CSIR IN MEDIA

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The Innovation Engine of India

NEWS BULLETIN
26 TO 29 FEBRUARY 2024

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

National Science Day celebrated at CSIR Campus, Chennai

CSIR-SERC, CBRI

29th February , 2024

National Science Day is celebrated in India every year on 28 February to mark the discovery of the Raman Effect by Indian physicist Sir C.V. Raman. National Science Day was celebrated with great enthusiasm at the CSIR-Structural Engineering Research Centre (CSIR-SERC) and CSIR Madras Complex (CMC) during 28-29 February 2024.

The National Science Day function was organized on 29.2.2024 and was presided over by Dr. N. Anandavalli, Director, CSIR-SERC and Coordinating Director, CMC. Prof. S.K. Bhattacharyya, Vice Chancellor, Shiv Nadar University, Chennai, and Former Director, CSIR-Central Building Research Institute (CSIR-CBRI), Roorkee, was the Chief Guest of the function. In her welcome address, Dr. Anandavalli mentioned that science and technology are integral parts of Indian culture, deeply interlinked, and are also fundamental to the growth of the country and humanity. Speaking briefly on Sir CV Raman and the genesis of National Science Day, she said that this day is a powerful reminder of the impact of science and technology in our everyday lives. Talking about the theme of National Science Day 2024 – Indigenous Technology for Viksit Bharat, she said that India has always been a land of innovation and highlighted on the contributions of CSIR towards developing indigenous technologies. Dr. Anandavalli also remembered the contributions of Dr. N. Lakshmanan, Former Director of CSIR-SERC, for the structural engineering field and his outstanding work at CSIR-SERC. As a part of the National Science Day celebrations, the first edition of Dr. N. Lakshmanan Memorial Science Quiz Competition was organized at the CSIR Campus on 28 February 2024, exclusively for the Corporation of Chennai School students. The main

aim of the quiz was to inculcate the aptitude for scientific research in young minds. The quiz was organized by Shri. A.K. Farvaze Ahmed, Principal Scientist, CSIR-SERC, and his team. A total of sixty-three students from twenty-one schools from all across Chennai actively participated in the quiz. Six teams (3 members per team) were selected for the finals following the qualifying round. The finals were organized on the same day and consisted of several rounds of science questions, including audio-visuals. All students participated in the quiz enthusiastically. The first prize was won by CHSS, Taramani. CHS, Kallikuppam, won the second prize, and CHS, Kamaraj Avenue, won the third prize. The consolation prizes went to CHS, Puliyur, CHS, Cholapuram, and CHSS, Velachery.

A brief report on the organization of Dr. N. Lakshmanan Memorial Science Quiz Competition was given by Dr. M.B. Anoop, Senior Principal Scientist, CSIR-SERC. The prizes were given to the winning students on 29.2.2024 by the chief guest, Prof. Bhattacharyya, Director Dr. Anandavalli, and Dr. Gomathi Lakshmanan, wife of Dr. N. Lakshmanan. Dr. J. Rajasankar, Chief Scientist, CSIR-SERC, introduced the chief guest to the audience.

The chief guest Prof. Bhattacharyya, delivered the National Science Day lecture on Global Problem – Indigenous Solution. In his speech, Prof. Bhattacharyya highlighted on the availability/accessibility of indigenous solutions/capabilities for many of our existing problems. He spoke in detail on the fire accident at the Bagri Market, Kolkata, in the year 2018 and the studies/analysis that his team had done in the aftermath of the fire, and the solutions arrived at. He also mentioned various fire accidents in the recent past and said that detailed studies focussing on various aspects of the cause of fire and comprehensive scientific solutions are necessary for retrofitting the structures that are affected or destroyed by fire. Prof. Bhattarcharyya highlighted that their study was one such detailed one with which one can know the temperature at which the structure was exposed to during fire – based on which an apt solution can be given to retrofit/strengthen the structure. Dr. Robert Sam, Senior Principal Scientist, CSIR-SERC, proposed a vote of thanks.

Published in:
Pib

National Science Day: Dr Jitendra hails CSIR-IIIM's efforts in fostering scientific inquiry, innovation

CSIR-IIIM 29th February, 2024

The CSIR-Indian Institute of Integrative Medicine (IIIM), Jammu on Wednesday celebrated National Science Day in memory of the birth anniversary of Nobel Laureate Sir C. V. Raman. The event, graced by eminent scientists, academicians, innovators, startups, researchers, and students, aimed to foster scientific inquiry and innovation. More than 350 students from various academic institutions in the region participated, igniting curiosity and emphasizing the pivotal role of science in societal development.

In a special video message, Dr Jitendra Singh, Union Minister of State (Independent Charge) for Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy, and Space, and Vice President CSIR, commended the Director, CSIR-IIIM, and his team for organizing a dynamic open day. Dr Singh highlighted the current conducive environment for science and innovation, citing the significant increase in startups and India's advancements in space technology and vaccine development.

Dr Zabeer Ahmed, Director, CSIR-IIIM, reiterated the importance of fostering a scientific mindset and reflected on the institute's rich legacy and cutting-edge research endeavours. He emphasized Dr CV Raman's revolutionary discovery of the Raman Effect, illustrating the transformative power of scientific inquiry. Dr Ahmed encouraged embracing a scientific outlook to drive innovation and societal progress.

Students from various institutions explored CSIR-IIIM's laboratories, engaging directly with scientists and research scholars. Through informative posters, research scholars showcased ongoing projects, offering valuable insights into the institute's research endeavours.

A highlight of the event was Dr Naveed Qazi's lecture on "Modern Drug Discovery: A Rational Approach," providing a comprehensive overview of drug discovery processes and recent

advancements, including the role of artificial intelligence. The program, organized under Dr Zabeer Ahmed's patronage and supervision, with assistance from Er Abdul Rahim, Head, RMBD&IST, and other Division Heads, exemplified CSIR-IIIM's commitment to fostering scientific inquiry and innovation in Jammu and beyond.

Published in:
Risingkashmir

CDRI to work on major drugs, aims to cut healthcare costs

CSIR-CDRI 29th February, 2024

The Central Drug Research Institute (CDRI) will be working on around a dozen major drugs this year, targeting its goal of making affordable healthcare available to society. On National Science Day, the institute shared that the institute is working on Umifenovir for Covid-19, Picroliv for non-alcoholic fatty liver (NAFLD), Centinhale for drug-sensitive TB, S007-1500 for fracture healing and L-Ormeloxifene for contraception and that they are at different stages of clinical development. Discussing the year-long plan, CDRI director Radha Rangarajan said, "CSIR-CDRI is dedicated to the research and development of drugs, diagnostics and process technologies towards 'affordable healthcare for all'. The institute engages in a blend of basic and translational research in eight different therapeutic areas. In line with India's mixed burden of disease, CSIR-CDRI works on communicable and non-communicable diseases."

She said apart from drug development the institute also has several preclinical stages leads for malaria, chemotherapy-induced neuropathic pain, colon cancer and hyperlipidaemia for which regulatory studies have been initiated. "To strengthen our market connect, we will continue to engage in collaborations with industry. In the recent past, the institute has initiated various sponsored projects, including a project from Dr Reddy's Laboratories. Further, we have recently signed a licensing agreement with Cipla for the development of a novel ophthalmic formulation for fungal keratitis," said the director.

She said the institute has initiated a collaborative research project with Sravathi AI Pvt Ltd, a startup based in Bengaluru to harness artificial intelligence for drug discovery and others. "We will continue to work on contraception through a grant from the Bill and Melinda Gates Foundation. Our goal will be to identify new, non-hormonal mechanisms for women to manage their reproductive health," she said.

Published in:
Times of India

CSIR-NEERI

29th February, 2024

आर्द्रभूमियों को बचाना जरूरी

नीरी में मनाया राष्ट्रीय विज्ञान दिवस

■ नागपुर, व्यापार संवाददाता. आर्द्रभूमियों को बचाने के लिए तत्काल सामूहिक प्रयासों पर जोर दिया जाना जरूरी है. आर्द्रभूमियां लोगों की आजीविका के लिए आवश्यक हैं. हमें आर्द्रभूमि का संरक्षण और विवेकपूर्ण प्रबंधन करना होगा, ताकि हम सभी को पर्याप्त और गुणवत्तापूर्ण पानी मिले. क्षेत्र की पारिस्थितिकी, जल विज्ञान और पर्यावरणीय अखंडता को बनाए रखने के लिए नियोजित शहरीकरण जरूरी है. पश्चिमी घाट में पारिस्थितिक रूप से संवेदनशील क्षेत्र चिंता का विषय बने हुए हैं. वनों की कटाई लोगों की आजीविका के लिए गंभीर चुनौतियां पैदा करने के साथ जल सुरक्षा को खतरे में डाल रही है. यह कहना है आईआईएससी के प्राध्यापक व समन्वयक डॉ. टीवी रामचंद्र का. वे सीएसआईआर-राष्ट्रीय पर्यावरण अभियांत्रिकी अनुसंधान संस्थान (सीएसआईआर-नीरी) में आयोजित राष्ट्रीय विज्ञान दिवस के समारोह में बतौर मुख्य अतिथि संबोधित कर रहे थे. इस अवसर पर सीएसआईआर-नीरी के निदेशक डॉ. अतुल एन. वैद्य और मुख्य वैज्ञानिक डॉ. एम. सुरेश कुमार प्रमुख रूप से उपस्थित थे.

स्वदेशी प्रौद्योगिकियों का उपयोग समय की मांग

उन्होंने बेंगलुरु में जक्कुर झील के पुनरुद्धार के बारे में बताते हुए कहा कि इसे एकीकृत शहरी जल प्रबंधन प्रणाली के लिए एक आदर्श मॉडल के रूप में अपनाया जा सकता है. इसका उपयोग संपूर्ण देश के विभिन्न शहरों में जलापूर्ति के लिए किया जा सकता है. उन्होंने जिले में उपलब्ध संसाधनों की जानकारी प्राप्त करने के लिए विभिन्न तालुकाओं में 'कैरिंग कैपेसिटी एप्रोच' और 'पारिस्थितिकी तंत्र सेवाओं व वस्तुओं के मूल्यांकन' के महत्व को रेखांकित किया ताकि 'क्लस्टर-आधारित विकास' को सुनिश्चित किया जा सके. डॉ. वैद्य ने स्वदेशी स्तर पर नई तकनीक को विकसित करने पर जोर दिया. उन्होंने कहा कि प्राकृतिक संसाधनों के सतत प्रबंधन के लिए स्वदेशी प्रौद्योगिकियों का उपयोग करना समय की मांग है. विश्व स्वास्थ्य संगठन (डब्ल्यूएचओ) ने उभरते सार्स - सीओवी2 वेरिएंट और अन्य वायरस की ट्रैकिंग के लिए सीएसआईआर-नीरी को एक रिफ्रेंस प्रयोगशाला के रूप में चुना है. कार्यक्रम का संचालन वैज्ञानिक डॉ. देबीश्री खान व आभार प्रदर्शन वरिष्ठ प्रधान वैज्ञानिक प्रकाश कुंभारे ने किया. यूनिवर्सल गर्ल्स कॉलेज, पांढुरना (एमपी) के 50 बी.एससी. (माइक्रोबायोलॉजी और बायोटेक्नोलॉजी) छात्रों और तपोवन स्कूल, नागपुर के 50 हाई स्कूल के छात्रों ने इस अवसर पर सीएसआईआर-नीरी का दौरा किया.

Published in:

Navbharat

Pollution Control Board signs pact with CSIR-NEERI for study on polluted canals

CSIR-NEERI 28th February, 2024

The Kerala State Pollution Control Board (KCBC) has signed a memorandum of understanding (MoU) with the Council of Scientific and Industrial Research-National Environmental Engineering Research Institute (CSIR-NEERI), Nagpur, to conduct a feasibility study on the development of process package treatment method to check pollution of pollution of Pallikkalar in Karunagappally, and Edappally and Perandoor canals in Kochi. The board has released an advance of ₹26.5 lakh towards initiating the project from its environment protection fund. The feasibility study was proposed after the Southern Bench of the National Green Tribunal (NGT) directed the State authorities to consider the wastewater treatment technology developed by NEERI to tackle the increasing faecal contamination of Pallikalar, and Edappally and Perandoor canals. The agency is expected to complete the study within 12 months.

The tribunal had suggested extending the model to other places that lacked underground sewage system. As part of the study, scientists from NEERI will estimate the pollution loads of sewage discharge from various areas into the canals. They will carry out a topography survey of drains/canals to ascertain the treatment system to be adopted. The agency will submit the design of the recommended treatment method along with basic engineering specifications for treatment of domestic sewage reaching the canals. It will also provide an estimate of the cost required for setting up the systems. The package treatment method involves sewage treatment through physical, chemical and biological processes to remove physical, chemical and biological pollutants/contaminants. The Southern Bench had asked the State government to implement temporary measures such as phytorid wastewater treatment technology proposed by NEERI, while stating that projects to rejuvenate canals could not be kept pending forever.

Published in:
The Hindu

Health camp held at CFTRI

CSIR-CFTRI, IGIB 28th February, 2024

A multi-institutional project on health status of the employees of CFTRI, Mysuru, was inaugurated by the CFTRI director Sridevi Annapuna Singh. The six-day comprehensive health checkup camp at the CFTRI campus concluded on Tuesday.

In order to study the cardiometabolic health status and predicting possible risk of communicable and non-communicable diseases of employees and their spouses, this project is being implemented across all the 37 laboratories of CSIR.

This ambitious project of the CSIR is coordinated by CSIR-Institute of Genomics and Integrative Biology (IGIB) under the leadership of Shantanu Sengupta, chief scientist and project coordinator.

Singh emphasised the importance of the CSIR-Cohort health knowledge base project, which is being undertaken for the first time in India.

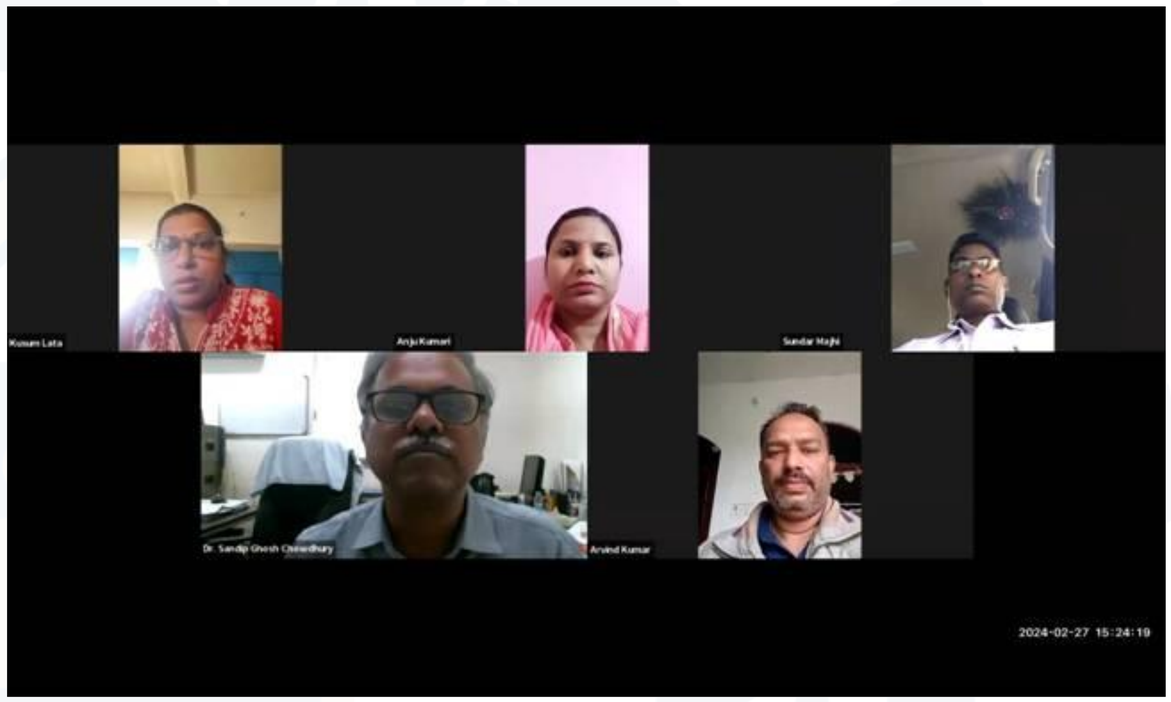
In this camp, a range of different tests that will were undertaken, included blood biochemistry, body composition, lipid profile, the health status of the liver, lung, eyes, skin, thyroid, kidney, heart, gut microbiota analysis and immuno-phenotyping analysis. Outcome of this study is expected to provide baseline data of the Indian population for different disorders and lifestyle diseases.

Published in:
Times of India

"CSIR-NML and KAMP Empower 150+ Teachers Nationwide with Cutting-Edge Experiential Learning Techniques in Science Education"

CSIR-NML

28th February , 2024



On the 27th of February, a specialized online teacher training program took place, accommodating over 150 teachers from diverse schools, all across the nation. The program focused on the theme 'Fostering Experiential Learning in Science Education, Beyond the Textbook'. This event marked KAMP's fifth Continuous Professional Development program tailored for teachers in collaboration with the CSIR-NML.
Participating educators engaged in comprehensive training sessions conducted by subject matter experts, covering various dimensions of science education.

Through this program, the teachers received the opportunity to interact and learn from prestigious scientists, Dr. Sandip Ghosh Chowdhury (Chief Scientist and Head of Materials Engineering Division at CSIR-NML), Dr. K. Gopala Krishna (Chief Scientist of Materials Engineering Division at CSIR-NML) and Dr. Animesh Jana (Senior Scientist and PI of Jigyasa, CSIR-NML).

The scientists delved into an array of subjects during their presentation, providing a comprehensive introduction to CSIR-NML. They specifically highlighted major focus areas within CSIR-NML, such as materials, minerals, national priorities at government level, effective management of primary and secondary resources, among others. In their insightful discussion, the scientists introduced innovative tools aimed at enhancing the learning experience. They emphasized strategies for effective learning, smart teaching methodologies, and the importance of experiential learning. Additionally, they presented hands-on examples

to illustrate key concepts, focusing on topics such as the concept of primary colors and electromagnetic induction, including the intriguing aspect of contactless electricity transport. This multi-faceted approach not only broadened the understanding of the teachers but also provided valuable insights into fostering a dynamic and engaging learning environment for students. Towards the end of the session, Mr. Aniket Arora (Outreach Coordinator, KAMP) expressed his gratitude to all the Speakers and participants present in the session. He also mentioned the importance of such events and how KAMP believes that such experiential learning is the key to fostering teachers and students' deep interest in and understanding of science & other developments in India. Additionally, he informed the teachers about the upcoming activities like the online Knowledge Sharing Sessions, Scientific Excursions for students as well as Continuous Professional Development for educators to explore, discover, and engage with various scientific disciplines in a real-world setting at various eminent CSIR laboratories/Research Organizations in India.

About CSIR-NML

CSIR-National Metallurgical Laboratory (CSIR-NML) is a leading Indian research organization specializing in Minerals, Metals, and Materials, with a focus on science, technology, industrial services, and human resource development. Since its establishment, CSIR-NML has diversified its research areas, including extractive metallurgy, alloy development, refractory materials, corrosion studies, mathematical modeling of metallurgical processes, mineral research, advanced materials, integrity evaluation of industrial components, surface engineering, and sustainable metals production.

About KAMP

Knowledge and Awareness Mapping Platform is an Initiative and Knowledge Alliance of the Council of Scientific & Industrial Research (CSIR) - National Institute of Science Communication and Policy Research (NIScPR) and industrial partner M/S Nysa Communications Pvt. Ltd. (NCPL), it intends to develop creativity, meaningful learning, critical reading, and thinking skills that bring out the inherent abilities of the students.

Published in:

Pib

National Science Day | Science Expo on 'Indigenous Tech' to be held at IITR Lucknow today

CSIR-IITR 28th February, 2024

Exhibiting the indigenous technologies developed by the institute's researchers, a Science Expo will be held at Lucknow's Indian Institute of Toxicology Research (IITR) on the occasion of National Science Day, i.e., today.

It is noteworthy that the Science Day celebrations take place at the institute every year, on a fresh theme. And this year's theme will be 'Indigenous Technologies for Viksit Bharat'.

Visit to learn about the institute's massive scientific achievements

Visitors and students at the event will get to learn about the scientific achievements of the researchers at the institute and the huge leaps that India has taken in the fields of Science. Apart from this, the institute will also be holding an interactive session for the visiting students where they will get to interact with prominent scientists at IITR Lucknow.

It is noteworthy that one of the objectives of these Science Day celebrations at Lucknow's IITR is to encourage young minds and prepare the next line of innovators and scientists who will further propel the nation's growth.

Published in:
Knocksense

Phytomolecules for med use to be developed at CIMAP unit

CSIR-CIMAP 28th February, 2024

CSIR-Central Institute of Medicinal and Aromatic Plants (CIMAP), which is known for retrieving natural compounds from aromatic and medicinal plants, will soon set up a unit for the development of a synthetic biology platform for high-value phytomolecules.

Synthetic biology is a science where we change living things on purpose to make them useful, giving them new abilities through genetic engineering.

"The unit will develop phytomolecules, which will be basically molecules produced by plants to protect themselves from moulds, yeasts, bacteria and other harmful organisms. The use of plants and their extracts in human and veterinary medicine has been a well-established fact for ages hence this unit holds great relevance for the pharma industry and others," said CIMAP director Prabodh Kumar Trivedi while talking to TOI on the eve of National Science Day.

Trivedi shared that the institute has set a goal to work towards the development of a synthetic biology platform, speed up research on plant genome editing, set up standards for herbal products and establish sustainable aroma clusters to double farmer's income this year.

The scientific institute took the synthetic plant biology route as research in the field of aromatic and medicinal plants and synthetic biology are interrelated.

The plant-specialized metabolites (natural products that are not mandated for the vegetative growth of the host plants) are regularly used for medicinal purposes. Plant synthetic biology can enhance the production of bioactive compounds, especially when the native host plants are difficult to cultivate, or the concentration of bioactive compounds are too low for purification.

"Synthetic biology can change the genetic material in viruses, bacteria, yeasts, plants, or

animals to give them useful new characteristics. For example, integrating spider DNA makes a silkworm produce super strong, ultra-lightweight silk. The institute has set up a goal to establish the development of a synthetic biology platform," said the CIMAP director.

"We will also be focussing on accelerating research on plant genome-editing for improved traits in medicinal and aromatic plants," he said.

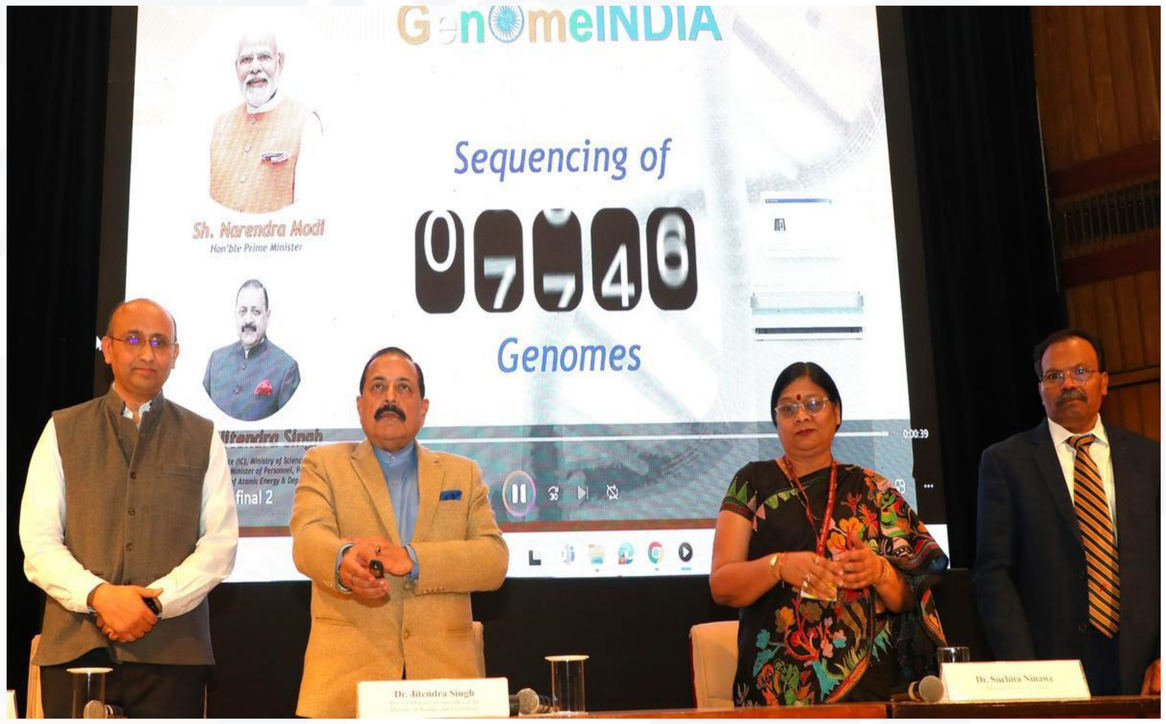
"We are working on the development of sustainable aroma clusters to enhance the income of the farmers and entrepreneurship development. This will include using solar distillation units (to minimize carbon emission), zero waste (utilization of de-oiled herb for vermicomposting, mushroom cultivation, cutlery making), Apiculture and the use of agri-drones for disease/nutrient management," he said.

Published in:
Times of India

‘10,000 genome’ project completed, says government

CSIR-CCMB

27th February , 2024



The Department of Biotechnology (DBT) on Tuesday officially announced the completion of the ‘10,000 genome’ project — an attempt to create a reference database of whole-genome sequences out of India. While India first sequenced a complete human genome in 2006, creating a database that is representative of the diversity of India’s population, is seen as a key step to being able to learn about genetic variants that are unique to India’s population groups and use that to customise drugs and therapies. The United Kingdom, China, and the United States are among the countries that have programmes to sequence at least 1,00,000 of their genomes.

About 20 institutions across India are involved in the project with the Indian Institute of Science (IISc), Bengaluru and the Centre for Cellular and Molecular Biology, Hyderabad being the lead institutions coordinating the project.

Distinct variations

The Indian population of 1.3 billion consists of over 4,600 population groups, and many of them are endogamous. These factors have contributed to the genetic diversity of the current population. Thus, the Indian population harbours distinct variations and often many disease-causing mutations are amplified within some of these groups. “There are harmful mutations that are less prevalent in the world but located in endogamous groups at a high frequency [relative to their population] in India,” said Kumaraswamy Thangaraj of the CCMB and one of the leaders of the initiative. “This has been a revolutionary initiative but going ahead we

will need to sample many more thousands of genomes to pick out more, rare mutations." The main outcomes of such an enterprise would be to gain deeper insight into India's population diversity, improve diagnostic methods and medical counselling, find genetic predispositions to disease, develop personalised and customisable drugs, improve gene therapy and throw more light on individual susceptibility to infectious disease.

Dr. Y. Narahari of the IISc said the creation of a biobank housing 20,000 blood samples (from which genomes were sequenced) at the Centre for Brain Research, IISc, coupled with data archiving at the Indian Biological Data Centre "exemplified" the project's commitment to transparency, collaboration, and future research endeavours. All the data are being stored at the Indian Biological Data Centre (IBDC) set up by the Department of Biotechnology, Government of India at the Regional Centre for Biotechnology (RCB), Faridabad.

Published in:
The Hindu

IIT-I, CSIR-NEERI to work on academic & research prog

CSIR-NEERI 27th February, 2024

Indian Institute of Technology Indore (IIT-I) has collaborated with the Council of Scientific and Industrial Research - National Environmental Engineering Research Institute (CSIR-NEERI) to share knowledge in the fields of natural resource management, environment, sustainability, climate change and related areas.

The institutes have signed a memorandum of understanding.

IIT-I assistant professor in department of civil engineering Dr Ashootosh Mandpe said, "This MoU sets the stage for enhanced collaboration between CSIR-NEERI and IIT-I, facilitating joint research projects, academic programmes, and exchange initiatives. By leveraging each other's expertise and resources, this partnership will foster innovation, knowledge sharing, and skill development."

Mandpe said the collaboration will have a long-term impact and will be evident in the advancement of research outcomes, the enrichment of academic programmes and the nurturing of a vibrant intellectual community. As part of the MoU, IIT-I and CSIR-NEERI will work on designing academic programmes, PhD supervision, research, training and consulting activities, exchange of human resources and intellectual property rights.

"Exchange programme will promote cross-cultural understanding and provide invaluable learning experiences for students and faculty members, ultimately contributing to the broader goals of sustainable development and scientific excellence," said Mandpe. The institutes will also work towards addressing critical challenges and promote sustainable development in diverse domains.

Published in:
Times of India

NIOT organises World Ocean Science Congress 2024 on Sustainable Utilization of Oceans in Blue Economy

CSIR-SERC 27th February, 2024

World Ocean Science Congress (WOSC 2024) provides a common platform for the stakeholders of ocean, mainly in the sectors of tourism, navy and defence, maritime industries, transportation, ports & harbour, coastal infrastructure, researchers, academicians, legal and geo-political experts, archaeologists, etc., to interact, exchange ideas and appreciate the conflicting demands of the stakeholders. The third WOSC conference has been organised at IIT Madras Research Park, Chennai from 27 to 29 February 2024 with the theme 'Sustainable Utilization of Oceans in Blue Economy' focuses on the development of coastal infrastructure, tourism in coastal states & Islands, offshore & coastal fisheries, marine biotechnology, warming of oceans, sea level rise, depletion of oxygen & acidification, marine pollution, oceanic hazards and mitigation, etc.

The following dignitaries attended the Inaugural session:
Dr. G.A Ramadass , Director NIOT, Dr. Ranjith Rath, CMD Oil India Ltd., Prof. Raghuram Rangasamy, Director In-charge IIT Madras, Dr. Anandavalli, Director CSIR-SERC, Dr. Satheesh Chandra Shenoy, VIBHA and Dr. Vivekanda Pai, VIBHA. The inaugural event started with lighting of lamp by the dignitaries followed by welcome address by Dr. G. A Ramadass, Director NIOT. During his address, he recalled the establishment of Department of Ocean Development (DoD) in the year 1981 which is currently called as MoES under which 5 autonomous organisations covers all 5 spheres of earth. He stated that India is having 2.2 million square km of Exclusive Economic Zone (EEZ). He also highlighted that the sea area and land area contributes to the blue economy and added that the draft paper for Blue Economy is ready for unveiling. He also indicated the launch of Deep Ocean Mission announced by the honourable Prime Minister of India Shri. Narendra Modi Ji in September, 2021 which covers 6 verticals with a budget allocation of 4000 Crores within a time frame of 5 Years. One of them is SAMUDRAYAN where 3 aquanauts will be sent to the depth of 6000 meters.

Following the welcome address Dr. Satheesh Chandra Shenoy, Vice President – Vignana Bharati (VIBHA) gave the introductory remarks in which he quoted that Vibha is a Largest Science movement which interlink ancient and modern scientific technologies. VIBHA believes that challenges faced by our country are the unique and it can be solved only through integrated technologies. He also mentioned that there are about 4 million Fishermen who are living near the Coast line and are exposed to natural calamities. Towards this many international conferences, workshops and symposiums are regularly being conducted by VIBHA.

Dr. Anandavalli, Director - CSIR-SERC, during her introductory remarks said that our planet as well as our human body made of 5 basic elements (Sky, Air, Fire, Water and Earth). Three-fourth of the planet covered by Water in the form of oceans and seas which is a multi-disciplinary area. We have to harness the resources without disturbing the ecosystem. Current need is the renewable energy sources which is available in oceans, wind etc., and desalination for our water requirement. She also mentioned that we have to indigenise latest technologies to harvest the resources.

Prof. Raghunath Rengaswamy, Director in-Charge, IIT Madras, Chennai formally welcomed the gathering to the IIT campus which covers 645 acres catering to 10000 students in UG, PG and doctoral levels. Recently it aims for international collaboration for faculty and research scholars. Apart from academic it also involved in lot of research activities to resolve the numerous challenges faced by the country.

Dr Ranjith Rath- CMD – Oil India Ltd. has mentioned that the first and second world ocean science congress were the baby steps and now the third is the game changer as it has line of discussions with special directives by distinguished speakers which will enlighten us and create a new wisdom. We have about 7500 km of maritime boundary with coastline. India is blessed with coastal lines harbours and coasts, water ways, plenty of resources atomic and industrial minerals which are crucial for our economy. Sustainable harvesting of these resources is required with the importance of maritime protection. During 1970's we discovered Bombay High an offshore oilfield

which recently celebrates 50th year producing crude oil for Indian economy. Recently we have unlocked 1 million Sq. km of area in East and West coast and A & N basin for exploration and production. Out of 42 billion metric tonnes of oil and oil equivalent 40 to 50% are yet to find from shallow water, deep water and ultra-deep waters. Science is extremely challenging and all challenges are opportunities for us. Protection of maritime boundary is an important point to be discussed Following the introductory speeches, Abstract volume of WOSC 2024 was released by the dignitaries and inauguration concluded by Vote of Thanks by Shri Vivekananda Pai, Vijnana Bharati.

During the vote of thanks Shri Vivekananda Pai mentioned that the whole journey of WOSC started in 2018 at Kochi with four main aspects and focus on fisheries. The second WOSC conference happened at Visakhapatnam. He mentioned that India has around 28 million fishermen and anything to do with fishermen, the area is so big. He also stated that India is a maritime nation. So it has its advantages, as majority of the shipping routes are passing through our oceans. He also mentioned that we are the only country in the world with an ocean named after. So oceans is now a huge priority. At the same time, there is the challenge that even despite being a maritime nation, the awareness and the capabilities of our common man, the civil society, and their envisioning of this challenge and opportunities is very, very minimal. So that is where World Ocean Science Congress becomes important. He also mentioned that WOSC 2024 has been endorsed by the United Nations. He also thanked all the dignitaries who have accepted the invitation and for delivering plenary talks. He finally thanked MoES, NIOT and partnering organisation for their support.

The inaugural session was followed by plenary talk by Shri. A.S.Kiran Kumar, Former Chairman ISRO and Dr. Malini V Shankar, Vice Chancellor, IMU. There were a total of 9 technical sessions with 38 oral presentations, 72 poster cum flash presentations and 30 plus exhibits by industry partners. The whole event was witnessed by around 500 participants.

Published in:
Pib

NIIST transfers know-how for treatment of organic waste water

CSIR-NIIST

27th February , 2024

The CSIR-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST) here has made a breakthrough by developing and patenting a sustainable technology for treatment and disposal of organic waste water discharged by hotels, restaurants, catering units and similar businesses – which is a big problem in cities, especially in locations without proper sewerage network.

As a sustainable solution, the on-site waste water technology, named NOWA, developed by CSIR-NIIST, has the advantage of recovering valuable resources like reuse quality water, bio-energy and organic manure and soil conditioner from waste-water.

The technology was developed by a team of scientists led by Dr. Krishnakumar B., Senior Principal Scientist in the Environmental Technology Division of NIIST, Thiruvananthapuram.

Unlike the common waste-water treatment technologies such as the Moving Bed Biofilm Reactor (MBBR), Sequence Bioreactor (SBR) and Electrocoagulation, this technology has many added advantages such as less space requirement, less operational cost and capacity to treat high strength waste-water without problems from frequent sludge disposal.

The technology

The technology is a combined anaerobic-aerobic bioprocess with sludge handling and

disinfection modules attached. Nearly 70-80% of the inlet organic contaminant is recovered as biogas in the anaerobic process unit. The residual organics and nutrients are removed in the subsequent aerobic process unit. A 10 KLD waste-water treating NOWA unit will occupy less than 18 sq.m.

A pressnote issued by NIIST said the technology would be a boon for small and medium scale businesses as even small restaurants now spend up to ₹50,000 per month for disposing waste-water. This technology has been approved by the Kerala State Suchitwa Mission, and four companies have already licensed it non-exclusively and field units are working at different industrial sites.

MoU inked

CSIR-NIIST recently signed a Memorandum of Understanding (MoU) with Kochi-based Two-degree Climate Control Pvt Ltd for commercial transfer of the technology, making this the fifth technology transfer for NOWA.

CSIR-NIIST Director Dr. C. Anandharamakrishnan said NIIST was looking forward to partner with more start-ups and private companies in highly diverse and interdisciplinary research activities to address the real problems of the society.

Published in:
The Hindu

Study on cardiometabolic health status of CSIR-CFTRI employees undertaken

CSIR-CFTRI, IGIB, CCMB

27th February , 2024

Phenome-India and Council of Scientific and Industrial Research (CSIR) Cohort Knowledge base (PI-CheCK) multi-institutional project on health status of employees of CSIR-CFTRI, Mysuru, was held here. Inaugurated by CSIR-CFTRI director Sridevi Annapurna Singh, the six-day comprehensive health check-up camp at the CFTRI campus was conducted from February 22 and 27.

She stated that CSIR-CFTRI was always open to join hands to take up a collaborative project with sister laboratories in the frontier area of science and technology.

While addressing the volunteers and participants, she emphasised the importance of the CSIR-Cohort health knowledge base project, which is being undertaken for the first time in India.

In order to study the cardiometabolic health status and predict possible risk of communicable and non-communicable diseases of employees and their spouses, the project is being implemented across all 37 laboratories of CSIR-New Delhi. This ambitious project of CSIR is coordinated by CSIR-Institute of Genomics and Integrative Biology (IGIB) under the leadership of Shantanu Sengupta, Chief Scientist and Project Coordinator.

The project is funded by CSIR for five years with a worth of nearly ₹100 crore. To facilitate the camp at CSIR-CFTRI, a team of experts arrived from the Centre for Cellular and Molecular Biology (CCMB), Hyderabad, and IGIB, Delhi. Current and retired employees of

CFTRI and their spouses were examined for their health status. The range of different tests that were undertaken included blood biochemistry, body composition, lipid profile, health status of liver, lung, eyes, skin, thyroid, kidney, heart, gut microbiota analysis, and immuno-phenotyping analysis etc, a release said.

The outcome of the study is expected to provide baseline data of the Indian population for different disorders and lifestyle diseases. The proposal also helps to establish the health status of different individuals, it stated.

CSIR-CFTRI had previously participated in a similar cohort project on sero-surveillance during COVID-19 pandemic, and contributed to the highest number of samples for corona antibody assays. Gut microbiota results will be known in 3-4 months, phlebotomy results in 3-4 days and all other results are known immediately through SMS and updated in CSIR Cohort portal.

Prakash M. Halami, Head, Microbiology and Fermentation Technology Department, who is coordinating this project at CSIR-CFTRI, and S.P. Muthukumar, chief scientist, monitored the health check-up programme wherein about 309 CFTRI staff availed the opportunity.

"Using AI/ML tools, data will be analysed and used for follow up in next two phases," Dr. Halami said.

Published in:
The Hindu

For Science Day, CSIR instts plan lectures, open lab

CSIR-NBRI 26th February, 2024

City-based laboratories of the Council of Scientific and Industrial Research (CSIR) are planning to organise National Science Day on Wednesday, Feb 28, by organising special lectures and open laboratories for students and general public.

The National Botanical Research Institute (NBRI) will observe National Science Day as an 'Open day' during which laboratories, exposition, herbarium and botanic garden will remain open for general public from 11 am to 4 pm. For school/group visits, interested people may contact NBRI on phone numbers 0522-2297984 and 9737302883.

Central Drug Research Institute is organising a translational research lecture series on the occasion. Professor in the department of gastroenterology of All India Institute of Medical Sciences, New Delhi, Dr Vineet Ahuja, will be delivering a lecture on 'Microbiome manipulation therapies in inflammatory bowel disease at the institute's main auditorium, 11:30 am onwards.

Central Institute of Medicinal and Aromatic Plants is organising a special lecture on indigenous technologies of Viksit Bharat. An eminent scientist from National Institute of Virology, Pune will be delivering lecture on 'The response towards the pandemic and the role of science' at the institute's Utsav hall at 10:30 am. The scientific institute will also be open for school children to visit the institute for a look at its technology and laboratories.

Published in:
Times of India

CSIR-NIScPR Organizes Workshop on “How to Spread Science-based Stories through Radio"

CSIR-NIScPR

26th February , 2024

The CSIR-National Institute of Science Communication and Policy Research (NIScPR) hosted an Orientation Workshop today, empowering its Science Media Communication Cell (SMCC) with valuable insights from renowned expert. The workshop, held at Vivekananda Hall, CSIR-NIScPR, Pusa, New Delhi, aimed to train the SMCC staff as well as the Ph.D. students with effective strategies to communicate S&T stories to the public through radio.

Shri Manoj Mainkar, Program Executive at All India Radio, New Delhi Station shared his valuable insights on crafting compelling science narratives for the audio format. He delved into the essential elements of vocal delivery, including voice quality (VQ), Voice emotional quotient (VEQ), and texture. He addressed the importance of clear pronunciation, engaging delivery, and effective use of modern spoken language both English and Hindi to connect with diverse audiences and make science stories come alive for radio listeners.

Dr. Sujit Bhattacharya, Chief Scientist and officiating Director of CSIR-NIScPR, emphasized the importance of radio in science communication which bridges the gap between scientific research and the public. He added, "Such workshops train the SMCC with the necessary tools and strategies to disseminate complex S&T information in a clear, engaging, and accessible manner through radio programs.”

The workshop prepared the SMCC with a deep understanding of the power of audio and the nuances of spoken language in communication. Such knowledge and experiences will

definitely empower the participants to craft targeted communication strategies that resonate with specific audiences, ultimately fostering greater public engagement with science.

Dr. Manish Mohan Gore, Scientist, CSIR-NIScPR and Principal Investigator, SMCC provided a brief outline about the objectives, work strategy and a few concrete outcomes of SMCC. He mentioned the purpose of the orientation workshop. Shri Kuldeep Dhatwalia, Project Manager, SMCC; project staff members of SMCC as well as Ph.D. students actively participated in the workshop and learnt a lot from the expert.

The Council of Scientific and Industrial Research-National Institute of Science Communication and Policy Research (CSIR-NIScPR) is dedicated to advancing science communication, evidence-based S&T policy research and promoting scientific awareness among the public. Through innovative initiatives and collaborative efforts, CSIR-NIScPR strives to bridge the gap between the scientific community and the general public. Science Media Communication Cell (SMCC) is a new initiative of CSIR-NIScPR to disseminate R&D breakthroughs of Indian labs to society through various platforms of mass media.

Published in:
Pib

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