





## Govt to support indigenously developed Cancer radiation technology: Dr Jitendra

CSIR-CEERI

25<sup>th</sup> May, 2022

New Delhi, May 25: Government will support indigenously developed latest Cancer radiation technology in the form of high-powered Magnetron for specific use as therapy in Cancer patients. This was disclosed here on Wednesday by the Union Minister of State, Dr Jitendra Singh. He said this after the signing of an MoU between Technology Development Board (TDB) of Department of



Science & Technology and M/s Panacea Medical Technologies Pvt. Ltd., Bangalore to provide financial support for development and commercialization of "S Band Tunable Magnetron for Particle Accelerators". TDB has agreed to offer loan assistance of ₹4.87 crores, out of the total project cost of ₹9.73 crores to the company.

Dr Jitendra Singh said, high-powered Magnetron developed by CSIR-CEERI (Central Electronics Engineering Research Institute), Pilani for commercial use by Panacea Company will be a pathbreaking technology for Oncologists to treat even 2 mm diameter brain tumour with precision radiation with very little side-effects. He said, this will not only increase efficacy, but also prove cost effective in treatment of micro and major tumours.

Dr Jitendra Singh said, with the handholding of TDB, Panacea developed India's first most advanced & innovative SBRT enabled Linear Accelerator (LINAC), Siddharth II, capable of performing treatment modalities like 3DCRT, VMAT, IMRT, SBRT and SRS. He said, this machine with U.S. FDA, 510(k) clearance has been launched on Technology Day celebrated on 11th May 2022 and this is the third brand in the world which is ready for the market beside two global giants UK and Japan. The Minister further added that in tune with Modi



Government's mantra of "Make in India" and "Make for the World", the machine can be exported to many countries in the world as it has already received US FDA clearance.

Currently, our economy is dependent on the use of imported magnetrons in various applications related to NDT, radar & other industrial applications in addition to medical applications. This technology can be further extended for other applications ensuring seamless supply of RF source to Medical LINAC Manufacturers across the globe.

Dr Jitendra Singh said, TDB supporting Panacea Medical Technologies for "Development and Commercialization of S Band Tunable Magnetron for Particle Accelerators" would enable Panacea one step ahead to further lower the cost of Siddharth II to make the cancer treatment more affordable to the common man. This also exemplifies the best Industry Academia linkage promoting market driven R&D to benefit the society at large.

Dr Jitendra Singh said, medical devices have been identified as a priority sector by Narendra Modi Government under the flagship 'Make in India' program and it is committed to strengthen the indigenously manufacturing ecosystem of the country. He said, currently, India is the fourth largest medical devices market in Asia, after Japan, China & South Korea and positioned 20th in the global market. India imports about 86% of its requirement of medical equipment and almost 100% of high-end medical equipment, the Minister added.

Dr Jitendra Singh said, as per the study of global markets, magnetron holds a huge demand globally, as it is essential for all types of linear accelerators, industrial heating equipment, radar systems, medical applications, NDT & others industries. He said India would be the third country to achieve this feat. England and Japan hold around 80% - 90 % of the global market. The Minister said, for making the Indian Healthcare Ecosystem a robust sector, TDB is providing an impetus to India's vision of becoming a global manufacturing hub for medical devices.



## ‘The earth laughs in flowers’: Come, smell the lavenders in Jammu and Kashmir

CSIR-IIIM

25<sup>th</sup> May, 2022

Srinagar: Paradise comes alive by the scent of lavender. Thanks to the Council of Scientific and Industrial Research-Indian Institute of Integrative Medicine (CSIR-IIIM), lavender cultivation has become increasingly popular in Jammu and Kashmir. Taking a cue from the US, Australia, and France, Jammu and Kashmir has become the first State/Union territory in the country to host a lavender festival and showcase the rich biodiversity of medicinal and aromatic plant



CSIR-IIIM has kick-started a two-day lavender festival in Baderwah from today. Lavender is a shrubby perennial plant that stays up to 15-20 years. The primary mode of propagation is preferred through the rooted cuttings. The plant produces flowers in bulk— giving commercial output in the third year of its growth. It requires minimum water and maximum sunshine.

With its multiple uses beyond sheer fragrance – the cosmetic, culinary, medicinal, craft, and decorative – the essential oils extracted from the magical herb have benefited a large number of farmers and fostered dozens of small creative ventures across the UT.

Official figures show that more than 1000 farming families are associated with lavender cultivation. In addition to this, the cultivation has employed more than 5000 entrepreneurs in the region. Nodal Scientist Aroma Mission, CSIR-IIIM, Dr. Sumeet Gairola told The Kashmir Monitor that lavender cultivation began in J&K under the Aroma Mission. “We created a cluster of farmers in selected regions that are ideal for this type of cultivation. They include Kupwara, where the Karewa belt is known, Doda, and Kishtwar. Proper technical support and



quality planting material was offered to the farmers,” he said. Gairola maintained that 45 distillation units were installed for processing and extracting lavender oil in the last seven years.

“Presently, there are 11 units in Doda district alone to cater to the needs of the farmers. A lot of people are showing interest in lavender farming. To promote the concept and connect industry as well as the tourism sector with lavender, we decided to conduct a festival on the instructions of the Ministry of Science and Technology.”

He noted the festival will bring people from this industry, academia, and farmers on the same page. “They will go to the fields and interact with the farmers. They can discuss and understand their problems/expectations more closely. Also, the use of new technologies can be explored to boost its production,” Gairola said.

The highlights of the festival will be the cultural events involving the local community. On May 26, Union minister of state for Science and Technology Dr. Jitendra Singh will inaugurate six new distillation units and facilitate farmers and entrepreneurs with success stories.



## Experts inspire Himachal farmers to grow aromatic marigold

CSIR-IHBT

25<sup>th</sup> May, 2022

The CSIR-IHBT, Palampur, organised aromatic marigold day — the harbinger of golden revolution. In this programme, representative of 50 cooperative societies — 36 panchayats and 14 nagar nigams — and Trilok Kapoor, chairperson, wool federation, participated. More than 1,000 farmers are associated with these societies.



Different sessions were organised in which information about the crop was provided. The main attraction was seed distribution, training, practical demonstration and interaction with progressive farmers of aromatic marigold from different villages of Himachal Pradesh.

Dr Sanjay Kumar, Director, CSIR-IHBT, Palampur, said Himachal Pradesh is suitable to produce essential oil with preferred high-demand aromatic constituents in the international market.

He said the institute was working throughout the country and the small farmers of the region could come together and form small clusters. Then crops in smaller landholding would get higher benefits.



## Jamshedpur CSIR-NML MoU with Recy Energy Pvt Ltd for recycling scrap, used LIB

CSIR-NML

25<sup>th</sup> May, 2022

Jamshedpur, May 25: CSIR-National Metallurgical Laboratory (NML) entered into an agreement with Recy Energy Pvt Ltd of Pune to transfer a breakthrough technology for the recycling of scrap, waste, and used Lithium Ion Batteries (LIB). Dr SK Pal, Head, Research Planning & Business Development Division of CSIR-NML and Dr Masood Khajenoori, Founder & CEO of Recy Energy



Pvt Ltd signed the technology transfer agreement on May 25, in presence of Dr Indranil Chatteraj, Director of CSIR-NML, Arindam Das from Recy Energy Pvt Ltd and Dr Sanjay Kumar, Head-Metal Extraction & Recycling Division, CSIR-NML. During the signing of the MoU, Principal Scientists Dr Abhilash, Dr Pratima Meshram and Dr TC Alex along with Senior Principal Scientist Dr A Vidyadhar, Scientist Rohit Meshram and Technical Officer Sudhakara Rao K were present.

The automotive and transport sector has been surging ahead worldwide and witnessing sharp growth in the realm of Lithium battery-based electrical vehicles across developed and emerging nations. India generates over 50,000 tonnes of Lithium battery waste every year, which is expected to increase three-fold by 2025. The customers' lucrative demands and stringent environmental regulations ensure development of sustainable technology for Lithium battery recycling. At this juncture, CSIR-NML has come up with a waste-to-wealth creation technology that will address the global challenges prevailing at present.

Dr Masood Khajenoori mentioned that their quest for a universal technology that was capable of treating all types of Lithium Ion batteries had ended with this technology transfer



agreement that was poised to help India in fulfilling the goals of the Swachh Bharat Mission and the Smart Cities initiative. This indigenous technology would pave the way for extraction of battery-grade Nickel, Lithium, Cobalt, and Manganese apart from Copper, Aluminium and rejuvenated graphite, as well as recycling of solvents used in the process.

Speaking at the event, Dr Indranil Chatteraj stated the role of CSIR via a Mission Mode Project in developing this technology. He added that a 100 kg throughout LIB recycling pilot plant was in the phase of realization under this project on a hire-operate-transfer mode for new generation entrepreneurs and established recyclers in battery recycling. Dr Sanjay Kumar, Head-MER Division of CSIR-NML mentioned the need of leveraging a universal technology in battery recycling that held the key to process economics and sustainability.



## AI-based iRASTE initiated first on Nagpur roads

CSIR-CRRI

25<sup>th</sup> May, 2022

WITH the help of a unique Artificial Intelligence (AI) approach, using its predictive power to identify risks on the road, a project named 'Intelligent Solutions for Road Safety through Technology and Engineering' (iRASTE) is being implemented in Nagpur city as a pilot project with an objective to significantly reduce road accidents.



The project has been initiated in a collaboration between Intel India, IIT Hyderabad, Central Road Research Institute (CRRI), Mahindra & Mahindra and Nagpur Municipal Corporation (NMC).

Informing this, a press release issued by the Union Ministry for Science and Technology, on Tuesday, said that, apart from identifying potential accident-causing scenarios while driving a vehicle and alerting drivers about the same with the help of the Advance Driver Assistance System (ADAS), the project will also identify 'greyspots'. It will be identified by data analysis and mobility analysis by continuously monitoring dynamic risks on the entire road network, the release stated.

While greyspots are locations on roads, which left unaddressed could become blackspots or the locations with fatal accidents, the system also conducts continuous monitoring of roads and designs engineering fixes to correct existing road blackspots for preventive maintenance and improved road infrastructure. Nitin Gadkari, Union Minister for Road Transport and Shipping launched the initiative last year with an objective to reduce road accidents on Nagpur roads by 50 per cent.



The iRASTE project is under the I-Hub Foundation, IIIT Hyderabad, a Technology Innovation Hub (TIH) set up in the technology vertical - Data Banks and Data Services supported by the Department of Science and Technology (DST) under its National Mission on Interdisciplinary Cyber Physical Systems (NM-ICPS) along with INAI (Applied AI Research Institute).

The project consortium includes CSIR-CRRI and NMC, with Mahindra and Intel as the industry partners.

AI and technology is being applied to create practical solutions, as a blueprint, for Indian conditions is a unique aspect of iRASTE project. While the initial rollout of iRASTE is in Nagpur, the eventual goal is to replicate the solution in other cities too. According to the press release, talks are on with the Telangana Government to adopt the technology in a fleet of buses that ply on highways, while there are further plans to extend the scope of iRASTE to Goa and Gujarat as well.



## CSIR-CFTRI presents ready to reconstitute pour over mini idli, cold coffee

CSIR-CFTRI

25<sup>th</sup> May, 2022

Mysuru-based CSIR-CFTRI researchers developed the ready mix for idli, fermented and dried instant idli/ dosa batter, and Idli, chutney, sambar in a tray under REPFED (Refrigerated Processed Foods of Extended Durability) technology. This enables the product to be stored under refrigerated conditions in heat and eat format.

The products were launched by Union minister for Science and Technology Dr Jitendra Singh during the TechBharat 2022 event held at the CSIR-CFTRI campus.

Idli is a well-known Indian traditional food. However, preparation of these involves time-consuming steps such as soaking, wet grinding and fermentation of the batter. The Institute earlier had developed ready-made batter.

This product offers great convenience and is a pour-over product, where in idlis with sambar powder are provided. To hot water, sambar powder is added to get sambar and idlis are dipped in this hot sambar to get ready to eat idli sambar in 4-5 minutes, said the institute.

The key features of the technology are that it has highly acceptable texture and sensory attributes. It is a RTRC (Ready To Re Constitute) product and offers great convenience. All that one needs to do is to just add boiled water and allow to stand for 4-5 minutes. The product contains no added preservatives and artificial flavours.

In the case of the cold coffee product, the institute said it is a refreshing drink to suit every taste at any time of the day. It is enriched with the benefits of green coffee extract. It also avails the richness of premium coffee, chocolate and vanilla flavoured cold coffee. Besides it is a combination of powerful antioxidants and caffeine.



The institute's minimally processed or fresh cut ready to eat fruits is a mission-oriented R & D programme of CSIR-CFTRI with industrial partner Bigbasket, a Tata Enterprise. The process provides convenience, freshness, retains nutrients, microbial safety and extends shelf life 3-5 folds benefiting Industries/ enterprises in long run. With busy lifestyle and health-conscious consumers, fresh cut fruits would be one of the most demanding sectors in food industry, stated CSIR-CFTRI.



## India awaits ASTM approval for aviation biofuels

CSIR-IIP

25<sup>th</sup> May, 2022

A consortium of a public sector refiner is working on a project to put up a demonstration plant for producing sustainable aviation fuels

India is proceeding with the formalities of obtaining what is called the “ASTM D4054” certification to be able to mix indigenous aviation biofuels with ATF for commercial aviation. The process of getting the certification is on—it might take a year to complete subject to fulfilment of applicable requirements. By the time the certification happens, a consortium of a public sector refiner in south India, Indian Institute of Petroleum and Engineers India Ltd would have already finalized a project to put up a demonstration plant capable of producing about 15,000 litres per day of sustainable aviation fuels (SAF) based on bio-derived sources.

In a conversation with Business Line, Dr Anjan Ray, Director, CSIR-Indian Institute of Petroleum (IIP), Dehradun, which is one of the government of India-supported autonomous research bodies under the umbrella of the Council of Scientific and Industrial Research (CSIR), said that the process of getting the certification and building a commercial-scale demonstration plant were running in parallel.

The certification is for establishing that the aviation biofuel itself, as well as the process of manufacturing it, both conform to ASTM D4054 standards. These standards have been set up ASTM International (formerly, American Society for Testing and Materials), founded in 1898. It is the responsibility of the technology provider – in this case, CSIR-IIP to secure the certification, Dr Ray said.

### **Bombardier Q400 aircraft**

In August 2018, a 75-seater Bombardier Q400 aircraft that belonged to SpiceJet flew between Dehradun and Delhi for 45 minutes, with a “25 per cent blended fuel” in one engine; the other



engine was operated on pure ATF. Ever since, the expectation is that biofuels will enter commercial aviation (the Indian Air Force has started using blended fuels at 10 per cent levels), bringing a bouquet of benefits such as reduced emissions, savings in the national oil import bill and generating income for the farming community.

This will happen, but there is a process to be gone through, part of which is securing the ASTM D4054 clearance. A Delhi-Mumbai commercial flight consumes about 3,500 liters of ATF. A 10 per cent blend is a substantial saving in ATF.

### **Biofuels more expensive**

Today, biofuels are about two-and-a-half times more expensive than ATF, but when produced on a commercial scale (not a pilot scale), the costs are expected to be on par with ATF.

Dr Ray expects India to be consuming six lakh kilolitres of aviation grade biofuels a year, by 2030. For this, the feedstock supply chain should gear up to meet the demand. Technically the best biofuel for aviation by the CSIR-IIP process, Dr Ray said, is coconut oil, which is both expensive and edible and therefore avoidable, but SAF can be made with jatropha, carinate, fish oil or used cooking oil too.



## Discourse for sustainable tapping of medicinal plants in NE

CSIR-NEIST

24<sup>th</sup> May, 2022

Imphal, May 24 2022: Institute of Bioresources and Sustainable Development (IBSD) Imphal on Tuesday organised 'Brainstorming on Medicinal Plants for Rural Livelihood and Drug Development in North East Region of India' as a part of the programme on 'Bioeconomy from Bioresources'.

The brainstorming session held in connection with the observance of International Biodiversity Day was organised under the guidance of IBSD director Prof Pulok K Mukherjee and in association with CSIR - North East Institute of Science & Technology, Jorhat and Society for Ethno-pharmacology, Kolkata.

Union minister of state for External Affairs Dr Rajkumar Ranjan Singh joined the event virtually as the chief guest and addressed the gathering about various research initiatives and outreach activities of IBSD for societal uplift and livelihood generation in NER under the IBSD director.

He appreciated the efforts of IBSD to establish Science Museum in Chandel Aspirational District of Manipur to inculcate scientific temperament among students. In his address, DBT New Delhi scientist Dr Sanjay Kumar Mishra highlighted about the unique biodiversity available in NER and opined that they can be harnessed scientifically for boosting the bio-economy of this region.

He also mentioned about the various initiatives of Ministry of Science & Technology under DBT, CSIR, DST and ICMR for documentation of traditional knowledge and medicinal plants of the region. Dr Sanjay Kumar also emphasised on focusing on translating knowledge to practice in the form of tangible products, processes and technology from bioeconomy perspectives.



During the programme, CSIR-NEIST Jorhat director Dr G Narahari Sastry, NERP BMC-DBT New Delhi consultant Dr Mohd Aslam, Institute of Advanced Study in Science and Technology, Guwahati director Prof Ashis K Mukherjee, DBT scientist E Dr Vaishali Panjabi, Society for Ethno-pharmacology Kolkata vice president Indraneel Das, Society for Ethno-pharmacology India secretary Dr Subhash C Mondal, School of Natural Products Jadavpur University Kolkata director Dr Pallab Kanti Halder, CSIR-NEIST Jorhat scientists Dr HB Singh, Dr Jatin Kalita and BRDC Shillong scientist Dr Junie P Lyngdoh shared their ideas on the use of medicinal plants for livelihood generation and drug development.

Many experts from industries, Emami Limited, Kolkata CEO (Technical) Dr CK Katiyar, Ayu Swasth Pvt Ltd director Dr Arun Gupta and Declibac Technologies Pvt Ltd representative Inderneel Das stressed on the need to establish value chain for products development.

During the programme, more than 30 traditional healers of Manipur interacted with experts about their traditional medicines/formulations. The programme was attended by scientists, scholars, staff of IBSD, CSIR-NEIST and other institutions.

According to a participant, the brainstorming session was effective, for all stakeholders and successful with the involvement of industrialists, scientists, students, traditional healers to promote Himalayan resources for the development, of bioeconomy from bioresources through Himalayan Bioresources Mission.



## From saline gargle to genome sequencing, a big leap for NEERI lab

CSIR-NEERI, NCL CCMB, IGIB

24<sup>th</sup> May, 2022

Nagpur: With an impressive turnaround time of 1.5 days and delivering over 1,500 whole genome sequencing (WGS) results, CSIR-NEERI'S environmental virology cell lab has not only shared the huge genomics burden of India but set a new benchmark among the scientific diaspora. Its capability of dedicatedly declaring results within the shortest duration is being looked at with awe at the national level while its crisp reporting pattern has been adopted by several premier labs.

Besides NEERI lab, ICMR's National Institute of Virology (NIV), CSIR's National Chemical Laboratory (NCL), Indian Institute of Science Education and Research (IISER), National Centre for Cell Science (NCCS) – all from Pune – and Mumbai's Kasturba Hospital are also performing genome sequencing in the state.

Initially, the NEERI lab established a WGS facility to cater to Nagpur's population but its speedy delivery of results — rated as the fastest among all facilities — attracted the attention of state as well as national surveillance authorities. The Indian SarsCov-2 Genomics Consortium (INSACOG), established under the department of biotechnology, Ministry of Science and Technology, allocated 11 districts of Maharashtra as well as state of Tamil Nadu for WGS.

The lab led by scientist Krishna Khairnar joined the Covid fight soon after the pandemic began in March 2020. It took off the overall load of Nagpur and delivered RT-PCR results the same day. Many people from Vidarbha districts didn't mind travelling to Nagpur to get a Covid test done at NEERI. Later, it introduced saline gargle RT-PCR which saved the pain of swab insertion. Though working with a modest team of five project associate and one data entry operator, project leader Khairnar's own international exposure made it look easier. Khairnar had been a faculty at University of Toronto.



“Very few labs possess such kind of exclusive skills,” said a researcher. As a research institution, NEERI started genotypic surveillance on its own in October 2020 when it collaborated with CCMB Hyderabad. “As it was taking long time to deliver results to Nagpur, we thought of starting this facility here itself. We have been successful in doing that. Nagpur is now Atmanirbhar,” said Khairnar. The project cost is estimated at Rs45lakh, while WGS is said to be a costly affair.

Dr Rajesh Karyakarte, state coordinator for genome sequencing, said Maharashtra has done the highest number of genome studies in India. This was mainly due to the MoU between Maharashtra government through DMER, Mumbai, with CSIR-IGIB, Delhi, that led to sequencing of almost 19,000 SARS-CoV-2 samples. The next impactful sequencing was done by Pune-CoG, a consortium of five INSACOG labs in Pune. The genome sequencing activity of Pune-CoG is coordinated by BJGMC.

ICMR-NIV, DBT-NCCS, CSIR-NCL, and DST-IISER are the other four labs, these labs together sequenced more than 5,000 samples and were able to pinpoint Omicron’s entry in Mumbai and Pune.

“Three standouts in this Covid fight were Kasturba hospital lab, which took care of Mumbai, CSIR-NEERI for Vidarbha, and Pune-COG for rest of Maharashtra,” he said.



CSIR-IMMT

24<sup>th</sup> May, 2022



## सीएसआईआर-आईएमएमटी में स्वच्छता अभियान कार्यक्रम संपन्न

भुवनेश्वर, खनिज एवं सामग्री प्रौद्योगिकी संस्थान की ओर से 15 दिनों से स्वच्छता अभियान चल रहा था. सीएसआईआर-आईएमएमटी के परिसर में स्थित चिलड्रन्स पार्क में आईएमएमटी के निदेशक प्रो. एस बासु ने अभियान की शुरुआत की, यह कार्यक्रम 1 मई से 15 मई तक चला. इस स्वच्छता अभियान के तहत सुबह की परेड और स्कूल छात्र-छात्राएं, आईएमएमटी के विभिन्न वर्गों और कर्मचारियों के बीच प्रतियोगिताएं हुईं. सीएसआईआर- आईएमएमटी के निदेशक प्रो. एस बासु कार्यक्रम संपन्न होने के अवसर पर मुख्य अतिथि के रूप में योगदान कर कहा कि छात्रों के बीच स्वच्छता और पर्यावरण की



सफाई के बारे में जागरूकता बढ़ाने के लिए यह अभियान शुरु किया गया था. आने वाले दिनों में छात्र-छात्राओं के बीच स्वच्छता संबंधी जागरूकता बढ़ाने के लिए रचना, प्रश्नोत्तरी, नृत्य, गीत, चित्र और फैसी ड्रेस जैसी प्रतियोगिताएं आयोजित की गईं. इस कार्यक्रम में विभिन्न विभागों और कर्मचारियों के साथ-साथ स्कूली छात्रों

को भी पुरस्कार प्रदान किए गए. स्वच्छता अभियान के नोडल अधिकारी डॉ. विभूदत्त ने इस अवसर पर उपस्थित सभी लोगों को धन्यवाद दिया. इस कार्यक्रम का संचालन डॉ. बर्षा दास, डॉ. संतोष बेहरा, डॉ. सिमंतिनी नायक और उनकी टीम के सदस्यों ने किया. कार्यक्रम में 150 से अधिक प्रतिभागियों ने भाग लिया.



## NML Jamshedpur organizes corporate training programme on MCC

CSIR-NML

23<sup>rd</sup> May, 2022

Jamshedpur, May 23: A four day training programme on “Mineral & Coal Characterization (MCC)” commenced at the CSIR – NML on Monday, May 23. The program was initiated under the umbrella of the CSIR Integrated Skill Training Development Program that will conclude on May 26.



The objective of the training program was aimed at providing exposure to the working professionals in the field of mineral processing including coal characterization to enhance their knowledge and skill in that particular area. The programme was expected to improve the understanding of various concepts and methods of mineral processing and coal characterization. The training schedule was divided in two modules and included lectures and hands-on training that covered topics related to these areas

Dr Ganesh Chalavadi, Scientist, MNP Division, was the coordinator of the training program and welcomed the participants. The welcome address was delivered by Dr Indranil Chatteraj, Director, CSIR-NML. He introduced the CSIR-NML and stated that it was one of the premier research organizations and had the oldest mineral processing research infrastructure in the country.

Dr S Sivaprasad, Chief Scientist and HoD, HR of CSIR-NML, in a brief speech, expressed his expectation from the participants who would have a mutual learning experience in this four-day training program. His speech was followed by an address by Dr Sanchita Chakravarty, Chief Scientist and Head of AAC and MNP Divisions of CSIR-NML. She gave a brief



introduction to the overall training program and hoped that the participants gained a very good experience through interactive sessions on all four days. Dr Mita Tarafder, Chief Scientist and Head, KRIT Division of CSIR-NML gave a presentation and talked about the skill training initiative of CSIR. She brought out some facts about the skill gap that existed in the youth of India and introduced various skill training programmes conducted every year by CSIR-NML in an attempt to fill this gap.

This customized corporate training program was organized by the MNP Division of CSIR-NML for the employees of Arcelor Mittal, Nippon Steel India Ltd. Odisha. Six employees from the organization participated in this program. They introduced themselves at the end of the inaugural program. The program was concluded with a vote of thanks proposed by the Coordinator, Dr Ganesh Chalavadi.



## C-CAMP & CFTRI to promote deep-science innovation in food technology

CSIR-CFTRI

23<sup>rd</sup> May, 2022

Bengaluru-based Centre for Cellular and Molecular Platforms (C-CAMP) has signed a Memorandum of Understanding (MoU) with Centre for Food Technological Research Institute, CFTRI, in the presence of Dr Jitendra Singh, Minister of Science and Technology, Govt. of India and Shobha Karandlaje, Minister of Agriculture & Farmer's Welfare, Govt. of India.



The agreement will initiate a joint effort in nurturing deep-science innovation in agriculture, food technology and allied areas towards sustainability and food security in India's agri sector.

The MoU was formally inked by Dr Taslimarif Saiyed, CEO and Director of C-CAMP and Dr Sridevi Annapurna Singh, Director, CFTRI at the third edition of the ongoing TechBharat Conclave in Mysore.

On the occasion of the signing Dr. Taslimarif Saiyed, CEO & Director, C-CAMP said "We are delighted to formalize this pact with CFTRI, India's leading food technology research institute. The agreement will identify and foster agri innovations and agri entrepreneurships led by the twin pillars of deep-science and sustainability."

The Ministers acknowledged the contribution by both organizations in the development of agritech and agri entrepreneurships in India and appreciated this effort of unifying ecosystems for greater impact.



The new signing is envisioned to augment C-CAMP's current efforts in Agritech and allied space under its recently launched Centre of Excellence for Agri Innovation in collaboration with the Govt of Karnataka. It will also strengthen science-based entrepreneurship in the CSIR affiliated CFTRI.



## Millet Cultivation Decline A Cause Of Concern: Senior Agro Officer

CSIR-CFTRI

22<sup>nd</sup> May, 2022

Three-day TechBharat-2022 extended for one more day due to popular demand Mysuru: Dr. Ashok Dalvoy, CEO of National Rainfed Area Authority under the Union Ministry of Agriculture and Farmer Welfare, has expressed concern over the declining output of millet crops.



He was speaking at the third and concluding day of the third edition of a three-day conclave TechBharat-2022 at CSIR-Central Food Technological Research Institute (CFTRI) in city yesterday. The event was organised by the IMS Foundation and Laghu Udyog Bharati – Karnataka Chapter in collaboration with CSIR-CFTRI. Though the conclave ended last evening, the exhibition part of more than 100 stalls was extended by a day due to the huge response it got from the public. The expo will conclude today evening.

Ashok Dalvoy was speaking at the session ‘Food Technology: Employment Opportunities in the Processing of Millets’ on the third day of the Tech Bharat .

Noting that millets used to be cultivated in large quantities in the southern States of India like Andhra Pradesh, Odisha, Telangana and Karnataka, he said that millets were earlier cultivated in an area of 35 million hectares of land. But it is now being grown in only 15 million hectares, he regretted. “Agriculture scientists and food processing resource persons should work towards encouraging farmers to grow millets which is widely regarded as a health supplement,” he opined.



Stating that the millet industry has abundant opportunities in the agricultural sector as it can be used to manufacture many other foods which are consumed worldwide, he said that the millet industry also has the potential to create more employment opportunities and entrepreneurs should make use of this. “Agriculture scientists, technologists and researchers have the responsibility of disseminating information in this connection and encourage the entrepreneurs,” he added. “Banks and financial institutions are providing loan facilities at low interest rates for those who produce value-added products from millets and the Union Government has also provided financial grants of Rs. 93,000 crore to the agricultural sector,” he concluded.

Senior Scientists Dr. G.V. Saiprasad, Dr. N.G. Mallesh, Managing Director & CEO, Tata Consumer Soufull, Prashant Parameshwaran, Assistant Professor & HoD – Agribusiness Management, Symbiosis Institute of International Business (SIIB) Pune, K.V. Shivaramakrishnan of Velavan Agro Trichy and others were present.





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