

## In the News

# Transfer of Technology (ToT) of CSIR's indigenously designed and developed HANSA-3(NG) trainer aircraft for Commercial Pilot Licensing (CPL)

*CSIR's indigenously designed and developed HANSA-3(NG) trainer aircraft signifies a giant leap for creating India's robust aviation ecosystem: Dr Jitendra Singh*



Union Minister Dr Jitendra Singh officially launched indigenous “Trainer Aircraft” technology for Commercial Pilot Licensing (CPL) and also announced the decision to involve the private sector to collaborate in the manufacture of this aircraft on 4 April 2025.

The Minister formalised the Transfer of Technology (ToT) of CSIR's indigenously designed and developed HANSA-3(NG) trainer aircraft for Commercial Pilot Licensing (CPL) at the National Media Centre, New Delhi. The licensing of the HANSA-3(NG) two-seater trainer aircraft has been

*The HANSA-3(NG) aircraft offers excellent performance with a range of 620 nautical miles, 7 hours of endurance, and a maximum cruise speed of 98 Knots Calibrated Airspeed (KCAS).*



granted to M/s Pioneer Clean Amps Pvt. Ltd.

Union Minister of State (Independent Charge) for Science and Technology, Minister of State (Independent Charge) for Earth Sciences, MoS PMO, Department of Atomic Energy and Department of Space, MoS Personnel, Public Grievances and Pensions, Dr Jitendra Singh lauded the efforts of CSIR scientists for the successful demonstration and commercialisation of the indigenous HANSA-3(NG), noting that the aircraft will fulfil the requirements of flying clubs in providing PPL (Private Pilot License) and CPL (Commercial Pilot License) training to the young generation.

The Minister emphasised the need to develop a large and world-class flying training ecosystem in India to meet the rapidly growing demand of the Indian aviation sector. The availability of CSIR's indigenous HANSA-3(NG) aircraft will strengthen India's aviation industry and help realise Prime Minister Shri Narendra Modi Ji's vision of India becoming a leading aviation hub by the end of the decade and achieving the goal of Viksit Bharat by 2047.

Dr Jitendra Singh highlighted the huge opportunity for StartUps

and MSMEs, along with significant employment generation potential through the indigenisation of aviation technologies. He emphasised that indigenous small aircraft manufacturing under the "Atmanirbhar Bharat" initiative would support the development of infrastructure and promote small & medium-scale private entrepreneurs in the production of airworthy components, including assembly and integration of aircraft in India.

He also pointed out the socio-economic potential of this initiative, which will create employment opportunities through on-the-job training for ITI & Diploma holders in various disciplines of aircraft building and Aircraft Maintenance Engineering (AME) training.

Dr Jitendra Singh reaffirmed the government's focus on democratisation and decentralisation of pilot training, which will reduce the cost of pilot training and give wings to the aspirations of youth, many of whom give up on their dream of becoming pilots due to affordability issues.

He stated, "Success in the Space Economy by collaborating with the private sector will now be replicated in the aviation sector to meet the growing demand."

India will need 30,000 pilots over the next 15–20 years, up from the current 6,000–7,000 pilots, as Indian airlines collectively have over 1,700 aircraft on order. Currently, India's commercial aircraft fleet stands at over 800 aircraft. Typically, each aircraft requires 15–20 pilots for narrow-body aircraft and 25–30 pilots for long-range wide-body jets. Hence, there is an urgent need to create a world-class flying training ecosystem in the country. Dr Singh also credited Union Minister for Civil Aviation Shri K Ram Mohan Naidu for enabling growth in the sector.

Union Minister for Civil Aviation, Shri K Ram Mohan Naidu, complimented CSIR and CSIR-NAL scientists for their commitment towards the commercialisation of the HANSA-3(NG) aircraft, following his recent visit to CSIR-NAL in October 2024.

The HANSA-3(NG) aircraft comes equipped with a digital display (glass cockpit) system and is powered by an advanced fuel-efficient Rotax 912 iSc3 Sports engine. The aircraft features a bubble canopy with a cabin width of 43 inches and electrically operated flaps, meeting modern user requirements. It offers

excellent performance with a range of 620 nautical miles, 7 hours of endurance, and a maximum cruise speed of 98 Knots Calibrated Airspeed (KCAS).

Dr N Kalaiselvi, Secretary, DSIR & Director General, CSIR, while congratulating the scientists, said that the successful flying demonstration of HANSA-3(NG) at Aero India 2025 reflects CSIR's unwavering commitment to developing indigenous technologies to meet the national need. These efforts aim to serve end customers like Flying Training Organisations (FTOs), ensuring a complete ecosystem for the commercialisation of CSIR technologies.

Dr Abhay Pashilkar, Director, shared that CSIR-NAL has received Letters of Intent (LOI) for 110+ HANSA-3(NG) aircraft from FTOs across the country. To meet the domestic demand and export potential, CSIR-NAL has partnered with M/s Pioneer Clean Amps Pvt. Ltd, Mumbai, who will set up a manufacturing facility aiming to build 36 aircraft per year, with plans to scale up to 72 aircraft annually, in alignment with the goals of Atmanirbhar Bharat.

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Source: PIB

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## Gujarat Chemical Association Visits CSIR-CSMCRI

In a significant step towards strengthening industry-research collaboration, seventeen members of the Gujarat Chemical Association

(GCA), Ahmedabad, led by their esteemed president, Dr Jaimin R Vasa, visited the CSIR-Central Salt & Marine Chemicals Research



*The visit of members of the Gujarat Chemical Association (GCA) aimed to explore avenues for collaboration between the chemical industries and CSIR-CSMCRI.*

Institute (CSIR-CSMCRI) in Bhavnagar on 25 March 2025.

The visit aimed to explore avenues for collaboration between the chemical industries and CSIR-CSMCRI. Dr Kannan Srinivasan, the Director of CSIR-CSMCRI welcomed the delegation and expressed his desire to have a long-term collaboration with GCA and other allied industries. Dr Kamalesh Prasad, Head-Business Development & Information Management Division of CSIR-CSMCRI,

presented a brief detail of the research and technological competency of the institute. Dr KB Pandey, the Principal Scientist informed that two memorandum of understanding was signed with GCA and Dr Jaimin Vasa Foundation, Ahmedabad. This initiative is expected to pave the way for impactful collaboration and the development of solutions addressing industrial challenges while contributing to the growth of the chemical industry in Gujarat, he added.

## **DG, CSIR, Dr N Kalaiselvi Inaugurates Stevia Processing Plant**

**D**r (Mrs) N Kalaiselvi, Director General CSIR & Secretary DSIR, Govt of India inaugurated the RJ Saints Stevia processing plant at Singha in Una district of Himachal Pradesh that has been developed with the technical support of CSIR-Institute of Himalayan Bioresource Technology (CSIR-IHBT), Palampur. It is one of its one-of-a-kind green processing units that has the capacity to





process dry stevia leaves into steviol glycoside powder.

It is pertinent to mention that Stevia is a low-calorie natural sweetener which is about 300 times sweeter than sucrose and can be consumed by diabetics.

Prior to this Dr Kalaiselvi visited the Stevia farms wherein the variety “Him Stevia” developed by the institute is being grown in an area of more than 200 acres. She witnessed the latest farm management practices including the use of drones for spraying plant nutrients.

Dr Kalaiselvi also congratulated RJ Saints for taking this wonderful initiative that has the potential to be a game changer as India is the diabetic capital of the world. She appreciated the efforts of the institute in striving towards Viksit Bharat.

On the occasion, Dr Sudesh Kumar Yadav, Director CSIR-IHBT presented the work carried out by the institute on Stevia.

He emphasised that worldwide, some 540 million people in the age group of 20-79 years are living with diabetes and that this number is projected to upsurge to 645 million by 2030. India alone has 77 million people above the age of 18 years with diabetes. Generally, diabetes patients are not recommended to consume cane sugar whereas stevia comes as a sweet alternative. He dwelled on the characteristics of the variety “HimStevia” developed by the institute which has 14.5% total glycoside content.

He also emphasised the Good Agricultural Practices (GAP) for higher productivity and yield, and the green process technology for extracting pure steviol glycoside from leaves.

Mr Ravi Sharma, the owner of RJ Saints recalled his involvement with the institute since 2016 and thanked the institute for the help and guidance.

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## CSIR-IIIM Field Station Bonera Sets to Indigenise Tulips

The scenic beauty of Kashmir's tulip gardens has long been a major attraction for tourists, with vibrant displays at Srinagar drawing visitors each year. In a significant step toward promoting sustainable floriculture

and enhancing the income of farmers, CSIR-Indian Institute of Integrative Medicine (CSIR-IIIM), Jammu, mandated with pre-clinical drug discovery, has also been implementing various societal Mission programmes like



*In conformity with the vision of Viksit Bharat 2047, the Prime Minister's clarion call for self-reliant India, the pan India CSIR Societal Mission programmes envisioned by Union Minister Dr Jitendra Singh, achieved remarkable achievements since the last few years.*

CSIR's Aroma and Floriculture Mission. Under the CSIR Floriculture Mission, the key verticals include the Generation of Quality Planting Material for High-Value Floricultural Crops, Area Expansion under floriculture, urban floriculture, post-harvest processing and value addition, integration of floriculture with apiculture, establishing marketing linkages, and domestication of wild ornamentals. Further, through the Mission activities, the institute has been dedicated to supporting farmers through research and development, particularly in high-value floricultural crop cultivation.

In conformity with the vision of Viksit Bharat 2047, the Prime Minister's clarion call for self-reliant India, the pan India CSIR Societal Mission programmes envisioned by Dr Jitendra Singh, Union Minister of State for Science and Technology (Independent Charge) achieved remarkable achievements since the last few years. The institute initiated tulip cultivation at its Bonera Station in the year 2022 with the primary objectives of indigenising tulip bulb production, developing agro-technological protocols, and expanding crop cultivation. A spokesperson informed that

the initiative which started with just 10,000 bulbs in 2022, has successfully produced over one lakh bulbs within just two years, grown over an area of more than 12 kanals this season. During media interaction held at the Tulip Garden of Bonera Field Station, Dr Zabeer Ahmed, Director of CSIR-IIIM, highlighted the significance of this initiative, stating that the Bonera Station currently houses eight tulip varieties under strategic research programmes to develop indigenous tulip bulbs, assess morphological characteristics, establish agro-technological protocols and evaluate varieties for resistance to biotic and abiotic stresses. He emphasised that indigenising tulip bulb production would reduce India's reliance on imports, create economic opportunities for farmers, and contribute to the overall growth of the floriculture sector.

The newly developed Tulip Garden-cum-Experimental Field at Bonera, located in South Kashmir's Pulwama, was opened to the public and drew thousands of enthusiastic visitors from all parts of the valley. The initiative marks a significant step toward positioning Jammu and Kashmir as a hub for tulip

bulb production in future, aiming to shift India from an import-dependent consumer to a self-sufficient producer. By integrating scientific advancements with floriculture

tourism, the CSIR Floriculture Mission, besides fostering self-reliance in tulip production, also aims to enhance the economic potential of the region's farming communities.

## CSIR-National Chemical Laboratory Celebrates its Platinum Jubilee



CSIR-National Chemical Laboratory (CSIR-NCL), Pune, have completed 75 years of its glorious journey of pioneering research and innovation. The momentous Platinum Jubilee occasion was commemorated through a series of events on 20 February 2025, at the CSIR-NCL premises.

The event witnessed the gracious presence of Chief Guest, Padma Bhushan Dr Kiran Mazumdar-Shaw, Chairperson of Biocon Group, along with the Guest of Honour, Padma Vibhushan Dr Raghunath Mashelkar, Former Director General, CSIR. The celebration brought together esteemed dignitaries, scientists,

academicians, and industry leaders to reflect on the journey of CSIR-NCL and its contributions to scientific advancements.

The celebrations commenced with the inauguration of "Interfaces", an immersive 3D-printed wall sculpture that transforms the language of science, engineering and art into a striking visual narrative representing the fabric of the research at the National Chemical Laboratory.

This was followed by the main event, which featured the Director's report on the laboratory's accomplishments in 2024 and insightful speeches by both the Guests of Honour and the Chief Guest.

*Dr Kiran Mazumdar-Shaw, Chairperson of Biocon Group, emphasised that now is the time for India to develop new medicines and advanced technologies.*

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Mashelkar, Former  
Director General,  
CSIR, highlighted  
several cutting-  
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the institute, which  
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to benefit various  
industries.*

Dr Ashish Lele highlighted CSIR-NCL's science, innovation and technology roadmap for the decade 2021-30 and the key achievements of the laboratory under each of the identified themes.

He also mentioned the challenges and opportunities for the laboratory in the near future and suggested interventions required to be taken.

Dr Kiran Mazumdar-Shaw, in her talk, fondly recalled her first visit to CSIR-NCL in 1989, appreciating its long history of innovation. She emphasised that now is the time for India to develop new medicines and advanced technologies. With our ability to innovate at lower costs, she believes India can compete on a global scale. She spoke about the exciting possibilities brought by new technologies like Artificial Intelligence (AI) and Quantum Computing. She pointed out how AI is already making breakthroughs in biosciences and urged scientists to embrace these changes. She emphasised that we are entering a golden era in healthcare, biology, and medicine, with groundbreaking discoveries on the horizon.

Dr Mazumdar-Shaw highlighted that India has the talent, ambition, and resources to lead in this field. However, to turn this potential into reality, she stressed the need for steady investments, clear government policies, a strong research environment, and teamwork among all stakeholders. She reaffirmed India's crucial role in shaping



the future of healthcare through scientific advancements and innovation.

Dr Raghunath Mashelkar emphasised the significant contributions of CSIR-NCL in advancing science and technology. He highlighted several cutting-edge technologies being developed at the institute, which have the potential to benefit various industries. He acknowledged five fundamental scientific breakthroughs that have emerged from CSIR-NCL. He reflected on the institute's crucial role in addressing major industrial disasters, including the Bhopal Gas Tragedy and the Maharashtra Gas Cracker Complex blast, underscoring its expertise in problem-solving and crisis management. Furthermore, he lauded CSIR-NCL's leadership in driving India's Intellectual Property Rights (IPR) movement and its ability to compete at a global level. Citing the prestigious World Bank consultancy contract won by CSIR-NCL, he asserted that success is driven not by budgetary constraints but by the power of innovative ideas. Expressing confidence in CSIR-NCL's future, Dr Mashelkar affirmed its potential to spearhead groundbreaking innovations that could transform the landscape of science and technology on a global scale.

A significant highlight of the event was the release of Platinum Jubilee special publications, including *CSIR-NCL 75 Stories – Coffee Table Book*, the 3<sup>rd</sup> edition of *Flora and Fauna on CSIR-NCL Campus*, and *Allotrope's Platinum Jubilee Special Issue*. As per tradition, the NCL Research Foundation Awards were presented to outstanding contributors in research and innovation, and to individuals and teams who made significant contributions to various initiatives throughout the year.

The main event was followed by the inauguration of CSIR-NCL's "Archives and Science

Museum", which captures NCL's rich legacy in both physical and digital formats. The gallery showcases the early origins of chemistry in India, the birth of CSIR-NCL coinciding with India's independence, significant achievements of the laboratory through the 75 years, current research and technology development focus, and aspirations for the future.

The Platinum Jubilee celebrations not only celebrated the accomplishments of the laboratory but also set the stage for future endeavours in scientific discovery and societal impact.

*Dr Ashish Lele, Director, CSIR-NCL, highlighted the institute's science, innovation and technology roadmap for the decade 2021-30 and the key achievements of the laboratory.*

## UK-India Partnership Launches “Living Laboratory” to Boost Pharma Industry Decarbonisation



Leaders from the Indian and UK diplomatic and pharmaceutical sectors attended the opening of a 'Living Laboratory' in Pune,

India on 20 February 2025. The new state-of-the-art facility has been designed to allow pharmaceutical companies to

*The newly launched 'Living Lab' acts as a testbed and market demonstration for companies to explore and de-risk advanced sustainable pharmaceutical manufacturing technologies that significantly reduce greenhouse gas emissions and increase productivity.*

explore and de-risk advanced manufacturing technologies that reduce greenhouse gas emissions and support the pharmaceutical industry's move towards net zero targets.

The laboratory is a joint venture between CPI in the UK and CSIR-National Chemical Laboratory in India. CPI — a deep tech innovation organisation and a founding member of the Innovate UK Catapult Network that assists companies and researchers to take promising technologies from the lab bench towards scale-up and commercialisation — led the UK efforts in this joint venture, which is supported through funding from the UK Government. The CSIR-NCL led the India efforts in this joint venture, which is also supported through funding from the Indian Government and industry partners. CSIR-NCL is a leading research, development and consulting organisation conducting application-oriented and focused basic research in chemical and allied sciences and engineering.

Dr Arun Harish, Chief Strategy Officer at CPI, said: "The 'Living Lab' allows for a new collaborative model with industry that fosters demonstration of new greener technology and processes that can be adopted at scale. The potential impact this project could have on the pharmaceutical sector's drive towards industrial decarbonisation and productivity gain is huge."

This first-of-its-kind partnership between CPI and NCL is set up to make data and processes available to all partners, allowing them to

build on insights to more readily develop and commercialise less energy-intensive and efficient manufacturing processes.

Several pharmaceutical companies have already joined the partnership, including Sun Pharma, Aarti Industries, Alivus Life Sciences, USV, Anthem Biosciences, Corning and GMM-Pfandler.

These companies will work together with CPI and CSIR-NCL to create world-leading manufacturing practices. Many mid-size companies have also joined the Industry Consortium of Continuous Manufacturing to experience the flow synthesis and scale-up approaches.

This new state-of-the-art 'Living Lab' facility will initially develop and demonstrate the potential of both solvent-free manufacturing methods and continuous manufacturing. Continuous manufacturing is widely accepted as a more sustainable and efficient method to batch manufacturing while incorporating solvent-free reactions is expected to significantly reduce the quantity of hazardous waste generated during pharmaceutical manufacturing. The greener manufacturing practices will allow companies partnering with Indian manufacturers to adhere to Scope 3 targets by reducing indirect greenhouse gas emissions, which in turn can open access to European markets.

India, the world's biggest supplier of generic medications, produces over 60% of the world's vaccinations and supplies a



quarter of all medicines in the UK. Medicinal and pharmaceutical products were the second largest category of goods the UK imported from India in 2022, accounting for £533.8 million worth of trade or 7.5% of all imports from India, according to the Association of the British Pharmaceutical Industry.

Dr Ashish Lele, Director of CSIR-NCL, said “The ‘Living Lab’ will be a unique testbed that will allow the Indian chemical and pharmaceutical industries to validate the advantages of emerging technologies and help them to transition from conventional batch manufacturing to continuous manufacturing, thereby contributing to a significant reduction in emissions and effluents.”

Mr Sudarshan Jain, Secretary-General at the Indian Pharmaceutical Alliance (IPA),

said, “Continuous manufacturing is an enabler for improving pharmaceutical manufacturing performance. With growing regulatory acceptance — exemplified by the FDA’s approval of over a dozen CM-produced drugs — leading pharma companies are shaping a future driven by smart automation. By integrating patient-centric, technology-enabled processes into daily operations, the industry is advancing towards greater efficiency and sustainability. The CPI UK-NCL India Living Lab will further accelerate this transformation, fostering innovation and operational excellence on a global scale.”

Businesses from across India and the United Kingdom can find out more about how the Living Laboratory can support their manufacturing processes.

*Dr Ashish Lele, Director of CSIR-NCL, said “The ‘Living Lab’ will be a unique testbed that will allow the Indian chemical and pharmaceutical industries to validate the advantages of emerging technologies.”*

## R&D

# Endogamy — A Major Cause for Health Disparity in India

India is a land of rich cultural and genetic diversity with numerous distinct populations. Earlier studies have shown many population-specific hereditary diseases. Such diseases are most often associated with novel

genetic mutations. A recent study led by Dr K Thangaraj, CSIR Bhatnagar Fellow at the CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB), Hyderabad, explains that persistent practice of endogamy, viz. marrying

*Dr Vinay K Nandicoori, Director, CSIR-CCMB, said, "This study reveals a major step towards our understanding of the genetic underpinnings for India's unique genetic architecture."*

within small communities, is the primary cause for population-specific diseases in India. The findings have been recently published in the *Journal of Genetics and Genomics*.

"We have analysed 281 high-coverage whole exome sequences from four anthropologically distinct populations. We examined several key factors, such as the extent of inbreeding and novel genetic variants in populations. We also looked at pharmacogenomic markers that influence drug metabolism to understand why different drugs seem to work differently in different populations," said Dr Pratheusa Machha, lead author of the study.

One of the key findings of this study was identifying that the widespread prevalence of ankylosing spondylitis, a type of arthritis that causes inflammation in the joints and ligaments of the spine, is linked to the HLA-B27:04 risk allele, a genetic variant that increases the likelihood of developing a disease.

"We found a high incidence of ankylosing spondylitis disease in the Reddy community, who dwell in a specific geographical region of Andhra Pradesh", said Dr Sarath Chandra Mouli Veeravalli, Rheumatologist from Krishna Institute of Medical Sciences, Hyderabad, and one of the authors of this study. In addition, the authors found a significant number of disease-causing genetic variants, many of which are unique to specific populations.

This study also uncovered novel genetic variants associated



with drug metabolism, with implications for personalised medicine, especially in response to some of the common drugs, such as tacrolimus (an immunosuppressive drug) and warfarin (an anticoagulant drug). "We observed genetic variations in the genes that alter the drug response, which differ across populations, and hence provide an opportunity for developing targeted drugs and improving health outcomes", said Dr Divya Tej Sowpati, co-author of the study.

Dr Thangaraj highlighted that "our study forecasts the impact of endogamy in causing population-specific genetic diseases and drug responses. This emphasises the need for appropriate genetic screening, counselling and clinical care for the communities that are vulnerable to various health conditions."

Dr Vinay K Nandicoori, Director, CSIR-CCMB, said, "This study reveals a major step towards our understanding of the genetic underpinnings for India's unique genetic architecture. This is important in the development of more effective diagnostic and therapeutic strategies".

The paper can be found online here: <https://www.sciencedirect.com/science/article/pii/S1673852725000384>

## International Women's Day Celebrations at CSIR-NPL

In alignment with the guidelines of the Sports Authority of India (FIT India Mission) to observe 3-9 March 2025 as International Women's Week, and directives from the Ministry of Women & Child Development to observe a week-long (8-15 March 2025) celebration of International Women's Day, CSIR-NPL organised an extensive series of events during March 2025 to promote women's health, fitness, and empowerment.

The events began with a Walkathon on March 03 and over the following days, CSIR-NPL hosted engaging activities, including fun games, competitive sports, and lectures. Day-wise highlights of the events are:

- Day 1 (3 March 2025): A walkathon (kick-off event) was organised with around 60 participants (women staff and students)
- Day 2 (4 March 2025): fun games (lemon-spoon race and musical chair race) were organised for women staff and students
- Day 3 (5 March 2025): CSIR-NPL and IWSA Delhi branch organised a lecture on healthy diet and nutrition delivered by naturopathy experts Acharya Dr Mohan Gupta and Ms Pooja Bansal.
- Day 4 (6 March 2025): CSIR-NPL and IWSA Delhi branch



organised a lecture on Mental well-being. It was delivered by Dr Sudha Ashwin, an Ayurveda Psychiatrist from Central Ayurveda Research Institute.

- Day 5 (11 March 2025): the game competition 'shot-put' in different age categories was organised for women staff and students
- Day 6 (12 March 2025): the competitions Marathon, Slow-cycling in different age categories were organised for women staff and students.
- Day 7 (13 March 2025): the lecture on "Health & Hygiene" was delivered by Dr Preeti Bijlani.

The concluding ceremony for IWD-2025 celebrations at CSIR-NPL was held on 24 March 2025 with Prof. Rashmi Bhardwaj (GGSIP University) as the Guest of Honour.

# CSIR-NIScPR Celebrated International Women's Day 2025 with a Special Focus on Strength and Well-being



## INTERNATIONAL WOMEN'S DAY - 2025

*Stronger her. Healthier Future*

**"SELF DEFENCE & MARTIAL ARTS TRAINING PROGRAM"**

*"In the present era, women are achieving great heights based on their capabilities. No one in the world is as resilient and multifaceted as a woman," said Dr Ranjana Aggarwal, Director, CSIR-NIScPR.*



Glimpses of International Women's Day celebration at CSIR-NIScPR

The CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR), New Delhi, celebrated

"International Women's Day" 2025 on 7 March 2025 with great enthusiasm under the global theme 'Accelerate Action.' This

theme calls for rapid strides toward gender equality and emphasises the need for immediate and sustained efforts to empower women in all spheres of life. Aligning with this vision, CSIR-NIScPR dedicated the event to the theme “Stronger Her, Healthier Future” and conducted a “Self-Defence and Martial Arts Training Programme” in collaboration with the Delhi Police.

This year’s celebration was further enriched by the participation of the Ministry of Youth Affairs and Sports, and the Fit India Initiative, highlighting the intersection of gender empowerment and physical well-being.

The event was hosted by Dr Kanika Malik, Senior Principal Scientist, CSIR-NIScPR and Coordinator of the International Women’s Day Celebration Committee. Dr Ranjana Aggarwal, Director, CSIR-NIScPR facilitated the Trainer, Mr Shakti Singh and his team. The celebration reinforced CSIR-NIScPR’s commitment to fostering an inclusive environment where women are encouraged to take charge of their well-being and security.

In her welcome address, Prof. Ranjana Aggarwal emphasised that gender equality was deeply ingrained in Indian society during the Vedic period, where men and women worked together as complementary forces rather than in hierarchical structures. She further stated, “In the present era, women are achieving great

heights based on their capabilities. No one in the world is as resilient and multifaceted as a woman.”

Weightlifter Ms Sonika, a Yellow belt holder and national powerlifting award winner in 2024 in the All India Police Games in powerlifting, shared her inspiring journey of overcoming challenges to achieve success. Despite becoming a mother through C-section delivery, Sonika’s determination and motivation propelled her to become a heavyweight lifter. She encouraged girls and women to find their strength and pursue their passions.

The highlight of the event was an interactive self-defence and martial arts training session conducted by Mr Shakti Singh and his team from the Delhi Police. The session aimed to equip women with essential self-defence skills to enhance their safety and confidence in challenging situations. The programme witnessed active participation from CSIR-NIScPR staff including scientists, researchers, and others, who engaged enthusiastically in the training.

As the event concluded, participants expressed appreciation for the practical knowledge imparted during the self-defence training. The initiative served as a significant step towards empowering women with skills that promote their physical and mental well-being, aligning with the broader mission of International Women’s Day 2025 – accelerating action towards a more equitable future.

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## CSIR-IMTECH at the forefront of India's Skill Development Initiative



Dignitaries releasing the workshop manual

*The workshop aimed to provide specialised training in animal handling and biosafety laboratory practices to enhance expertise in biomedical research.*

The IMTECH Center for Animal Resources & Experimentation (iCARE) at CSIR-Institute of Microbial Technology (CSIR-IMTECH), Chandigarh, conducted a five-day National Workshop on Ethical Contemplation of Animal Resources for Experimentation (WeCARE-2025). The workshop was organised from 17 February to 21 February 2025 as part of the CSIR Integrated Skill Initiative. The workshop aimed to provide specialised training in animal handling and biosafety laboratory practices to enhance expertise in biomedical research. More than fifty participants from different academic and research institutes attended the workshop. The intensive training

programme emphasised the ethical use of animal resources in research and their role in biotechnology and pharmaceutical advancements, particularly in vaccine development and drug discovery.

Dr Neeraj Khatri, Head, iCARE, CSIR-IMTECH, welcomed the participants and emphasised the significance of trained personnel *in vivo* experimentation. Dr Sanjeev Khosla, Director, CSIR-IMTECH, acknowledged the critical contributions of laboratory animals to medical research and lauded the efforts of the iCARE team in organising the workshop. The workshop was formally inaugurated by Dr Varinder Garg, MBBS, MD (Radiology), PGIMER and

OSD to the Union Health Minister. In his address, Dr Garg stressed the importance of interdisciplinary and translational research in addressing societal challenges. The session also featured the release of the workshop manual and the felicitation of the Chief Guest by Dr K Subramanian.

Eminent experts from leading institutions, including NIPER Mohali, CSIR-CFTRI Mysore, Panjab University Chandigarh, and CSIR-IMTECH, delivered comprehensive lectures aligned with the workshop curriculum. Participants were exposed to a rigorous practical evaluation along with theory examination and their feedback was carefully assessed to refine future training programmes.

A highlight of the concluding session was a special lecture on “Zebrafish as a Model System for Research” by the Chief Guest, Prof. Rajat Sandhir from Panjab

University, Chandigarh. Following this, certificates of participation were awarded to the successful candidates.

The iCARE facility, situated within the institute, serves as a premier centre for housing and breeding laboratory animals, including inbred, transgenic, and knockout mice, Sprague Dawley rats, Syrian hamsters, and NZW rabbits. Accredited by the CCSEA, Ministry of Fisheries, Dairying, and Animal Husbandry, India, the facility is equipped with state-of-the-art infrastructure to support biomedical research and drug development programmes. The WeCARE-2025 workshop successfully reinforced the importance of ethical animal research while equipping participants with essential skills to advance biomedical and pharmaceutical sciences in India.

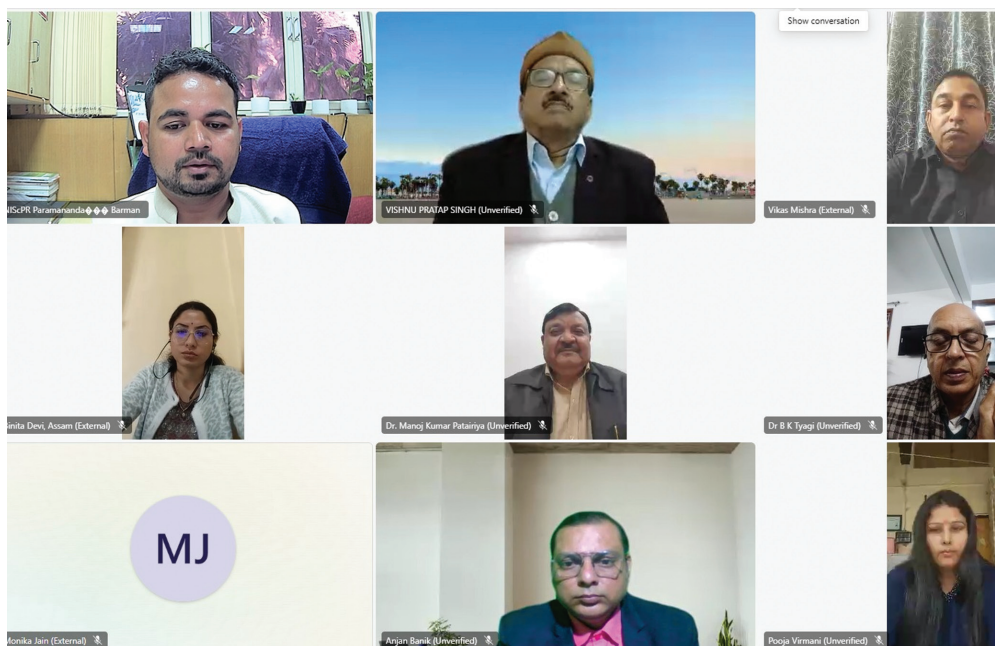
*Dr Sanjeev Khosla, Director, CSIR-IMTECH, acknowledged the critical contributions of laboratory animals to medical research and lauded the efforts of the iCARE team in organising the workshop.*

## Brainstorming Session on “Breaking the Barriers in Science Communication using Folk Media”

A brainstorming session on “Breaking the Barriers in Science Communication using Folk Media” was organised by the CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR), New Delhi, in online mode on 21 February 2025.

Folk media — such as puppetry, storytelling, folk art, and folk songs have deep

cultural roots and foster community engagement. They serve as an effective medium to communicate complex scientific ideas in a way that is understandable, relatable, engaging, and culturally relevant. By bridging the gap between traditional knowledge and modern science, folk media help build trust and understanding among diverse audiences.



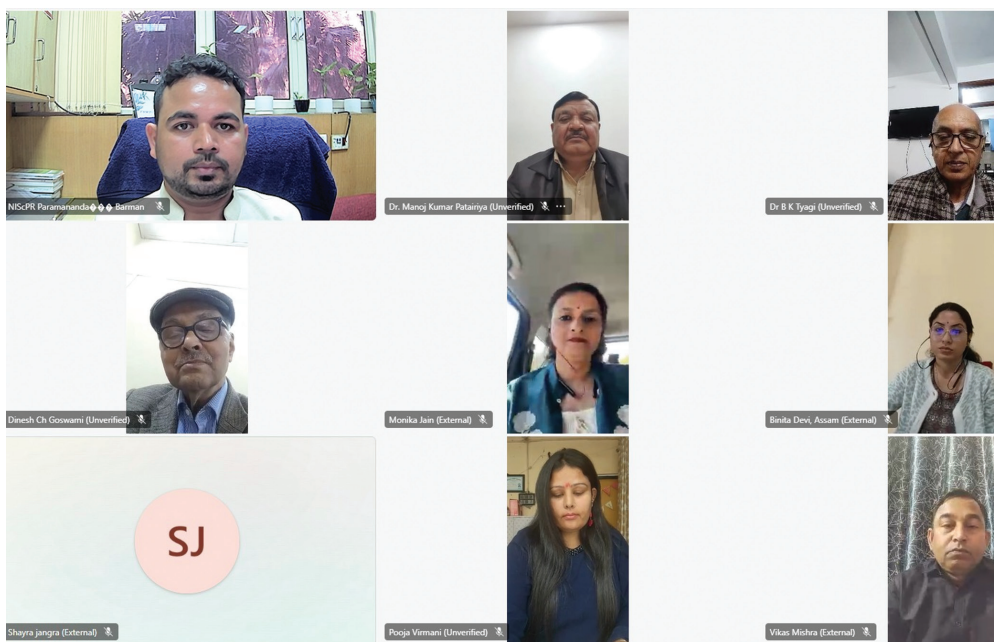
*Discussions were focused on using regional storytelling, puppetry, folk songs, and street theatre to make science more accessible to diverse linguistic and cultural communities across India.*

Unlike communication modes such as print, radio, television and social media, folk media allow for instant audience feedback, enabling performers to adapt their messages in real time. This interactivity makes learning participatory and impactful, especially in rural and semi-urban populations where digital, print and social media access is limited. Additionally, folk media are dynamic and capable of incorporating new ideas while retaining their cultural significance. This adaptability makes them powerful tools for promoting awareness and development.

The session commenced with a warm welcome by Dr Paramananda Barman, Senior Scientist, CSIR-NIScPR, where he addressed the esteemed guests, setting the tone for the event with an insightful introductory remark. Dr Manoj Kumar Patraiyra, Dr Dinesh Ch Goswami, Dr BK

Tyagi, Mr Vishnu Pratap Singh, Dr Monika Jain, Ms Pooja Virmani, Mrs Binita Devi, Dr Vikas Mishra, Mr Anjan Banik, and Dr Samir V Onkar discussed the challenges and opportunities associated with using folk media as an effective tool for disseminating scientific knowledge. Discussions were focused on using regional storytelling, puppetry, folk songs, and street theatre to make science more accessible to diverse linguistic and cultural communities across India. They also shared case studies and best practices, showcasing successful initiatives in integrating folk media with modern communication strategies.

The session also highlighted the need for policy support, capacity-building initiatives, and interdisciplinary collaborations to mainstream folk media in science communication. Speakers also put forth key recommendations, to guide



future actions in this domain. The brainstorming session concluded with a call for sustained efforts to make science communication more inclusive, engaging, and culturally resonant through the power of folk media.

*The session also highlighted the need for policy support, capacity-building initiatives, and interdisciplinary collaborations to mainstream folk media in science communication.*

## CSIR-NIScPR Organises “Doing Science is Fun” Programme under CSIR Jigyasa Initiative



CSIR-National Institute of Science Communication and Policy Research (NIScPR) organised a Student-scientist connect programme under the CSIR Jigyasa initiative on “Doing

## Events



*The event is expected to inspire young minds to explore the wonders of science and encourage them to become the next generation of scientists and innovators.*

Science is Fun” at SV Marg Campus on 11 February 2025.

The programme was aimed to promote scientific temper and curiosity among school students, encouraging them to pursue careers in science and technology. The event featured a series of engaging activities.

In his welcome address, Shri CB Singh, Head, Jigyasa, Training & HR Division and Popular Science Division said, “After schooling, research offers exciting opportunities but few students know about it. CSIR’s Jigyasa programme aims to inspire school students to

explore the fascinating world of scientific research.”

A special talk on “About Telescopes” was delivered by Shri Amit Kumar Sharma from Nirbhaya Science Museum-MCD, New Delhi. The programme also included a short video on “Solar Spots,” DIY assembling of 40 MM Refractor Telescopes, and a field activity where students got a unique opportunity to view solar spots through telescopes.

The event is expected to inspire young minds to explore the wonders of science and encourage them to become the next generation of scientists and innovators.

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**Phone:** 011-25843130

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**E-mail:** sonalinagar@niscpr.res.in

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**Please direct all Subscription-related queries to:**

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