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Cholesterol-lowering drug causing side effects to long-term users: CCMB study

CSIR-CCMB

10th April, 2022

Statins are one of the top selling drugs worldwide and are used to lower cholesterol. These drugs act by inhibiting a key enzyme (HMG-CoA Reductase) needed for making cholesterol in our body.

Yet, statins have been reported to give rise to severe side effects to long-term users, but the molecular basis of these side effects is not clear. A recent work by professor Amitabha Chattopadhyay's group at the CSIR-Centre for Cellular and Molecular Biology (CCMB) showed that statins could induce changes in the architecture of cells as well, possibly leading to the side effects.

A cell's architecture called cytoskeleton is made of proteins like actins that form polymers. These help the cells maintain their shape and size. Prof. Chattopadhyay's study showed that statins could induce polymerisation of cytoskeleton, in addition to cholesterol lowering.

Published in the journal on lipid research (by the American Society of Biochemistry and Molecular Biology), the study showed that statins affect the 'actins' or proteins in the cytoskeleton. "Our results constitute one of the first comprehensive reports providing a molecular basis for the reported side effects of statin treatment," said Parijat Sarkar, the first author of the paper.

"These findings can provide vital clues in dissecting the biochemical processes that give rise to adverse effects of statins, thereby helping develop better drugs in future," added Prof. Chattopadhyay in an official release.

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[The Hindu](#)

Ashoka University Appoints Dr. Anurag Agrawal, Former Director CSIR-IGIB, As Dean Of Biosciences And Health Research

CSIR-IGIB

09th April, 2022

New Delhi : Ashoka University today announced the appointment of Dr. Anurag Agrawal, former Director, CSIR Institute of Genomics and Integrative Biology, Delhi, as the Dean of Biosciences and Health Research, Ashoka University. Dr. Agrawal is a leading Indian scientist and a member of the pandemic preparedness subgroup of the Global Partnership for Artificial Intelligence. His appointment at Ashoka will further give a fillip to the University's efforts at strengthening the Sciences and coming up with path-breaking researches, specifically in the Biosciences.

On his appointment, Dr. Anurag Agrawal, Dean, Biosciences and Health Research, Ashoka University, said "The future of Bioscience in India is very bright. Indian scientists and researchers are seeking to conduct world-class research which creates a significant impact on India and the world. The government, too, recognizes this and is supportive of scientific research and development. I am excited to join Ashoka at a time when the University is making significant strides into various areas of cutting-edge research, which aims to solve important scientific problems."

Dr. Agrawal has been active in molecular and digital tracking of the COVID-19 pandemic and is also the co-chair of the Lancet and Financial Times Global Commission, Governing health futures 2030: growing up in a digital world, with a mandate to explore the convergence of digital health, AI and other frontier technologies towards universal health coverage. Through research and other events, he will engage with the Ashoka students and faculty in the emerging area of Bioscience. He will assume the position from 1st April 2022.

According to Prof. Malabika Sarkar, Vice-Chancellor, Ashoka University, "It is an honour for the University to have Dr. Anurag Agrawal join us as the Dean of Biosciences and Health Research. He brings a wealth of experience, international recognition and deep understanding

of the field to this role. We believe that under his guidance, research at Ashoka will grow exponentially and the university will contribute immensely to the future of Bioscience and health research in India.”

Ashoka is on a journey towards creating a leading multidisciplinary research university with a strong focus on teaching and learning. The diversity of experience and research in Ashoka’s faculty reflects the University’s foundational goals. Ashoka actively strives to build inclusive communities and empower students to see the world differently – through work, in and outside the classroom, in peer interactions, and towards communities.

Indian frogs also being affected by Bd fungus, finds LaCONES

CSIR-CCMB

09th April, 2022

HYDERABAD: Has fungus *Batrachochytrium dendrobatidis* (Bd), responsible for the amphibian apocalypse in the West in the past few decades, spread to India too? Researchers at CSIR-CCMB Laboratory for Conservation of Endangered Species (LaCONES) said Bd fungus is seen in almost 75% of frog species in India.

But visible impact of the fungus is not known as there is no monitoring of frog population and no massive deaths in water bodies reported in India unlike in South America, Australia and Europe. Researchers at LaCONES believe the fungus has spread to the West from India during 1980s due to frog trade from Asia to Europe and South America.

Kartikeyan Vasudevan, chief scientist at LaCONES, said: "Trading in frogs was huge before 1985. It was banned later by India. The fungus that went to the West may have mutated and infected the host species there and killed them. The host frogs there were vulnerable as they did not have prior exposure to Bd fungus.

"Frog is a Schedule IV animal in the Wildlife act. Wildlife trade is linked to the spread of diseases — whether it is viral or fungal," Vasudevan said.

Since frogs play an important role in aquatic ecosystem and clean up the water by feeding on algae, their absence could sound alarm bells for the aquatic ecosystem, warn experts.

Vasudevan said: "Our research has found that the fungus is found in all frog populations in India. But, there are is no visible impact or massive deaths in India. We are improving RT-PCR tests to diagnose the fungus. The RT-PCR test used in Australia is not effective in Asia. There are different strains of fungus in different parts of the world and their virulence and impact vary as well."

Frog deaths in protected areas in central America, the Caribbean and Australia had triggered an alarm. Bd fungus was linked to population decline in almost 500 species of amphibians, with over 90 extinctions globally.

In the last one decade, frog populations in Asia have been reported to have been infected with Bd fungus and these are referred to as coldspots as the pathogenicity is low due to the immunity of frogs.

However, scientists said harmful mutations caused at any time in the fungus may turn fatal for populations in Asia too. "As reports on Bd fungus from Asia are coming, measures should be taken to save endemic frog populations from lethal infections," a researcher said.

Researchers collected samples over six years from several places, including Araku in Andhra Pradesh, the Himalayas, Nicobar islands, Western Ghats and other regions of the country, representing approximately 25% of India's total frog species. Their findings highlight that Bd fungus in Asia is an important wildlife disease and needs focused research.

Hands-on training in farming technology

CSIR-NEIST

09th April, 2022

KIMIN, A two-day hands-on 'training-cum-demonstration programme' on citronella, lemongrass and mushroom cultivation, banana fibre extraction, etc, began at the Rural Technology Demonstration Centre here in Papum Pare district on Friday.



A good number of local entrepreneurs and SHG members from Naharlagun participated on the first day of the programme, which is being conducted by the Arunachal Pradesh State Council for Science & Technology (APSCS&T), in collaboration with Jorhat (Assam)-based CSIR-North East Institute of Science & Technology (CSIR-NEIST).

Among others, APSCS&T Director CD Mungyak, Joint Director Bamang Apo, and Centre for Bioresources & Sustainable Development-DBT Project Director Dr D Mahanta attended the programme.

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[Arunachal Times](https://www.arunachalimes.com)

कालिम्पोंग में अब होगी सुगंधित फूलों की खेती

■ प्रशिक्षण सह जागरूकता कार्यक्रम में 35 किसानों ने लिया हिस्सा

कालिम्पोंग (निज संवाददाता)। कालिम्पोंग के पहाड़ी क्षेत्र होने के कारण तथा गर्मी के मौसम में भी यहां का तापमान नियंत्रित रहने को लेकर सीएसआईआर-आईएचबीटी ने इस क्षेत्र को सुगंधित फूलों की खेती की खेती के लिए मान्यता दी है। अब कालिम्पोंग के लोगों को फूलों की खेती करके आत्मनिर्भर बनने का मौका मिलेगा। इसी क्रम में सीएसआईआर-आईएचबीटी के वैज्ञानिक कालिम्पोंग के किसानों के लिए जागरूकता सह प्रशिक्षण कार्यक्रम आयोजित कर रहे हैं। सीएसआईआर-आईएचबीटी, (पालमपुर) निदेशक डॉ. संजय ने कहा कि सीएसआईआर ने साल 2017 को अरोमा मिशन और किसान समुदाय व ग्रामीण जनता के लिए सामाजिक-आर्थिक उत्थान और रोजगार सृजन के साथ-साथ सुगंधित फसलों और फूलों की फसलों को बढ़ावा देने के लिए फ्लोरीकल्चर मिशन 2020 कार्यक्रम देश भर में शुरू किया है।

सुगंधित पौधों के मूल्यवर्धन के लिए प्रसंस्करण इकाई अपरिहार्य है और कालिम्पोंग में इस सुविधा की स्थापना से स्थानीय किसानों को लाभ होगा। सीएसआईआर-आईएचबीटी ने मणि ट्रस्ट के सहयोग से 7 अप्रैल, 2022 को दोंग बस्ती, पेशोक और 4 माइल ताशिडिंग में विविधोकरण और आजीविका सृजन के लिए उपयुक्त सुगंधित फसलों पर प्रशिक्षण सह जागरूकता कार्यक्रम आयोजित किया। कार्यक्रम में कुल 35 किसानों ने हिस्सा लिया।

जागरूकता कार्यक्रम के मौके पर मणि ट्रस्ट के अध्यक्ष श्री सुभाष सिंह, उपाध्यक्ष श्रीमती इंदिरा शर्मा और संस्थापक ट्रेस्टी संस्थापक रिजवान रहमान उपस्थित रहे। सीएसआईआर-आईएचबीटी पालमपुर के वरिष्ठ प्रधान वैज्ञानिक सह सीओ नोडल डॉ. रमेश कुमार ने 2017 में अरोमा मिशन शुरू किया और मार्च 2020 तक अरोमा मिशन चरण के तहत 550 हेक्टेयर क्षेत्र को कवर किया है। अरोमा मिशन की सफलता के बाद सीएसआईआर-आईएचबीटी अब फिर से अरोमा मिशन चरण-2 सीएसआईआर-आईएचबीटी का एक हिस्सा है। भारत के उत्तर पूर्वी क्षेत्र सहित किसानों के स्वरोजगार सृजन सामाजिक-आर्थिक उत्थान में



मदद करेगा। दुनिया भर में सुगंधित फसलों की खेती व्यापक रूप से उनकी उच्च राजस्व कमाई वाले आवश्यक तेल के कारण की जाती है, जिसका उपयोग कृषि रसायन, भोजन, स्वाद, सुगंध और दवा उद्योग में किया जाता है। वैश्विक आवश्यक तेलों के बाजार का आकार 2021 में 10.3 बिलियन अमरीकी डॉलर था और पूर्वानुमान अवधि के दौरान 9.3 प्रतिशत की सीएजीआर से बढ़ते हुए 2026 तक 16.0 बिलियन अमरीकी डॉलर के मूल्य तक पहुंचने की उम्मीद है। डॉ. कुमार ने यह भी कहा कि कालिम्पोंग क्षेत्र उच्च मूल्य वाले सुगंधित फसलों जैसे डैमस्क गुलाब, मुशकबाला, लेमनग्रास, सिट्रोनेला और कैमोमाइल की खेती के लिए उपयुक्त है। सीएसआईआर-आईएचबीटी के प्रधान वैज्ञानिक डॉ. मोहित शर्मा ने बताया कि प्राकृतिक और जैविक उत्पादों के प्रति उपभोक्तों का झुकाव बढ़ रहा है जिसके कारण सौंदर्य प्रसाधन, भोजन और पेय पदार्थों में आवश्यक तेलों का उपयोग बढ़ गया है। संस्थान सुगंधित पौधों के प्रसंस्करण के माध्यम से गुणवत्तापूर्ण रोपण सामग्री, क्षमता निर्माण और मूल्यवर्धन प्रदान करके किसानों की मदद करेगा और बाजार संपर्क स्थापित करने में मदद करेगा। इस सौजन्य के दौरान कालिम्पोंग में एक प्रोसेसिंग यूनिट भी लगाई जाएगी। मणि ट्रस्ट के

अध्यक्ष श्री सुभाष सिंह ने बताया कि यह साझेदारी उन्हें कालिम्पोंग क्षेत्र में सुगंधित और फूलों की खेती में अग्रणी सीएसआईआर संस्थान के सहयोग से काम करने और क्षेत्रीय किसानों को अधिकतम लाभ प्रदान करने की अनुमति देगी। उन्होंने मुद्रास्फीति को मात देने के लिए परिवार की आय में वृद्धि पर भी जोर दिया जिससे परिवार के बच्चों की शिक्षा, आपातकालीन स्वास्थ्य खर्च और सुरक्षित सेवानिवृत्ति के लिए पैसे बचा सके। महत्वपूर्ण रूप से घर को आर्थिक पारिस्थितिकी तंत्र का हिस्सा होना चाहिए। उन्होंने यह भी बताया कि मणि ट्रस्ट डिस्टिलेशन यूनिट की स्थापना के लिए भूमि प्रदान कर रहा है ताकि सुगंधित पौधों को कालिम्पोंग में संसाधित किया जा सके। परिवार की आय में वृद्धि सुनिश्चित करने के लिए मूल्य संवर्धन द्वारा फसल का मुद्राकरण किया जा सके।

उन्होंने आगे बताया कि मणि ट्रस्ट ने सीएसआईआर-आईएचबीटी के साथ 7 सितंबर 2021 को सीएसआईआर-आईएचबीटी के

साथ खेती, उच्च मूल्य वाली सुगंधित फसलों को बढ़ावा देने और कालिम्पोंग में सुगंधित फसलों के लिए प्रसंस्करण इकाई की स्थापना के लिए एक समझौता ज्ञापन पर हस्ताक्षर किए हैं। उन्होंने मणि ट्रस्ट के साथ सहयोग करने के लिए सीएसआईआर-आईएचबीटी को पहल के प्रति भी आभार व्यक्त किया, जिससे किसानों को उनकी आजीविका में सुधार करने और उन्हें आत्मनिर्भर बनाने में मदद मिलेगी।

CSIR-NEERI to celebrate 64th foundation day

‘नीरी’चा स्थापना दिन उत्साहात

◆ नागपूर, ८ एप्रिल

राष्ट्रीय पर्यावरण अभियांत्रिकी संशोधन संस्थेचा (नीरी) स्थापना दिन उत्साहात साजरा झाला. राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठाचे कुलगुरू डॉ. सुभाष चौधरी, 'एम्स'च्या संचालिका मेजर जनरल (निवृत्त) डॉ. विभा दत्ता, 'नीरी'चे संचालक डॉ. अतुल वैद्य, वरिष्ठ शास्त्रज्ञ प्रकाश कुंभारे प्रामुख्याने उपस्थित होते.

कुलगुरू डॉ. चौधरी यांनी वैज्ञानिक संशोधनासाठी 'नीरी'चे विशेषतः जीनोम सिक्वेन्सिंग तसेच संशोधन आणि विकास उपक्रमांची पुनर्रचना करण्यासाठी घेतलेल्या पुढाकाराची प्रशंसा केली. ऊर्जेच्या वाढत्या वापराबाबत चिंता व्यक्त केली. नवीन शैक्षणिक धोरणाच्या बहुविद्याशाखीय वैशिष्ट्यांमुळे प्रभावी मार्गाने समस्या सोडविण्यास नक्कीच मदत होईल. ई-कचरा व्यवस्थापन, आर्टिफिशियल इंटेलिजन्स आणि बिग डेटामध्ये आगामी काळात अधिक क्षमता असल्याचेही त्यांनी सांगितले.

डॉ. विभा दत्ता यांनी शास्त्रज्ञांना संशोधन आणि विकास प्रकल्पांचे व्यावहारिक उपयोगात रूपांतर करण्याचा सल्ला 'नीरी'ला दिला.



डॉ. सुभाष चौधरी बोलताना. शेजारी डॉ. अतुल वैद्य, डॉ. विभा दत्ता व प्रकाश कुंभारे

भारताच्या डीकार्बोनायझेशनसाठी पुढाकार घ्यायला हवा, असे मत त्यांनी व्यक्त केले. स्वागतपर भाषणात डॉ. अतुल वैद्य यांनी 'नीरी'ने हाती घेतलेल्या संशोधन आणि विकासाची रूपरेषा सांगितली.

विद्यार्थ्यांसाठी 'नीरी'च्या 'जिज्ञासा' या संकेतस्थळाचे उद्घाटन पाहुण्यांच्या हस्ते झाले. सर्वोत्कृष्ट कामगिरीसाठी शारदा कोसनकर आणि डॉ. पी. नागाबाबू यांना 'उत्कृष्ट वैज्ञानिक', सतीश लोखंडे यांना 'सर्वोत्कृष्ट तांत्रिक अधिकारी', वित्त व लेखा नियंत्रक दुर्योधन सेठी, प्रशासकीय अधिकारी शैलेश

कुमार, हरीश कुमार, भांडार व खरेदी अधिकारी आर.डी. चिंचुळकर तसेच सर्वोत्तम कर्मचारी म्हणून अंजू बाला तसेच पी.एस. दत्त स्मृती 'सर्वोत्कृष्ट तरुण संशोधक' पुरस्कार विजया लक्ष्मी व दीपक पांचाळ यांना संयुक्तपणे प्रदान करण्यात आला.

जया सब्जीवाले यांनी आभार मानले. २५ शाळा आणि महाविद्यालयातील सुमारे १२०० विद्यार्थ्यांनी प्रयोगशाळांना भेट देत शास्त्रज्ञांशी संवाद साधला व प्रयोगांविषयी माहिती करून घेतली. यानिमित्ताने रक्तदान शिबिराचेही आयोजन करण्यात आले होते. (तथा वृत्तसेवा)

CSIR-NEERI

09th April, 2022

‘NEERI should now address pressing ecological issues’

■ AIIMS director Dr Dutta hails CSIR-NEERI’s contributions

LOKMAT NEWS NETWORK
NAGPUR, APRIL 8

The first stone of National Environmental Engineering Research Institute (CSIR-NEERI) was laid during the jaundice epidemic in 1958. Formerly called Central Public Health Engineering Research Institute (CPHERI), it proved itself then by coming up with a solution for the water-borne disease.

During the ongoing Covid pandemic too, CSIR-Neeri’s research has managed to save lives.

During the institution’s 64th Foundation Day, director Dr Atul Vaidya spoke about its inventions that have benefited both the health sector as well as the environment over the years. Speaking on Friday, Dr Vaidya said, “We have the first Covid diagnostic centre in Vidarbha and were the centre for genome sequencing in the region. The scientists in NEERI have worked



NEERI scientists showcasing their research work to students on CSIR-NEERI foundation day celebrated on Friday.

day and night to meet the demand of the pandemic.”

He called for CSIR labs across India to together come up with solutions for environmental problems. “We will focus on carbon capture and utilisation and plan for e-waste disposal, which is already becoming a pressing issue and should be dealt with at the earliest,” he said.

Director of All India Institute of Medical Sciences (AIIMS), Maj Gen (retd) Dr Vibha Dutta, said

CPHERI was established in India when there was no institution in the country to deal with the water problems. Water is responsible for many diseases, the formation of this institution was a step by the government to deal with India’s water problem. She said the work done at that time has given life to thousands of people. Nalgonda technique for defluoridation of water developed by NEERI is being used by countries like Tanzania, Kenya etc.

She added the the institute now dealt with air, biodiversity, waste management, and eco-restoration.

She stated, “India ranks 168th out of 180 countries in the 2020 Environmental Performance Index (EPI). Researchers at Yale and Columbia universities say India’s decarbonization agenda needs to accelerate and the country faces a number of serious environmental health risks, including poor air quality. I think Neeri needs to take the lead in this area.”

CSIR-NEERI launched its Jigyasa website which will assist students in areas with poor lab facilities to perform experiments through simulation.

Chief guest Dr Subhash R Chaudhari, vice chancellor RTM Nagpur University said, it was time to think about sustainability for a better future. He explained how nature tried to maintain a balance and man with his selfishness has been continuously affecting this balance.

‘Energy Swaraj Yatra’ reaches Thiruvananthapuram

CSIR-NIIST

08th April, 2022

The 11-year-long yatra is undertaken by Prof. Chetan Solanki, an IIT (Bombay) faculty



There is a need for a “drastic and immediate” change in energy usage patterns for tackling global warming and climate change, says Chetan Singh Solanki, the IIT Bombay professor known as the ‘Solar Man of India’.

“But are we taking drastic and immediate action? The reality is that CO₂ emissions are increasing,” Prof. Solanki said on Friday, speaking on ‘Climate Change, Energy Swaraj and I’ at the CSIR-National Institute for Interdisciplinary Science and Technology (NIIST) where the Energy Swaraj Yatra led by him was given a reception by the CSIR thematic group on energy conversion and related devices.

Currently on unpaid leave from IIT Bombay, Prof. Solanki is the brand ambassador of solar energy for Government of Madhya Pradesh and is founder of the Energy Swaraj Foundation. He has undertaken a 11-year-long (2020-2030) Energy Swaraj Yatra on a ‘solar bus’.

The yatra, which began in November 2020 from Mumbai, is designed to create a public movement towards 100% adoption of solar energy. The ‘solar bus’ reached Thiruvananthapuram after covering 18,000 km across nine states. Prof. Solanki’s ‘mobile home’ is equipped with 3.2 kW solar panels and 6 kWh of battery storage. It also has a 3 kVa inverter. The bus runs on diesel, but all lights, cooler, cookstove, and other appliances inside it are solar-powered.

On Friday, Prof. Solanki urged his audience to surrender their electricity connections and switch to solar energy. "At some point, do it. That is the only way to survive," he said. After 1950, global energy use has grown exponentially and 80-85% of it is contributed by fossil fuels. The planet is warmer by 1.1 degrees Celsius compared to the pre-industrial era, calling for drastic measures to limit warming to, ideally, 1.5 degree Celsius. Once this threshold is crossed, the changes will be irreversible. "1.5 degrees is the 'Lakshman Rekha'," he said.

For switching fully to solar energy, Prof. Solanki advises a three-step approach—'Avoid, Minimise, Generate'. "Avoid use of energy as much as possible even if it is solar energy. If you can't avoid the use of energy, minimise its use through use of efficient appliances. Step 3, generate energy locally. Energy Swaraj is about distributed production," he said.

There were two important "laws" that needed careful study, he said. In an ecosystem of finite resources, there could only be finite consumption. And, two, in an ecosystem of finite resources, there would have to be distributed production. "Limit your consumption, localise your production," he said.

Prof. Solanki undertook the Energy Swaraj Yatra after an international trip convinced him that very little was being done constructively to mitigate global warming. But for 'Energy Swaraj' to succeed, government action alone would not suffice, he said. Underscoring the importance of energy literacy, he said individuals and institutions would have vital roles in it.

CSIR thematic group coordinator Dr. Narayan Unni and Dr. Elizabeth Jacob, scientist, NIIST, also spoke on the occasion.

CSIR-IIIM distributes ornamental plants in Pulwama

CSIR-IIIM

08th April, 2022

Pulwama, April 07: CSIR-IIIM under CSIR Floriculture Mission organised a distribution programme of ornamental plant species under the vertical “Development of Floriculture Gardens in Schools/ Colleges” Thursday at CSIR-IIIM Field Station Pulwama under the patronage of Dr. D. Srinivasa Reddy Director, CSIR IIIM Jammu, Er Ab Rahim, Head, RMBD&IST & Dr. Zabeer Ahmad, Head, CSIR IIIM, Srinagar. Dr Zabeer Ahmed took stock of the activities being carried out at the Field Station and complimented the team of CSIR Floriculture Mission for their efforts in successful implementation of various activities under the Mission in J&K with active collaboration of local stakeholders/ entrepreneurs and line departments.

Dr Iqra Farooq while welcoming the participants informed about the different farmer oriented projects launched and implemented by CSIR in J&K. Earlier in the programme, Dr Shahid Rasool in his address informed the participants about the Mission being implemented by CSIR-IIIM in J&K. Prof Shafiq Ahmad while speaking at the event appreciated CSIR-IIIM for implementing the mission in the UT and highlighted the efforts of Field Station, Pulwama for inculcating the spirit of entrepreneurship in the floriculture and aroma sector among the students across the UT.

Prof Nisar Ahmad discussed about opportunities offered in floriculture sector in the valley and informed about the scope of value addition of crops for maximum profitability. Mr Aijaz Ahmad Wani, a progressive farmer from Budgam shared his experience of association with CSIR IIIM as a beneficiary and thanked the mission for empowering the small farmers by providing free quality planting material of high value commercial cut flowers crops.

Published in:

[Rising Kashmir](#)

CSIR-CFTRI

08th April, 2022

Govt. to support CFTRI food tech finishing school



Minister impressed by 'ragi mudde' and dosa-making machines; savours dishes

Mysuru, Apr. 8 (MK&BCT)- Minister of Information Technology-Biotechnology, Higher Education, Science and Technology Dr. C.N. Ashwathnarayan said that the State Government would fully support the CSIR-Central Food Technological Research Institute (CFTRI), Mysuru, to set up a finishing school in the area of food technology.

He was speaking after visiting the CFTRI campus last evening where he inspected the over 40 products and technologies developed by the premier food technology institute. He was impressed by the 'ragi mudde'-making machine and dosa-making machine and called the innovations path-breaking. He even savoured the dosa and 'ragi mudde'.

The Minister participated in the presentation of prototypes of various machines for over three hours and his attention was drawn to the efforts of the CFTRI in augmenting the income of rural women and self-help groups.

Scientists told the Minister that

many women's self-help groups were preparing homemade products like 'karadantu', 'peda' and 'pickles' but they cannot preserve these products for a long time as the products have very short shelf-life. They told him that the CFTRI was ready to help the women to offer technologies to give longer life for their products.

Even training will be provided for the women in the technologies that will help them augment their income and continue their businesses. Scientists told the Minister that as the CFTRI was the only institute having this expertise, the Government must come forward to support it so that it can benefit women.

Responding positively to the request, Dr. Ashwathnarayan suggested that the products made by women self-help groups must get attractive packaging, branding and a good market. The CSIR-CFTRI can help them in this direction too. This will improve their financial sustainability, he said.

The scientists told the Minis-

ter that CFTRI was also ready to impart knowledge to farmers and fruit growers on fruit processing skills so that it can help them prevent losses.

CFTRI's meat and fish technology scientist H.S. Satish said that facilities can be made to farmers to test the quality of their produce and for this, district-level general food processing units can be established. The Minister responded by saying that these issues would be discussed at the Government level.

CFTRI Director Dr. Sridevi Annapurna Singh felt that every farmer need not be required to procure technology developed by CFTRI. Instead, such technologies can be established in Gram Panchayats or in farmer produce centres.

The Minister visited the Incubation Centre set up inside the CFTRI campus built by IT-BT Department and also chaired a meeting with the Director and senior scientists on other activities taken up by the institute.

Published in:

Star of Mysore, The Hindu

Andhra Pradesh: NIO laboratory near Rushikonda to come up in 18 months

CSIR-NIO

07th April, 2022

The National Institute of Oceanography's (NIO) shore-based laboratory near Rushikonda in Visakhapatnam district is scheduled to be completed in the next 18 months. This was stated by Minister of State (independent charge) of Science and Technology and Earth Science Jitendra Singh.

He was responding to an unstarred question posed by Member of Parliament V. Vijaya Sai Reddy in Parliament on Thursday. Mr. Sai Reddy had asked the Minister whether the project had obtained the required Coastal Regulation Zone (CRZ) sanctions and what was causing its delay. Responding to it, Dr. Jitendra Singh said that the CRZ clearances from the Ministry of Environment, Forests & Climate Change were obtained on December 10, 2013.

He also admitted that the reason for delay was linked to obtaining the CRZ clearances and finalising the schemes and other administrative clearances with the project management consultant Bharat Sanchar Nigam Limited.

The Minister said BSNL was appointed as the project management consultant for construction of the laboratory building and the work order was awarded in 2009. BSNL had prepared different versions of architectural drawings for the proposed building and submitted the final drawings along with preliminary estimates for ₹30.50 crore.

However, there were some differences in the contractual obligation and the process of termination of the contract on mutual consent has been initiated. This was also one of the reasons for the delay, the Minister said in his response.

Fresh tender will be invited for the appointment of new PMC and the entire process along with securing administrative and financial approvals are expected to be completed within six

months. Thereafter, the actual construction work is scheduled to be completed in 18 months' time, the Minister stated. Referring to a question from Mr. Vijaya Sai Reddy, on whether the delay was hampering research and development, the Minister said that CSIR-NIO Regional Centre at Visakhapatnam is currently housed in two rented buildings. Since the centre is well-equipped with state-of-the-art laboratory equipment, the regular R&D activities are not affected to a major extent, he replied.

City's 2nd genome sequencer installed at AIIMS

CSIR-NEERI

07th April, 2022

Nagpur: The city got its second genome sequencing facility at AIIMS (All India Institute of Medical Sciences). The sequencer has been donated under the Global Health Facilitators Jhpeigo-USAID programme to the central institute in Maharashtra.

The sequencer is likely to start functioning once a pending technical part arrives. The machine has a capacity of 48 samples per week. As Covid sample load is less now, the sequencer would be used for surveillance of other diseases like TB, tumours, bacterial resistance etc.

Dr Meena Mishra, professor and head, department of microbiology at AIIMS Nagpur, said primarily the Jhpeigo-USAID sponsorship for genomic sequencer is for Covid surveillance. "As Covid cases are low, the sequencer can be used for other purposes too. We have got sequencing kits to study Covid samples while those for other studies need to be purchased. The sponsors aim to make AIIMS Nagpur a training hub in Maharashtra to hone sequencing skills at other such facilities," she said.

In January this year, CSIR-NEERI lab was the first to set up genome sequencing facility in Vidarbha. The Neeri lab has independently performed genome sequencing of more than 1,000 SarsCov2 samples collected from entire Vidarbha as well as other parts of the state and Tamil Nadu. The Neeri lab's turnaround time is around 1.5 days for each lot of Covid samples. The lab has also published its data on GISAID portal.

Dr Mishra was speaking during a press conference ahead of the 3rd annual regional conference of Vidarbha Association of Medical Microbiologist (VAMMCON-2022) from April 8 to 10. The three-day meet themed 'Man Vs Microbes: The Seesaw Ride' shall deliberate on key issues encountered during the Covid pandemic.

Three pre-conference Continuing Medical Education (CMEs) on ‘Antimicrobial resistance and WHO net training’, ‘Anaerobic culture techniques’, and ‘Lifestyle intervention for health care workers’ are also planned during VAMMCON.

More than 200 medical microbiologists from across Vidarbha, Madhya Pradesh and Chhattisgarh will be participating in the academic fest. They would deliberate on topics like genomic sequencing in Covid-19 and TB, antimicrobial resistance, mucormycosis, TB elimination, global challenge of emerging and re-emerging diseases.

Maj Gen (retd) Dr Vibha Dutta, director of AIIMS Nagpur, said the viral research and diagnostics lab (VRDL) at AIIMS has mentored several other labs in Covid testing when the pandemic began. The lab performed more than 4 lakh RT-PCR tests, did quality checks for 44 labs in the state as a designated ILQC lab by Indian Council of Medical Research, and trained more than 300 medical microbiologists and technicians. The lab is also referral lab for integrated disease surveillance programme, she said.

Dr Dutta also said the institute led from the front in the Covid fight. “Now we have 350 operational beds while the total capacity is at 960. We have 27 departments offering basic specialities to super specialities like pulmonary, cardiology and paediatric treatment,” she said.

Dr Dutta added treatment is free of cost at AIIMS Nagpur and encouraged people to take benefit of the state-of-the-art facility.

Kangra tea to get European GI tag

CSIR-IHBT

07th April, 2022

SHIMLA : Famous for its distinct flavour, Kangra tea will soon get a Geographical Indication (GI) tag from the European Commission. This will open the European markets for the product.



A government spokesman said in 2005, Kangra tea was accorded the status of Geographical Indication Tag in India. The

development and cultivation of Kangra tea is being promoted and looked after by four departments iTea Board of India Regional office Palampur, cooperative and agriculture departments of the state and CSIR, IHBT Palampur and Chaudhary Sarwan Kumar Agriculture University, Palampur.

He said more than one lakh plants were provided to tea growers in 2021-22 and an area of 5.6 hectares was brought under fresh plantation. The department is providing the tea plants to the tea growers both for infilling in the existing gardens and also for fresh plantations at the doorstep of the growers (on FOR basis) at the nominal cost of ₹2 per plant to the general farmers and ₹1 per plant for the Scheduled Caste category farmers.

Published in:

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

Buy-back time using organic solar cells shorter, says polymer scientist Asha SK

CSIR-NCL

06th April, 2022

Polymer scientist Asha SK wants her laboratory in Pune to be involved in developing organic polymers and their raw materials that will both find effective and environment-friendly use after reaching end-of-life use. More often than not, many existing polymers and chemical compounds after desired use, turn nuisance environmentally and they end up at landfill sites or are subject to other harmful waste disposal methods.



Asha is the recent recipient of the Science and Engineering Research Board (SERB) Power Fellows 2022 presented by the Department of Science and Technology (DST). She bagged the fellowship for a proposed project involving the development and scaling-up of p-Conjugated Polymers for Energy Storage applications using a now in-house synthesis facility at the CSIR-NCL.

p-Conjugated Polymers are organic polymers with alternate single and double bond structures in their backbone. Due to this structure, it possesses unique electronic properties like conduction of charges, which is not possible with conventional polymers. Therefore, they find application in optoelectronic devices like light-emitting diodes, organic solar cells and more.

With growing emphasis on renewable energy in India and the world over, and the growing penetration of solar energy-based services—vehicles, roof-top solar panels, water heaters and others—harnessing solar energy and widening their scope of applications are in focus.

According to the Union Ministry of New and Renewable Energy, India stood fifth globally in solar power deployment. Since 2014, India's solar power capacity generation grew 11 times and rose to 30 Giga Watts as of July 2019. In 2015, India and France announced the launch of the International Solar Alliance (ISA) aimed at providing solar energy-based solutions, energy access and security while attempting to cut carbon emissions thus combating climate change. Presently, 101 countries are signatories to the ISA Framework Agreement.

As such, Asha's area of solar photovoltaics is only beginning to see a boom and holds the potential to grow further in the coming years. "While silicon-based solar cells—commonly installed in the roof-top solar panel setups—may be more efficient, the challenge remains in sourcing raw materials for its making. To date, they get imported thus making them expensive. In comparison, organic solar cells are less expensive, can be installed on vertical and other surfaces, are thin and lighter to handle," says Asha, chair of the Polymer Science and Engineering Division at CSIR-National Chemical Laboratory (NCL).

But the biggest advantage of using organic solar cells made from naphthalene-based polymers, which her lab is involved in, is the shorter payback time. "If the payback scheme using the silicon-based solar cells takes up to a few years, the same can be accomplished within a few months in the case of the organic solar cells," assures Asha.

Currently, the lab is pursuing research to understand the numerous parameters aimed at making the organic polymer more efficient and contributing to further cost reduction. This, alongside finding a desi way to source raw materials. With awareness about the availability of the green-solar cells continuing to remain limited, Asha is hopeful that more industries would come forward and invest in its commercialisation. "This alone will lead to a reduction in costs, find wider applications and make sourcing of raw materials easier," she says.

In December 2018, NCL established a Centre of Excellence (CoE) for 3D printing and additive manufacturing. But not much substantive work with the industry has taken shape, partly due to the Covid-19 pandemic. "3D printing can have a wide range of applications for

making medical implants, in the auto industry and others. It can best be used where materials need to be turned into highly complex shapes,” says Asha, who now heads the CoE, and adds, “In India, 3D printing has largely remained as mere display models and is yet to get into its functional roles.”

Hailing from Thiruvananthapuram in Kerala and being among the top rank holders at undergraduate and postgraduate levels, Asha’s career path goes alongside her husband Professor M Jayakannan, a professor in the Chemistry department at the Indian Institute of Science Education and Research (IISER), Pune.

After completing their PhDs at the Indian Institute of Science, they landed their first jobs at General Electric (GE) in Bengaluru. “In the industry, one learns to work in a time-bound manner. The industry, where safety is given utmost importance, trained me with skills that came in handy later in my career,” she recalls.

Being a full-time scientist is a demanding job, she says, and support from the family has been her biggest boon. “Pursuing doctoral studies requires perseverance and patience. Science is a high demand job,” shares Asha.

The pandemic, she found, brought some much-needed respect and recognition to the scientific community – which has been striving on all fronts from vaccines drugs, safety gear and creating awareness about the virus. “But recognition for women scientists and awards still remain few,” feels Asha, who hopes to inspire young scientists.

New device to wipe out COVID threat from enclosed spaces

CSIR-CCMB

06th April, 2022

Developed by rural innovator with CCMB-approved virus attenuation technology

The COVID-19 pandemic is not over, which means one cannot drop their guard just as yet. Adding to the list of products in the fight against SARS-CoV-2, rural innovator Narishma Chary Mandaji has come out with 'Instashield', a medical device with Centre for Cellular & Molecular Biology (CCMB)-approved virus attenuation technology. It can disable viruses with up to 99.9% efficacy in enclosed spaces, in air, and on surface, he



claims. "From the time of COVID-19 outbreak, I had been relentlessly working on building a technology that can fight this virus as well as other viruses. I am happy that my efforts have now taken shape and are finally going to be of use to mankind," said Mr. Chary, who has earlier been credited with developing a formulation of re-glowing of filament-less light without choke and starter.

Instashield is a plug and play device based on an electron-based technology producing hypercharge high velocity electrons, which interact with the negative seeking s-protein of the corona family of viruses, thus, reducing infectivity and preventing air and surface-borne transmission of the corona family of viruses, he explained.

A single device has an effective coverage area starting 5,000 sq.ft, activates within 18 minutes and within 120 minutes, n entire room can be covered, said Instashield co-promoter and director Hitesh M. Patel, in a press release.

The technology created by Mr. Chary can be used in multiple places such as schools, colleges, offices, banks, hospitals, clinics, conference rooms, etc. “We did a soft launch 15 days ago and it is available online. We have appointed an all-India distributor and sold about 1800 units. We did a turn over of ₹1.70 crore and aiming for ₹14 crore within a year,” he said.

The device is said to have received support from Telangana State Innovation Council and International Advanced Research Centre for Powder Metallurgy and New Materials. It has been lab tested and certified by CSIR-CCMB and other labs like Vimta, and so on, ensuring that it is 100% safe for humans and the environment.

The device is also registered with MSME, Start-up India and GEM portal with ‘Go green’ as a sustainable product.

पारदर्शिता से समाप्त होगा भ्रष्टाचार

रुड़की, संवाददाता। केंद्रीय भवन अनुसंधान संस्थान रुड़की में आयोजित कार्यक्रम में सुशासन के लिए पारदर्शिता पर जोर दिया गया। वक्ताओं ने कहा कि पारदर्शिता भ्रष्टाचार को समाप्त करने का मूल मंत्र है।

संस्थान में मंगलवार को पारदर्शिता और कार्यालय प्रबंधन सुशासन की ओर एक कदम विषय पर तीन दिवसीय प्रशिक्षण कार्यक्रम शुरू हो गया है। कार्यक्रम का उद्घाटन संस्थान के वैज्ञानिक डॉ. अशोक कुमार ने किया। उन्होंने कहा कि सुशासन के लिए शासन में पारदर्शिता अत्यंत आवश्यक है। कार्यक्रम के नोडल अधिकारी डॉ. आर. धर्मराज ने कहा कि यह कार्यक्रम संस्थान में कार्यभार ग्रहण करने वाले नए वैज्ञानिकों के लिए भारत सरकार की कार्यप्रणाली को समझने का बेहद महत्वपूर्ण अवसर है। डॉ. धर्मराज ने

- केंद्रीय भवन अनुसंधान संस्थान में तीन दिवसीय कार्यशाला शुरू
- 55 कर्मचारी कार्यक्रम में कर रहे हैं प्रतिभाग संस्थान के

बताया कि इस प्रशिक्षण कार्यक्रम के दौरान प्रशासन में पारदर्शिता, आरटीआई अधिनियम एवं नियम, आरटीआई से जुड़े हुए अधिकारियों की भूमिका एवं उत्तरदायित्व, कार्यालय में गुणवत्ता प्रबंधन, रिकॉर्ड अधिनियम और रिकॉर्ड का रखरखाव, कार्यस्थलों पर महिलाओं का यौन उत्पीड़न रोकने, महिलाओं का सामाजिक एवं आर्थिक सशक्तिकरण, महिलाओं को कानूनी सहायता, संगठन प्रमुख की भूमिका एवं

उत्तरदायित्व जैसे महत्वपूर्ण विषयों पर चर्चा की जाएगी।

इस अवसर पर संस्थान के प्रशासनिक अधिकारी प्रवेश चंद ने भी विचार रखे। प्रशिक्षण कार्यक्रम में मैसूर, कर्नाटक से आए वी. योगनाथ सिंह मौजूद रहे। इस प्रकार के कार्यक्रमों में व्याख्यान देने का 22 वर्षों का उनका अनुभव है। इन्होंने मास्टर ट्रेनर, डिजाइन ट्रेनर और प्रशिक्षण की आवश्यकताएं से संबंधित प्रशिक्षण मॉड्यूल, उनके डिजाइन पर भी कार्य किया है। प्रशिक्षण कार्यक्रम में संस्थान के 55 कर्मिकों ने प्रतिभाग किया। इस अवसर पर एसके नेमी, डॉ. डीपी कानुंगो, डा. अचल मित्तल, आशीष पिप्पल, मेहरसिंह, अर्चना, ममता शर्मा, विनीत सेनो, अमित कुश, विश्वास त्यागी, हरीश कुमार, सक्षम भारद्वाज, अभिनव त्यागी आदि उपस्थित थे।

CSIR-IHBT

Kalimpong to get a distillation unit for aromatic crops

YOWAN MOTHAY

KALIMPONG, APRIL 9/- Scientists of CSIR - IHBT are conducting an awareness and training programme for farmers in Kalimpong in floriculture and cultivation of aromatic crops in association with Mani Trust. A total of 35 farmers participated in the training and awareness programme held at Dong Busty on April 7. Director CSIR - IHBT Palampur Sanjay Kumar said on Saturday that CSIR started Aroma Mission in 2017 and Floriculture mission in 2020, programmes to promote aromatic crops and floriculture as a means of socio-economic uplift and employment generation for the farming community living in rural areas throughout the country.

According to him, the

climate of Kalimpong, located in the Himalayan foothills with a summer temperature varying between 15 and 25 degrees Celsius and winter temperature between 7 and 15 degrees, with five distinct seasons, spring, summer, autumn, winter and monsoon, is ideally suited for the cultivation of aromatic crops and for floriculture.

A processing unit is indispensable for value addition to aromatic plants, and the establishment of one such facility will help the local farmers. Accordingly, one processing unit would be installed in Kalimpong during the current cultivation season, Chairman Mani Trust Subash Singh said. Mani Trust would provide the land for installation of one distillation unit so the



aromatic plants could be processed in Kalimpong, he said. Value addition would help in increasing the income of the family. He said Mani Trust signed an MoU with CSIR - IHBT on September 7, 2021, for the cultivation and promotion

of high value aromatic crops and the establishment of a processing unit for aromatic crops in Kalimpong.

The partnership would allow Mani Trust to work in collaboration with a leading CSIR institute in the

cultivation of aromatic crops and for floriculture in the Kalimpong region and help farmers in a major way. Farmers would be able to beat the inflation with increased income and save money for children's education and to meet

emergency medical expenses.

Kumar said the Kalimpong region was suitable for the cultivation of high value aromatic crops like damask rose, muskhala, lemongrass, citronella and chamomile. Principal Scientist CSIR-IHBT Mohit Sharma said there was a growing inclination among consumers towards natural and organic products. This had led to an increase in the usage of essential oils in cosmetics, food and beverages.

The Institute of Himalayan Bioresource Technology (IHBT) would help farmers by providing quality planting material, capacity building and value addition through processing of aromatic plants and also by establishing market linkages.



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