सीएसआईआर
CSIR
भारत का नवाचार इंजन
The Innovation Engine of India

News Bulletin
01 To 15 July 2025

CSIR in Media

Compiled by Science Communication and Dissemination Directorate (SCDD), CSIR Hq, Anusandhan Bhawan, New Delhi

Vedanta Aluminium granted patent to recover graphite from industrial waste

CSIR-IMMT

28th June, 2025

Vedanta Aluminium has announced the grant of a patent for a process that enables the recovery of high-purity graphite from aluminium industry waste. The development was showcased on National Technology Day 2025, aligning with this year's theme, YANTRA – Yugantar for Advancing New Technology, Research & Acceleration.

Developed in collaboration with the CSIR - Institute of Minerals and Materials Technology (IMMT), Bhubaneswar, the patented process enables the extraction of battery-grade graphite (>99% purity) from Spent Pot Lining (SPL) and Shot Blast Dust—both by-products of aluminium production.

Potential to reduce graphite imports

India currently imports over 70% of its graphite needs. In 2024, the country imported natural graphite worth approximately USD 41 million, ranking among the top three importers in theAsia-Pacific region alongside South Korea and Japan.

The recovered graphite has shown properties suitable for use in lithium-ion batteries, including high electrical conductivity and a structure conducive to lithiation and de-lithiation, key processes in battery operation.

Rajiv Kumar, CEO of Vedanta Aluminium, said, "With India's demand for electric vehicles, energy storage, and high-tech electronics set to skyrocket, our patented solution is both timely and transformative. It strengthens our contribution to India's critical minerals roadmap while advancing our vision of zero-waste, future-ready manufacturing."

Read More: [Manufacturing Economic Times]

CFTRI launches Nutrition Intervention Programme for malnourished children in Mysuru district

CSIR-CFTRI

29th June, 2025

As per National Family Health Survey-5, nearly one third of the children in India are having low weight and height for their age and 62 percent of them are anaemic. These deficiencies, apart from impairing growth, reduces mental ability, compromises immunity and affects metabolism. Research has shown that undernourished are at higher risk of getting non-communicable disease in their adulthood.

Providing dietary interventions of the deficit nutrients would correct the nutritional status of children and is highly essential for a healthy community and nation.

CSIR – Central Food Technological Research Institute, being a premier food research institute, developed supplementary foods for alleviation of malnutrition in the 1960s and its efficacy was validated in school children. The efforts have been continuous in the direction and later developed several products that are suitable for the purpose…

Read More: Star of Mysore

Researchers identify key brain-gut signalling pathway in roundworms

CSIR-IGIB

30th June, 2025

In 1960, American nutritionist and radio host popularised the phrase “You are what you eat" with a book of the same title. It refers to the idea that the food we consume not only provides energy but also has complex effects on our bodies, influencing everything from our mood to our lifespan. However, how exactly the nutrients from the food affect our health hasn’t been fully understood. To understand this, researchers have been studying how nutrients interact with our gut and brain, and how these two parts of the body communicate.

A recent study using the common roundworm Caenorhabditis elegans, also known as C. elegans, a transparent roundworm approximately 1 mm in length that inhabits temperate soil environments, has shed light on a connection between a common vitamin, nerve cells, and the gut. The study by researchers from BRIC-National Institute of Immunology (BRIC-NII), CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB), Academy of Scientific and Innovative Research (AcSIR), and University of Southern California, USA, reveals an internal highway from the brain to the gut that influences health and lifespan based on diet …

Read More: Research Matters

Inside CCMB Hyderabad—where scientists turn elephant blood, tiger bones into criminal evidence

CSIR-CCMB

30th June, 2025

All it took was a few drops of blood to put a poacher behind bars. In Odisha's Mayurbhanj district last year, forest officials caught a man red-handed with ivory tusks, but had no way to prove he had killed an elephant. Then they spotted the blood on his shirt. A team of forensic scientists analysed the stains. DNA testing showed a match between the blood and the tusks—and the poacher was arrested.

"The difference between human and wildlife DNA forensics is at least we know that humans are all the same species," laughed Vinay Nandicoori, director of the Centre for Cellular and Molecular Biology (CCMB), Hyderabad. "With wildlife, the challenge is to identify what species, what genus, what breed this animal belongs to from just a few specks of DNA."

That's where Universal Primer Technology (UPT) comes in. Think of it like a DNA barcode reader. Even the smallest traces of biological samples can be identified. This year marks 25 years since two Indian scientists — late Sunil Verma and Lalji Singh — developed the DNA technology at CCMB. The impetus was the infamous Salman Khan blackbuck …

Read More: The Print

CSIR-SERC and Birla Institute of Technology & Science exchanges MoU for Academic and Research Collaboration

CSIR-SERC

30th June, 2025

CSIR-Structural Engineering Research Centre (CSIR-SERC) and Birla Institute of Technology & Science exchanged a Memorandum of Understanding (MoU) for Academic and Research Collaboration at CSIR-SERC. The MoU was exchanged in the presence of Dr. N. Anandavalli, Director, CSIR-SERC, Prof. Annapoorna Gopal, Dean, PSD, BITS, Pilani, Smt. R Bharathi, Faculty-WILPD Sciences, Core Engineering Group, BITS, Pilani, Dr. S. Parivallal, Chief Scientist & Advisor(M), Dr. K.Sathish Kumar, Chief Scientist and Head, BKMD, Dr. Mohit Verma, Principal Scientist and Co-ordinator, Dr. M.B.Anoop, Chief Scientist, Dr. (Ing.)Saptarshi Sasmal, Chief Scientist, and Dr S. Vishnu Vardhan, Senior Principal Scientist. The meeting also focused on initiating internships for BITS Pilani students for the July–Dec 2025 semester. Both expressed interest in establishing a long-term, mutually beneficial collaboration. The proforma, along with the detailed internship requirements, were shared with BITS Pilani to facilitate the student allotment process.

Read More: PIB

How a Scientist Is Growing Bamboo Forests To Heal Maharashtra's Villages Choked by Toxic Ash

CSIR-NEERI

01st July , 2025

As narrated by expert Dr Lal Singh, Principal Scientist and Project Leader at CSIR-NEERI. He specialises in ecological restoration, particularly using bamboo for environmental rehabilitation of degraded lands such as fly ash dumps, mining sites, and wastelands.

There was a time when this land looked like the surface of the moon—grey, dry, and covered in thick layers of fly ash. Nothing could grow here. The soil was weak, the air heavy with dust, and the ground cracked underfoot. For years, people believed these areas around Koradi, Khaparkheda, and Chandrapur Thermal Power Stations in Maharashtra's Vidarbha district were beyond saving.

But today, everything has changed. The dusty ground is now covered with soft green grass. Long lines of bamboo plants, neem, karanj, and other native trees stretch as far as the eye can see. Some trees now stand as tall as buildings, their leaves rustling in the wind. Where there was once silence and emptiness, there is now shade, cool air, and the sound of birds returning.

What started as a technical experiment has quietly grown into a movement—a green revolution that not only cleans the land but also restores livelihoods …

Read More: [The Better India]

University of Salford, CSIR-IGIB, ORDI host glaucoma awareness and advocacy workshop

CSIR-IGIB

02nd July , 2025

The event highlighted the need for early genetic screening to prevent childhood blindness due to glaucoma and premiered the short film 'Ripples of Light'

The University of Salford (UK), in collaboration with CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB) and the Organization for Rare Diseases India (ORDI), hosted a national workshop titled Towards Equitable and Early Genetic Care for Glaucoma in New Delhi.

Premas Life Sciences and Shroff Eye Hospital were the event partners. The event brought together leading clinicians, scientists, genetic counsellors, policy advocates, non-profit charities and media representatives to spotlight the urgent need for early genetic diagnosis in managing inherited forms of glaucoma in India.

The workshop opened with a welcome address by the Director, CSIR-IGIB, highlighting the need for such events and their alignment with IGIB's mission. The event also featured presentations from notable experts including Prof Arijit Mukhopadhyay (University of Salford), Prof BK Thelma (University of Delhi), Shri Prasanna Shirol (ORDI) and senior ophthalmologists from across India. Dr Debjani Saha from Premas Lifesciences presented its plans to develop a genetic testing panel specifically targeted for childhood glaucoma …

Read More: India Med Today

Ayurveda Rasayana for cellular regeneration: MoU signed for research study

CSIR-NIIST

02nd July , 2025

A Memorandum of Understanding (MoU) has been signed for a collaborative research study on the role of Rasayana (rejuvenation) medicines in Ayurveda for cellular regeneration and enhancement of immunity.

The project is supported by the Government of Kerala and involves the School of Fundamental Research in Ayurveda under the Kerala University of Health Sciences (KUHS), the CSIR-NIIST (National Institute for Interdisciplinary Science and Technology), the Advanced Centre for Regenerative Medicine and Stem Cell Research in Cutaneous Biology under the Department of Zoology, University of Kerala, and the Government Ayurveda College, Thiruvananthapuram.

The MoU was signed by Dr. S. Gopakumar, Registrar of KUHS; Dr. K. S. Anil Kumar, Registrar of the University of Kerala; Dr. K. V. Radhakrishnan, Senior Principal Scientist, CSIR; Dr. V. K. Sunitha, Principal, Government Ayurveda College; Dr. Anil Kumar M. V., Professor, School of Fundamental Research in Ayurveda; Dr. Rajmohan V., Associate Professor, Government Ayurveda College; Dr. Sreejith P., Director, ACRM-STEM (Advanced Center for Regenerative Medicine - Stem Cell Research).

The signed documents were handed over to Dr. Mohanan Kunnummal, Vice Chancellor of both KUHS and the University of Kerala; Dr. Anantharamakrishnan, Director of CSIR-NIIST; Dr. K. S. Anil Kumar, Registrar, University of Kerala; and Dr. V. K. Sunitha, Principal of Government Ayurveda College.

Read More: UNI

CSIR-CCMB scientists unravel biodiversity changes down south over millions of years

CSIR-NIIST

02nd July , 2025

Peninsular India, a tropical region in Southern Asia, extending from Aravalli mountains, Vindhyas, Eastern Ghats, Deccan Plateau, and a global biodiversity hotspot— Western Ghats, harbours unique and highly diverse groups of animal and plant species, many of which do not occur anywhere else in the world.The endemic diversity of the various species could be due to varied trajectories ofspeciation among different life forms — some due to stability of tropical ecosystems and others by past fluctuations in temperature and geo-climatic changes that occurred between 11 and 3 million years ago, said scientists at the CSIR-Centre for Cellular & Molecular Biology (CCMB) on Wednesday.

A recent study from Jahnavi Joshi's lab uncovered how species of life forms evolved and disappeared across South Asia and the wider Asian region by analysing 33 well-studied groups of animals and plants using mathematical models, said an official release. The team traced patterns of species formation (speciation) and loss (extinction) across the region in a broad-scale analysis done for Asia for the first time. "Each of the groups comprises closely related endemic species, and a common ancestor that existed at some point in time. Through millions of years, their descendants of the common ancestors spread across the landscape and diversified into multiple species, many of which exist today," explained Dr. Joshi …

Read More: The Hindu

Celebrating 43 Years of Innovation: CSIR-IHBT Marks Foundation Day with Vision for a Greener, Healthier Himalaya

CSIR-IHBT 02nd July, 2025

The CSIR-Institute of Himalayan Bioresource Technology (IHBT), nestled in the scenic town of Palampur, Himachal Pradesh, celebrated its 43rd Foundation Day on July 2, 2025, with enthusiasm and pride. The event brought together scientists, farmers, academicians, industrialists, and students to honor the institute's legacy and explore its future role in sustainable development.

Dr. VK Paul, Member of NITI Aayog and Chief Guest of the event, praised IHBT's contributions to bioresource research and community welfare. He emphasized the transformative potential of Himalayan bioresources in improving livelihoods and tackling issues like women's health and malnutrition. "Science and technology are the backbone of a developed India," he said, urging the institute to continue its leadership in innovation …

Read More: Himachal Headlines

Sigachi Pharma blast: Telangana govt forms panel with CSIR-IICT experts to identify cause

CSIR-IICT 02nd July , 2025

The Telangana State government has constituted a committee with experts from CSIR-IICT to identify the causes, establish reasons and examine the events that led to the major explosion at Sigachi Industries.The committee will also provide suggestions to prevent such industrial accidents in future and submit its report within a month.

Explosion claims over 40 lives

The tragic incident occurred on June 30 at around 9:20 am in Sigachi Industries Ltd, located at Plot Nos. 20 and 21, IDA Phase-I, Pashamylaram, Patancheru mandal, Sangareddy district. The factory manufactures microcrystalline cellulose powder used as a binding agent in pharmaceutical tablets and capsules. At the time of the explosion, 143 workers were present inside the premises. The blast resulted in the death of more than 40 people and left several others injured.

Committee members

The government issued orders on Tuesday, constituting an expert committee comprising:
Dr B Venkateswar Rao, Emeritus Scientist, CSIR-IICT – Chairman
Dr T Prathap Kumar, Chief Scientist, CSIR-IICT – Member
Dr Surya Narayana, Retired Scientist, CSIR-CLRI Hyderabad – Member
Dr Santosh Ghuge, Safety Officer, CSIR-NCL Pune – Member …

Read More: News Meter

Ancient Climate Shaped India's Unique Biodiversity: CCMB Study

CSIR-CCMB

03rd July , 2025

Peninsular India, a tropical region in Southern Asia, extends from the Aravalli Mountains southwards, including the Satpuras and Vindhyas, the Eastern Ghats, the Deccan Plateau, and a global biodiversity hotspot—the Western Ghats. It harbours unique and highly diverse groups of animal and plant species, many of which do not occur anywhere else in the world. They are called endemic species. But how did this high endemic diversity originate in peninsular India, and what factors contributed to it?

A recent study, from Dr. Jahnavi Joshi's lab at the CSIR-Centre for Cellular and Molecular Biology, Hyderabad, published in Ecology Letters, uncovers how species of life forms evolved and disappeared across South Asia and the wider Asian region. By analysing 33 well-studied groups of animals and plants using mathematical models, the team traced patterns of species formation (speciation) and loss (extinction) across the region.

Such a broad-scale analysis has been done for Asia for the first time. "Each of the groups comprises closely related endemic species, and a common ancestor that existed at some point in time. Through millions of years, their descendants spread across the landscape and diversified into multiple species, many of which exist today," explained Dr. Joshi …

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NBRI to help plant enthusiasts turn into certified gardeners

CSIR-NBRI

03rd July , 2025

If you want to learn all about gardening and nursery management and want to have certification for the same, CSIR National Botanical Research Institute (NBRI) is happy to help. The NBRI is offering a one-year certificate course on professional gardening and nursery management, approved by the National Council for Vocational Education Training, Ministry of Skill Development and Entrepreneurship. NBRI has made the application form available on its website, and interested candidates can register until July 5.

"This course is an opportunity to become a certified gardener and nursery manager. This one-year course will offer enhanced job prospects, entrepreneurial opportunities, and the acquisition of practical skills in plant care, landscape maintenance, and nursery operations. Students of this course will be equipped to work in diverse settings, from residential and commercial landscaping to nurseries and botanical gardens," said CSIR NBRI director Ajit Kumar Shasany. He said that NBRI is offering 20 seats in this course, and anyone who has passed class 12 can pursue this course. It will offer expert guidance by practical skills in plant propagation, care, and management, and visit renowned nurseries.

The certifying body of this course is the Agriculture Skill Council of India. "The course will have 1,200 hours of study, including theory, practical, skill development, and others. The fees for this one-year course are Rs 30,000, and those opting for accommodation and food will have to pay Rs 60,000. QR Code is available on our institute's website for registration and for further information our senior scientist and head botanic garden K J Singh can be contacted," added the director.

Read More: The Times of India

पालमपुर : CSIR-IHBT में दो दिवसीय हर्बल Meet संपन्न, 200 से अधिक विशेषज्ञों ने लिया भाग

सी.एस.आई.आर.-हिमालय जैवसंपदा प्रौद्योगिकी संस्थान, पालमपुर में 2 जुलाई को शुरू हुई दो दिवसीय हर्बल सैक्टर स्टेकहोल्डर मीट-2025 का आज समापन हो गया। इस कार्यक्रम में देशभर से 200 से अधिक प्रतिभागियों ने हिस्सा लिया, जिनमें वैज्ञानिक, किसान, नीति निर्धारक, उद्योगपति, शोधकर्ता, चिकित्सा क्षेत्र के विशेषज्ञ, एनजीओ और एफपीओ के सदस्य शामिल थे।

मीट में कुल तीन सत्र आयोजित किए गए। पहले सत्र का विषय था हर्बल खेती में चुनौतियाँ और सतत स्रोत, जिसमें डॉ. डी.आर. नाग ने उद्घाटन भाषण दिया और औषधीय संसाधनों पर प्रकाश डाला। दूसरे सत्र में हर्बल उत्पादों की गुणवत्ता नियंत्रण और वैज्ञानिक प्रमाणन पर चर्चा हुई। इसकी अध्यक्षता फार्माकोपिया कमीशन फॉर इंडियन मेडिसिन एंड होम्योपैथी, गाज़ियाबाद के निदेशक डॉ. रमन मोहन सिंह ने की और मुख्य वक्ता के रूप में डॉ. सी.के. कटियार, सलाहकार (आर&डी हेल्थकेयर, इमामी लिमिटेड) ने व्याख्यान दिया। उन्होने पादप गुणवत्ता मापदंडों के मूल्यांकन पर ज़ोर दिया।

तीसरा सत्र हर्बल क्षेत्र में सहयोग को बढ़ावा देने पर केंद्रित था, जिसमें प्रमुख व्याख्यान डॉ. विजय चौधरी, प्राचार्य, राजीव गांधी आयुर्वेदिक कॉलेज एवं अस्पताल, पपरोला ...

Read More: First Verdict

Fruit for thought: Hyderabad study links highenergy diets to bigger primate brains; genes show evolutionary trade-offs

CSIR-CCMB

04th July , 2025

A high-energy diet-especially one rich in fruits-may have played a pivotal role in the evolution of larger brains in primates, including humans.

A new study from the Laboratory for the Conservation of Endangered Species (LaCONES) at the Centre for Cellular and Molecular Biology (CSIR), Hyderabad, offers compelling genetic evidence connecting diet quality with brain development across 50 primate species

Led by Vinay Teja Potharlanka and Govindhaswamy Umapathy, the research explores how energy-rich foods like fruits influenced the evolution of relative brain size. "We examined what drives brain size across all primate families, and quality of diet-particularly fruit consumption-stood out as a key factor," said Umapathy. Since the brain is one of the most energy-demanding organs, diets high in carbohydrates and …

Read More: The Times of india

Honour for CSIR-NGRI woman scientist

CSIR-NGRI 04th July , 2025

CSIR-NGRI scientist Barnita Banerjee has been selected as founder member of INSA Women Associate (IWA) for 2025. The INSA Council initiated this new IWA category to foster greater diversity and inclusion. Dr. Banerjee completed her Ph.D. in 2018 from CSIR-National Geophysical Research Institute under AcSIR, having worked on paleomonsoonal reconstruction during the Miocene Epoch, with work published in various international journals. Post-Ph.D., she was an assistant professor at the National Institute of Technology, Rourkela. In 2021, she joined CSIR-NGRI as a scientist, where she currently works on lacustrine sediments across India to establish paleocyclonic and tsunami records. A conscientious worker, she was awarded the Women's Excellence Award by her institute in 2024, said a press release on Friday.

Read More: The Hindu

Workshop on addressing 'hidden hunger' begins at CSIR-CFTRI, Mysuru

CSIR-CFTRI

04th July, 2025

A national workshop organised by the CSIR-CFTRI, the Innovation Hub for Rice Fortification, and the Indian Institute of Technology, Delhi, began in Mysuru on Friday to evaluate the progress made so far in addressing 'hidden hunger' — the widespread micronutrient deficiencies that continue to pose significant public health challenges.

The workshop's concept note, quoting the Global Burden of Disease 2021, states that the global prevalence of anaemia stands at 24.3%, with dietary iron deficiency being the leading cause. Anaemia accounts for approximately 52.1 million Disability-Adjusted Life Years (DALYs) globally, of which iron deficiency alone contributes around 34.5 million DALYs (60%). In India, dietary iron deficiency is responsible for an estimated 12 million DALYs, it added. According to the National Family Health Survey (NFHS-5, 2019–21), 59% of women aged 15–49 years, and 67% of children aged 6–59 months in India are anaemic. Further, Comprehensive National Nutrition Survey (CNNS), 2016-18, data shows that 50-70% of anaemia cases are due to deficiencies of iron, folate (B9), and Vitamin B12, it stated. The note also highlighted that Vitamin A and D deficiencies pose significant public health challenges. CNNS data indicate that 61% of children under the age of five are Vitamin A deficient, while 50% of children aged one to four years lack adequate Vitamin D.

Read More: The Hindu

Jamshedpur students visit NML for hands-on science experience

CSIR-NML

04th July, 2025

CSIR-National Metallurgical Laboratory (CSIR-NML), Jamshedpur, organized a special laboratory visit for school students and teachers on July 4, under the CSIR-Jigyasa Virtual Laboratory Project. The initiative aimed to promote scientific awareness by providing students with a real-time experience of research and innovation.

A total of 78 students and 4 teachers from Gamharia English School participated in the visit. The program began with an inaugural session, where Dr. Sandip Ghosh Chowdhury, Director, CSIR-NML, welcomed the attendees and highlighted CSIR's 82 years of contributions to national development through technology and innovation.

Dr. Sarmista Palit Sagar, Head of IMDC, explained the significance of CSIR-NML and its ongoing research and development activities. Dr. Animesh Jana, Senior Scientist, IMDC, elaborated on the objectives and various initiatives of …

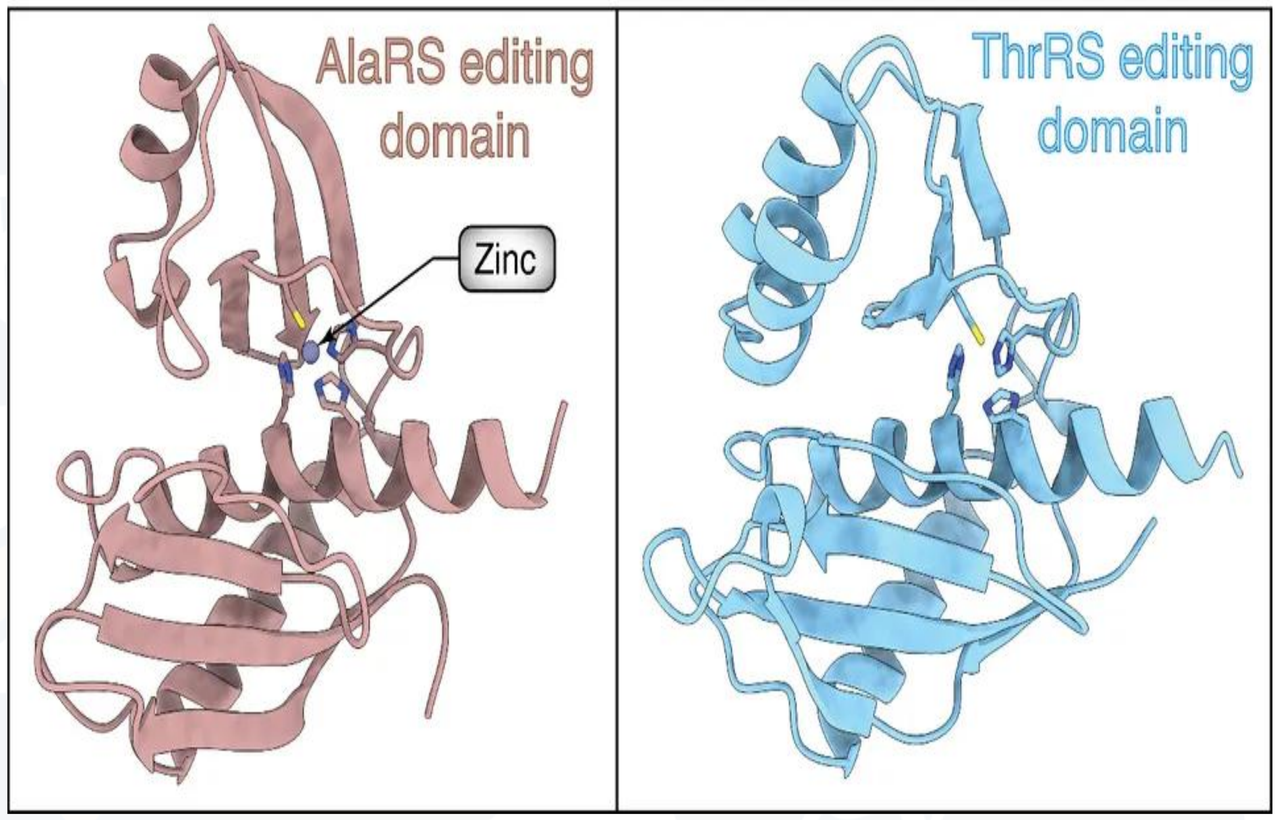
Read More: Avenue Mail

Some mistakes in protein translation might be good for cells!

CSIR-CCMB

04th July, 2025

About 3.5 billion years ago, when the first living cells formed on earth, the weather conditions were far from pleasant. The ancient earth was bombarded with ultraviolet radiation and faced extreme temperatures. Such conditions are known to produce molecules broadly categorised as Reactive Oxygen Species (ROS) in cells. They help cells survive the stressful conditions successfully. However, their overproduction can also damage cells in various ways. One.



such adverse outcome is disruption of protein synthesis in cells. A new study from Rajan Sankaranarayanan's lab at CSIR-Centre for Cellular and Molecular Biology, Hyderabad, suggests that minor errors in protein synthesis under stress might benefit cells. These mistakes might help cells detect the overproduction of ROS in cells and activate protective mechanisms in response …

Read more: India Bioscience

Engg students must align with goals of Viksit Bharat: CSIR Director

CSIR-IMMT

05th July, 2025

Stating that technology is growing rapidly and has
improved everyone's life, N Kalaiselvi, director of Council of
Scientific and Industrial Research (CSIR) called upon engineering
students to align themselves with the goals of 'Viksit Bharat' by
adapting to new and emerging technologies.
Addressing the fresh graduates at the seventh

Annual convocation of Indian Institute of Information technology, Dharwad held on its campus on Friday, she said that there has been a stellar achievements of India in science and technology, and exhorted graduating students to see that the newer technology is used for the betetrment of society.

Kalaiselvi reminded the students about the investments made by their parents, teachers and society at large, to ensure their success as graduates from a premier national institution, and urged them to fulfill their ambitions and become worthy citizens of the country …

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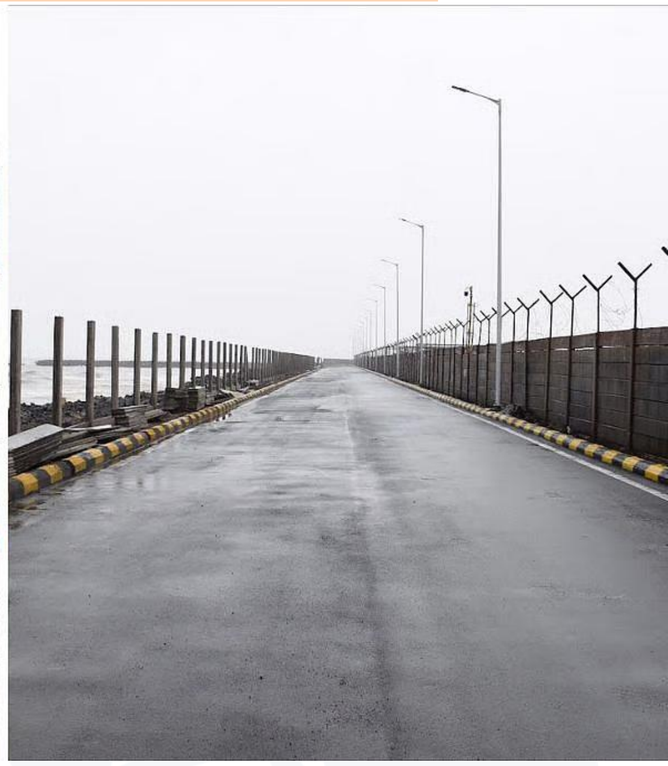
Gujarat: Adani Builds World's First Port Road Using Steel Slag, Pioneering Green Infrastructure

CSIR-CRRI

05th July, 2025



In a landmark step for green infrastructure, Adani Ports and Special Economic Zone Ltd. (APSEZ) has inaugurated the world's first steel slag road at any port, setting a new global benchmark in circular economy-led development. Spanning 1.1 kilometres within Hazira Port, this sustainable road connects the Multi-Purpose Berth (MPB-1) to the coal yard. It utilises processed steel slag aggregates a by-product of steel manufacturing demonstrating how industrial waste can be repurposed into high-performance, durable infrastructure. The project was developed as part of Phase-II of the Bulk & General Cargo Terminal (BGCT) expansion in collaboration with the Council of Scientific and Industrial Research Central Road Research Institute (CSIR-CRRI) and the Union Ministry of Science & Technology.The road's flexible pavement design, curated by CSIR-CRRI, enhances load-bearing capacity and longevity while cutting down on construction costs and environmental impact. The initiative aligns with the Waste to Wealth mission and reinforces APSEZ's commitment to environmentally conscious port development. The road was formally inaugurated at Hazira Port by Dr. Vijay Kumar Saraswat, Member (Science & Technology), NITI Aayog, in the presence of Dr. N. Kalaiselvi, Director-General, CSIR & Secretary, DSIR, and Dr. Manoranjan Parida, Director, CSIR-CRRI & President, Indian Roads Congress. Also present were Satish Pandey, Senior Principal Scientist and inventor of steel slag road technology, Anand Marathe, COO, Adani Hazira Port Ltd., and other dignitaries and scientists. This marks India's third steel slag road, but the first ever constructed inside a port globally, placing India and APSEZ at the forefront of sustainable maritime infrastructure.With this initiative, APSEZ continues to lead the transformation of India's logistics sector, blending innovation, industrial ecology, and infrastructure resilience in service of national growth.

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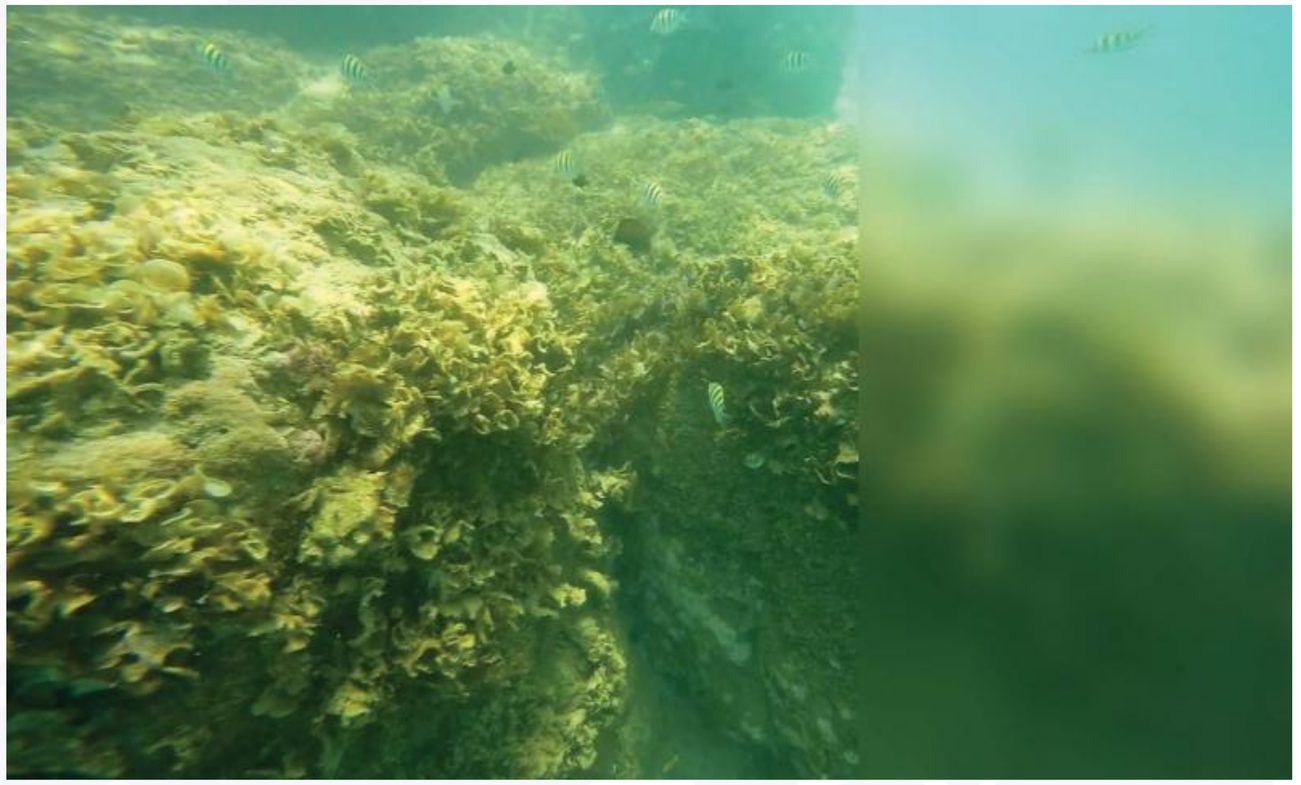
Tropical Forests Turned South India Into Global Biodiversity Hotspot

CSIR 05th July, 2025

Peninsular India harbours unique and highly diverse groups of animal and plant species, endemic to this region. But how did this high endemic diversity originate and what factors contributed to it? A recent study from the CSIR-Centre for Cellular and Molecular Biology (CCMB) uncovers how species of life forms evolved and disappeared across South Asia. The study was published in 'Ecology Letters'.



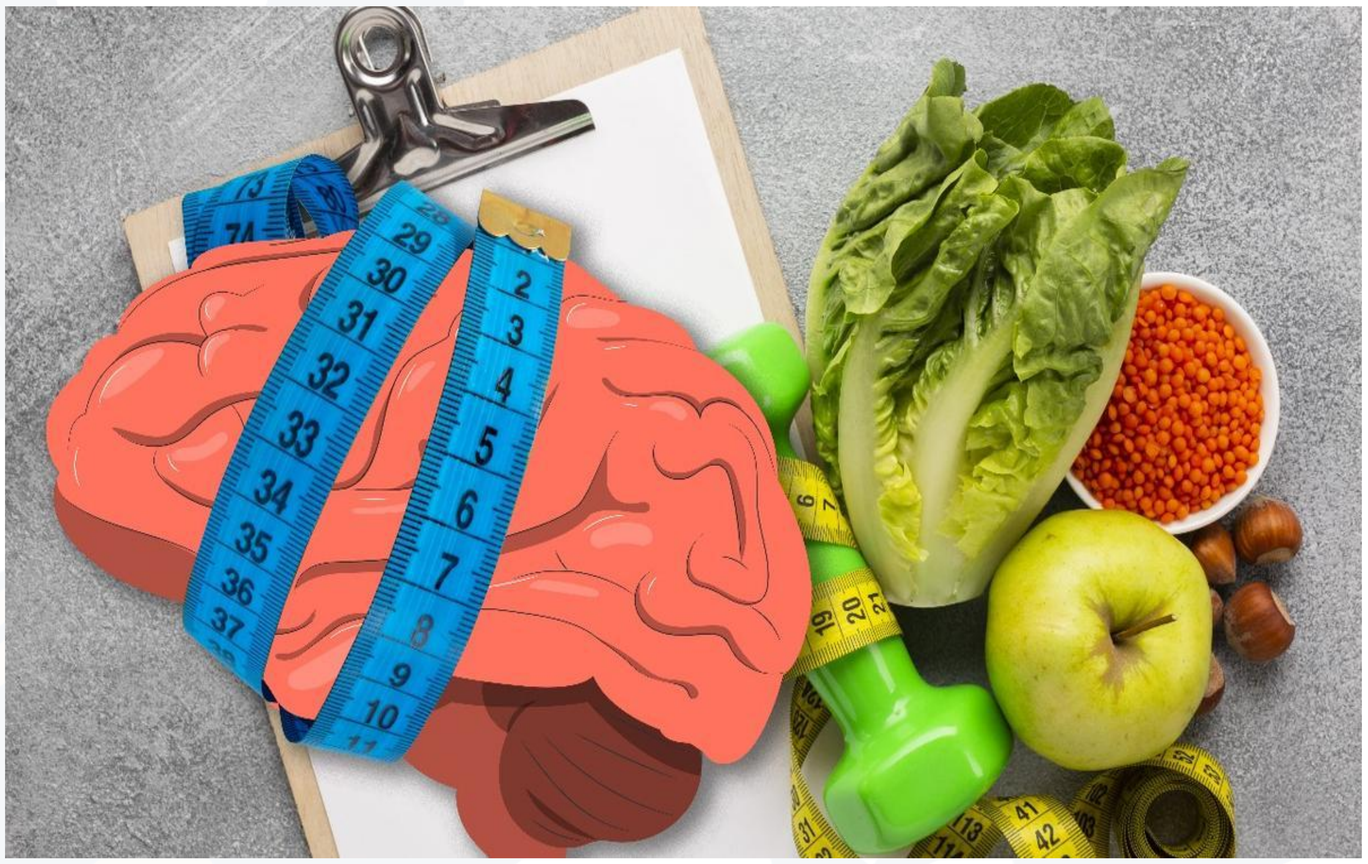
Dr Jahnavi Joshi's team at CCMB Hyderabad undertook the study of diversity of animal and plants species in peninsular India, which is a tropical region extending southwards from the Aravalli Mountains, including the Satpuras and Vindhyas, the Eastern Ghats, the Deccan Plateau, and a global biodiversity hotspot — the Western Ghats. By analysing 33 well-studied groups of animals and plants using mathematical models, the team traced patterns of species formation (speciation) and loss (extinction) across the region. Such a broad-scale analysis has been done for Asia for the first time …

Read More: Deccan Chronicle

High-quality diet may have led to bigger human brain: CSIR-CCMB led international study reveals genetic link between diet and brain size

CSIR-CCMB

05th July, 2025



Our ancestors' shift to higher-quality diets, especially with use of fire and consumption of meat and fruits, had likely triggered genetic changes and may have paved the way for the dramatic expansion of the human brain, deduce researchers at the CSIR-Centre for Cellular and Molecular Biology (CCMB) here in Hyderabad. A ground-breaking international study published in the latest issue of Philosophical Transactions of the Royal Society B, involving scientists from the United States and China, has uncovered the genetic mechanisms linking diet quality and brain size in primates, shedding new light on how some species, especially humans, evolved to have such large and complex brains. It reveals that the quality of food primates eat influences not just their energy levels but also the way their brains evolve at the genetic level. The research team, including CCMB's Laboratory for Conservation of Endangered Species …

Read more: The Hindu

India's personalized medicine push gets boost as Jitendra Singh inaugurates Biobank at IGIB

CSIR-IGIB

06th July, 2025

Union Minister Jitendra Singh, along with the Vice President of CSIR, inaugurated the state-of-the-art "National Biobank" at the CSIR-Institute of Genomics and Integrative Biology (IGIB) in the capital on Sunday. The facility marks a significant step toward strengthening India's health data infrastructure and advancing personalised treatment in the future.

According to the statement issued by the Ministry of Science and Technology, the biobank enlisting comprehensive genomic, lifestyle, and clinical data from 10,000 individuals across India will serve as the backbone of a nationwide cohort study. The project was initiated to capture the country's unique diversity across geography, ethnicity, and socio-economic backgrounds.

The new data sets will help in early diagnosis, improve therapeutic targeting, and bolster the fight against complex diseases such as diabetes, cancer, …

Read more: The Stateman

IIIM celebrates World Bioproducts Day; pledges commitment to principles of BioE3 Policy

CSIR-IIIM

07th July, 2025

The CSIR-Indian Institute of Integrative Medicine (CSIR-IIIM), Jammu, celebrated World Bioproduct Day today with a simple yet impactful event aimed at promoting awareness of bioproducts and their role in sustainaDelivering the keynote address, Dr. Zabeer Ahmed, Director, CSIR-IIIM, emphasized the national importance of the BioE³ Policy-Biotechnology for Economy, Environment, and Employment. He noted that the policy provides a strategic framework for advancing high-performance biomanufacturing and scaling up bio-based innovations across India. Dr. Ahmed highlighted the unique advantage of the Jammu, Kashmir, and Ladakh region as a biodiversity hotspot-often referred to as the 'Bio-mass State of India' due to its rich reservoir of medicinal, aromatic, floral, and microbial biodiversity. "With sub-tropical zones in Jammu, temperate zones in Kashmir, and cold deserts in Ladakh, this region offers immense potential for bio-based innovations," he said…

Read more: State Times

Study of India's Mangroves Facing Climate Change Reveals Stark East-West Divide

CSIR-NBRI

07th July, 2025

Mangroves are salt-tolerant trees and shrubs that thrive in coastal zones, acting as natural barriers against adverse events such as tsunamis. India has a significant mangrove cover, totalling 4,992 sq km, which represents 0.15% of the country's total geographical area. These incredible ecosystems protect the coast against storms and erosion and are crucial for a wide range of biodiversity, protecting and providing for millions of people. With rising sea levels and changing weather patterns, the vital mangrove forests that hug

India's shores are now under immense pressure. A new study now shows that the pressure isn't distributed evenly. Researchers from the CSIR-National Botanical Research Institute, the Academy of Scientific and Innovative Research (AcSIR), and Panjab University have discovered a significant difference in how India's mangrove forests on the east and west coasts are responding to climate change. They found that while the east coast, with its vast river deltas, might have a slight edge in adapting to changing conditions in the short term, both coasts face serious threats. The study used Species Distribution Models (SDMs), which are computer models …

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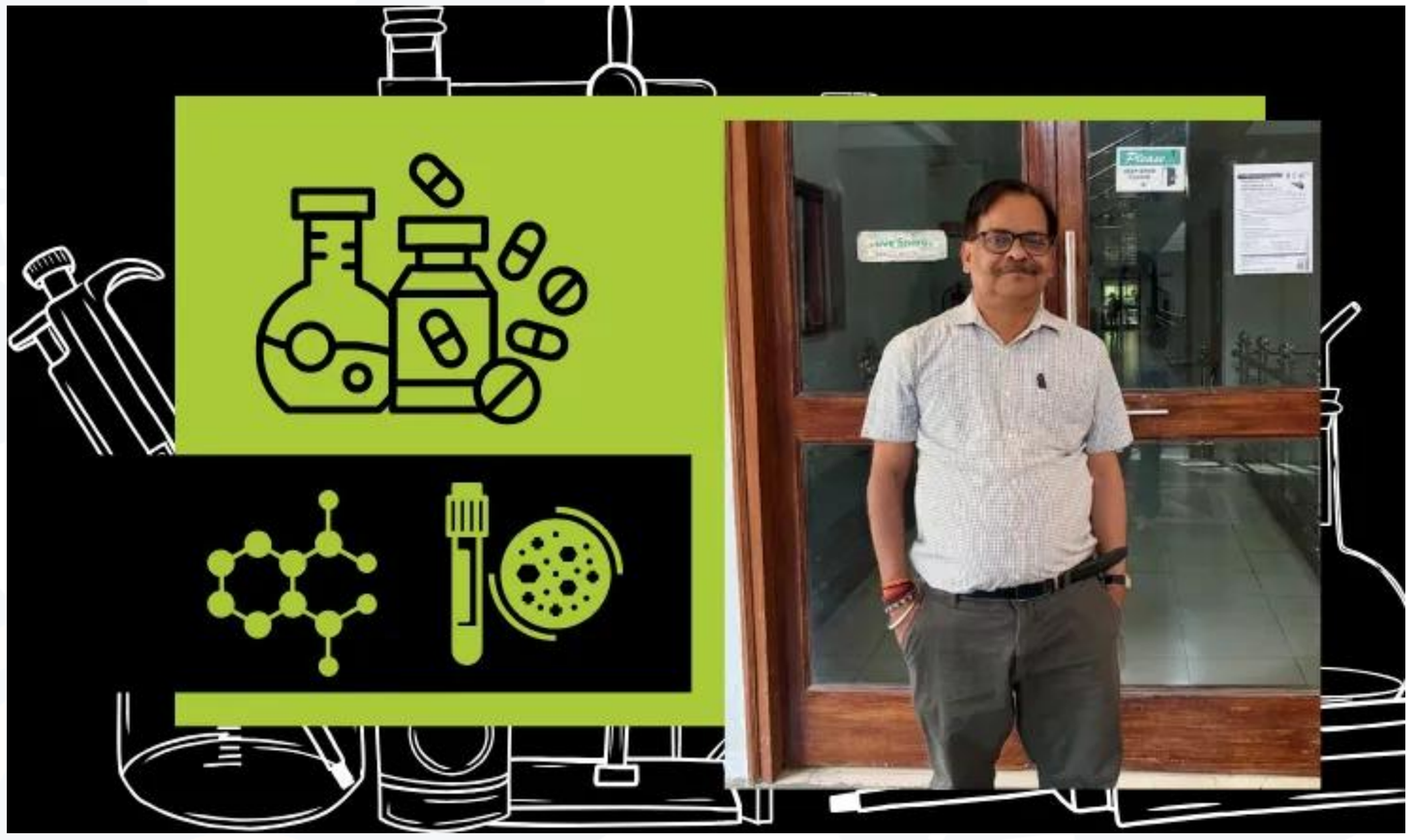
The science of safety: A conversation with Srikanta K Rath

CSIR-CIMAP, IICT

28th June, 2025



In this conversation, Srikanta K Rath, Chief Scientist & Professor at Academy of Scientific and Innovative Research (AcSIR) and Head, Division of Toxicology, CSIR-Central Drug Research Institute (CSIR-CDRI), Lucknow, shares insights with Akshita into the field of regulatory toxicology, its implementation from research to risk management, related key issues, and the role of researchers/scientists.

1. Please tell us about the field of regulatory toxicology, research in this field and its implementation for risk management.

Toxicology as a subject is still underrepresented in Indian academia, with very few universities offering it formally. Regulatory toxicology, a more specialised branch, is even less understood. I was introduced to it at CDRI. Those working in pesticides, and human or veterinary drugs engage more with regulatory toxicology, but regulatory requirements …

Read more: India Bioscience

World Bio-Products Day: IIIM pledges commitment to BioE3 Policy principles

CSIR-IIIM 09th July, 2025

The CSIR-Indian Institute of Integrative Medicine (CSIR-IIIM), Jammu, celebrated World Bio-product Day with an aim of promoting awareness of bio-products and their role in sustainable development. The event brought together scientists, students, startups, & key stakeholders to highlight the critical importance of bio-products in achieving a cleaner, greener and more economically vibrant future.

Delivering the keynote address, Dr. Zabeer Ahmed, Director, CSIR-IIIM, emphasized the national importance of BioE3 Policy-Biotechnology for Economy, Environment and Employment. He noted that the policy provides a strategic framework for advancing high-performance bio-manufacturing and scaling up bio-based innovations across India. Dr. Ahmed highlighted the unique advantage of Jammu, Kashmir and Ladakh region as a biodiversity hotspot-often referred to as the 'Bio-mass State of India' due to its rich reservoir of medicinal, aromatic, floral and microbial biodiversity."With sub-tropical zones in Jammu, temperate zones in Kashmir and cold deserts in Ladakh, this region offers immense potential for bio-based innovations," he maintained. A key moment of the event was BioE3 Pledge, led by Dr. Ahmed, where attendees including scientists, researchers, entrepreneurs and media representatives committed to support sustainable bioproduct development. Dr. Saurabh Saran, In-Charge, IIIM-Technology Business Incubator (TBI) also spoke on the occasion. A major highlight of the day was the launch of a new honey product by CSIR-IIIM incubatee and entrepreneur Aditya Sumbriya, founder of M/s Pahadi Amrit. The function was organized under the patronage of Dr. Zabeer Ahmed and under the overall supervision of Abdul Rahim. The inaugural session proceedings were conducted by Dr. Saurabh Saran, Principal Scientist, while Dr. Suphal B. Gupta, Senior Principal Scientist and Nodal, Aroma Mission, delivered the formal vote of thanks.

The program was graced by several eminent scientists, including Dr. Dheeraj Vyas, Sr. Principal Scientist & Head, PMC; Dr. Naveed Qazi, Sr. Principal Scientist & Head, NPC and Dr. Raj Kishore, Sr. Scientist & Head, QMI Division, Dr Shashank Singh, Sr. Pri. Scientist and many senior scientists and students.

Read more: Daily Excelsior

CSIR-IMMT imparts training to Hindalco GETs

CSIR-IMMT 09th July, 2025

CSIR-IMMT has started a one-month external technical training program for Graduate Engineer Trainees (GETs) of Hindalco Industries from Monday. This one moth training is for metallurgy and chemical engineering trainees with a series of sessions (including theory/practical demonstrations and hands-on) on various aspects focusing the theme/objective of the training program. This program is being attended with 40 GETs from various working stations of Hindalco.

Prof Dhanush Dhari Misra, chairman-Research Council, CSIR-CIMFR, Dhanbad inaugurated the programme as the chief guest and conducted a knowledge intensive interaction session on "Mining, Minerals, Metallurgy and Materials".

Dr Ramanuj Narayan, Director, CSIR-IMMT detailed on the various activities of CSIR-IMMT.

The program coordinator Dr Kali Sanjay has detailed about the design and technical structural pattern of the training course and emphasized on the productive learning and application based outcomes through these kind of training where the faculties from CSIR-IMMT and external experts from Industry and Academia are invited to conduct the sessions.

Dr T Pavan Kumar, Program Convener, has outlined about the program modules and methodology and moderated the inaugural event.

The inaugural event was attended by more than 200 scientists, IMMT staff and students of IMMT along with 40 GETs of Hindalco.

Read more: India Whispers

National level science aptitude exam winners from across Tamil Nadu visit CSIR-SERC

CSIR-SERC

10th July, 2025

A total of 90 students from across Tamil Nadu who have participated in the national-level science aptitude examination called Vidyaarthi Vigyaan Manthan (VVM) and secured top three levels from each district visited on a one-day science field trip to CSIR – Structural Engineering Research Centre (SERC) on 10 July 2025.

During the visit, Dr. S. Maheswaran, Senior Principal Scientist and Dr.S. Sundarakumar Principal Scientist, interacted with the school students. The students expressed that such science field trips greatly inspire and enhance their interest in the fields of science and research.

The event was coordinated by Vidyaarthi Vigyaan Manthan's South India Coordinator Mr. Kannabiran, and Tamil Nadu Coordinators Mr. Rajendran and Ms. Syamala.

Read More: PIB

एलयूबी और सीएसआईआर में हुआ उद्यमिता संवाद, उद्यमियों ने जाना नई तकनीकों और उत्पादों के बारे में

CSIR-CEERI

11th July, 2025

सूक्ष्म और लघु उद्योगों के अग्रणी संगठन लघु उद्योग भारती ने राष्ट्रीय स्तर पर उद्यमिता विकास के लिए वैज्ञानिक एवं औद्योगिक अनुसंधान परिषद (सीएसआईआर) के साथ मिलकर एक बड़ी पहल शुरू की थी। इस संयुक्त उद्यमिता कार्यक्रम में देशभर में स्थापित सीएसआईआर के संस्थानों में विकसित नवीन उत्पादों और तकनीकों को बहुत ही कम लागत में सीधे उद्यमियों को उपलब्ध करवाने की दिशा में ठोस कार्य किया गया।

लघु उद्योग भारती के जयपुर अंचल अध्यक्ष महेंद्र मिश्रा ने बताया कि इसी क्रम में आज 25 उद्यमियों की राजस्थान के प्रमुख वैज्ञानिक अनुसंधान संस्थान सीएसआईआर-सीरी (CSIR-CEERI), पिलानी के जयपुर कैंपस में विजिट करवाई गई। सीरी के वैज्ञानिकों और उद्यमियों के बीच संवाद हुआ जिसमें कई तकनीकों और उत्पादों के बारे में चर्चा की गई और कुछ तकनीकों को टीओटी (ट्रांसफर ऑफ़ टेक्नोलॉजी) के लिए भी चिन्हित किया गया जिसमें वेस्ट रीसायकल, रियल टाइम यूरिन टेस्टिंग, बायोडिग्रेडेबल पद्धति से कार्बन में कन्वर्ट करने वाली प्लास्टिक ग्रेडिंग मशीन, लैब ग्रोन डायमंड, मिल्क टेस्टिंग मशीन, लेटेस्ट फीचर्स वाले ब्लाइंड चश्मे, दिव्यांगों के लिए विशेष ट्राईसाईकल, ड्रोन टेक्नोलॉजी आदि शामिल हैं।

मिश्रा ने बताया कि संगठन का प्रयास है कि देशभर में अधिक से अधिक युवा खुद का उद्यम शुरू कर रोजगार सृजन करें और राष्ट्र की अर्थव्यवस्था में सक्रिय योगदान दें। उन्होंने जानकारी दी कि इससे पहले सीएसआईआर की 27 लैब्स में लघु उद्योग भारती की अगुवाई में टीओटी प्रोग्राम के अंतर्गत 100 दिनों के रिकॉर्ड टाइम में 100 टेक्नोलॉजी उद्यमियों को ट्रांसफर की गई थी।

Read more: Khaskhabar

India's First Road Trial Using Technical Textiles Made from End-of-Life Plastic Launched

CSIR-CRRI

11th July, 2025

In a pioneering step towards sustainable infrastructure, CSIR-Central Road Research Institute (CRRI), in collaboration with Bharat Petroleum Corporation Limited (BPCL) and supported by the National Highways Authority of India (NHAI), launched India's first road trial using technical textiles made from end-of-life waste plastic. The trial commenced with the inauguration of a test road section on Loop No. 1 of the elevated DND-Faridabad-KMP Expressway. The event was graced by Dr. N. Kalaiselvi, Director General of CSIR and Secretary, DSIR, Prof. Manoranjan Parida, Director, CSIR-CRRI, and Shri Chandrasekhar N, Head–R&D Bharat Petroleum Corporation Limited …

Read more: NBMCW

India first country to launch a traditional knowledge digital library: WHO

CSIR-TKDL

12th July, 2025

In a significant step towards global healthcare innovation, the World Health Organization (WHO) has released a technical brief titled "Mapping the Application of Artificial Intelligence in Traditional Medicine", acknowledging India's pioneering efforts in integrating Artificial Intelligence (AI) with traditional medicine systems, particularly Ayush systems.

The WHO release follows India's proposal on the subject, leading to the development of WHO's first-ever roadmap for applying AI in traditional medicine, the Ayush Ministry said in a release. As per the release, India's efforts to harness the potential of Artificial Intelligence (AI) to advance and amplify the strengths of its Ayush systems reflect the broadervision of Prime Minister Narendra Modi, who seeks to position the country as a global leader in digital health innovation and the integration of traditional medicine.

Speaking at the inauguration of the Global Partnership on Artificial Intelligence (GPAI) Summit in 2023, Prime Minister Modi said, "We have developed government policies and programmes inspired by the spirit of 'AI for all'. Our endeavour is to take full advantage of the capabilities of AI for social development and inclusive growth …

Read more: Business Standard

‘Demonstration of Lantana Camara Biomass Pelletisation’ conducted at CSIR-IIP

CSIR-IIP

12th July, 2025

In a step towards sustainable biomass utilisation, CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun, hosted a training programme, titled “Demonstration of Lantana Camara Biomass Pelletization” on 10 July. The training imparted as a part of the “Mapping, Monitoring, and Management of Lantana Camara Biomass Through its Utilisation for Improving the Livelihood of People in Forest Fringe Villages of India” project funded by Indian Council of Forestry Research and Education under Ministry of Environment, Forest and Climate Change. Dr Sudip K Ganguly, Director (Acting) of CSIR-IIP, welcomed the participants and felicitated the trainers and distinguished guest Dr Thallada Bhaskar, Director of CSIR-AMPRI, Bhopal, who is instrumental in launching the project activities at CSIR-IIP. The Acting Director also highlighted how biomass pelletisation …

Read more: Garhwalpost

AI to power Himalayan farming: SKUAST-K leads MeitY's smart agri-tech mission

CSIR-IIP

12th July, 2025

The Ministry of Electronics and Information Technology (MeitY), Government of India, has launched an ambitious Agri-Excellence Program focused on the "Application of Electronics & ICT in Himalayan Region Crop Management." The initiative, aimed at transforming high-value crop farming in the Himalayas, particularly in Jammu & Kashmir, was formally launched in New Delhi. Sher-e-Kashmir University of Agricultural Sciences and Technology ofKashmir (SKUAST-K) has been designated the nodal institution for the program, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir (SKUAST-K) has been designated the nodal institution for the program, bringing together a consortium of leading national R&D organisations—C-DAC Kolkata, CSIR-CMERI Durgapur and Ludhiana, CMTI Bengaluru, and C-DAC Mohali.

The project is backed by MeitY with support from ICAR, the J&K government, and private sector partners. Speaking at the kickoff meeting, Sunita Verma, Group Coordinator (R&D), MeitY, highlighted the program's national importance in advancing ICT and automation-based solutions for high-value crops like saffron, apple, & walnut. Project teams outlined a roadmap featuring AI-powered tools including smart saffron harvesters, automated stigma separators, non-destructive apple defect detectors, and walnut harvesters. An integrated e-Marketing platform is also in development, aimed at digitising the entire value chain from farm to market

...

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Glacier-fed Ganga's microbes offer new hope in fight against superbugs: Neeri, NCL study

CSIR-NCL, NEERI 13th July, 2025

Researchers have unveiled the rich microbial diversity and antimicrobial potential of the glacier-fed upper stretch of the Ganges River, in a study published in Microbiology Spectrum. This groundbreaking work not only contributes to environmental microbiology but also holds promise for combating antimicrobial resistance (AMR) under the globally endorsed One Health framework.

The study, titled 'Deciphering the Comprehensive Microbiome of Glacier-Fed Ganges and Functional Aspects: Implications for One Health', was led by Dr Krishna Khairnar, principal investigator and head of environmental epidemiology and pandemic management at CSIR-Neeri. Dr Khairnar coordinated this multi-institute project sponsored by the National Mission for Clean Ganga (NMCG).

The research was conducted in close collaboration with Dr Mahesh Dharne and Dr Syed Dastager from CSIR-National Chemical Laboratory (CSIR-NCL), showcasing an exemplary inter-institutional partnership between CSIR-Neeri and CSIR-NCL. The project investigated microbial communities from sediment samples collected over two years along a 250km glacier-fed stretch of the Ganges, spanning Gomukh to Rishikesh. The findings revealed a rich diversity of bacteria, archaea, and bacteriophages. Notably, several microbes were found to possess biosynthetic pathways for important antimicrobial compounds such as streptomycin, …

Read more: Times of India

Waste to wonder: India's first road trial with plastic used for construction; Military and NHAI to test for load-bearing efficiency

CSIR-CRRI

13th July, 2025

Central Road Research Institute (CRRI), along with Bharat Petroleum Corporation Limited (BPCL), has devised Geocells, 3D block-shaped textile made utilising waste plastic. The innovation aims to provide an efficient way of addressing the menace of end-of-life plastic and building roads suited especially for difficult terrains. Geocells, when filled with soil or aggregated material like construction and demolition waste, can be used to pave roads. Scientists at CSIR-CRRI said they filed a patent along with BPCL for the technology and aimed to begin the trial with Military Engineering Services in Aug to pave roads in difficult terrains, demonstrating the efficiency of their invention.

Geocells are being projected as a solution to the major environmental challenge of municipal solid waste, particularly end-of-life or mixed plastic, which is hard to segregate. In a successful demonstration of the application of Geocells, CRRI and BPCL paved a small portion near the elevated section of the DND-Faridabad-KMP Expressway near DND. "CRRI and BPCL developed a plastic-based module or sheet and a technical textile called Geocell, using end-of-life and mixed waste plastics. Recycling such plastics is particularly challenging due to the wide variation in material quality," said Ankita Behl, principal scientist at CSIR-CRRI."These plastics are processed through a mechanical recycling method to produce sheets or modules with thicknesses ranging from four to eight mm …

Read more: Times of India

New Plant Species ‘Berberis myriovula’ With Record-Breaking Ovule Count Discovered In Arunachal

CSIR-NEIST

14th July, 2025

Scientists have discovered a new plant species, Berberis myriovula, in the high-altitude region of Tawang, Arunachal Pradesh. The species is distinguished by having up to 17 ovules in a single ovary — the highest ever recorded within the Berberis genus.

The discovery was made by researchers from the CSIR-North East Institute of Science and Technology (CSIR-NEIST) in collaboration with scientists from the United Kingdom.

Researchers believe this rare trait may represent a unique evolutionary adaptation to the Eastern Himalayan environment.

The finding reinforces Arunachal Pradesh’s status as a biodiversity hotspot and highlights the significance of continued field research and conservation in the region. The research team credited the discovery to extensive exploration efforts and support from the state government.

Read more: Northeast Today

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