

CSIR IN MEDIA



CSIR

NEWS BULLETIN
26 TO 31 MAY 2022



North India's first Biotech Park opens at Ghatti, Kathua district, J&K

CSIR-IIIM

30th May, 2022

Union Minister of State (Independent Charge) Ministry of Science and Technology; Minister of State (Independent Charge) Ministry of Earth Science; MoS of Prime Minister's Office and Ministry of Personnel, Public Grievances & Pensions, Atomic Energy and Space, Dr Jitendra Singh inaugurated North India's first industrial biotech park in Ghatti, Kathua, Jammu along with Manoj Sinha, Lieutenant Governor, UT of J&K.



Dr Singh said, the biotech park would act as a hub for incubation of new ideas and will act as a robust platform to support the agri-entrepreneurs, startups, scientists, scholars and students not only from Jammu & Kashmir and Ladakh but also from nearby states of Punjab, Haryana and Himachal Pradesh. Dr Jitendra Singh said that the biotechnology park at Kathua has the potential to produce 25 startups in a year which will be among its great contributions to this region.

Dr Singh also said that the work on the two industrial biotech parks, one at Ghatti, Kathua, Jammu and the other in Handwara, Kashmir jointly funded by the Department of Biotechnology, Government of India, Ministry of Science & Technology and Jammu & Kashmir Science, Technology & Innovation Council was started in February 2019. CSIR-Indian Institute of Integrative Medicine, (CSIR-IIIM) Jammu has been entrusted with the responsibility of implementing the project.

Published in:

[Biospectrum India](https://www.biospectrumindia.com)

India's first Lavender Festival held in J & K's Baderwah

CSIR-IIIM

29th May, 2022

Indian Union Minister of Science and Technology Jitendra Singh inaugurated India's first 'Lavender Festival' in Baderwah on Thursday. Addressing the event, Singh said, "Baderwah is the potential destination of agri-tech startups of the country. Lavender Festival in the valley of Baderwah is the best example of the development of the present progressive government at the centre.



Baderwah is the best place for lavender cultivation in terms of land and climate.“

The Minister said that the development prospects of PM Modi-led government for the far-flung areas like Baderwah can also be judged from the fact that the country's first National Institute of High Altitude Medicine is being built in Baderwah which will attract scholars and researchers not only from India but across the globe generating employment opportunities for the region.

Referring to the lavender cultivation in the region, Singh said "Lavender is an avenue of employment generation and research opening many paradigms of development for the region."

He further said that the agriculturist Bharat Bhushan called the Brand Ambassador of Purple Revolution in India is an inspiration for youth in J-K towards startup culture.

The Minister also inaugurated six distillation units under the Council of Scientific and Industrial Research (CSIR)-Indian Institute of Integrative Medicine (IIIM) for lavender situated at six different places.

Three MoUs were also signed between CSIR-IIIM Jammu with Agro Voltic Power, Mussoorie Uttarakhand, Lyallpur Khalsa College, Jalandhar Punjab and Fine Fragrance Power Limited, Mumbai. The Lavender Festival in Baderwah is being attended by scientists, technologists, progressive Farmers and agri-entrepreneurs drawn from different parts of the country including Jammu and Kashmir.

CSIR-AROMA Mission, under the Ministry of Science and Technology aims to develop and disseminate aroma-related science and technology to reach the end-user/clients of CSIR: Farmers, industry and society.

According to the Ministry of Science and Technology, Aroma Mission is attracting startups and agriculturists from across the country, and during Phase-I, CSIR helped in the cultivation on 6,000 hectares of land and covered 46 Aspirational districts across the country. More than 44,000 people have been trained and several crores of farmers' revenue generated.

In the second Phase of the Aroma Mission, it is proposed to engage over 45,000 skilled human resources with the aim of benefitting more than 75,000 farming families across the country.

CSIR-IIIM introduced lavender to farmers in Doda, Rama, Kishtwar, Kathua, Udhampur, Rajouri, Pulwama, Anantnag, Kupwara and Bandipora districts. It provided free quality planting material and end-to-end technology package for cultivation, processing, value addition and marketing of the Lavender crop to the farmers.

CSIR-IIIM also installed 50 distillation units -- 45 fixed and five mobile -- at different locations across J-K under CSIR-Aroma Mission. Lavender cultivation has employed about 5,000 farmers and young entrepreneurs in geographically remote areas of J-K. More than 1,000 farming families are cultivating it on more than 200 acres.

NML signs MoU with Pune-based firm for recycling of scrap

CSIR-NML

27th May, 2022

National Metallurgical Laboratory (NML) has entered into an agreement with Recy Energy Pvt. Ltd., Pune to transfer a breakthrough technology for the recycling of scrap, waste, and used lithium Ion Batteries (LIB).

Dr. S.K. Pal, head, research planning & business development division, CSIR-NML, and Dr. Masood Khajenoori, founder & CEO, Recy Energy Pvt. Ltd signed the technology transfer agreement in presence of Dr. Indranil Chatteraj, director, CSIR-NML, Arindam Das from Recy Energy Pvt. Ltd, and Dr. Sanjay Kumar, Head-Metal Extraction & Recycling Division, CSIR-NML. During the agreement ceremony Dr. Abhilash, Principal Scientist, Dr. Pratima Meshram, Principal Scientist, Dr. TC Alex, Sr. Principal Scientist, Dr. A Vidyadhar, Sr. Principal Scientist, Rohit Meshram, Scientist, and Sudhakara Rao K, Technical Officer were present.

The burgeoning automotive and transport sector has been surging ahead worldwide, 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. While the customer's lucrative demands and stringent environmental regulations ensure the development of sustainable technology for Lithium battery recycling. Nonetheless, CSIR-NML comes up with a waste-to-wealth creation technology that addresses all the global challenges that are prevailing at present.

Dr. Masood Khajenoori mentioned that their quest for a universal technology, which is capable of treating all types of lithium ion batteries has ended with this technology transfer agreement and is poised to help India in fulfilling the goals of the Swachh Bharat Mission and the Smart Cities initiative. This indigenous technology shall pave the way for the 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 mentioned the role of CSIR via a Mission Mode Project in developing this technology. Further, he added that a 100 kg throughout LIB recycling pilot plant is 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, CSIR-NML mentioned the need of leveraging a universal technology in battery recycling that holds the key to process economics and sustainability.

Dissemination of CSIR Technologies 'Kisan Sabha' & 'Gur Bhatti' for Rural Development

CSIR-NIScPR, IIP

31st May, 2022

Recently CSIR-NIScPR has undertaken a major initiative for dissemination of CSIR technologies for creating livelihood opportunities in rural areas in the wake of situation created by COVID-19 pandemic. In this regard, a farmer-industry-scientist meet was organized at Lovraj Auditorium, CSIR-IIP Dehradun on 30 May 2022 to disseminate the Kisan Sabha App and Gur Bhatti Technology to the farmers.

The objective was to disseminate Kisan Sabha application developed by CSIR-NIScPR and Gur Bhatti Technology developed by CSIR-IIP Dehradun, for creating livelihood opportunities in rural areas; and also to develop the business opportunities for the farmers' livelihood creation and enhance their income. At the meet, scientists, industrialists, financiers and farmers came together on a single platform to discuss all the opportunities and challenges.

Dr. Anjan Ray, Director, CSIR-IIP delivering his talk

On this occasion, Dr. Anjan Ray, Director CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun, encouraged to organize such meetings that will help to ensure the economic security and health of rural people. He asserted the need for enhanced production with limited resources as well as to minimize the environmental impacts of the process, he listed out some of the CSIR-IIP's Technologies which could benefit the farmers. He expressed his gratitude to the farmers for attending the meet.

Prof. Ranjana Aggarwal, Director, CSIR-NIScPR expressing her thoughts in the Farmer-Industry-Scientist Meet Prof. Ranjana Aggarwal, Director, CSIR-National Institute of Science Communication & policy Research (CSIR-NIScPR), New Delhi joined the meet online. She expressed her gratitude to the farmers and described the recent initiatives taken by CSIR-NIScPR towards the livelihood creation and income generation in the rural areas through

CSIR-Technologies. Further, she highlighted the success of Kisan Sabha and explained the potential of UBA network. She apprised of 82 technologies compendium selected for rural areas. She explained the importance and the benefits of the Gur Bhatti technology. Finally, she assured full support of CSIR to the farmers.

Dr. Yogesh Suman, Senior Principal Scientist, CSIR-NIScPR, discussed the importance of the meet to sort out the challenges faced by the farmers. This exercise will help to boost the dissemination of the technology using Unnat Bharat Abhiyan (UBA) Network. As UBA has a large network of higher education institutions and provides the grass-root information about the problems of the rural areas. This information would help in dissemination and deployment of the CSIR technologies in rural areas. He also emphasized that strong linkages should be developed between technology developer and adopter.

In the concluding session, farmers shared their experiences and thoughts

Dr. Pankaj Arya, Principal Scientist, CSIR-IIP, emphasized that traditional Gur making process results in air pollution in the region and expressed the need of advanced technology solutions. In view of this, CSIR-IIP has developed advance, simple and affordable Gur Bhatti technology that not only reduces the emission of pollutants but also increases the efficiency of the Gur Bhatti by reducing in the fuel cost by 15% and increasing production by 25%. He further listed multiple benefits of this technology, in particular, increased life of the plant.

Dr. Farhat Azad, Principal Scientist, CSIR- NIScPR discussed about the Kisan Sabha App and also demonstrated it in front of the farmers. The app was launched with the objective to uplift livelihood of small and marginal farmers. Discussing about the dependency on middle man and lack of information in supply chain, she described Idea of the Kisan Sabha App assimilating the idea of utilization in agri-supply chain. She further added various information channels and various options. The app can keep the farmers updated by continuously adding recent features. About 8 lakhs farmers and numerous other stakeholders have joined in the Kisan Sabha App. In addition,' 3000 SHGs are also joined in this App. The most important feature of this app it is available in 12 regional languages. She categorically mentioned to the

farmers about the jaggery products are added in the Kisan Sabha. A Comprehensive presentation of the central/states government and NABARD initiatives towards funding for farmers was given by Shri Bhupendra Kumawat, AGM, NABARD Dehradun. He mentioned about Kisan Credit Card, Deendayan Kisan Yojana, Agriculture Infrastructure Fund and various other schemes to facilitate farmers' funding requirements for needs.

Shri Satya Prakash from Dhampure Specialty Sugars Ltd explained about the need of the marketing strategy to sell the product in the market. He emphasized on to make the other products like Sirka that will enhance the income of the farmer.

Shi Ajay Gairola discussed about the opportunities for farmers in the retail sector. He further emphasized on the exploration linkages between farmers and retailers which is yet less explored. In the concluding session, the meeting was concluded with the success stories of the farmers.

Menopause drug can fight malaria, CCMB study reveals

CSIR-CCMB

31st May, 2022

Hyderabad: A drug widely used for the treatment of post-menopausal symptoms and osteoporosis among women now has the potential to treat malaria. In a ground-breaking study, researchers from Hyderabad-based Centre for Cellular and Molecular Biology (CCMB) have demonstrated that Bazedoxifene is anti-parasitic and inhibits *Plasmodium falciparum*, the unicellular protozoan parasite that causes malaria in humans.

The researchers, led by senior principal scientist Dr Puran Singh Sijwali, have shown in the study that Bazedoxifene has ‘potent inhibitory activity against both susceptible and drug-resistant strains of *Plasmodium falciparum*’.

Since Bazedoxifene is already in clinical use for the treatment of post-menopausal osteoporosis, the findings by the CCMB researchers have supported the need to repurpose the drug as an anti-malarial. The study was published in the American Society for Microbiology (ASM) journals *Microbiology Spectrum* on May 26.

Since the development of new drugs for malaria involves a lot of risk, time and expenditure, it was only natural to explore the possibility of repurposing existing drugs against the disease. In this direction, the CCMB group assessed Tamoxifen, Raloxifene and Bazedoxifene, which are Selective Estrogen Receptor Modulators (SERM), for the treatment and prevention of breast cancer and antibacterial, and have anti-parasitic activities.

“Our study brings up an important finding that SERMs should be evaluated for anti-microbial effects in in-vivo disease models using both male and female animals. As Bazedoxifene is already in clinical use and inhibits hemozoin formation like chloroquine, it may be used as an adjunctive treatment for malaria as a partner of four-aminoquinolines or any currently used antimalarial regimens,” the study states.

Out of Tamoxifen, Raloxifene and Bazedoxifene, the researchers found that Bazedoxifene was the most potent. “The Bazedoxifene inhibited *P. falciparum* growth in erythrocytes of male and female mice origin, highlighting the importance of sex-specific host physiology in drug efficacy. Bazedoxifene was most potent on early ring-stage parasites, and about 35 per cent of the treated parasites did not contain hemozoin (malarial pigment). Bazedoxifene-treated parasites had almost 34 per cent less hemozoin content than the control parasites,” the study said.

The team of CCMB scientists, who were part of the study, include Renu Sudhakar, Navin Adhikari, Saniya Pamnani, Abhipsa Panda, Manish Bhattacharjee, Zeba Rizvi, Sadaf Shehzad, Dinesh Gupta and Puran Singh Sijwali.

CSIR-NBRI

31st May, 2022

{ **OLDEST LIVING SEED PLANT** } NBRI EXPERTS SAY

‘Cycads on verge of extinction, humans responsible for it’

Aakash Ghosh

aakash.ghosh@htlive.com

LUCKNOW : Cycads, said to be the oldest living seed plant, are on the verge of extinction, experts at Lucknow’s Council of Scientific and Industrial Research–National Botanical Research Institute (CSIR–NBRI) said. The institute is working to ensure they survive through artificial reproduction, they said.

“Cycads have undergone huge transformations throughout their history and humans may be the only ones who can save them. They’re on the verge of extinction, so we’re working on artificial reproduction to keep them alive before they go extinct,” said SK Barik, director, CSIR-NBRI, Lucknow.

The NBRI boasts of a vast collection of Cycads.

“We have the most extensive collection of Cycads in South Asia and rank ninth in the world



The Cycads

SOURCED

with 71 species,” he said.

“Cycads are mostly seen in gardens and parks to enhance their aesthetics, but few people are aware that they date back to the dinosaur era. They have been around for a long time and are among the oldest living fossils,” Barik said.

“Despite surviving three mass extinctions, many cycad species are now in danger of disappearing because of humans. They are the oldest living seed plants and are the most threatened group of organisms on earth, with almost 64% being on the verge of extinction. They evolved in the late

Carboniferous or early Permian around 300 million years ago and then rose to abundance in the Jurassic Period,” said Dr KJ Singh, senior scientist, CSIR-NBRI, Lucknow, who is researching extensively on the rare plant to save it from extinction.

He said four species of cycads were now extinct, including *Encephalartos Woodii*, *Brevifoliatulus*, *Nubimontanus*, and *Relictus* that can now only be found at Botanical Gardens.

“Cycads are one of the popular plants used in offices, hotels and parks for beautification. It has a multi-million commercial market globally. Most of the demand is fulfilled by importing from Japan. If we can increase the number of Indian species in the market, we would too be able to commercialise it,” Singh added.

It is advisable to leave these plants alone in their natural habitat and not snatch them from the wild, said Barik.

कम ईंधन में 15 फीसदी ज्यादा उत्पादन देगी नई गुड़ भट्ठी

देहरादून। वैज्ञानिकों ने गन्ना किसानों के लिए ऐसी गुड़ भट्ठी बनाई है, जिसमें गुड़ बनाने के लिए न सिर्फ 25 फीसदी कम ईंधन लगेगा बल्कि गुड़ का उत्पादन भी 15 फीसदी तक बढ़ जाएगा। सोमवार को किसान-उद्योग-वैज्ञानिक सम्मेलन में काउंसिल ऑफ साइंटिफिक एंड इंडस्ट्रियल रिसर्च (सीएसआईआर) और इंडियन इंस्टीट्यूट ऑफ पेट्रोलियम (आईआईपी) की ओर से विकसित इस भट्ठी का प्रदर्शन किया गया। साथ ही किसानों को इसके बारे में विस्तार से जानकारी दी गई।

आईआईपी के निदेशक डॉ. अंजन रे ने कहा कि ऐसे सम्मेलनों को लगातार आयोजित करने की जरूरत है ताकि किसानों की आर्थिक स्थिति को और अधिक सुधारा जा सके। उन्होंने पर्यावरण संरक्षण को सुनिश्चित करते हुए सीमित संसाधनों के साथ अधिक उत्पादन की प्रौद्योगिकी अपनाने की आवश्यकता पर बल दिया।

आईआईपी और सीएसआईआर की ओर से विकसित भट्ठी का सम्मेलन में किया गया प्रदर्शन

संस्थान के वरिष्ठ वैज्ञानिक डॉ. पंकज आर्य ने पुरानी गुड़ भट्ठियों से होने वाले वायु प्रदूषण पर कहा कि पारंपरिक गुड़ बनाने की प्रक्रिया इसके लिए मुख्य रूप से उत्तरदायी है। उन्होंने नए, सरल और किफायती गुड़ भट्ठी के बारे में बताया, जो प्रदूषण के लिहाजा से बेहद उन्नतशील है। डॉ. फरहत आजाद ने किसान सभा एप पर चर्चा की और किसानों के सामने इसका प्रदर्शन किया।

यह एप छोटे और सीमांत किसानों की आजीविका के विकास के उद्देश्य से लांच किया गया था। सम्मेलन में नाबार्ड के सहायक महाप्रबंधक भूपेंद्र कुमावत ने केंद्र, राज्य सरकार और नाबार्ड के कार्यों की विस्तृत जानकारी दी। मा.सि.रि.

‘India becomes one of the largest exporters of lemongrass’

CSIR-CIMAP

29th May, 2022

From being one of the largest importers of lemongrass a few years back, India has now become one of the largest exporters in the world, courtesy, the ‘Aroma Mission’ project led by CSIR-CIMAP, Lucknow.



According to Dr Prabodh Kumar Trivedi, director of CSIR-CIMAP, “About 1000 tonnes of lemongrass are produced every year, and out of it, 300 – 400 tonnes are exported. Thanks to the ‘Aroma Mission’ project led by CSIR-CIMAP, Lucknow. The mission also syncs with the PM’s mission to make India ‘Atmanirbhar Bharat,’ as the Council of Scientific and Industrial Research (CSIR) has made important contributions to the establishment, fostering, and positioning of the country’s essential oil-based aroma industry. It benefited the industry, farmers, and next-generation businesses, besides, also boosting the export of lemongrass over the time.”

“During the Covid-19 pandemic, the demand for disinfectants skyrocketed which has significantly increased the demand for lemongrass across the world. As per the CSIR-CIMAP, Lucknow, the global market of lemongrass was USD 38.02 million in 2020 which is expected to grow from USD 41.98 million in 2021 to 81.43 million by 2028,” said Dr Trivedi.

“In India, lemongrass cultivation became widely popular due to its fewer challenges in farming. It can be easily grown in drylands and even in areas frequently affected by drought or insufficient rainfall. Inherently tolerant to moisture stress, it grows very well under moisture deficient conditions including in areas such as Vidarbha, Bundelkhand and Marathwada regions. Mostly, it is grown in Western Ghats including Kerala, Maharashtra,

UP, Andhra Pradesh, Karnataka, Odisha and in several North-Eastern states. Interestingly, there is no risk of damage from animals; because the essential oil present in the leaves makes it unpalatable to the wild or domestic animals,” he said. “This crop under Aroma Mission has been highly successful in areas close to forests, tribal lands and places like Bundelkhand where Annapratha (leaving domestic animals in fields) is a common practice,” he said. 2000 hectares land brought under cultivation

As per CIMAP, under the Aroma Mission itself, more than 2000 hectares have been brought under cultivation which would have contributed about 200 tonnes of essential oil worth ₹30 crore to the Indian Aroma industry. This has also reduced the import burden of the country and helped in enhancing exports. Significant benefits in terms of utilization of underutilized lands, abandoned farmlands, and lands with high pH, salinity, and solidity have been brought under cultivation. High yielding varieties brought by CIMAP, such as Krishna and CIM-Shikhar, supplied more essential oil and increased crop yields by two folds where old varieties were grown. Growth in rural employment of approx. 2-3 lakh man-days Under the Aroma Mission, several improved distillation units were also installed in lemongrass clusters.

“Our interventions under Aroma Mission provided handsome benefits to farmers, especially tribal farmers from UP, Tamil Nadu, Chhattisgarh, and Jharkhand who were unable to grow crops because of animal menace; are now getting an income of at least ₹20,000 – 30,000 per acre. Installation of efficient units with high-yielding varieties has doubled the farmer’s income,” said a CIMAP official.

Further, it was also quoted that the introduction of lemongrass also provided roughly 2-3 lakh man-days of rural employment. “Overall, the S&T interventions made under this mission contributed greatly to reducing imports of lemongrass oil almost to nil, as well as delivering sufficient quantities of necessities for our domestic businesses and significantly increasing exports,” said the official.

Published in:

[Hindustan Times](https://www.hindustantimes.com/)

Azadi ka Amrit Mahotsav celebrations at CSIR-NML Jamshedpur

CSIR-NML, CIMFR, CGCRI, IMMT

29th May, 2022

Jamshedpur, May 29: Azadi ka Amrit Mahotsav was organized via an online webinar at the CSIR-national Metallurgical Laboratory, Jamshedpur, in association with Vigyan Bharti, Jharkhand Chapter. The webinar was conducted between 3pm and 5 pm. Dr. Indranil Chatteraj, Director CSIR-NML, welcomed all participants and encouraged a discussion on ‘Great Metallurgical legacy of India through Ages.’ He spoke on the significance and contribution of metals and metallurgy since the beginning of civilization.



The program was organized by Dr J.J Pandey (Chief Scientist, CSIR-CIMFR, Dhanbad), Dr Arvind Sinha (Chief Scientist and Advisor Management, CSIR- NML), Dr TB Singh (Secretary Vigyan Bharti, Jharkhand Chapter) and Dr AK Singh (President, Vigyan Bharti, Jharkhand Chapter).

Snehashish Tripathy, Senior Scientist, CSIR-NML, through a presentation stated, “India is a leader in metallurgy and has been a manufacturer for over 3000 years. India is known for metallurgical wonders, astonishing technologies, and exquisite craftsmanship and has been a supplier of wootz steel to different parts of the world.”

Snehasish Tripathy discussed the civilization-wise development through application of metals and stones in a different period dating back to Mohenjo-Daro- Harappa Civilization (2500 BC) and continuing at present. He also discussed in detail the 72 years of glorious contribution of CSIR-NML to the nation, that commenced with the development of Low Shaft Furnace,

Coins, over traction wire and metals' powders to the development of advanced materials. A group of experts from India participated in the program and it included Prof Indranil Manna (Vice-Chancellor, BIT Mesra, Ranchi), Dr K Murlidharan (Ex-Director CGCRI, Kolkata), Dr N Iswara Prasad (Director, DMSRDE, DRDO, Kanpur), Prof S Basu, (Director, CIMFR, Dhanbad and IMMT Bhubaneswar) and Jayant Sahasrabudhe of Vigyan Bharti. Experts participated in discussion on the 'Great Metallurgical Legacy of India through the Ages' and gave their views on the development of civilization and contribution of different types of metals in the different periods of history.

Jayant Sahasrabudhe discussed the legacy of science that needed to be documented in a proper and chronological manner so that the future generation could learn and know about the contribution of their ancestors. He further stated, "It is a fact that we have lost a number of documented evidences and monuments due to the invasion of foreigners an example of which is Nalanda University that was set on fire by invaders. However, instead of pondering over the loss, we must move forward and focus on further development of our country."

Dr Arvind Sinha, Chief Scientist and Adviser Management CSIR-NML proposed the vote of thanks.

मेक इन इंडिया

कैंसर रोग के उपचार में मिलेगी मदद

सीरी पिलानी के वैज्ञानिकों ने विकसित किया ट्यूनेबल मैग्नेट्रॉन

पत्रिका न्यूज नेटवर्क

rajasthanpatrika.com

पिलानी. केन्द्रीय इलेक्ट्रॉनिकी अभियांत्रिकी अनुसंधान संस्थान सीरी के वैज्ञानिकों द्वारा विकसित किया गया एस बैंड ट्यूनेबल मैग्नेट्रॉन फॉर पार्टिकल एक्सलरेटर्स टेक्नोलॉजी को पैनेशिया मेडिकल टेक्नोलॉजीज प्रा. लि. बेंगलूरु को ट्रांसफर किया गया है। टेक्नोलॉजी का ट्रांसफर होने से बेंगलूरु की कम्पनी इस उपकरण का उत्पादन कर बाजार में मुहैया करवाएगी। एस बैंड ट्यूनेबल मैग्नेट्रॉन फॉर पार्टिकल एक्सलरेटर्स पूर्ण तथा स्वदेश निर्मित टेक्नोलॉजी है तथा यह कैंसर रोग के उपचार में काम में आनी वाली रेडियोथैरेपी मशीनों में उपयोग में आता है। इससे पहले यह उपकरण विदेशों से आयात करना पड़ता था। संस्थान के वैज्ञानिकों ने भारत सरकार की आत्मनिर्भर अभियान के तहत किया गया है। टेक्नोलॉजी के व्यावसायिक विकास और वाणिज्यीकरण के लिए भारत सरकार के टेक्नोलॉजी डेवलपमेंट बोर्ड ने बुधवार को मैसर्स पैनेशिया मेडिकल टेक्नोलॉजीज प्रा. लि., बेंगलूरु के साथ समझौता पर हस्ताक्षर किए हैं।



पिलानी. एमओयू सौंपते सीरी के वैज्ञानिक व मौजूद केन्द्रीय मंत्री डॉ.जितेन्द्र सिंह।

विज्ञान तथा प्रौद्योगिकी मंत्री डा.जितेन्द्र सिंह की उपस्थिति में आयोजित कार्यक्रम में वरिष्ठ प्रधान वैज्ञानिक एवं परियोजना प्रमुख, मैग्नेट्रॉन डा. शिवेन्द्र मौर्य, टेक्नोलॉजी डेवलपमेंट बोर्ड सचिव राजेश पाठक तथा मैसर्स पैनेशिया मेडिकल टेक्नोलॉजीज के प्रबंध निदेशक जी वी सुब्रह्मण्यम एवं अन्य पदाधिकारी उपस्थित थे। गौरतलब है कि टेक्नोलॉजी का हस्तांतरण जुलाई 2020 में मैसर्स पैनेशिया मेडिकल टेक्नोलॉजीज को किया था ताकि इससे देश में उपलब्ध रेडियोथैरेपी मशीनों में स्वदेशी मैग्नेट्रॉन का उपयोग किया जा सके।

अभी इन मशीनों में आयात किए गए मैग्नेट्रॉन का ही उपयोग होता है। एम ओ यू के अंतर्गत भारत सरकार क टेक्नोलॉजी विकास बोर्ड मैसर्स पैनेशिया मेडिकल टेक्नोलॉजीज क इस टेक्नोलॉजी की मदद से कैंसर के उपचार में उपयोगी रेडियोथैरेपी मशीने का निर्माण करने के लिए आवश्यक इन्फ्रास्ट्रक्चर प्राप्त कराने के लिए वित्तीय सहयोग प्रदान करेगा सीएसआईआर-सीरी निदेशक डा. पी सी पंचारिया ने डा. शिवेन्द्र मौर्य सहित संस्थान की मैग्नेट्रॉन टीम क देश को गौरव बढ़ाने के लिए बधाई दी।

Students urged to pursue science as a career option

CSIR-NIIST

27th May, 2022

A four-day workshop on science for school students, conducted by the Rajiv Gandhi Centre for Biotechnology (RGCB) in association with the Kerala Chapter of Vijnana Bharati (Swadeshi Science Movement), concluded here Friday with experts exhorting the young minds to pursue science as a career option and give wings to their talents in frontier areas, including space, artificial intelligence and cyber security.

Around 100 students from various schools in the city participated in the workshop, Face to Face with Frontiers in Science. In his inaugural address, RGCB Director Chandrabhas Narayana urged the students to consider creativity as the guiding light in their choices of higher studies and profession. He also briefed them about the various services offered by the RGCB during the pandemic, helping the State to a great extent in controlling it.

Eminent scientists, drawn from the RGCB; CSIR-National Institute for Interdisciplinary Science and Technology; Sree Chitra Tirunal Institute for Medical Science and Technology (SCTIMST); Indian Institute of Science, Education and Research (IISER) Thiruvananthapuram; Vikram Sarabhai Space Centre (VSSC); and Centre for Development of Advanced Computing (C-DAC), addressed the technical sessions on diverse topics, ranging from biotechnology to sustainable energy materials.

Applied biotechnology

E.V. Soniya, scientist, RGCB, provided a tutorial on applied biotechnology, giving insights into topics such as genetically modified crops and DNA fingerprinting and Suraj Soman and Rakhi R.B. of the CSIR-NIIST dwelt upon the need for sustainable energy and also demonstrated the potential of dye sensitised solar cells and energy storage device supercapacitors. A session by Achuth Sankar S. Nair of the University of Kerala introduced the concepts of new frontiers of science, artificial intelligence (AI) and deep learning.

Melvin John and Hiren Bose of C-DAC unfolded the intricacies of cybersecurity, enabling the students to comprehend new-age terms like open source intelligence. H.K. Varma and Anoop Thekkuveetil from SCTIMST introduced the clinical use of biomaterials and the learnings from the COVID-19 pandemic, respectively.

Rajeev Kini of IISER Thiruvananthapuram gave an interesting lecture on the world at Femtosecond time scales while Biju Prasad provided a clear vision of future prospects in student workshop on space.

P.A. Vivekananda Pai, National Secretary, Vijnana Bharati, and U.S. Hareesh, Programme Chairman, and Senior Principal Scientist, CSIR-NIIST, were among those who spoke at the valedictory function.

A session on Vedic mathematics and a science quiz were the other highlights of the programme. The students also visited the laboratories of the RGCB for a feel of the state-of-the-art analytical facilities.

CSIR-IICT installs 15 atmospheric water generators in Uttarakhand

CSIR-IICT

26th May, 2022

Fifteen Atmospheric Water Generator (AWG) units of 60 litres per day capacity (10) and 150 litres per day capacity (5) each, were installed recently by a team of CSIR-IICT scientists led by chief scientist S. Sridhar in the remote community schools and colleges located in Dehradun, Rishikesh and Tehri districts of Uttarakhand where the groundwater is scarce.



The project is sponsored by THDC India Limited, Rishikesh, as part of the corporate social responsibility, while the CSIR-IICT designed AWGs were manufactured in collaboration with Maithri Aquatech, Hyderabad.

This technology is based on the inverse Carnot cycle involving the condensation of pre-filtered humid air to water droplets using a refrigerant that undergoes compression and evaporation alternately. The water is remineralised using a proprietary salt mixture and post-treated by ultraviolet light for any secondary microbial contamination, followed by exposure to an activated carbon column for good taste.

Atmospheric water generator (AWG) can be used in coastal regions, hilly areas, or water-scarce regions as long as the relative humidity is $>25\%$ and temperature $> 15^{\circ}\text{C}$. “All the AWG plants were running well and providing the designed output of 60 – 150 Lit/day,” said the scientists team. The technology is jointly patented by CSIR-IICT and Maithri Aquatech Pvt. Ltd., said a press release on Thursday.

Published in:

[The Hindu](https://www.thehindu.com)



Please Follow/Subscribe CSIR Social Media Handles



[CSIR INDIA](https://www.youtube.com/CSIRINDIA)



[CSIR_IND](https://twitter.com/CSIR_IND)



[CSIR India](https://www.facebook.com/CSIRIndia)



[CSIR India](https://www.linkedin.com/company/CSIR-India)



[csirindia](https://www.instagram.com/csirindia)