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A grid plan that can watch and check NCR pollution

CSIR-NEERI

15th October , 2023

Scientists at CSIR-National Environmental Engineering Research Institute (NEERI) are working on a grid-based mitigation strategy to watch and check air pollution across the National Capital Region (NCR). The entire NCR can be divided into small grids, akin to tiles, called Local Area Management Plan (LAMP). A network of stationary and mobile sensors can be used to monitor each area.

Each tile or LAMP - unique to that area - will be spread over an area of 2x2 square kilometres. Air pollution sources can be identified, their activity levels quantified along with daily pollutant emission loads. While NEERI has already done the exercise in Wazirpur, it is now working in the Siri Fort area and Bahadurgarh (Haryana).

The approach is to treat air pollution at a local level, keeping in mind the diverse requirements of each area, instead of opting for a one-size-fits-all policy.

A research article, titled Development of Strategic Air Quality Improvement Framework for Urban Hotspots, published by CSIR-NEERI in a reputed peer-reviewed journal, used a grid of tiles in the Wazirpur area pollution hotspot for summer and winter (summer from April to June 2019 and winter from December 2019 to January 2020).

The study findings indicated that Wazirpur, an urban industrial area, saw high PM2.5 levels during winter followed by the summer season. The daily PM2.5 values were in the range 36-195 g/m3 during summer and 92-433 g/m3 in winter. The concentrations exceeded the daily standards of 60 g/m3, 80% of the time in summer and 100% of the time in winter, the study found.

Out of the overall sources, road dust and industries were found to be the prominent emission

sources emitting 53% and 28% as reflected in the PM2.5 concentrations. "Using developed framework (based on pollution reduction associated cost, social impact and ease of enforcement), the prioritized control actions for better air quality in the study area were identified- dust cleaning by mechanized vacuum machine, operation of industries with full capacity during day time only, installation of cyclone dust collector in industrial stacks, and increase in stack height by 50%," said the study.

"It is inferred that heterogeneous trends at the local level necessitates strategic and a smart criteria-based air quality management plan for designing any control intervention. The developed framework can aid regulatory agencies or urban local bodies in managing air quality at the local level," said the study, whose authors are Prachi Goyal, Sunil Gulia and SK Goyal.

Speaking at the India Clean Air Summit (ICAS) 2023 in August, SK Goyal, the chief scientist and head (professor, AcSIR), CSIR-NEERI, Delhi Zonal Centre, said: "We will develop a grid-based mitigation strategy, termed 'Local Area Management Plan' (LAMP), for a hotspot, as a conceptual model for each season. The 'one size fits all' approach has rarely worked for air pollution mitigation. Hence, rather than similar actions across the city, LAMP will allow policymakers to have grid-wise mitigation and will make urban air pollution more manageable."

Published in:
Times of India

Pune Wastewater Surveillance Project Expands to Monitor Influenza Viruses

CSIR-NCL

14th October , 2023

The Pune Wastewater Surveillance project in India is expanding its monitoring efforts to include not only the Covid-19 virus, but also various subtypes of influenza-A viruses, such as H1N1 and H3N2. This project, funded by the Rockefeller Foundation and led by the Pune Knowledge Cluster, aims to detect community-wide disease prevalence through early detection in wastewater samples.

The project, which started in August 2021, involves a team of scientists from institutions such as the National Chemical Laboratory, Symbiosis School of Biological Sciences, and the Indian Institute Science Education and Research Pune. Over the past two years, they have been sampling wastewater from 32 sites in Pune, including sewage plants and open nullahs, to understand the viral load and presence of viruses in the population.

Wastewater testing has the advantage of being less biased compared to clinical testing, as it represents the combined contribution of all individuals served by a specific catchment area. This makes it a valuable tool for proactive study of disease emergence and spread. To present the results of wastewater surveillance in a user-friendly format, the project has developed a dashboard that provides information on viral loads of Covid-19 and influenza-A viruses found in wastewater.

While the project's goal is to identify the presence of viruses, it acknowledges the need to correlate this data with clinical cases for more concrete conclusions. With reduced testing, the project team can only provide indicative information about the virus's presence in comparison to other areas in Pune.

The expansion of the Pune Wastewater Surveillance project to monitor influenza viruses in addition to Covid-19 will enhance the city's ability to detect and respond to infectious diseases.

By utilizing wastewater as a tool for surveillance, public health officials can gain valuable insights into the prevalence and spread of these viruses in the community.

Definitions:

– Wastewater surveillance: Monitoring and testing wastewater samples for the presence of viruses or other pathogens to detect disease prevalence in a community.

– Influenza-A viruses: A group of viruses that cause influenza in humans and animals, including subtypes such as H1N1 and H3N2.

Sources:

– Pune Wastewater Surveillance project funded by Rockefeller Foundation and led by Pune Knowledge Cluster

– Scientists from National Chemical Laboratory, Symbiosis School of Biological Sciences, and the Indian Institute Science Education and Research Pune involved in the project

– Senior project manager Priyanki Shah providing insights on wastewater sampling and testing

– Dashboard developed by the project team to present surveillance results in a user-friendly format

– Wastewater samples collected from various locations in Pune Metropolitan Region, including sewage treatment plants and open drains

Note: The original article has been edited and rewritten to meet the specified requirements.

Published in:
Expresshealthcaremgmt

Regional Level 31st National Children's Science Congress held

CSIR-IIIM 14th October , 2023

Kendriya Vidyalaya Group Centre Central Reserve Police Force (CRPF) Bantalab hosted a one-day Regional Level 31st National Children's Science Congress (NCSC)-2023, here today. The theme of the exhibition was 'Understanding Ecosystem for Health and Well-being', wherein 174 students from 26 Kendriya Vidyalayas of Kendriya Vidyalaya Sangathan, Jammu region presented their projects in under two different categories; Juniors (10-14 years) and Seniors (14-17 years) on various sub-themes. The projects were evaluated by a panel of judges from CSIR-Indian Institute of Integrative Medicine (IIIM), Jammu headed by Asha Chaubey, Senior Principal Scientist and Head of Department.

The inaugural ceremony began by Suraj Prasad, Principal, KV GC CRPF Bantalab &Regional Science Coordinator, NCSC welcomed the Chief Guest, Nagendra Goyal, Deputy Commissioner, Kendriya Vidyalaya Sangathan, Jammu Region; Guest of Honour, Asha Chaubey, Senior Principal Scientist & Head of Department IIIM- CSIR, Jammu. He expressed his gratitude towards Dr. Zabeer Ahmed, Director IIIM for extending his team support to make the event successful. He also thanked the panel of judges for sparing the time out and judging the event with patience and grace.

The chief guest in his address appreciated all the efforts made by students and explained how this platform emboldens the participants to question many aspects of our progress and development and express their findings in vernacular.

Published in:
Dailyexcelsior

Lavender cultivation takes centre stage at Farmers Scientists Interaction Meet in Bhaderwah

CSIR-IIIM

14th October , 2023

In a remarkable effort to encourage the value addition of lavender crops and expand cultivation beyond Jammu and Kashmir's Bhaderwah valley, often hailed as the "Capital of Lavender in India," the Ministry of Science and Technology, through CSIR-IIIM (Council of Scientific and Industrial Research-Indian Institute of Integrative Medicine), organised a 'Farmers Scientists Interaction Meet' in Bhaderwah today.

The day-long event brought together an eclectic group of participants, including lavender cultivators from the Bhaderwah Valley, local start-ups, entrepreneurs, and visiting farmers from the Udhampur district. The meeting was held at the prestigious Lal-Ded Auditorium of Bhaderwah Campus, showcasing the commitment of both the scientific community and farmers to the growth of lavender cultivation.

SP Bhaderwah, Vinod Sharma, graced the event as the chief guest, and Nodal Scientist of Aroma Mission CSIR-IIIM Jammu, Dr Supla Gupta, presided over the function. The gathering primarily aimed to inspire farmers to venture into value addition of the lavender crop, further enhancing their income and the economic prospects of the region.

Dr Supla Gupta, while addressing the attendees, highlighted the objectives of the Aroma Mission's Phase 3.

"Under phase 3 of Aroma Mission, our primary aim is to provide basic training to the farmers

and encourage them to adopt value addition of lavender by venturing into the making of soaps, incense sticks, room fresheners, lavender tea, and more," said Dr Gupta.

The Bhaderwah region alone boasts 2,100 farmers involved in lavender cultivation, tending to approximately 1,800 hectares of land. With the newfound emphasis on value addition, the mission aspires to expand lavender cultivation beyond the confines of Bhaderwah Valley. To achieve this, dozens of nurseries have been established across Bhaderwah Valley, serving as the foundation for this agricultural expansion.

The gathering witnessed tremendous enthusiasm from the farmers and entrepreneurs who showed a keen interest in exploring value-added opportunities for lavender. They expressed their gratitude to the Union Minister for Science and Technology, Dr Jitender Singh, for initiating the third edition of the Aroma Mission.

Touqeer Bagban, a young entrepreneur from Bhaderwah, voiced his appreciation for Dr. Jatinder Singh's support and the extension of the Aroma Mission. "We are grateful to Dr Jitender Singh, who has been supporting us unconditionally, and by extending Aroma Mission to its third instalment, he has given the much-required boost to the lavender farmers," said Bagban.

The 'Farmers Scientists Interaction Meet' in Bhaderwah marks a pivotal step in the journey to harness the full potential of lavender cultivation and value addition. With the collaborative efforts of the scientific community and dedicated farmers, the aroma of success is spreading far beyond Bhaderwah, promising a more prosperous and aromatic future for the region.

Published in:
Greaterkashmir

Vegan fish with Omega 3 fatty acids? A research institute is working on 3D-printed food with edible ink from plant sources and customised nutrients

CSIR-NIIST

14th October , 2023

Remember the cartoon Jetsons where a simple press of the button would dispense a tray full of food? It is no longer science fiction. A research institute in Thiruvananthapuram is working on different types of inks to 3D-print food items based on individual preferences — you can choose any shape, colour and most importantly their nutrient profile. That means customising their salt, sugar, fats, carbohydrate and protein content.

"Usually, 3D printers are used for producing construction materials or machine parts. The inks used for this are based on different types of fibres, plastics or concrete. For printing foods, we need edible ink, which is made from molecules derived from natural sources. Not only do we require inks for different food groups, we need to ensure they are printable and the layers can be deposited on top of each other for a stable form. For example, if the ink has high fibre content then it is likely to print materials that are brittle," says Dr C. Anandharamakrishnan, who is heading the project and director of the CSIR-National Institute for Interdisciplinary Science and Technology. His team has already created inks of rice starch, millet carbohydrates, egg proteins and chocolate. Their 3D printer is now capable of producing noodles from vegetable refuse. "At the end of the day, noodles are carbohydrates and you can find carbohydrates in vegetable waste such as potato peels. The machine just uses these to print the noodles," he explains.

The pride of the team, however, is the vegan or the mock meat, which uses ink from vegetable proteins to replicate the flavours of meat and fish. "Not only would the 3D-printed food taste

like meat, it would also have its texture. A person eating it would feel he is having the real thing when it will mostly be plant proteins. While many have worked on meat, we are one of the few to attempt fish," says Dr Anandharamakrishnan. The 3D-printed fish will contain high levels of Omega-3 fatty acids like normal fish, which are needed for our eyes, the brain and the heart. Since the body does not produce Omega-3, it has to be sourced from food. So you can create a nutrient-dense animal protein.

Dr Anandharamakrishnan says the 3D printers can be installed at homes and cafes. "A family of four can eat different foods without too much effort. Some can even be shaped like cartoon characters to make the dish interesting for children," he adds.

While the technology is currently in its initial phases and not ready to be marketed, a small 3D printing machine is expensive at the moment, costing around Rs 1 lakh. Working on different inks for 3D printers, Dr Anandharamakrishnan's team is experimenting with 4D printing. "This will print foods in sheets that acquire the needed shape when cooked. For example, you can print fusilli pasta as plain sheets but when you boil them in water, they would spring up in coils," he says. This will ease packaging and transporting of foods.

Published in:
Indianexpress

Aviation out of Covid shock, to get Rs 35,000-crore investment in 4 years

CSIR-NAL

13th October , 2023

India's aviation industry is expected to witness around Rs 35,000-crore investment in the next four years which includes development of airport infrastructure along with aviation services, DK Sunil, Director, Engineering and R&D, HAL, has said.

Delivering a talk during a roadshow organised in Bengaluru to promote 'Wings India 2024', an aviation event to be held at Begumpet in Hyderabad from January 18 to 21, 2024, Sunil said the demand for Maintenance, Repair and Overhaul (MRO) facilities are bound to increase due to consistent growth in the aviation sector. "India's civil MRO industry is expected to grow from 800 US dollars in 2018 to more than 2.4 billion US Dollars by 2028," he said.

"The Indian aviation industry has recovered fully from the Covid-19 pandemic shock as revealed by the 327.28 million Air Traffic Movements in the 2023 financial year as compared to 188.89 million movements in fiscal 2022. Aircraft carriers are expected to increase their fleet size to more than 1,100 aircraft by 2027," Sunil said, adding that to cater to the rising air traffic, the number of operational airports will increase to 220 by 2025.

CM Ananda, Program Director for Civil Aircraft, Chief Scientist and Head, Aerospace, Electronics & systems Division & Chief Scientist, CSIR-National Aerospace Laboratories, said the HANSA-NG-CS VLA aircraft unveiled in the Wings event last year had received 100+ letters of intent. "In the upcoming Wings event, it is planned to announce the production partner for HANSA NG in India."

CSIR NAL led the Project Definition Phase of a 90-seater Regional Transport Aircraft (RTA 90) completed successfully along with HAL and DRDO over 18 months.

Remi Mallard, chairman, president & MD, Airbus, South Asia & India, said, "Aviation

infrastructure is constantly being upgraded in India. There is a need to focus on decarbonising aviation as well as sustainable aviation." Gaurav Gupta, Additional Chief Secretary, Infrastructure, said Karnataka has invested heavily in infrastructure in its greenfield airports. The launch of air taxi operators in urban areas was being looked into with many U.S. operators showing interest, he said. "We are planning to provide them a place for assembling of their aircraft and operating them," he said.

Vumlunmang Vualnam, Secretary, Ministry of Civil Aviation, said that India has 149 airports as on date, up from 74 airports in 2014. "Domestic traffic in aviation has boomed from 84.2 million to 136 million presently, a growth of 61.6%," he said.

Hari Marar, CEO, BIAL said, "There will be a five-fold increase in air traffic in the next two decades. Capacity Building and Capability Building are required."

1,500 DELEGATES, 1L VISITORS TO ATTEND MEET

Wings India will be Asia's largest commercial and business aviation event. It is being organised by MOCA, Federation of Indian Chambers of Commerce and Industry. Asangba Chuba Ao, Joint Secretary, MOCA, said, "There will be 1,500 delegates including 50-plus international delegates and 1 lakh general visitors."

Published in:
Newindianexpress

CSIR-CCMB study to understand genetics behind diseases

CSIR-CCMB 13th October , 2023

CSIR-Centre for Cellular and Molecular Biology (CCMB) is collaborating with 20 research groups across the world on a ground-breaking integrated genomics and epigenomics study to understand the genetics behind Non-Communicable Diseases (NCDs) in diverse populations, including South Asians.

The project — "Diverse Epigenetic Epidemiology Partnership (DEEP)" — is to uncover the effects of genomic and environmental diversity in disease risk observed in people across the world, including those in Asia, Africa and North and South America.

"This collaborative study involving scientists with varied expertise provides a unique opportunity to understand gene-gene and gene-environment interaction and their role in intermediate traits associated with NCDs or the disease itself," explained co-principal researcher, senior scientist and Sir J.C. Bose Fellow Giriraj R. Chandak, in an official release on Thursday.

While NCDs such as diabetes, cardiovascular disorders and mental disorders are on rise throughout the world, especially in India and other South Asian countries, a huge variation in disease onset and symptoms for people living in different global regions has been observed. Much of the population health research conducted till date has drawn heavily on data collected from people of white European origins leaving many global communities under-represented in health studies.

Genetic databases for genomic research need diversity to help all people and to get a better understanding of which factors are causing differences in gene regulation and therefore differences in disease risk, said Bristol University (UK) research fellows Josine Min and Hannah Elliott.

Dr. Chandak has been working for the last two decades using multiple cohorts to understand how genetic basis for NCDs in Indians is responsible for clinical peculiarities and how the risk can be modulated by targeted approaches, including nutrition such micronutrients.

CSIR-CCMB's studies have provided evidence of different genetic structure of Indians and its implications for common diseases like type 1 and 2 diabetes, chronic pancreatitis, etc. It also showed a new paradigm in the role of environment, especially micronutrients like vitamin B12, folates, in modifying the disease risk through epigenetic regulation, he said.

DNA methylation (DNAm), a type of epigenetic modification, helps the body to respond to environmental signals and ultimately contributes to whole system health and disease status. Understanding relationships between DNAm, genetics and environment is essential for understanding pathways of health, disease and consequences. DEEP researchers will be studying individuals representing diverse genetic and environmental contexts and learn which DNA methylation patterns contribute to their disease risk in each context, said Dr. Chandak.

About 13,000 participants, including from India, are to be part of the project which got a fund of ₹25 crore recently by the Medical Research Council, UK. Researchers from the University of Bristol, UK and Medical Research Unit - The Gambia at London School of Hygiene & Tropical Medicine, London, are also involved in the research.

The study will enable identification of disease-causing mechanisms common worldwide and also unique to particular groups or regions. It will help with answering questions such as whether medicines developed in one part of the world will be effective for all. Ultimately it hopes to enable targeted interventions and reduce global health disparity and inequity, added the release.

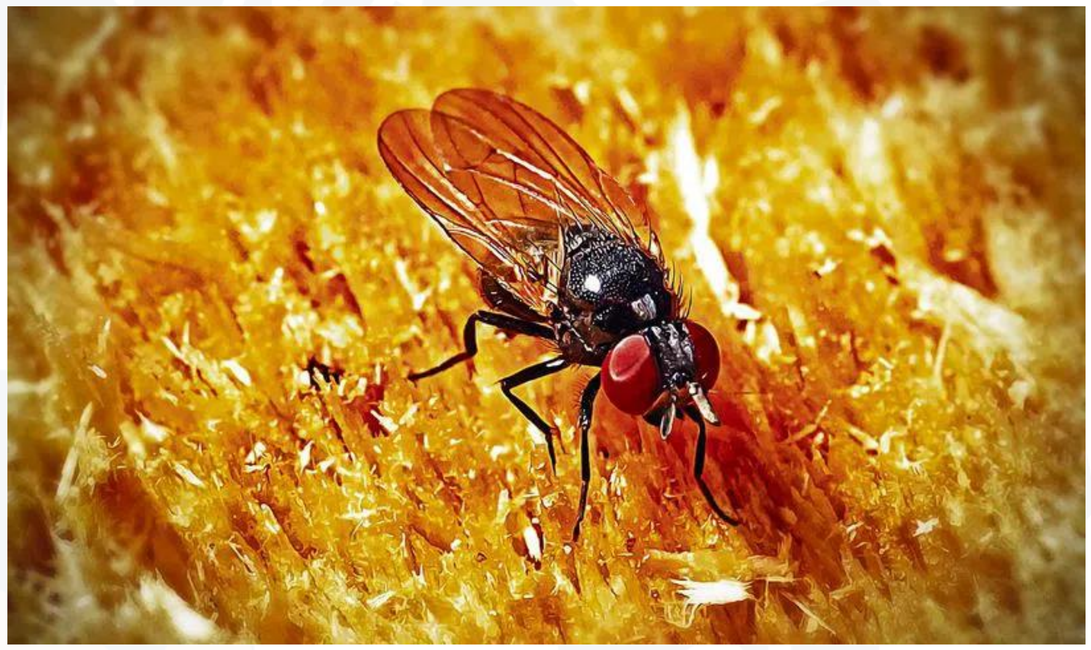
Published in:
The Hindu

Hyderabad: CCMB researchers use fruit flies to find a cure for microcephaly

CSIR-CCMB

13th October , 2023

Does a tiny fruit fly have the potential to make us understand the mysteries of human brain development? To better comprehend how the human brain develops and find treatment, researchers from Hyderabad have genetically mutated fruit flies to have small brains, a lethal developmental brain disorder also known as microcephaly.



The fruit fly brain has molecular similarities with the human brain. And, genetically mutated fruit flies with small brain can enable researchers to develop therapeutics for the medical condition among infants.

Microcephaly is a lethal condition caused due to underdevelopment of brain during pregnancy. Once a baby is born with small brain, then there is no standard form of treatment for this medical condition.

As a result, babies will struggle to develop their normal physical and mental abilities for a lifetime. To understand this medical condition better and find a potential cure, geneticists from Centre for Cellular and Molecular Biology (CCMB), including Aishwarya Arun, a neurodevelopmental biology specialist in Dr Sonal Nagarkar Jaisewal's laboratory, has undertaken this unique research on small brain by employing fruit flies.

The genes that cause small brain condition in fruit flies are also present in human beings and their mutations also lead to microcephaly. Some of these mutations impact the neural stem cell size, causing abnormal cell division or even untimely death of stem cells.

Scientists worldwide are involved in utilising fruit flies in understanding and trying to develop treatments for intellectual disabilities due to lack of brain development in human beings.

The CCMB researcher pointed out the behaviour of fruit flies with small brain has the potential to offer a model system that will enable to test potential drugs for treating brain-related diseases.

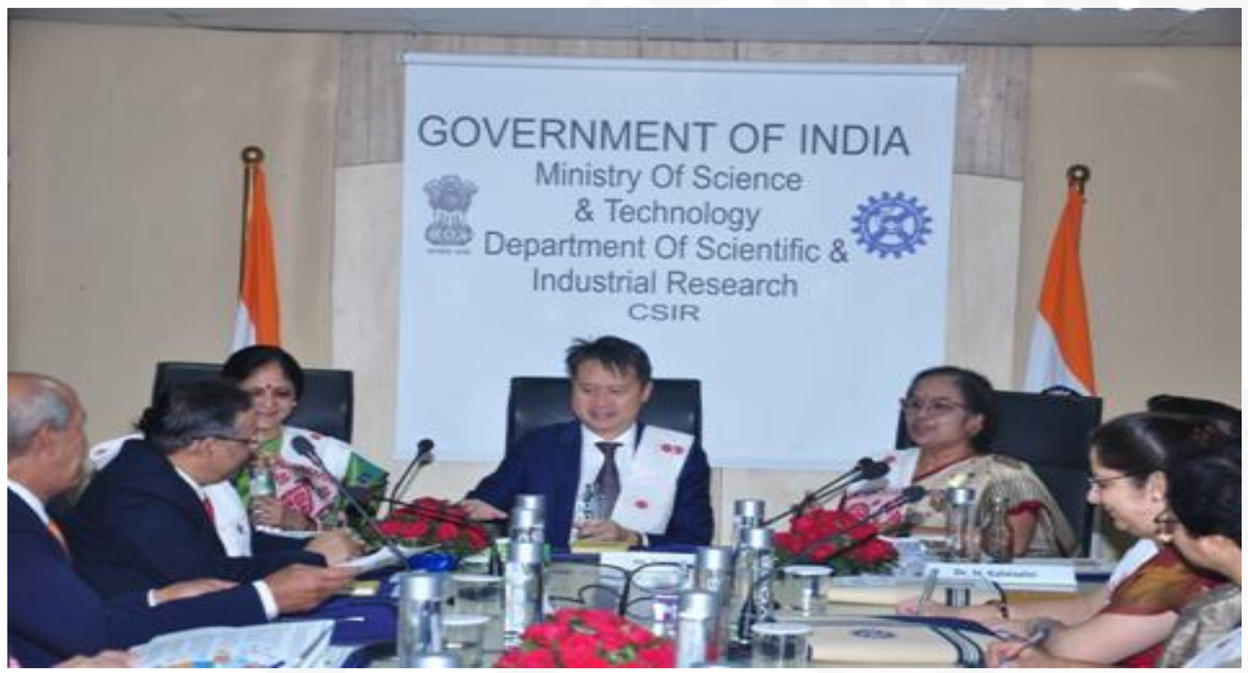
There are multiple cutting- edge studies and peerreviewed research papers that have revealed deep similarities in how brain regulates behaviour in flies and humans. In fact, in a fruit fly, there are nearly 1 lakh neurons (compared to billions in human brain) that provide ideal conditions for research to understand the human brain better.

Published in:
Telangana Today

Director General, WIPO visits CSIR-Traditional Knowledge Digital Library

CSIR-TKDL

12th October , 2023



Mr. Daren Tang, Director General, World Intellectual Property Organization (WIPO) and other distinguished delegates from the WIPO visited the CSIR-Traditional Knowledge Digital Library (TKDL) facility and participated in discussions on the CSIR Innovation System, TKDL, CSIR Technologies, and CSIR's Current IP Strength & Strategy.

The CSIR team was led by Dr. (Mrs.) N. Kalaiselvi, Secretary, DSIR and Director General, CSIR. The distinguished guests included Prof. Unnat P. Pandit, Controller General of Patents, Designs & Trade Marks (CGPDTM), and representatives from the Department for Promotion of Industry and Internal Trade (DPIIT), the office of the CGPDTM, and Ministry of AYUSH.

Speaking on the occasion, Dr. Kalaiselvi elaborated on the proud IP legacy of CSIR, including the IPR policy and strategy. Welcoming Mr. Tang, she said his visit and the discussions would provide further impetus to the innovation ecosystem of the CSIR family. She spoke about the potential for new collaborative efforts between CSIR and WIPO. She also opined that this visit by Mr. Tang and the WIPO delegation would highlight CSIR's S&T capability at the global level.

Mr. Daren Tang elucidated WIPO's vision to bring about more inclusiveness and position it as a powerful catalyst to transform IP system. He said that India's S&T capacity was not new and dated back several 1000 years. He was happy to note the great strides being made by CSIR as a key Indian innovator, and appreciated the organization's activities related to the TKDL, IP targeted at the Sustainable Development Goals (SDGs), Patinformatics and IP Audit. He expressed WIPO's support to CSIR for a meaningful and impactful journey together.

The visit to CSIR-TKDL Unit showcased the various activities related to digitization of ancient Indian texts of traditional medicine namely Ayurveda, Unani, Siddha, and Sowa Ripga, Yoga and the third party submissions to prevent misappropriation of traditional knowledge through wrong grant of intellectual property. The WIPO delegates interacted with the CSIR-TKDL team to understand the interdisciplinary nature of the work and its impact as a one of its kind prior art database of traditional knowledge. Mr. Daren Tang and team WIPO appreciated the work on TKDL and opined that this is a required strategy for the South-South cooperation.

At the exhibition, CSIR showcased its globally benchmarked technologies and potentially game changing technological pursuits in pipeline to the delegates. The DG, WIPO, CGPDTM and team appreciated the activities of the CSIR, stating that the technologies were all objective oriented and supported by a well thought through IP strategy. The DG, WIPO and CGPDTM requested that the details of the showcased CSIR technologies be included in the national IP Compendium being put together by the O/o CGPDTM.

About CSIR-TKDL: Traditional Knowledge Digital Library (TKDL) is a pioneering Indian initiative to prevent exploitation and to protect Indian traditional knowledge from wrongful patents mainly at International Patent Offices. India's rich and time-tested traditional medicinal knowledge which exists in languages such as Sanskrit, Hindi, Arabic, Persian, Urdu, Tamil etc. is neither accessible nor comprehensible for patent examiners at the international patent offices. TKDL contains Indian traditional medicine knowledge available in public

domain and pertains to classical/ traditional texts related to Ayurveda, Unani, Siddha and Sowa Rigpa in a digitized format and is available in five international languages (English, French, German, Spanish and Japanese)

About WIPO: The World Intellectual Property Organization (WIPO) is the global forum for intellectual property (IP) services, policy, information and cooperation. It is a self-funding agency of the United Nations, with 193 member states. WIPO's mission is to lead the development of a balanced and effective international IP system that enables innovation and creativity for the benefit of all. The Organization's mandate, governing bodies and procedures are set out in the WIPO Convention, which established WIPO in 1967. Among other functions, WIPO provides a policy forum to shape international IP rules, provides global services to protect IP across borders and resolve disputes as well as facilitate cooperation and capacity building in all countries.

Published in:
Pib

Inauguration of Chintan Shivir on "CRTDHs Empowering MSMEs" on 13th October 2023 at Delhi Pharmaceutical Sciences & Research

CSIR-IITR, CMERI, IMMT

12th October , 2023

The Department of Scientific and Industrial Research (DSIR) implements a number of programmes to promote R&D by the industries and supports the industrial units to develop state-of-the-art globally competitive technologies of high commercial value, catalyzing faster commercialization of laboratory-scale R&D, augment technology transfer capabilities, enhance the share of technology intensive exports in overall exports, strengthen industrial consultancy and establish a user-friendly information network to facilitate scientific and industrial research in the country.

Micro, Small and Medium Enterprises (MSMEs) play a pivotal role in the overall economy of India by promoting equitable development across the nation. These MSMEs, therefore, need to be sensitized towards translation of public funded R&D into products and processes. Aligning with this goal, DSIR has been implementing Common Research and Technology Development Hubs (CRTDHs) in public-funded institutions having linkages with and proximity to MSME clusters under CRTDH program since the year 2014. So far, 18 CRTDHs established across the country provide state of the art R&D facilities to MSMEs and research institutes for translation of scientific knowledge and ideas into new products and processes. These facilities are being availed by the Micro, Small and Medium Enterprises, innovators and start-ups.

As a part of the "Azadi Ka Amrit Mahotsav" initiative and while traversing the journey towards "Aatmanirbhar Bharat" and to strengthen the interaction between the CRTDHs and MSMEs/Start-ups/innovators, DSIR has planned to organize "Chintan Shivir-CRTDHs Empowering MSMEs" across all the established CRTDHs. These shivirs will serve as platforms for in-depth discussions and engagement with various stakeholders. Four Chintan Shivirs have already been organized by DSIR at IIT Kharagpur, CSIR-IITR, Lucknow, CSIR-CMERI Durgapur and CSIR-IMMT Bhubaneshwar and the fifth one is being organized on

13th October 2023 at Delhi Pharmaceutical Sciences & Research University, New Delhi (DPSRU).

The event will begin with a talk of Prof Ramesh K. Goyal, Vice-Chancellor, DPSRU, New Delhi on vision of DPSRU & DPSRU-CRTDH followed by an inaugural address of Dr N. Kalaiselvi, Secretary, DSIR & Director General, CSIR. The inaugural session will proceed with an overview of Chintan Shivir by Dr. Sujata Chaklanobis, Scientist-G & Head-CRTDH, DSIR along with talks of Prof. (Dr.) Harvinder Popli, Registrar, DPSRU and Prof Geeta Aggarwal, Project Coordinator-CRTDH at DPSRU. The event will also be attended by Dr Vipin C Shukla, Dr Ranjeet Bairwa and Dr Suman Mazumdar from CRTDH scheme division of DSIR along with CRTDH team of DPSRU and DPSRU Innovation and Incubation Foundation team. Representatives from Micro, Small and Medium Enterprises (MSMEs) and start-ups, industry associations will also participate in this event to explore the benefits of CRTDH in their R&D endeavors. After the inaugural session, a visit will be undertaken to various stalls of the exhibition.

The panel discussion will begin on "CRTDH Building a Support System for MSMEs for R&D and Manufacturing" which will be moderated by Dr Vipin C Shukla, Scientist-F & Member Secretary-CRTDH, DSIR. Participants would explore and discuss the challenges confronted by the MSMEs, with a strong emphasis on fostering research and development as tools for problem-solving. The purpose is to generate new ideas, insights, and perspectives that can contribute to the development and implementation of policies, programs and initiatives aligned with the goals of the Government. The Chintan Shivir will provide a platform for these businesses like MSMEs, Start-ups and industries to understand how the resources available at CRTDH can bolster their capacity, enhance productivity, and drive forward innovation in the realm of affordable health solutions. Different sessions will highlight the role of CRTDH in empowering MSMEs and other stakeholders with research infrastructure, technologies, futuristic technologies and current & future opportunities for them in the country.

Overall, the event will aim to tap into the combined wisdom, knowledge, and expertise of Government officials, DPSRU and stakeholders through in-depth discussions, critical analysis, and strategic planning. This will fulfill the goal to brainstorm potential solutions for the challenges that MSMEs, start-ups, and innovators encounter in the country while also leverage opportunities to establish India as a prominent global center for industrial research and manufacturing in affordable healthcare sector.

Published in:
Pib

Awareness cum seed distribution programme organized under CSIR Floriculture Mission

CSIR-IIIM

12th October , 2023

CSIR-Indian Institute of Integrative Medicine Jammu organized an Awareness, Training and Seed Distribution Programme under CSIR Floriculture Mission in coordination with Agriculture Production Department, Udhampur and Reasi here today. The programme was organised under the patronage of Dr Zabeer Ahmed, Director CSIR IIIM Jammu, in which more than 330 participants including farmers and women Self Help Groups of NRLM from districts participated.

Saraf Singh Nag who was Chief Guest at the event informed that district Reasi offers huge scope and opportunities for commercial farming and skill based agri-entrepreneurship.

He appreciated the initiative launched by CSIR IIIM Jammu for the farmers of the UT that envisages increase in their income and livelihood generation through cultivation of commercial floricultural crops and expressed his gratitude to Dr Jitendra Singh, Minister for Science and Technology for his patronage in such initiatives of the Ministry.

Dr Zabeer Ahmed in his address highlighted the achievements and impact of the various societal programmes being implemented by CSIR IIIM and informed that farmers of the region have immensely benefited from the CSIR Missions and technologies like Aroma Mission and Floriculture Mission.

Speaking at the event, Babila Rakwal who was guest of honour appreciated the outreach of the CSIR Floriculture Mission in hilly district of Reasi.

The event was attended by Dr Shahid Rasool, Nodal Scientist CSIR Floriculture Mission, Tejinder Singh Wazir, Member J&K Kisan Advisory Board, Harbans Singh, Chief Agriculture Officer, Reasi, officers of department of Agriculture, Floriculture and SKUAST Jammu.

Published in:
Dailyexcelsior

Netaji market flower waste to be converted into incense

CSIR-NEERI

12th October , 2023

The Nagpur Municipal Corporation in association with National Environmental Engineering Research Institute (NEERI) plans to convert floral waste into incense sticks (agarbatti).

The Netaji Market — the only wholesale flower market in central India — receives about 100 tonnes of flowers from different parts of the country every day. Of this, about 6 tonnes goes waste. NEERI has proposed scientific disposal of this waste by making incense sticks.

Otherwise, the traders handover these discarded flowers to door-to-door garbage collectors, who in turn dump them in the Bhandewadi dumping yard. NMC's solid waste management department confirmed that at present they do not have any process to reuse this flower waste.

As per NEERI's proposal, CRIS-Central Institute of Medicinal and Aromatic Plants (CRIS-CIMAP) will help the NMC set up the incense stick manufacturing plant, which will cost around Rs 6 lakh. CSIR-CIMAP will train the volunteers of NGO named VIBHA in making incense sticks and fragrant cones.

For setting up the incense manufacturing unit, NEERI has asked NMC to lease out about 4,500 sq ft land (out of approx. 80,000 sq ft) in the Netaji flower market for a period of 24 months. The NMC will also be required to provide space and electricity to run the unit.

Currently, there are many small scale industries involved in making incense sticks in the city. Even Bada Tajbagh shrine, situated on Umred Road, and Ganesh Tekdi Trust have started reusing flowers offered by devotees to make incense sticks and dhoops, confirmed an NMC official.

Published in:

Times of India

CSIR delegation visits UCHSS

CSIR-NEIST 12th October , 2023

A delegation from Council of Scientific and Industrial Research (CSIR), led by director of CSIR-NEIST Jorhat, Dr. G. Narahari Sastry, along with senior scientists Dr. Mantu Bhuyan, Dr Kalyani Medhi, and Scientist Twahira Begum, visited Unity Christian Higher Secondary School (UCHSS) on October 10.

A press release UCHSS stated that Dr. Sastry in his address expressed gratitude towards the school and emphasised the importance of pursuing Agricultural Science and Research.

He highlighted shortage of scientists from Nagaland in CSIR, urging students to consider careers in scientific field.

He also encouraged students to maximize use of available resources, nurture talents, and work towards honing their skills.

Published in:
Nagalandpost

CSIR-IHBT

12th October, 2023

किसानों को कार्नेशन की पौध सामग्री वितरित

पालमपुर, 11 अक्तूबर(भृगु): सी.एस.आई.आर.-हिमालय जैवसंपदा प्रौद्योगिकी संस्थान पालमपुर ने सी.एस.आई.आर. फ्लोरीकल्चर मिशन-2 के अंतर्गत सोलन, शिमला, मंडी, हमीरपुर, बिलासपुर, सिरमौर और कांगड़ा जिलों के 150 किसानों को 84 हजार कार्नेशन की पौध सामग्री का वितरण किया। साथ ही दो दिवसीय प्रशिक्षण कार्यक्रम भी आयोजित किया गया। सी.एस.आई.आर.-फ्लोरीकल्चर मिशन एक राष्ट्रव्यापी कार्यक्रम है जिसमें संस्थान पांच राज्यों में फूलों की खेती को बढ़ावा दे रहा है।

विगत अढ़ाई वर्षों में संस्थान ने देश के विभिन्न राज्यों में फूलों की खेती के अंतर्गत 750 हैक्टेयर क्षेत्र को समावेशित किया है जिससे 2500 किसान लाभान्वित हुए हैं। कोविड महामारी के बाद किसानों को इस मिशन से काफी प्रोत्साहन मिला है। इस मिशन के अंतर्गत विभिन्न फल कार्नेशन, गुलदाऊदी, लिलियम, गुलाब, जरबेरा, गैंदा, लाईमोनियम, ग्लाडियोलस व राजनीगंधा आदि की उन्नत पौध सामग्री किसानों को उपलब्ध कारवाई जा रही है।

निदेशक सी.एस.आई.आर.-आई.एच.बी.टी. डा. सुदेश कुमार यादव ने इस अवसर पर कहा कि मिशन के अंतर्गत दी जाने वाली गुणवत्तायुक्त रोपण सामग्री व प्रशिक्षण कार्यक्रम किसानों की आय बढ़ाने में सहायक सिद्ध होगा। मिशन नोडल अधिकारी डा. भव्य भार्गव ने कहा कि तीन वर्षों में संस्थान पांच राज्यों में 500 हैक्टेयर क्षेत्र को कवर करने के लिए गुणवत्तापूर्ण रोपण सामग्री प्रदान करेगा।

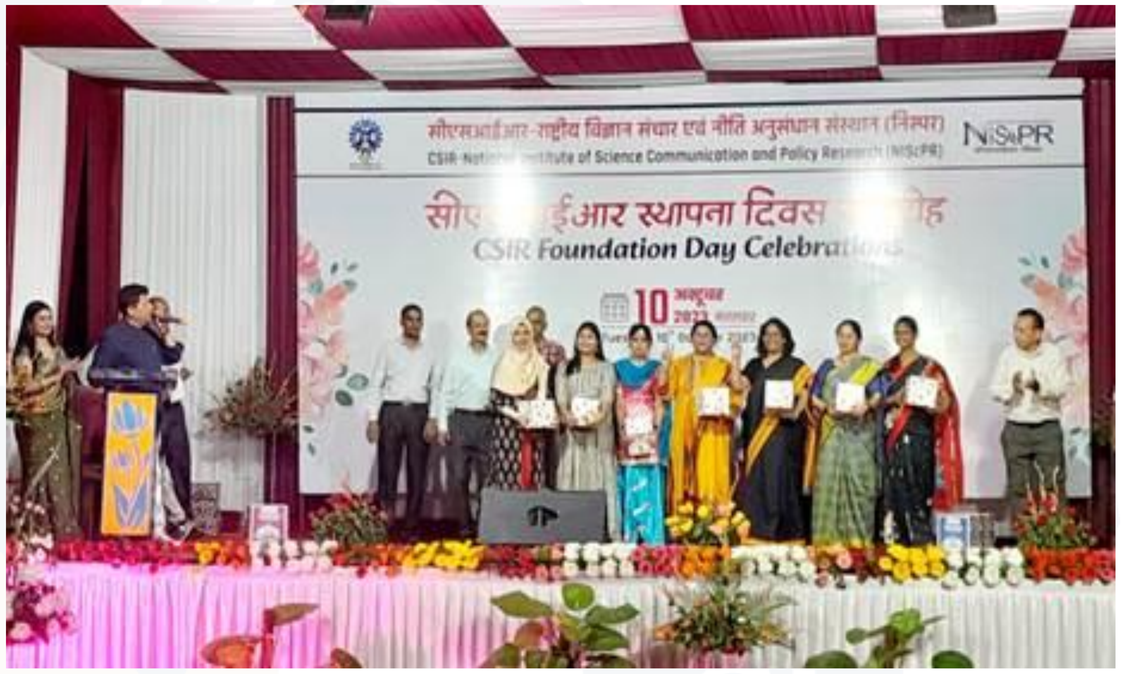
Published in:

Punjab Kesari, Dainik Jagran, Trycity Times

CSIR-NIScPR celebrated 82nd CSIR Foundation Day

CSIR-NIScPR

11th October , 2023



CSIR-NIScPR celebrated 82nd Foundation Day of CSIR on 10th October, 2023 at CSIR-NIScPR campus. Prof Chetan Singh Solanki, Founder, Energy Swaraj Movement and Professor, IIT Bombay, (also known as Solar Man of India) was the Chief Guest on the occasion.

The programme started with the Welcome Address by Prof Ranjana Aggarwal, Director NIScPR. Prof Aggarwal extended a warm welcome to all the attendees, setting the tone for the programme.

She gave an overview the CSIR foundation day and said that this year's foundation day was unique in the sense that all the CSIR laboratories came together on a single platform and showcased their achievements collectively. She highlighted the role played by CSIR laboratories in the technological progress of the country and how they are contributing to an AtmaNirbhar Bharat.

This was followed by the Foundation Day lecture by the Chief Guest, Prof Chetan Singh Solanki. The title of the lecture was Six-Points understanding of Climate Change and

Corrective Actions. Prof Solanki shared his invaluable wisdom on energy conservation with the CSIR-NIScPR family. He said that it is the wrong ways of using and consuming energy which is leading to so problems like Climate Change. He also gave his mantra of using energy judiciously, which he refers to as AMG (Avoid, Minimize and Generate) approach. Avoid one third of energy which we consume unnecessarily or can easily avoid in our homes, Minimize energy wastage by using energy efficient appliances and lastly, Generate one third of energy. This way we can save energy and hence tackle the big problems like Climate Change. The Chief Guest stressed upon the important role played by us as individuals in the whole scheme of energy conservation.

In addition to these distinguished speakers, the event also featured several key activities:

Book Releases: The first ever Biannual Report (2021-2023) of CSIR-NIScPR that showcased CSIR-NIScPR's achievements and contributions to the field of science communication and science policy, was released jointly by the Chief Guest and Director-NIScPR. In addition to this, another publication titled, 'Annual Journey: The magic of migration' by Dr Sukanya Dutta was also released on the occasion.

Felicitation of Retired Employees: The programme was also marked by the felicitation of NIScPR's retired employees, who have been the cornerstone of its success over the years and those who have completed 25 years of the service.

Cultural Programme: A delightful cultural program, featuring performances by the talented students and staff of CSIR-NIScPR captivated the audience with music, dance, and other artistic expressions.

Prize Distribution: To recognize and celebrate the exceptional talent within the CSIR-NIScPR family, the event also included a prize distribution ceremony for the winners of various competitions held in anticipation of this grand occasion.

CSIR Foundation Day is not just a celebration of its past achievements but also a glimpse into a promising future of innovation, excellence and endurance. This event serves as a reminder of the organization's enduring commitment to its mission and values.

CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR), New Delhi came into existence in 2021 with the merger of erstwhile CSIR-National Institute of Science Communication and Information Resources (CSIR-NISCAIR), New Delhi and erstwhile CSIR-National Institute of Science, Technology and Development Studies (CSIR-NISTADS), New Delhi. It is a flagship research institution in India that specializes in the field of science communication and policy studies. The institute publishes several research journals that cover a wide range of topics in science and technology. It also offers academic programmes in science communication and policy research at postgraduate and doctoral levels.

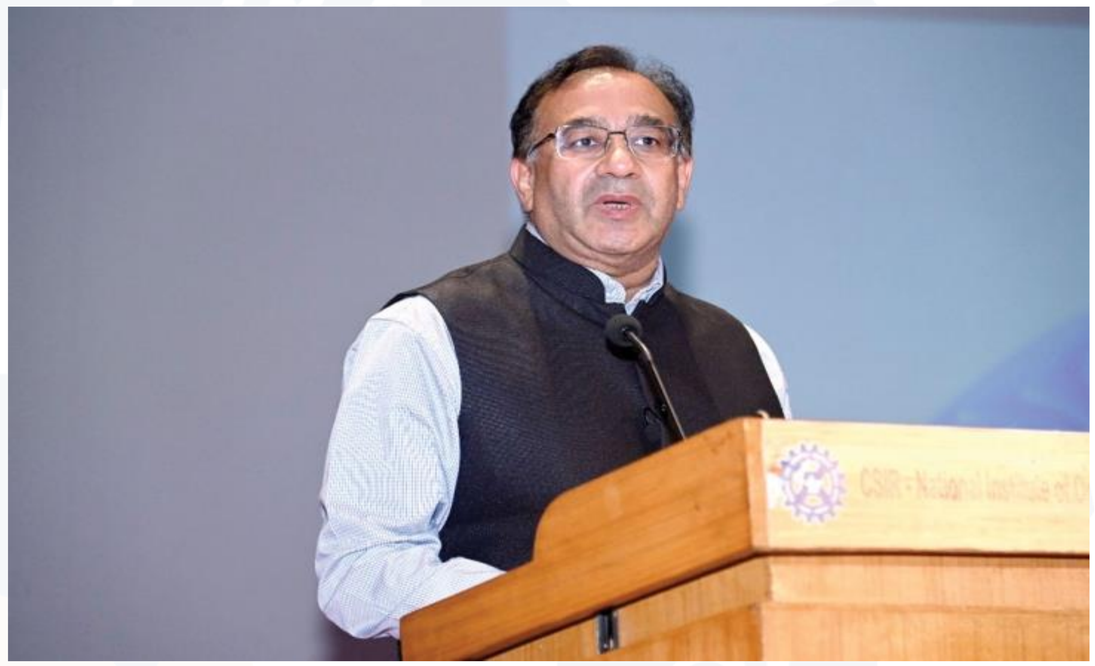
Published in:

Pib

CSIR Foundation Day Lecture unveils new discoveries from Indian Lunar Exploration Missions

CSIR-NIO

11th October , 2023



Director of the National Remote Sensing Centre, ISRO, Hyderabad, Dr Prakash Chauhan highlighted the critical milestones achieved, including the successful launch of Chandrayaan-1 in October 2008, which paved the way for in-depth scientific exploration of the Moon. Dr Chauhan delivered the CSIR Foundation Day public lecture titled "Exploration of Moon: New Insights from Indian Lunar Exploration Missions," which captivated the audience at the CSIR-NIO auditorium, Dona Paula.

Dr Chauhan said the mission carried 11 instruments to investigate mineral distribution, detect ice at polarregions, map elemental distribution, and characterise the Moon's radiation environment.

Chandrayaan-1 yielded groundbreaking discoveries, with the most notable being the revelation of an active hydrosphere in the polar regions of the Moon, reshaping our understanding of Earth's celestial neighbour. Building on this success, Indian Space Research Organisation (ISRO) initiated the Chandrayaan-2 mission, which entered lunar orbit following its triumphant launch on July 22, 2019. Most recently, Chandrayaan-3 successfully landed on the Moon's South Pole, with both the Vikram Lander and Pragyan rover conducting experiments to detect water and analyse various geophysical parameters, he said.

Dr Chauhan's lecture provided an in-depth exploration of the presence of hydration on the Moon and surface geology, unveiling a wealth of new information that will undoubtedly shape future lunar research endeavours.

Dr Chauhan, a distinguished scientist renowned for his contributions to Earth Observation applications, shared his extensive knowledge, emphasising his pioneering work in ocean color parameter retrieval, marine resource assessment, and climate response using space-borne observations. His remarkable achievements also extend to leading the use of hyper-spectral satellite data for Indian Planetary Missions such as Chandrayaan-2 and Chandrayaan-1, including his role as the Principal Investigator for the Infrared Imaging Spectrometer (IIRS) instrument on Chandrayaan-2.

The lecture shed light on India's ongoing Lunar Exploration Programme, a series of ambitious outer space missions executed by the ISRO. Director of NIO Prof Sunil Kumar Singh, welcomed and later CSIR-NIO chief scientist Dr Sanil Kumar proposed a vote of thanks.

Published in:
Herald Goa

NEERI to test water, soil in Ytl's kidney failure hub

CSIR-NEERI

11th October , 2023

Probing the cause of high incidence of kidney ailments in Asola village, Yavatmal district health department will be sending water and soil samples of the area to National Environmental Engineering Research Institute (NEERI) in the city. NEERI will be testing the samples for the presence of pesticides and fertilizers residue.

In medical jargon these cases are termed as chronic kidney disorder of unknown etiology (CKDu). In layman's language it is a type of chronic kidney disease — causes of which are not known — that mainly affects marginalized agricultural communities in specific areas. The known causes of kidney failure like blood pressure and diabetes are not found in CKDu patients.

Pesticides and fertilizer residue in water and soil can also be the likely cause of kidney failures. "These tests can only be done at NEERI, while the health department is checking other parameters," Dr Prahalad Chavan, Yavatmal district health officer, said.

After a meeting over Asola cases, Yavatmal collector Dr Pankaj Ashiya directed the samples from the area to be sent to NEERI, added Chavan. Water from Asola is tested twice a year for turbidity, presence of fluoride, nitrites and other impurities. All these were found to be within the acceptable levels. However, these are general tests, and a specialized investigation needs to be done by NEERI, said source.

Asola has been in the news for a high number of kidney related cases and deaths. The Nagpur branch of Nephrology Society initiated screening, which also involves taking blood samples, of 7,000 residents of Asola and four other villages. The villages are at a substantial distance from each other. So far 3,000 samples have been collected, as the health professionals are facing non-cooperation from the locals, said sources.

So far, the highest number of persons with high serum creatinine have been found in Asola only. Health officials, requesting to not divulge the exact figures, said that it is enough to cause concern. The problem appears to be Asola centric. High serum creatinine is one of the parameters of an unhealthy kidney. Now, the Nephrology Society has proposed to carry out renal biopsy of some patients.

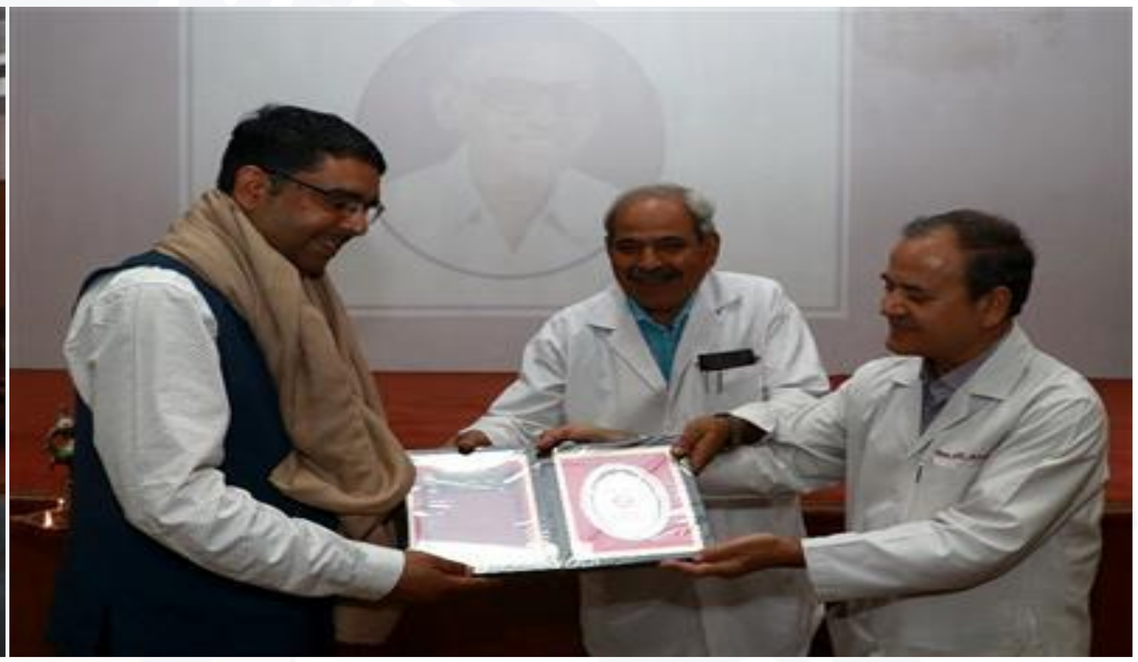
Dr Monali Sahu, president of society's Nagpur branch, said that a biopsy report will help in getting a better understanding of the cause. However, the sample size taken for biopsy should not be a handful, she said.

Published in:
Times of India

Dr. Sanjeev Khosla, Director, IMTECH delivered 12th Prof. R. N. Chakravarti Memorial Oration in PGIMER, Chandigarh

CSIR-IMTECH

11th October , 2023



11.10.23-The Department of Experimental Medicine and Biotechnology, PGIMER, Chandigarh, successfully conducted 12th Prof. R. N. Chakravarti Memorial Oration on October 11, 2023 in a hybrid mode. The venue of the oration was at LT-1, Nehru Hospital, PGIMER, Chandigarh. This year the oration lecture was delivered by distinguished Dr. Sanjeev Khosla, Director, IMTECH, Chandigarh, on "Learning Epigenetic regulation from host-microbe interaction." The oration was introduced by Prof. Naresh Panda, Dean (Academics), PGIMER, Chandigarh, while the speaker was introduced by Prof. Sujata Ghosh, Head of Department of Experimental Medicine and Biotechnology. Dr. Sanjeev Khosla talked about host-pathogen relationship and how both use their repertoire of proteins to modulate each other through epigenetic modifications. Dr. Khosla's talk focused on a novel host defense mechanism utilizing host epigenetic effector protein (SUV39H1) which interferes with the ability of Mycobacterium tuberculosis in formation of biofilms. The vote of thanks was given by Prof. R. K. Ratho, Sub-Dean (Academics & Research). The oration was attended by Emeritus professors, esteemed guests, other faculty members, staff members and students of different departments of the institute.

Published in:

Indianewscalling

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