identifying the exact organism can take a few days, treatment is initiated with antibiotics that are most likely to be effective, and later adjusted once the



Eye infection, PC: LVPEI

test results are known. This is called empirical therapy.

The high prevalence of AMR challenges the continued reliance on empirical antibiotic therapy. Fluroquinolones are a frequently used class of antibiotics, and this study reported resistance against these antibiotics in all eye pathogens. This highlights the importance of microbiology-guided diagnosis and treatment approaches, particularly in severe infections such as microbial keratitis and endophthalmitis. "While genomic tools are not yet part of routine clinical workflows, the insights generated through this study provide a critical foundation for developing region-specific treatment guidelines and strengthening antimicrobial stewardship efforts in ophthalmology," said Dr Joseph, Head of Microbiology at LVPEI.

Eye infections are not isolated events - they are caused by microbes on our skin as well as in the environment. Thus, these results reflect the larger AMR landscape in our surroundings, and are not just pertinent to the eye care sector. "This study positions the eye as a valuable site for AMR surveillance in the environment around us," said Dr Prashant Garg, Executive Chair, LVPEI.

WORKSHOPS/SEMINARS

AI-Driven Drug Discovery: Advanced Tools, Techniques & Applications

A three-day intensive workshop on "AI-Driven Drug Discovery: Advanced Tools, Techniques & Applications" was successfully organised at the CSIR-Human Resource Development Centre (CSIR-HRDC), Ghaziabad, from 7 to 9 April 2026. The programme was exclusively designed for CSIR Scientists and Technical Officers, with the objective of equipping them with advanced knowledge and practical exposure to cutting-edge Artificial Intelligence (AI) tools transforming modern drug discovery.

The workshop was inaugurated in the presence of eminent dignitaries, including Prof. GN Sastry, Department of Biotechnology, IIT Hyderabad; Dr TS Rana, Head, CSIR-HRDC; along with Dr Vinay Kumar, Scientist G & Programme Convener; and Mrs Preeti Chaudhary, Programme Coordinator. In his inaugural address, Prof. Sastry highlighted the transformative role of AI in revolutionising the drug discovery process and emphasised the growing importance of interdisciplinary approaches in pharmaceutical research. Dr Vinay Kumar also presented a comprehensive overview of the workshop, outlining its vision, objectives, and the rationale behind conceptualising this programme to

address emerging needs in AI-driven drug discovery.

Over the course of three days, the workshop featured a series of insightful lectures and interactive sessions delivered by distinguished experts from premier institutions. Notable contributors included Prof. Prabha Garg (NIPER, SAS Nagar), Prof. D Sunder (Director, IBAB), Dr Arijit Roy (TCS, Hyderabad), and Dr S Nagamani (CSIR-NEIST), who shared their expertise, real-world applications, and emerging perspectives in AI-enabled drug discovery.

The technical sessions on AI in Target Identification and Biomarker identification, AI-Assisted Molecular Docking & Scoring and AI in Bimolecular Simulation were particularly well-received. Experts such as Dr Rajnish Kumar, Associate Professor (IIT BHU, Varanasi), Dr Firoz Khan (CSIR-CIMAP), and Dr Tarak Karmakar (IIT Delhi) provided in-depth knowledge and hands-on insights, significantly enhancing participants' understanding of advanced computational approaches in drug discovery.

The workshop concluded on 9 April 2026, with the distribution of participation certificates by Dr TS Rana and Dr Vinay Kumar, recognising the active engagement of participants throughout the programme.

The valedictory session concluded with a vote of thanks delivered by Mrs Preeti Chaudhary, who expressed sincere gratitude to all distinguished speakers, dignitaries, and participants for their valuable contributions in making the programme a grand success.

The workshop received highly positive and encouraging feedback from participants, which will serve as a guiding framework for organising future programmes. The programme successfully provided a dynamic platform for knowledge exchange, skill enhancement, and fostering innovation in the rapidly evolving domain of AI-driven drug discovery.

National Capacity Building Workshop on "Traditional medicine: Documentation, validation and Communication"

CSIR-National Institute of Science Communication and Policy Research (NIScPR) in association with the ICMR-National Institute of Traditional Medicine (NITM) organised a National Capacity Building Workshop on "Traditional medicine: Documentation, validation and Communication" under the national initiative SVASTIK (Scientifically Validated Societal Traditional Knowledge) on 06 March 2026 at NITM, Belagavi. More than 60 participants from 10 different institutions in and around Belagavi registered and actively participated in the workshop.

The inaugural function was graced by Dr Padma Gurmet, Padma Shri and Director, National Institute of Sowa Rigpa (NISR); Prof Ranjana Aggarwal, Outstanding Scientist, CSIR and Former Director, CSIR-NIScPR; Dr Subarna Roy, Director, ICMR-National Institute on Traditional Medicine (NITM), and Dr Geetha Vani Rayasam, Director, CSIR-NIScPR, who joined online.

The programme started with the welcome address by Dr Harsha Hegde, Scientist F, ICMR-NITM. It was followed by the introductory remarks by Dr Subarna Roy. He emphasised on the importance of communicating research happening in traditional medicine to society at various platforms, and urged that researchers at any stage

of their career must be equipped with the nuances of science communication.

Dr Padma Gurmet, the Chief Guest of the programme, delivered an insightful talk on Sowa Rigpa and discussed in detail the inception journey of NISR. In his discussion, he emphasised the importance of traditional systems of medicine, especially Sowa-Rigpa, its interconnectedness with Ayurveda, and the need for documentation, validation, and communication of traditional medicines for better visibility and integration in the contemporary medical system.

Prof Ranjana Aggarwal delivered an engaging keynote talk where she provided an overview of the Indian traditional knowledge system. Dwelling on the concept of Vedas and Panchkosha, and citing many examples from different traditional knowledge/practices of India, she emphasised on the importance of validating such knowledge, its convergence with modern science, and effectively communicating them to society. The inaugural session came to an end with the vote of thanks proposed by Dr Charu Lata, Principal Scientist and Coordinator, SVASTIK, CSIR-NIScPR.

The first technical session of the workshop on "India's traditional medicine heritage: From protection to perpetuation" focused on India's rich and diverse traditional medicine heritage and its continuity in the present era. It started with the plenary lecture by Prof Pulok Mukherjee. He spoke on the translation of traditional medicine, systems ethnopharmacology, and sustainable bioresources. He urged the value of local health traditions, the development of ethnopharmacology-driven products, keeping in mind regulatory guidelines and ethical considerations, and the utilisation of sustainable bioresources.

Vaidya Pawankumar Ramesh Godatwar, World Health Organization Centre, New Delhi, delivered a very insightful plenary talk on the WHO perspectives on holistic health worldwide. He spoke about the research priority settings in traditional medicine initiated by WHO for affordable and sustainable health for the majority population globally.

In the second technical session, Dr Charu Lata delivered an insightful talk on India's traditional systems of medicine. She also outlined the systematic process followed under the

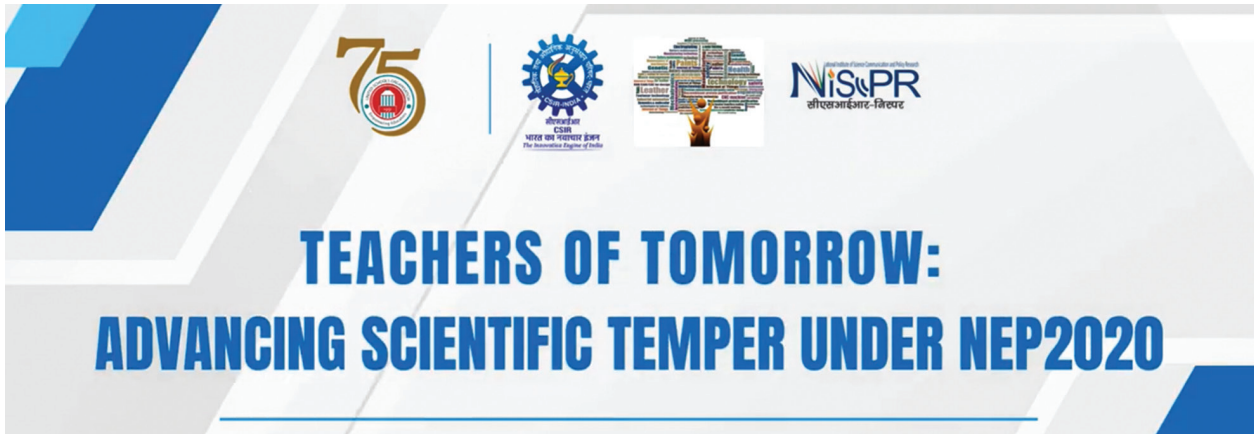
national initiative SVASTIK, from identifying and validating traditional practices to documenting and communicating them to the public through social media platforms. She added that educators and researchers who can link conventional knowledge with verified scientific data can effectively communicate science.

It was followed by an interactive hands-on training on traditional knowledge communication by Dr Paramananda Barman, Senior Scientist, CSIR-NIScPR. He explained the fundamentals of science communication and discussed its various forms that help translate scientific concepts for wider audiences. During the session, participants received hands-on training in writing popular articles, designing communication materials, and creating visually appealing infographics and short videos. During the workshop, SVASTIK was also showcased through a vibrant exhibition displayed by the CSIR-NIScPR team. The workshop concluded with an interactive feedback session from the participants.

Teachers of Tomorrow: Advancing Scientific Temper under NEP 2020

Teachers of Tomorrow is a comprehensive professional development initiative introduced by the United Schools Organisation of India (USO). The programme is designed to empower educators and enhance their capabilities beyond the traditional classroom environment. It provides a dynamic platform for teachers to engage in continuous learning through a diverse range of activities such as seminars, workshops, competitions, and webinars. Each component of the series is thoughtfully curated to address the evolving needs of educators in the 21st century, enabling them to adapt to modern pedagogical practices and foster holistic development among students.

The initiative focuses not only on strengthening academic competencies but also on nurturing essential skills such as communication, collaboration, and innovation. By encouraging educators to stay updated with contemporary educational trends and policies, Teachers of Tomorrow aims to build a community of forward-thinking teachers who can inspire and guide learners effectively. The Professional Development Programme titled "Teachers of Tomorrow: Advancing Scientific Temper under NEP 2020"



was successfully conducted on 25 March 2026, at the Einstein Meeting Room, USO House, New Delhi. The programme was organised by USO in collaboration with CSIR–National Institute of Science Communication and Policy Research (CSIR-NIScPR), New Delhi.

This initiative brought together science educators from various schools across the region, creating a collaborative platform for knowledge exchange, skill enhancement, and professional growth. The programme was aligned with the vision of the National Education Policy (NEP) 2020, which emphasises experiential learning, critical thinking, and the development of a scientific temper among students.

The workshop provided participants with valuable insights into innovative teaching methodologies and the importance of integrating scientific inquiry into everyday classroom practices. It also highlighted the crucial role of teachers in shaping young minds and fostering a culture of curiosity and evidence-based reasoning. Through a series of expert-led sessions and interactive activities, the programme created an engaging and enriching learning experience for all attendees.

The primary purpose of the programme was to empower science teachers with innovative pedagogical approaches that promote curiosity, critical thinking, and evidence-based learning. In line with the objectives of NEP 2020, the workshop focused on advancing scientific temper by encouraging inquiry-driven teaching methods and strengthening the ability of educators to communicate scientific concepts effectively.

Another key objective was to emphasise the importance of ethical practices in scientific writing and communication. Teachers were encouraged to adopt strategies that not only enhance students' understanding of scientific concepts but also instil values such as integrity, accuracy, and objectivity.

The programme also aimed to bridge the gap between theoretical knowledge and practical application. By introducing experiential learning techniques and real-world examples, educators were able to create more engaging and interactive classroom environments. This approach ensures that students are not passive recipients of information but active participants in the learning process.

The programme commenced with the registration of participants, followed by an inaugural session that set the tone for the day. The opening remarks and welcome address were delivered by Ms Nina Jain, Secretary General, USO, who emphasised the significance of continuous professional development for educators and the role of such initiatives in strengthening the education system.

The inaugural address was delivered by Mr CB Singh, Head of Jigyasa, Training & HR Division at CSIR-NIScPR. In his address, he highlighted the importance of scientific literacy in today's world and underscored the vital role that teachers play in nurturing informed and responsible citizens. He also spoke about the need to cultivate a spirit of inquiry and innovation among students.

The first technical session was conducted by Ms Sonali Nagar, Editor of *Science Reporter*. Her session, titled "Science Beyond the Textbook,"

This program focused on strengthening scientific temper, inquiry-based teaching, and classroom innovation under NEP 2020

focused on the importance of moving beyond rote learning and encouraging inquiry-driven education. She discussed effective science communication techniques, the development of scientific writing skills, and the importance of maintaining integrity in scientific practices. The session was followed by an interactive segment, where participants engaged in assignments and reflective exercises, allowing them to apply the concepts discussed.

Following a lunch break, the second technical session was led by Dr Manish Mohan Gore, Editor of *Vigyan Pragati*. His session on the "Role of Science Communication in disseminating research outcomes of Indian laboratories and its significance in science teaching" provided valuable insights into how teachers can connect classroom learning with ongoing scientific advancements in the country. He emphasised the importance of making science relatable and accessible to students by linking it to real-life contexts and current research.

Shaping Future-Ready Educators Aligned with NEP 2020 vision

The session also included an interactive component, where participants actively shared their perspectives and reflected on their learning. These discussions fostered a collaborative learning environment and encouraged the exchange of ideas among educators.

The programme concluded with closing remarks and the distribution of certificates to all participating teachers. As a token of appreciation, goodies were also provided by the USO to the participants. The event ended with a group photograph and a tea session, offering an opportunity for informal interaction and networking.

Overall, the sessions were thoughtfully curated to maintain a balance between theoretical insights and practical engagement. The workshop proved to be highly informative and impactful, leaving participants better equipped to implement innovative teaching strategies and promote scientific temper in their classrooms.

EVENTS

CSIR-CSMCRI Celebrates 73rd Foundation Day

CSIR-Central Salt & Marine Chemicals Research Institute (CSIR-CSMCRI), Bhavnagar, on 10 April 2026, celebrated its 73rd Foundation Day with grandeur, honouring its rich legacy of scientific excellence while looking ahead to future aspirations. The programme opened with a welcome address by Dr JR Chunawala, Chief Scientist, and Chairperson of the Foundation Day Committee, followed by a special lecture by Dr Kannan Srinivasan, Outstanding Scientist, who emphasised the institute's pioneering role in marine chemicals & salt research, and highlighted CSIR's contribution in the upliftment of science in the country.

The programme featured lectures by Dr Subeer S Majumdar, Director General of Gujarat Biotechnology University, on biotechnology innovations, and Prof. Sirimavo Nair of MS University, Baroda, who spoke on fortified rice and its health benefits. The centrepiece was the Foundation Day Address by Dr Arup Ghosh, Director of CSIR-CSMCRI, highlighting the institute's vision, achievements, and future roadmap. Dr Manish Kumar, District Collector & DM of Bhavnagar, also addressed the gathering.

The Chief Guest, Smt. Nimuben Jayantibhai Bambhaniya, MP & Hon'ble Minister of State for Consumer Affairs, Food and Public Distribution, Government of India, delivered a special address, commending CSIR-CSMCRI's role in advancing research and supporting national priorities. She extended her best wishes to all employees of the institute. Dr Kanti Bhooshan Pandey, Principal Scientist, informed that the institute was open to science enthusiasts as well as school and college students, providing them an opportunity to visit and gain insights into the ongoing research and development activities under Jigyasa. The event concluded with a vote of thanks by Shri Biranchi Sarang, CoA, CSIR-CSMCRI, expressing gratitude to all dignitaries, participants, and staff for making the celebration memorable.

Awareness Programme on Health and Nutrition

The CSIR-Institute of Himalayan Bioresource Technology, Palampur (HP), organised an Awareness Programme on Health and Nutrition for the Himachal Pradesh State Food Commission, district authorities, and field functionaries on 9 April 2026 to promote balanced nutrition and food safety that marked the launch of "Mission Bharpoor 2.0".

Shri Bal Mukund Sharma, IAS, Chairman, State Food Commission, Punjab, graced the occasion as the Chief Guest. Dr SP Katyal, Chairman, State Food Commission, Himachal Pradesh and Sh. Vinay Kumar, IAS, ADC, Kangra, attended as the Guest of Honour. The workshop was attended by representatives from the Department of Women and Child Development, Health and Family Welfare, along with field functionaries, including Child Development Programme Officers (CDPOs), block supervisors, Anganwadi workers and ASHA workers.

In his welcome address, Dr Sudesh Kumar Yadav, Director CSIR-IHBT, while welcoming all the guests, emphasised the role of the institute in addressing malnutrition and food security challenges in the Himalayan region. He highlighted the need for stronger collaborations between line departments for the implementation of innovative technologies developed by the institute, particularly in the valorisation of indigenous bioresources for regional food security and their integration into nutrition programmes and public distribution systems.

Mr Bal Mukund Sharma, Chief Guest of the programme, lauded the institute's efforts and said such initiatives are the need of the hour, wherein the nutritional status and well-being of the citizens are being prioritised through collaborative efforts. Speaking on the occasion, Dr SP Katyal praised the work being carried out by the institute and highlighted that this collaboration is bearing fruitful results and benefiting society. Mr Vinay Kumar also complimented the stakeholders for teaming up for such an important cause, which has now developed as a role model that can be replicated elsewhere.

Sh. Ashok Sharma, District Program Officer, Department of Women and Child Development, Kangra, informed that Phase-1 of Mission Bharpoor led to a significant reduction in the prevalence of SAM and MAM among children. He further noted that the District Administration is rolling out Phase-2 for wider coverage across District Kangra. Programme coordinators Dr Vidyashankar Srivatsan and Dr Mahesh Gupta, scientists at CSIR-IHBT, highlighted the salient features of various fortified food products developed by the institute and their potential health benefits.

The programme marked the launch of Mission Bharpoor 2.0, a special initiative for combating childhood malnutrition in District Kangra, Himachal Pradesh, jointly implemented by CSIR-IHBT, Palampur and the District Administration Kangra. The initiative was launched on the first day of POSHAN Pakhwada being celebrated from 9 April to 23 April 2026. During the workshop, a document highlighting the outcomes of Phase-1 of Mission Bharpoor was released. The results indicated that supplementation of fortified food products developed by CSIR-IHBT improved the health status of children aged 2–5 years. Among 920 beneficiaries covered under Phase-1, nearly 70% of children showed improvement in key health parameters including body weight gain, BMI, and reduction in stunting and wasting.

AWARDS/HONOURS

Mentoring Young Researchers for a Strong Science Ecosystem

Since 2016, TNQ Inspiring Science Awards (TNQ ISA) has been celebrating creative and impactful research in life sciences by rewarding the young researchers involved in the work. Four PhD students and a postdoctoral fellow from CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB), Hygerabad, have been on this list of finalists so far. The latest one this year was Dr Jotin Gogoi who authored a paper on how cells tolerate some mistakes in making proteins and how this might have helped in the evolution of living cells.

This year, TNQ ISA has also recognised two mentors, both affiliated to CCMB, for their exceptional mentoring of young researchers. Dr Rajan Sankaranarayanan and Dr Santosh Chauhan have trained four researchers each, whose work has been recognised by TNQ ISA. The concerned PhD students trained under Dr Chauhan were enrolled in the BRIC-Institute of Life Sciences, Bhubaneshwar. This move by the awarding agency highlights the importance of mentoring young researchers towards exciting and meaningful work.

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Dr Rajan Sankaranarayanan and Dr Santosh Chauhan receiving the award from Prof Bonnie Bassler

Dr Sankaranarayanan's research group focuses on understanding how structures of enzymes dictate their unique properties, which are also essential to life. One of their major focus areas is studying the living cell's machinery to select the right orientation of amino acids to make proteins. Dr Chauhan's research group looks into the cell's first line of defence against outside invaders, called innate immunity. His work has opened up a new line of research called Programmed Cell Revival — it lets us understand how cells on the brink of death have hard-wired molecular mechanisms to revive themselves.

On the occasion of receiving the award, both the senior scientists of CCMB reflected on the important role young researchers play in their groups through not only doing experiments but also their creativity and energy.

On the style of mentorship, Dr Chauhan remarked, "For me, mentorship is not about telling people exactly what to do. It's about giving them space to think, ask questions, make mistakes, and slowly become confident and independent scientists. When I see someone grow in that way, it feels more rewarding than any single result or paper."

Dr Sankaranarayanan also commented on the basic questions of life sciences that his lab addresses. He said, "Awardees from my lab have worked on very fundamental problems in biology, rather than on fashionable topics or work with immediate application relevance. I really appreciate that the TNQ jury has recognised such fundamental work, and I hope this will encourage young scientists to continue to take up basic biological problems."

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