



## NEWS BULLETIN

## 21 TO 25 JUNE 2024



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

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CSIR-CBRI

## **Council of Scientific and Industrial Research (CSIR) and AIIMS, New Delhi to install a pilot project and study 'Conversion of Pathogenic Biomedical Waste to Value Added Soil Additives'**

25<sup>th</sup> June, 2024

Council of Scientific and Industrial Research र्टन रेजर कार्यक्रम - एक सप्ताह, एक यीम **Curtain Raiser Program** (CSIR) and AIIMS, New Delhi to install a (जून-दिसंबर, 2024) CSIR - One Week, One Theme (June-December, 2024) मुख्य अतिथि pilot project and study 'Conversion of जितेन्द्र सिंह Chief Guest Dr. litendra Singh रचतंत्र प्रभार), विज्ञान एव उपाध्यक्ष सीएस. Pathogenic Biomedical Waste to Value Added ate (I/C), Ministry of S&T उपस्थिति एन. कलैसेल्वी Soil Additives'. an MoU was facilitated in this नआईआर गवं सचिव, 24 जून, 2024 इंडिया हैबिटेट सेन्ट regard at the inauguration of 'One Week One Theme' campaign by Dr. Union Minister Dr. Jitendra Singh on Monday in New Delhi. Dr. Jitendra Singh, Vice-President, CSIR chaired the event in which 24 Technology transfers, Product launches, and MOUs were signed with the respective industry partners for technology transfer. Following the success of the 'One Week One Lab'(OWOL) campaign conducted by all the CSIR laboratories in 2023, Dr. Jitendra Singh proposed to start 'One week One Theme' campaign for the year 2024 from the month of June to December to showcase theme-based weeklong activities on technology packages, innovative and indigenized products, processes and devices across the laboratories. OWOT program aims to promote their achievements and foster collaboration with industry to empower MSMEs, SHGs, Agripreneurs and Startups.

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8 themes have been identified by team CSIR to be showcased with integration of Labs-

S.No.	Thematic Areas	Organizing Week
1	Energy and Energy Devices	24 – 28 June 2024
2	Chemicals (including Leather) and Petrochemicals	15 - 20 July 2024
3	Aerospace, Electronics, and Instrumentation & Strategic Sectors	2 - 30 August 2024
4	Civil Infrastructure and Engineering	2 - 6 September 2024
5	Agri, Nutrition & Biotech	21 - 26 October 2024
6	Healthcare	11 - 15 Nov 2024
7	Mining, Minerals, Metals and Materials	25 - 30 November 2024
8	Ecology, Environment, Earth & Ocean Sciences and Water	10-17 December 2024

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# The technology transfers, product launches, and MoUs signed with industries to includes the following-

Handheld IoT Enabled Field Deployable Water Testing Kit Handheld Minimally Invasive based Hemoglobin Measurement System

Development of Millet Based Buns Technology on Protein Based High-Energy Products Integrated technologies for creating import substitution of quality essential oil (geranium) and production of value-added products Herbal Health Soft Drink (Pio) Electric Tiller Compact Electric Tractor Pilot Installation and Study on Manufacturing Leather Alternatives (Vegan Leather) from Agriwaste Microbial consortium for waste management in aquaculture ponds Portable & Universal Motor-cum-Pump Performance Monitor (PU-MPPM) Modbus based Energy Management System (EMS) Anaerobic Gas lift Reactor (AGR): A high-rate bio methanation technology for the generation of biogas and bio manure from organic waste Technology for Conversion of Diesel Genset to Dual-Fuel Mode Upgrading Raw Biogas to Pipeline Quality Bio-methane Zeolite Technology for Gas Separation

Indigenous MWCNTs Synthesis by CVD and Development of Flexible MWCNTs Paper Therefrom

Novel Biomarkers for Detection of different Types, Grades and Stages of Human Breast

cancer

Converting Pathogenic Biomedical Waste to Value Added Soil Additives Evergreen Hybrid Composites of PARALI (Agri Wastes) Bamboo composite - a substitute for teak wood Compostable Bio-resin Coating as an Alternative to Plastic Liner

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The above-mentioned themes and projects will be showcased along other projects and technologies in OWOT campaign. DR. N. Kalaiselvi, DG, CSIR and Prof. R. Pradeep Kumar, Director CSIR-CBRI Roorkee was also present for the launch event.

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#### **Published in:**

Pib

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## **CSIR-NIO's Cutting-Edge Microbial Technology Promises Healthier** Aquaculture

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The Council of Scientific and Industrial Research – National Institute of Oceanography (CSIR-NIO) has successfully transferred its groundbreaking microbial consortia technology to MSortia LLP, a faculty startup of Cochin University of Science and Technology, Kochi, Kerala. This strategic collaboration marks a significant advancement in sustainable aquaculture

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#### practices.

The microbial consortia technology, developed by CSIR-NIO, addresses a critical challenge in aquaculture by providing an effective solution for wastewater treatment, thereby protecting the health of cultivated aquatic animals. This innovative technology leverages marine bacteria isolated from diverse ecosystems to revolutionize water quality management in aquaculture operations. Developed through CSIR-NIO's research programs, the technology aims to translate scientific findings into practical applications beneficial to society.

The technology transfer agreement was signed on June 24, 2024, by Prof. Sunil Kumar Singh, Director of CSIR-NIO, and Dr. Vrinda S, Managing Partner of MSortia LLP. The signing event was part of the inaugural ceremony of the One Week One Theme program of CSIR, officiated by Dr. Jitendra Singh, Honorable Minister of Science and Technology. The event was graced by the presence of Dr. N. Kalaiselvi, Director General of CSIR and Secretary DSIR, along with Dr. NL Thakur, Dr. Anas Abdulaziz, Senior Principal Scientists, Dr. Mandar Nanajkar, Principal Scientist, Mr. Venkat Krishnamurthy, Collaborations Desk of CSIR-NIO, and Shri. K.S. Abhilash, Partner of MSortia LLP, among others.

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The microbial consortia technology utilizes a carefully selected mixture of microorganisms. These marine isolates were chosen from a pool of approximately 3000 bacterial strains, isolated from various marine ecosystems and maintained at the Marine Microbial Reference Facility at CSIR-NIO's regional centre in Kochi. The microbial consortia exhibit high enzyme production, facilitating the degradation of waste accumulated in aquaculture ponds—a significant issue in intensive aquaculture settings, leading to reduced growth, disease incidence, and mortality of stocked animals.

Extensive testing and validation were conducted in shrimp culture ponds across Kerala, Karnataka, and Gujarat, demonstrating the efficacy of the microbial consortia in improving water quality and promoting healthier aquatic ecosystems.

This milestone in microbial consortia technology transfer underscores CSIR-NIO's commitment to advancing scientific research and fostering sustainable practices in aquaculture, paving the way for a healthier and more productive future for the aquaculture industry.

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A delegation from Australian Consulate-General, Bengaluru, headed by Hilary McGeachy, Consul General; Andrew Collister, Consul and Steffi Cherian, Strategic Communication & Public Diplomacy Officer, visited CSIR-CFTRI here on June 19. The team interacted with scientific staff for exploring collaborations in the areas of Agro-Food Processing Technologies, Infestation control, Food Security and HRD activities.

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## The Consul General appreciated CFTRI's role in Food Technology and Food Processing sectors and its efforts to reach out to society in large and common man in particular.

The team also visited some of the facilities in the Campus such as CFTRI Showcase and Millet Showcase, according to a press release from Dr. Parigi Ramesh Kumar, Senior Principal Scientist, Technology Transfer & Business Development Coordinator (ISTU), CSIR-CFTRI.

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#### **CSIR-NIIST** inks MoU with AIIMS Delhi

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The Council of Scientific and Industrial Research-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST), Thiruvananthapuram, inked a memorandum of understanding (MoU) with All India Institute of Medical Sciences (AIIMS), New Delhi for validating the technology that offers a sustainable and energy-efficient alternative to current practices in disposing of pathogenic biomedical waste.

The MoU was signed on the sidelines of the curtain raiser of CSIR's 'One Week One Theme' (OWOT) programme held at India Habitat Centre, here on Monday

Director of CSIR-NIIST Dr C Anandharamakrishnan and AIIMS Delhi Director Dr M Srinivas exchanged the MoU in the presence of Union Minister of State for Science and Technology Jitendra Singh, a statement said.

The CSIR-NIIST has developed a dual disinfection-solidification system that can spontaneously disinfect and immobilise degradable pathogenic biomedical waste such as blood, urine, saliva, sputum, and laboratory disposables, besides imparting a pleasant natural fragrance to otherwise foul-smelling biomedical waste, it said.

The Institute, which is a constituent laboratory under the CSIR of the Union Ministry of Science and Technology, has developed the technology at its laboratory at Pappanamcode in Thiruvananthapuram, the statement said.

The technology has the potential for far-reaching consequences in the global biomedical arena, as it can address the limitations of conventional technologies, including energy-intense incineration. "It will be validated via a pilot-scale installation and accompanying R&D at the AIIMS. The two institutions will have a technical meeting for finalising the specifications

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prior to initiation of the proposed study," it said. The technology has also been confirmed by expert third parties for its antimicrobial action and the non-toxic nature of the treated material. Soil studies have confirmed that the treated biomedical waste is superior to organic fertilisers like vermicompost, it added.

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## **Tidco Centre of Excellence signs MoU with CSIR**

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To strengthen its commitment towards the Industrial research and commercialisation of technologies, Tamil Nadu Industrial Development Corporation (TIDCO) Centre of Excellence (CoE) on Tuesday signed MoUs with the Council of Scientific & Industrial Research (CSIR) through its constituent laboratory - Central Scientific Instruments Organisation (CSIR-CSIO), Chandigarh and its regional centre at CSIR Campus Taramani, Chennai.

TIDCO through its Industrial Centres of Excellence (CoEs) - TANSAM, TANCAM, and TAMCOE, in association with Siemens, Dassault Systemes and GE Aerospace respectively, at

a total project cost of ₹600 crore, have been successfully enabling Innovation, Industry 4.0 adoption and supporting the State's Advanced Manufacturing Capabilities amongst, Industry, Academia, MSMEs, Startups, and the government agencies. Spokes of the centres are also being created at various Academic institutions across the state to make the rich expertise and technologies available at these CoEs, within the reach of the students for their capacity building and bridging the gap between the Academia and Industries.

The MoUs will facilitate mutual sharing of expertise, domain knowledge, and available facilities in mutually agreed research areas between CSIR- CSIO and TIDCO's CoEs, says a

release.

Some of the key areas would be Engineering, Biomedical Application, Instrumentation, Control Systems, Industry 4.0, Energy Management, Material and Physical Sciences, Intelligent Sensors and Systems, AI development, Micro and Nano Optics, Calibration, CRTDH for Solar PV System testing and certification, 3D Modelling and Printing, Virtual Twin Technology, Innovative and Additive Manufacturing, drone design, composite modelling, robotics development, Reverse Engineering, Digital Twin (Smart Factory), IOT,

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## Digital Technology, and any other areas of common interest, towards its application in industrial sectors.

The MoU will also facilitate TIDCO's CoEs to undertake joint research with CSIR–CSIO units, leading to development of new technologies with IP creation as well as to undertake technical consultancy projects, Conducting feasibility studies, pilot projects, and validation of prototypes/technologies developed indigenously, including in-field evaluation, as well as deployment/ demonstration in an industrial environment.

The MoU will further strengthen the interaction between the TIDCO's CoEs and CSIR-CSIO with the Academia, MSMEs, start-ups, scientists, engineers, and research scholars and Industries through various joint activities and initiatives, the release said.

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**Thehindubusinessline** 

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A five days long Summer Science Camp was inaugurated today by CSIR- Indian Institute of Integrative Medicine, Jammu, n association with the Royal Society of Chemistry (RSC), India under the flagship of Yusuf Hamied Chemistry Camps and CSIR Jigyasa program. The camp has been specially designed for the students of class 9th and 10th from Govt Schools of all districts of

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Jammu Division. The aim of this Summer

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Camp is to inculcate scientific temperament among the budding students and is specifically designed to provide students an immersive experience of hands on trainings and an exposure in Scientific and Technological interventions in chemistry, biology and allied sciences. Participants will have the opportunity to engage in hands-on activities of basic scientific principles in well-equipped laboratories.

On the occasion, Ashok Kumar Sharma, Director, School Education, Jammu, was the chief

guest. He said that this is an exceptional opportunity for the students to have exposure of the scientific institute and hands on basis scientific experiments.

Dr Zabeer Ahmed, Director CSIR-IIIM Jammu, in his message, emphasized that the institute is commitment to nurturing scientific temperament and innovation among the students by providing the opportunities to them with unrestricted access to state-of-the-art laboratories and facilities. Bhakti Dhamdhere, representative of Yusuf Hamied Chemistry Camps, gave an outline of such programs as inspirational and most unique outreach activities conducted in collaboration with premier institutes in India. She outlined that the aim of such programs is

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#### to improve the quality of science teaching and inspiring young students to take up science for a better world tomorrow.

Er Abdul Rahim, Chief Scientist & Head, IIIM Srinagar (Br) emphasized that these camps are not only educational but also aim to instill a passion for scientific inquiry and discovery.

Dr Asha Chaubey, Senior Principal Scientist and Coordinator of Summer Science Camp & Nodal, Jigyasa program, gave an outline of the camp.

The formal vote of thanks was presented by Dr Nasir Ul Rasheed, Senior Scientist and proceedings of the inaugural session were conducted by Arushe, Project Associate.

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## **CSIR-NCL**, Pune launches the One Week One Theme program in 'Energy and Energy Devices'

CSIR-NCL, CGCRI, CECRI, IIP, NIIST

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Pune, 24th June 2024: CSIR-National Chemical Laboratory (CSIR-NCL), Pune, inaugurated the 'One Week One Theme (OWOT)' event on the Energy and Energy Devices (EED) along with other sister CSIR laboratories on 24 June 2024.

Dr. Ashish Lele, Director, CSIR-NCL, gave the welcome remarks and highlighted in brief about the CSIR's work in the Energy and Energy Devices theme focusing on Hydrogen technologies, Next Gen batteries, Bio-fuels, Solar harvesting and storage, and coal-based fuels.

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Chief Guest Dr. Surya Moganty, Head of Technology at L&T Energy, delivered a keynote address titled "Energy Transition: From Materials Perspective" and inaugurated the exhibition at the 'One Week One Theme (OWOT)' program. Dr. Moganty's presentation was divided into two main parts. In the first part, he discussed energy minerals and materials, emphasizing the critical need for specific minerals and the opportunities this presents. He elaborated on the importance of recycling and creating a circular economy, highlighting technological innovations that utilize earth-abundant materials.

The second part of his talk focused on the safety of lithium-ion batteries from an electrolyte perspective. He explained how to investigate cell-level thermal stability and the significant role that liquid electrolytes play. Dr. Moganty discussed the use of known flame retardants, the molecular engineering of phosphorus compounds, and how to control the cathode-electrolyte interface. He detailed the process of investigating the thermal stability of batteries, the properties of commercial lithium-ion electrolytes, and the benefits of engineered

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phosphorus compounds. He emphasized the need to optimize electrolytes for both safety and performance. Dr. Moganty concluded by saying that innovation is the key to moving forward. He highlighted the potential advancements in batteries, electrolyzers, and fuel cells, along with improvements in recycling technologies to foster a circular economy. Following the inaugural session, two major technical sessions featured prominent experts sharing their insights on

various cutting-edge technologies.

In the first technical session, Dr. Jayanta Mukhopadhyay, Senior Principal Scientist, CSIR-CGCRI, commenced the discussions with an in-depth exploration of "Solid Oxide Electrolysers and Fuel Cells." He was followed by Dr. K. Ramesha, Director, CSIR-CECRI, who presented his thoughts on "Next Gen Batteries," shedding light on advancements in battery technology and its future prospects. Dr. Sanat Kumar, Chief Scientist, CSIR-IIP, then talked on a topic of "Alternate Biofuels," highlighting innovative approaches and their potential impact on sustainable energy solutions. Concluding the first session, Dr. C. Anandharamakrishnan, Director, CSIR-NIIST, spoke on "Agrophoto Voltaics (PV) & Building Integrated PVs," discussing the integration of photovoltaic technologies in agriculture and building infrastructures.

The second technical session continued with enlightening presentations from other distinguished speakers. Dr. Prashant Dhakephalkar, Director, ARI, began with a comprehensive overview of "Bio Hydrogen," emphasizing its role in the future energy landscape. Following him, Dr. Sarika Kelkar, Program Lead for Batteries at KPIT, provided

further insights into "Next Gen Batteries," reinforcing the importance of advancements in battery technology. Dr. Sasisankar Padmanabhan, Praj Matrix, shared his views on "Alternate Biofuels," exploring alternative sources and their applications. The session concluded with Prof. Shaibal Sarkar, Associate Professor at IIT Bombay, who spoke on "Next Gen Solar Devices," discussing innovations and future developments in solar technology. The program concluded with an interaction with the local press and media, allowing for further discussion and dissemination of the valuable insights shared during the sessions. **Published in:** 

Punekarnews

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#### भारत का नवाचार डंजन The Innovation Engine of India Union Minister of State (Independent Charge) for Science and Technology, Minister of State (Independent Charge) for Earth Sciences, Dr. Jitendra Singh launches "One Week **One Theme" (OWOT)** campaign showcasing recent success stories of India in different streams of science and technology. 24<sup>th</sup> June, 2024

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Union Minister of State (Independent Charge) for Science and Technology, Minister of State (Independent Charge) for Earth Sciences, MoS PMO, Department of Atomic Energy, Department of Space, Personnel, Public Grievances and Pensions Dr. Jitendra Singh today launched "One Week One Theme" (OWOT) campaign showcasing recent success stories of India in different streams of science and technology.

"Our aim is to integrate the efforts of all CSIR labs working on similar projects to reduce overlap and optimize resources," said Dr. Jitendra Singh and said, the 'One Week One Theme'

initiative under Council for Scientific and Industrial Research (CSIR) aims to make innovation inclusive for all.

Pertinent to mention, 'One week One Theme' is the brainchild of Minister Dr. Jitendra Singh. 'OWOT' is built on the legacy and success of the 'One Week One Lab' (OWOL) initiative started last year. OWOL was also made possible under his guidance. Speaking on the occasion, the Science and Technology minister highlighted the aim and objective behind this initiative is to create awareness among citizens about the progress and development in Labs, to benefit

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them giving them new avenues and opportunities for employment, empowering stakeholders such as MSMEs, Startups, SHGs, scientists, researchers by integration and collaboration with Industry. Around 24 technology transfers, product launches, MoU's were signed in presence of the Science and Technology Minister Dr. Jitendra Singh, tracing CSIR's initial Journey, he said CSIR has history pre-dating to India's Independence still industry linkage had not happened to a great extent. However, in the last decade we have tried to integrate industryacademia-and research and entrepreneurship.

Dr. Jitendra Singh said "Prime Minister Narendra Modi's vision is to empower farmers and common citizens by not limiting Science to labs, but reaching out to them to promote ease of living. Dwelling on 8 themes which include energy and energy devices; chemicals and petrochemicals, aerospace, electronics and Strategic sectors; Civil infrastructure and engineering, Agriculture, nutrition and biotech; healthcare; Mining, minerals, metals and

#### materials; ecology, environment, earth, ocean sciences and water.

Dr. Jitendra Singh expressed satisfaction over the success of OWOL and wished for similar success to OWOT. Going further he also announced to scale up this initiative from CSIR labs to other facilities. He also gave the agenda for next year as One week One Integrated theme (OWIT). He also shared that progress in the Deep-Sea mission, Aroma Mission, millet economy, Bio economy and Next generation technology will propel the Indian economy to grow faster and become 4th largest from 5th largest.

The Minister also recalled how the local population was unaware of the work going on inside some of these the labs, but after creating awareness among them they could be made a part of the whole developmental journey of tulip cultivation and 108 petal Lotus developed by CSIR is a shining example. "We are going beyond CSIR realms" he said.

Dr. N. Kalaiselvi, DG, CSIR; R. Pradeep Kumar, Director CSIR-CBRI, Roorkee were also present on the occasion. <u>Published in:</u>

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## New research heralds breast cancer diagnosis with just a drop of blood

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The CSIR-Centre for Cellular and Molecular Biology (CCMB) scientists in association with clinicians of the Regional Cancer Centre (RCC) in Thiruvananthapuram (Kerala) have identified a potentially cost-effective and non-invasive method to detect various kinds of breast cancer from just a drop of blood.

The researchers have analysed microRNA signatures in hundreds of human cancer samples and identified 439 microRNAs (miRNAs) that are associated with invasive breast cancer, of which 107 qualified to be potential biomarkers for the stratification of different types, grades and stages of invasive ductal carcinoma., according to CSIR-CCMB Chief Scientist Lekha

#### Dinesh Kumar, who led the research.

Most of the cellular processes in a body are regulated by miRNAs molecules which are 23-25 base small non-coding RNA molecules. Identification of miRNAs involved in the regulation of the initiation and progression of breast cancer holds great promise for the development of molecular tools for early diagnosis and prognosis, said Dr. Lekha.

The scientist explained that cancer cells shed DNA/RNA into the circulation called 'Circulating Nucleic Acids (CNAs) and tumour-specific genetic changes, including DNA, RNA, and proteins, which are detectable in plasma or other body fluids of cancer patients to identify the earlier stages of cancer development.

Based on this principle, the identified biomarkers could be made into a liquid biopsy system that might prove to be a boon for developing countries, where cancer could be detected from one drop of blood. "Our study has paved the way for the application of miRNAs as biomarkers and would open up new vistas in developing a refined, cost-effective, and non-invasive method in breast cancer diagnosis," the CSIR-CCMB Chief Scientist said.

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#### Affordable, quick and robust

Affordable, quick and robust early detection protocols for breast cancer diagnosis using miRNAs could strengthen the healthcare system majorly because breast cancer is a hidden epidemic in third world countries with most rural women in India and elsewhere reluctant to

#### go for a physical examination," said Dr. Lekha.

The discovery of biomarkers has become essential for early detection, classification, and monitoring of cancer. It holds the key for the cure of this scourge and reduces the economic burden of the family in particular and society in general, she added.

#### International patents

Nine international patents have already been granted for these biomarkers as a testimony to the application of results of this study, which got published recently in a prestigious journal called "Cell Communication and Signalling (CCS)". The link to the paper is: https://doi.org/10.1186/s12964-023-01452-2.

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### **IIIM celebrates the 10th International Day of Yoga**

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CSIR-Indian Institute of Integrative Medicine (IIIM), Canal Road, Jammu, a premier Research and Development organization, under Council of Scientific and Industrial Research, Ministry of Science and Technology, Govt. of India, celebrated the 10th International Day of Yoga (IDY) with this year theme "Yoga for self and society" at its main campus with fervour, gaiety and zeal.

During the celebration, a yoga session was conducted byRajesh Kumar, Gupta, Administrative Officer, CSIR-IIIM and various Asanas such as Tadasana, Katichakrasana, Trikonasana, Konasana, Pavanmuktasana, Makarasana, Yogasana, Sarpasana, Bhujangasana, Hasya Kriya,

and Pranayama Kriya, including AnulomVilom were performed in which scientists, researchers, scholars, staff, and their families actively participated.

On this occasion, Dr. Zabeer Ahmed, Director, CSIR-IIIM, Jammu, said that in this era 'Yoga' is very crucial and imperative for physical and mental health, and we must append it to our daily lives to get the fruitful benefits and live a healthy life. Further, Dr. Ahmed said that this year's celebration emphasized the dual benefits of yoga in enhancing personal well-being and fostering societal harmony.

Prominent others were also present Abdul Rahim, Chief Scientist, Dhiraj Vyas, HoD, PSA Division, Sumit Gandhi, HoD, ID Division, Asha Chaubey, HoD, FMB Division, Naveed Qazi, HoD, NPMC Division, Vikram Singh, Senior Controller of Administration and Sh. Ajay Kumar, Controller of Finance and Accounts.

#### Published in:

Risingkashmir

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## **CSIR-NEIST Hosts DBT Consultative Meeting to Shape Biotechnology Roadmap for Northeast India**

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CSIR-NEIST, Jorhat organized a two-day Consultative Meeting of Department of Biotechnology (DBT) titled "Developing a roadmap for supporting and nurturing Biotechnology in NER by DBT during the next five years" from 21st to 22nd June, 2024. The meeting was attended by all heads and representatives of S&T Councils, Health

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Departments, Veterinary Departments of all the 8 States of NER and many leading scientists of NER Research Institutes like IBSD-Imphal, Pasteur Centre-Shillong, Guwahati Medical College, Jorhat Medical College, Tezpur University, Mizoram University, Veterinary Colleges of Assam, ADMac-Guwahati, NRC-Mithun-Dirang, NRC-Yak-Mefziphema, NRC-Pig-Guwahati and several others alongside many eminent scientists and technical experts from across India to discuss the current state of progress and identify the major challenges of NER in Medical, Veterinary, Agriculture, Aquaculture, Environment and Bioenergy sectors of Biotechnology for developing a roadmap of DBT to strengthen effective and inclusive support

#### to NER.

Dr Virendra M. Tiwari, Director, CSIR-NEIST, Jorhat welcomed the delegation of eminent scientists and leaders, the DBT organizing team and all participants of the meeting. He shared CSIR-NEIST, Jorhat is continuously working for the welfare of the NE region through quality knowledge and skilled human resource generation, S&T intervention and entrepreneurship development relevant to the NE States. Dr Dinakar Salunke, ICGEB, New Delhi shared the genesis of the meeting, necessities and possibilities for future course of action for biotechnology research. Dr. Suraksha S. Diwan, NER Program of DBT highlighted

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## the success stories of DBT support towards promoting biotechnology R&D in the Northeastern states.

Dr. Rajesh S. Gokhale, Secretary, DBT, New Delhi in his keynote address encouraged the scientists and academicians to come together to develop S&T mission for uplifting and encouraging biotechnological research in all sectors to rich greater heights in the Northeast India. On this occasion, brochure of DBT NER programs and their achievements was released and BIRAC funded recently concluded CSIR-BioNEST Udyomita 1.0 prizes were bestowed to the winner young entrepreneurs.

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## **Bangladesh, India sign 10 MoUs to enhance cooperation**

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Dhaka and New Delhi today signed 10 Memorandums of Understanding (MoUs) including seven new and three renewed in the presence of Bangladesh Prime Minister Sheikh Hasina and her Indian counterpart Narendra Modi to further consolidate the ever-growing relationship between the two neighbouring countries.

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The MoUs were signed after the delegation-level talks between the two countries at the Hyderabad House here as Sheikh Hasina is now in New Delhi on a two-day state visit to India

The talks mainly featured connectivity, energy, sharing of water from common rivers, maritime resources, trade, border management, security and development partnerships.

After the delegation-level meeting, the Bangladesh prime minister along with her Indian counterpart witnessed the exchange of MoUs on the key areas of blue economy and maritime cooperation,

railway, capacity building, health, academic cooperation, fisheries and disaster management.

Of the seven new MoUs, a MoU on the Field of Blue Economy and Maritime Cooperation in the Bay of Bengal and India Ocean Region was signed between the government of Bangladesh and the government of India.

Another MoU was signed between the Bangladesh Oceanographic Research Institute (BORI) and the Council of Scientific and Industrial Research (CSIR) of India for Joint Research on Oceanography of the Indian Ocean and Capacity Building.

![](_page_23_Picture_0.jpeg)

![](_page_23_Picture_1.jpeg)

An MoU on Rail Connectivity between India and Bangladesh was also signed as two separate shared visions of the Bangladesh Digital Partnership and the shared vision of India Bangladesh Green Partnership for a Sustainable Future were signed between the two sides as

![](_page_23_Picture_3.jpeg)

Another MoU between the Indian National Space Promotion and Authorization Centre (IN-SPACE) and the Department of Space, Government of the Republic of India and the Ministry of Posts, Telecommunication and Information Technology, Government of Bangladesh was signed for Collaboration on a Joint Small Satellite Project.

A MoU between DSSC, Wellington and DSCSC Mirpur for cooperation concerning military education in the field of strategic and operational studies was also signed.

Three renewed MoUs are- MoU for Fisheries Cooperation; MoU for Disaster Management; and MoU on Cooperation in the Field of Health and Medicine.

![](_page_23_Picture_7.jpeg)

![](_page_23_Picture_8.jpeg)

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### Mysuru, the yoga hub, celebrates Yoga Day with exuberance

![](_page_24_Picture_2.jpeg)

![](_page_24_Picture_3.jpeg)

The International Day of Yoga (IDY-2024) was celebrated across Mysuru city with exuberance, promoting the ancient art for establishing a healthy living. The Mysuru division of South Western Railway marked International Yoga Day with great enthusiasm, aligning with this year's theme, "Yoga for Self and Society." The event, aimed at promoting global peace, harmony, and progress, was held at the Railway Kalyana Mantap in Yadavagiri here.

![](_page_24_Picture_5.jpeg)

The celebration was inaugurated by Divisional Railway Manager, Shilpi Agarwal. In her address, Ms. Agarwal outlined the numerous benefits of yoga, urging railway employees and their families to integrate regular yoga practice into their lives.

She elaborated on the relevance of yoga in today's fast-paced world, emphasising the necessity of continuous practice to achieve holistic well-being. This initiative reflects the South Western Railway's

## commitment to the holistic health of its employees and their families, fostering an environment of peace, harmony, and progress.

The event featured the participation of Additional Divisional Railway Manager,(General)Mysuru, Vinayak Nayak, and E. Vijaya, Additional Divisional Railway Manager (Infra and Operations), along with other senior officers and approximately 200 staff members. The Yoga session, lasting for an hour, was conducted by representatives (Shikshaks) from the Art of Living. The Shikshaks guided the participants through basic asanas as per the common Yoga Protocol, highlighting the immense benefits of each asana.

![](_page_25_Picture_0.jpeg)

![](_page_25_Picture_1.jpeg)

International Yoga Day was also observed in a similar fashion at various stations and depots across the Mysuru division of South Western Railway, promoting a widespread culture of health and well-being through yoga, a press release from the railways said.

#### YOGA AT CSIR-CFTRI CAMPUS

CSIR-CFTRI, Mysuru celebrated International Yoga Day 2024. This year's focus is on the transformative power of yoga to enhance the well-being of individuals and contribute to a healthier society.

CFTRI staff research scholars and students actively participated by performing yoga in the campus in front of Cheluvamba Mansion. Food Research Institute Gymkhana (FRIG), which is a sports club of CFTRI, coordinated the entire event.

Kunal Sharan, Scientist and Secretary, FRIG welcomed the participants. Mr. Gangadarappa and his team members guided the yoga session. N.K. Rastogi, director in charge and chief scientist spoke about the theme and various health benefits of yoga and advised the participants to do yoga regularly. Earlier, as a prelude to IDY, daily practice sessions were held from May 29 until Friday in the campus.

![](_page_25_Picture_8.jpeg)

![](_page_25_Picture_9.jpeg)

![](_page_26_Picture_0.jpeg)

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### **CSIR-IMMT** Celebrated 10th International Yoga Day With Enthusiasm

![](_page_26_Picture_3.jpeg)

![](_page_26_Picture_4.jpeg)

CSIR-Institute of Minerals and Materials Technology (CSIR-IMMT) today marked the 10th International Yoga Day with a vibrant celebration held in SS Bhatnagar Hall of CSIR-IMMT. The event was conducted under the chairmanship of Dr. Ramanuj Narayan, Director, CSIR IMMT, Bhubaneswar. The theme of today's event was "yoga for self and society"

The programme started with a traditional lamp-lighting ceremony and the National anthem. Through his inaugural speech Hon'ble Chief Guest Suresh Kumar Mohapatra, Pranta Pradhan (Odisha) of Bharatiya Yoga Sansthan, motivated the audience and emphasized on the impact of Yoga in everyday life and how it should be incorporated to the quality of one's day-

## to-day life."

### Dr. Ramanuj Narayan, felicitated Yoga instructors from Bharatiya yoga Sansthan Ms. Manjula Mishra, Mr. K.V Apprao, Ms. Anusuya Behera, Mr.Pragyan Pattanik.

Dr. Ramanuj Narayan, Director of CSIR-IMMT Bhubaneswar, extended a warm welcome to all dignitaries and participants, expressing gratitude for their presence. The audience participated in an interactive session and discussed about the importance of International Yoga Day and the role of Yoga in our day-to-day life.

Scientists and staff members of CSIR-IMMT actively participated in the programme, guided by yoga instructors from Indian Yoga organizations who facilitated yoga sessions throughout the occasion. Dr. Manish Kumar coordinated the program, ensuring its smooth execution, while the vote of thanks was delivered by Shree Abhaya Kumar Sahoo.

![](_page_26_Picture_12.jpeg)

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