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

Now, a bio-drug derived from turmeric to treat cancer

CSIR-CCMB, NCL

20th January, 2022

CSIR-CCMB and CSIR-NCL in collaboration

CSIR-Centre for Cellular & Molecular Biology (CCMB) scientists in collaboration with CSIR-National Chemical Laboratory (NCL) announced on Thursday that they have made progress towards developing a non-toxic bio-drug derived from turmeric through a 'gene silencing approach' to treat cancer.

Promising tool

'RNA interference (RNAi)' is a gene silencing approach and a promising tool for targeted and focused therapy for chronic diseases like cancer. The lack of safe and effective delivery methods for RNAi molecules is one of the key challenges against using RNAi-based therapy in biological systems.

CCMB's Dr. Lekha Dinesh Kumar and her group in collaboration with NCL's polymer science and engineering division have developed nano-curcumin structures (derived from turmeric) to encapsulate the RNAi and other molecules that aid in targeting specific tissues.

The proposed bio-drug is bio-compatible with a higher uptake efficiency, and shows effective site-specific delivery with regression of tumors in two different mouse models of colon and breast cancer. "The use of curcumin, a well-known nutraceutical with high anti-cancer and anti-inflammatory properties with RNAi, showed tumor retardation with six months survival in aggressive models of colon and breast cancer," says Dr. Kumar.

Cancer is one of the leading causes of death worldwide and the quest to find plausible therapeutic interventions to replace non-specific chemo drugs has been leading to the development of novel strategies to combat cancer. This work has been published in the journal 'Nanoscale'.

In another study with the School of Nanosciences, Central University, Gujarat and Centre for Advanced Materials and Industrial Chemistry, RMIT Australia, they designed an eco-friendly and pH-responsive dietary fibre inulin-based nanodevice to target colon cancer.

This device suggests the possibility of substituting synthetic substances with natural compounds in bio-drug formulations for better bio-degradability, tissue accumulation, and lesser toxicity. The results from this work have been published in the journal 'Nanomedicine', said an official release.

"We have demonstrated that RNAi combined with appropriate targeting agents and encapsulations made of natural biomaterials have high translational capacity in mice models of cancer. This group of bio-drugs can revolutionize cancer therapeutics. But, it should be assessed in other cancer model systems to bring out the utility of these therapeutics in the clinical trials," she added.

Published in:
The Hindu

CSIR-CSMCRI

20th January, 2022

Jigyasa outreach program conducted at CSMCRI, Bhavnagar

સેન્ટ્રલ સોલ્ટ દ્વારા સૌર ઊર્જા વિષે વેબિનાર યોજાયો

વૈશ્વિક આબોહવાની ખતરનાક સ્થિતિમાં સૌર ઊર્જા આશીર્વાદરૂપ

ભાવનગર | 19 જાન્યુઆરી

આપણી દૈનિક પ્રવૃત્તિઓમાં ઊર્જા જીવનનો એક આવશ્યક અને મહત્વપૂર્ણ ભાગ છે અને વિવિધ પ્રકારની ઊર્જા માનવ જીવનને નોંધપાત્ર અસર કરે છે. ઊર્જાના ઘટતા પરંપરાગત સ્ત્રોતો અને ખતરનાક વૈશ્વિક આબોહવાની પરિસ્થિતિઓને કારણે નવીનીકરણીય ઊર્જાનો ઉપયોગ વેગ પકડી રહ્યો છે. સૌર તાપીય ઊર્જા જીવનના ઘણા ક્ષેત્રોમાં ઊર્જાની માંગને પહોંચી વળવા માટે સ્વચ્છ અને ટકાઉ ઊર્જા તરીકે ઉભરી રહી છે. સૌર ઊર્જાનો ઉપયોગ બે સ્વરૂપોમાં કરી શકાય છે તેમ આજે ભાવનગરની સીએસઆઈઆર-સેન્ટ્રલ સોલ્ટ એન્ડ મરીન કેમિકલ્સ રિસર્ચ ઈન્સ્ટિટ્યૂટ દ્વારા આયોજિત વેબિનાર ' સૌર ઊર્જાઃ એક નવીનીકરણીય સ્ત્રોત 'માં સંબોધન કરતા મુખ્ય વક્તા અને CSIR-CSMCRI ના વરિષ્ઠ વૈજ્ઞાનિક ભૂપેન્દ્ર કુમાર મરકમે જણાવ્યું હતુ.

CSIR- જિજ્ઞાસા-વિજ્ઞાન જ્યોતિ કાર્યક્રમ હેઠળ આ સેમિનારનું આયોજન કરવામાં આવ્યું હતું. કાર્યક્રમનો આરંભ જવાહર નવોદય વિદ્યાલય, દિવ અને વિજ્ઞાનના જ્યોતિ પ્રોજેક્ટના તપાસકર્તા ઉમેશ કુમાર દ્વારા કરવામાં આવ્યો હતો. ડો. ડુંગર રામ ચૌધરી(વરિષ્ઠ વૈજ્ઞાનિક અને CSIR-જિજ્ઞાસા પ્રોજેક્ટ તપાસક) એ તમામ જવાહર નવોદય વિદ્યાલયોના આચાર્યો, વિજ્ઞાન જ્યોતિ પ્રોજેક્ટના તપાસકર્તાઓ, શિક્ષકો અને વિદ્યાર્થીઓનું સ્વાગત કર્યું હતું. આ કાર્યક્રમના મુખ્ય વક્તા ભૂપેન્દ્ર કુમાર મરકમે વિદ્યાર્થીઓને સૌર ઊર્જા સ્ત્રોતોના દૈનિક ઉપયોગો વિશે માહિતી આપી હતી. પ્રથમ સીધો ઉપયોગ ઇલેક્ટ્રિકલ એનર્જી જેવી સોલાર પીવી પેનલ્સની મદદથી થાય છે, અને બીજું, પાણીને સૂકવવા, રાંધવા અને ડિસ્ટિલેશન જેવા કામો માટે સૌર તાપીય ઉર્જાનો ઉપયોગ કરીને. વિદ્યાર્થીઓએ જિજ્ઞાસા મુજબ પ્રશ્નો પૂછ્યા હતા, જેને ભૂપેન્દ્ર કુમાર મરકમે ખૂબ જ રસપ્રદ રીતે સંબોધ્યા હતા. આ કાર્યક્રમમાં જવાહર નવોદય વિદ્યાલય (દિવ), કેન્દ્રીય વિદ્યાલય, દિવ અને સરકારી ઉચ્ચ મધ્યમ શાળા, દિવના વિદ્યાર્થીઓએ ભાગ લીધો હતો.

Published in:

Saurashtra Samachar, Sandesh

RITES signs MoUs with CSIR-CRRI, IIT-R to explore opportunities in infrastructure sector

CSIR-CRRI 19th January, 2022

RITES entered into a Memorandum of Understanding (MoU) with CSIR-Central Road Research Institute (CRRI) to explore opportunities for cooperation in the infrastructure sector.

Under this agreement, RITES and CSIR-CRRI will collaborate for technical services, including consultancy assignments, knowledge sharing, and research & development etc. The partnership foresees the development of innovative and sustainable solutions that will drive the sector forward and can deliver significant value to associated stakeholders.

In a separate announcement, RITES, also collaborated with the Indian Institute of Technology, Roorkee (IIT-R) to enter into a memorandum of understanding (MoU) to explore viable business opportunities in the infrastructure sector.

As per the exchange filing, under this agreement, RITES and IIT-R will collaborate for knowledge sharing, research and development and technical services, including consultancy assignments etc. The partnership intends to bring in best practices by leveraging each other's expertise and to push the vision of building sustainable and robust infrastructure in the country and abroad. RITES' consolidated net profit rose 30.41% to Rs 168.97 crore on a 72.06% increase in net sales to Rs 755.18 crore in Q2 FY22 over Q2 FY21.

Shares of RITES rose 0.60% to Rs 269.30 on BSE. RITES is a Miniratna (Category - I) schedule 'A' public sector enterprise and a leading player in the transport consultancy and engineering sector in India, having diversified services and geographical reach. As of 30 September 2021, the Government of India held 72.2% stake in the company.

Published in:
Business Standard

CSIR team develops tech to address perchlorate contamination of water

CSIR-NIIST

18th January, 2022

Sets up demonstration plant in Ernakulam district along with NIIST

A team of researchers at the National Institute CSIR-National Institute for Interdisciplinary Science and Technology (NIIST) here has developed a process (patent filed) to address the issue of perchlorate contamination of water sources in the country.

Led by Krishnakumar B, Senior Principal Scientist in the Environmental Technology Division at the CSIR-NIIST, Thiruvananthapuram, the team is implementing the technology at a contaminated site in Keezhmad panchayat in Aluva in Ernakulam district.

Jal Jeevan Mission funds

Fully funded by the Jal Jeevan Mission, Ministry of Jal Shakti, Government of India, the project oversees purging of the perchlorate contaminated water from one of the abandoned (closed) wells to be treated to a potable quality level, an official spokesman said.

The demonstration plant can generate around 2,000 litres of potable water and will be operated at the site initially for a period of three months. The capital cost is ₹3 lakh, and the cost of production of pure water at 20 paise per litre (including operator charge).

Being a strong oxidising agent, perchlorate salts are widely used in the strategic sector, space research and development units and many industries including crackers and matchbox making.

First reported event

Severe contamination of groundwater, as well as surface water sources, has been observed around places where perchlorate salts are handled in bulk. The public health concern arises from perchlorate's penchant to interfere with the normal functioning of the thyroid gland.

Studies conducted by CSIR-NIIST from 2009 to 2015 had revealed high levels of perchlorate in well water samples around the Ammonium Perchlorate Experimental plant in Aluva. It was the first report of high levels of perchlorate in drinking water samples in the country.

Keezhmad and Edathala were the affected panchayats. Perchlorate level of up to 45,000 micrograms per litre was observed in the community wells in the Kulakkad region of Keezhmad panchayat, the spokesman said.

Wells decommissioned

Subsequent studies by the State Health Department revealed elevated TSH levels (indicating hypothyroidism) among those who took perchlorate contaminated well water in Keezhmad. Three of the highly contaminated community wells there had to be decommissioned.

Recent studies by CSIR-NIIST (July, 2021) found that even after 10 years, the level of perchlorate in the closed community wells was assessed at 9,090- to 1,490 micrograms per litre, several magnitudes higher than the existing WHO guidelines.

The perchlorate anion is highly stable in water and is difficult to remove using conventional water treatment technologies. CSIR-NIIST's hybrid process (bio-physical) for treating perchlorate contaminated water is now emerging as a sustainable solution to the issue.

UF, RO processes

In this process, toxic perchlorate contaminated water will be initially treated in a bio-reactor with a specially developed bacterial system that detoxifies (degrade) the toxic perchlorate into non-toxic chloride and oxygen, the spokesman explained.

The bioreactor-treated water will be passed through a combination of custom-designed ultrafiltration (UF) and reverse osmosis (RO) units for removing any residual contaminants. The rejects from UF and RO are also treated in the bioreactor leaving hardly any discharge.

The installation and operation of the treatment plant will ensure support and co-operation of the Keezhmad grama panchayat and residents of Kulakkad colony, the spokesman pointed out.

Decontaminating soil

Research at CSIR-NIIST on perchlorate assessment and remediation for the last 12 years has also developed a process for decontaminating soil and other matrices. Contaminated soil at perchlorate bulk handling sites also is a major contributor to groundwater contamination.

NIIST has developed an ex-situ remediation approach that has many advantages compared to existing methods practised abroad. Perchlorate handling sites can adopt these remedial approaches to avoid environmental contamination and a public health hazard.

Published in:
The Hindu Businessline

Novel genetic risk factors cause heart failures in India: CCMB

CSIR-CCMB

18th January, 2022

Scientists have found the genetic mutation responsible for dilated cardiomyopathy

The incidence of cardiovascular diseases and resultant deaths in India is among the highest in the world. Heart failures are quite common in conditions like severe cardiomyopathy -- one of the several cardiovascular disease. The heart is unable to pump blood normally as this condition changes the integral structure of the heart muscle, leading to cardiac arrest, causing death.

Scientists at the Centre for Cellular and Molecular Biology (CCMB) have found that novel genetic mutations are responsible for this condition. A team of CCMB scientists, led by K Thangaraj, have found novel genetic mutations in the beta myosin heavy chain gene (β-MYH7) gene are responsible for causing dilated cardiomyopathy among Indians. This gene is one of the major genes that are found to be causing cardiac diseases globally.

"However, not many genetic studies were carried out in Indian cardiomyopathy patients. Hence, we sequenced β-MYH7 gene of 137 dilated cardiomyopathy patients along with 167 ethnically matched healthy controls to identify the mutation(s), if any, that are associated with dilated cardiomyopathy in Indian patients," K Thangaraj, senior author of this study and presently Director, Centre for DNA Fingerprinting and Diagnostics (CDFD), said.

These findings have been published in the Canadian Journal of Cardiology last week. "Our study revealed 27 variations, of which 7 mutations were novel, and were detected exclusively in Indian dilated cardiomyopathy patients," he said.

"We for first time demonstrated how these mutations uniquely disrupt a critical network of non-bonding interactions at the molecular level, and may contribute to the development of

disease phenotype," Deepa Selvi Rani, the lead author of this study, said. "This study can help in developing gene editing methods that may rescue cardiac contractility of failing hearts among Indians with the novel mutations," Vinay Kumar Nandicoori, Director of CCMB, said in a statement.

Published in:
The Hindu Businessline

Union Minister Dr Jitendra Singh says, CSIR's newly developed Disinfection technology is being installed to combat pandemic in railway coaches, AC buses, closed spaces etc.

CSIR-CSIO

17th January, 2022

Union Minister of State (Independent Charge) Science & Technology; Minister of State (Independent Charge) Earth Sciences; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr Jitendra Singh today said here today that CSIR's newly developed Disinfection technology is being installed to combat pandemic in railway coaches, AC buses, closed spaces etc.

The Minister informed that the UV-C technology developed by the Ministry of Science & Technology through CSIR-CSIO (Central Scientific Instruments Organisation) is totally effective for mitigation of airborne transmission of SARS-COV-2 and will also remain relevant in post-COVID era. The technology has been successfully tried in Railways, AC Buses and even the Parliament House and is now open for general roll-out for use by common masses, he said.

Dr Jitendra Singh was speaking after releasing the CSIR Guidelines on Disinfection Technologies for Mitigation of SARS-CoV-2 Transmission. However, Dr Jitendra Singh cautioned that even after installation of this disinfection technology, everybody is advised to strictly adhere to COVID appropriate behavior including use of Face Mask, maintaining social distance, avoiding crowds etc.

Dr Jitendra Singh said, the technology has been developed according to the requirements for deactivation of SARS COV-2 virus contained in an aerosol with necessary ventilation

measures, necessary safety and user guidelines and tested Bio-safety standards etc. UV-C deactivates viruses, bacteria, fungus and other bio - aerosols etc. with appropriate dosages using 254nm UV light.

Dr Jitendra Singh said that CSIR will write to Election Commission of India for use of this technology during indoor meetings with limited capacity for the ensuing Assembly polls in 5 States in the wake of ban on physical rallies and roadshows for a specified period of time. He said, UV-C air duct disinfection system can be used in auditoriums, large conference rooms, class-rooms, malls etc. which provides a relatively safer environment for indoor activities in the current pandemic.

It may be recalled that the Election Commission has recently allowed indoor meetings in poll-bound States with a maximum capacity of 300 people or 50 percent capacity of the hall or auditorium, while adhering to the model code of conduct and COVID protocols during electioneering.

Dr Jitendra Singh informed that the technology meant for mitigation of airborne transmission of SARS-COV-2 was installed in the Central Hall, Lok Sabha Chamber and Committee Rooms 62 and 63 in July, last year ahead of the Monsoon session of Parliament. The Minister said, he will write to Secretary General of Rajya Sabha for installation of this technology ahead of the upcoming Budget Session.

The Minister commented on the legacy of CSIR in scientific pursuit and urged the scientists to highlight the role played by the organisation in different segments of the day-to-day life of the common man. CSIR enjoys a unique status globally in the field of science and technology, he added.

Secretary, Ministry of Housing and Urban Affairs (MoHUA) Shri Manoj Joshi said on the occasion that CPWD will work along with CSIR for wider dissemination and adoption of UV-C air duct disinfection system in Government and Private Buildings.

A.K Malhotra, Executive Director, Railway Board informed that the UV-C Disinfection Technology has been successfully tested for one month in Railways coaches from Bandra to Chandigarh covering a distance of 1000 kilometres. He said RDSO (Research Designs and Standards Organisation), Lucknow has recommended for the use of this technology in all Railways coaches in a phased manner.

Shri Amit Varadan, Joint Secretary, Ministry of Road Transport & Highways said that the UV technology was successfully used in AC Buses of Uttar Pradesh State Road Transport Corporation (UPSRTC) and informed that his Ministry is eager to carry forward for all Passenger Transport Vehicles.

DG, CSIR, Shri Shekhar C Mande, Dr Rajesh Gokhale and senior officials of CSIR Labs across the country joined the event in Hybrid Mode.

Published in:
Pib

Covid-19 disinfectant technology developed by CSIO being installed in Parliament, rail coaches, enclosed spaces

CSIR-CSIO

17th January, 2022

Technology developed recently by the Central Scientific Instruments Organisation (CSIO), Chandigarh, is being installed to combat the Covid-19 pandemic in railway coaches, air conditioned buses and other indoor spaces, including Parliamnt and election campaign-related meetings.

The Ultraviolet (UV-C) based technology developed by CSIO under the aegis of the Council of Scientific and Industrial research (CSIR) is said to be effective for mitigation of airborne transmission of SARS-COV-2 and will also remain relevant in post-Covid era.

The technology has been successfully tried in railways, buses and even in the Parliament House, and is now open for general roll-out for use by the common masses, according to a statement issued by the Science and Technology, today.

The Railways had carried out trials of the technology for a month in coaches on the Bandra to Chandigarh route, covering a distance of 1,000 km. Railway's Research Designs and Standards Organisation, Lucknow, has recommended its use in all Railways coaches in a phased manner.

The technology has been developed according to the requirements for deactivation of SARS COV-2 virus contained in an aerosol with necessary ventilation measures, necessary safety and user guidelines and tested bio-safety standards. UV-C deactivates viruses, bacteria, fungus and other bio-aerosols with appropriate dosages of 254nm UV light, the statement added.

It uses UV lights installed in the air conditioning and ventilation ducts to kill the virus and bacteria present in re-circulated air and is suitable for installation in auditoriums, conference halls, classrooms, malls and offices.

Speaking virtually after releasing the CSIR Guidelines on Disinfection Technologies for Mitigation of SARS-CoV-2 Transmission, Dr Jitendra Singh, Minister of State for Science and Technology; Earth Sciences; PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, said that that CSIR will write to the Election Commission of India for use of this technology during indoor meetings with limited capacity during the ensuing state assembly elections in five states as the commission has imposed a ban on physical rallies and road shows for a specific period.

The Commission had, however, recently allowed indoor meetings in the poll-bound states with a maximum attendance of 300 persons or 50 percent capacity of the hall or auditorium, subject to adherence to other Covid protocols.

The technology was installed in the Central Hall, Lok Sabha Chamber and two committee rooms of Parliament in July last year ahead of the monsoon session. Dr Jitendra said that he will take up a case to with the Secretary General of Rajya Sabha for installation of this technology ahead of the upcoming budget session.

Installation of this technology notwithstanding, strict adhere to Covid protocols, including the use of face mask, maintaining social distance, avoiding crowds maintai9ning personal hygiene and use of hand sanitisers has been highly recommended to check the spread Covid.

Published in:
Tribune India

Online faculty development programme begins

CSIR-CECRI 17th January, 2022

It is essential for faculty members to update their knowledge with cutting edge tools and techniques to motivate younger minds towards science and technology, said N. Kalaiselvi, Director, CSIR – CECRI, here on Monday.

She was presiding over a five-day online Faculty Development Programme (FDP) organised by the Departments of Physics, Biotechnology and Microbiology & CLT of Dr. Umayal Ramanathan College for Women (URCW) in association with CSIR – CECRI, Karaikudi, on 'Tools and Techniques in Characterization of Compounds.'

S. Jeyashree, Principal, URCW, welcomed the gathering.

S. M. Rajendran, Senior Principal Scientist, Principal Investigator, CSIR-Integrated Skill Initiative CSIR- CECRI, briefed about the FDP. On the first day, D. Vasudevan, Scientist, CSIR – CECRI, handled chromatography techniques.

S. Radhakrishnan, Chief Scientist & Head, CIF, CSIR-CECRI, J. Jeyakanthan, Professor & Head, Department of Bioinformatics, Alagappa University, K. Jeyadheepan, Assistant Professor, School of Electrical & Electronics Engineering, Sastra Deemed University, Thanjavur, would enlighten the participants in instrumentation and data interpretation of various sophisticated structural, morphological and spectroscopic techniques. Nearly, 700 participants from all over India have registered for the FDP

Published in:
The Hindu

CSIR-CEERI

17th January, 2022

रोग निदान एवं उपचार में एआई और जिनोमिक्स अत्यंत महत्वपूर्ण - डॉ अनुराग अग्रवाल

सीएसआईआर-सीरी द्वारा जिज्ञासा विज्ञान महोत्सव 2022 के अंतर्गत बूट कैंप का आयोजन

पिलानी। सीएसआईआर-सीरी में जिज्ञासा विज्ञान महोत्सव 2022 के अंतर्गत वेबिनार का आयोजन किया गया। वेबिनार में सुप्रसिद्ध जिनोम वैज्ञानिक डॉ अनुराग अग्रवाल का आमंत्रित व्याख्यान आयोजित किया गया। सीएसआईआर की नई दिल्ली स्थित राष्ट्रीय अनुसंधान प्रयोगशाला - जिनोमिकी एवं समवेत जीवविज्ञान संस्थान (आईजीआईबी), के डॉ अनुराग अग्रवाल ने नॉट सो एलिमेन्ट्री = एआई एंड हेल्थ विषय पर अपना महत्वपूर्ण व्याख्यान दिया। वेबिनार के माध्यम से डॉ अनुराग अग्रवाल ने छात्र-छात्राओं व संस्थान के वैज्ञानिकों एवं अन्य सहकर्मियों को संबोधित किया। अपने आमंत्रित व्याख्यान में डॉ अनुराग ने श्रोताओं को रोगों के निदान व उपचार में ए आई और जिनोमिक्स के महत्व को रेखांकित करते हुए बताया कि कोविड के शुरुआती दौर में जब अल्फा वेरिएंट अपने पैर पसार रहा था, उस समय सीएसआईआर-सीरी की टीम ने आईजीआईबी व अन्य सीएसआईआर प्रयोगशालाओं की टीमों के साथ मिलकर ए आई मॉडल का उपयोग करते हुए सीने की एक्स-रे इमेज से कोरोना का लिंक स्थापित करने में महत्वपूर्ण भूमिका निभाई। उन्होंने प्रतिभागियों को संबोधित करते हुए कहा कि आज की आर्टिफीशियल इंटेलिजेन्स अपने आरंभिक दौर से बहुत विकसित हो चुकी है परंतु अभी भी इसमें विकास की असीमित संभावनाएँ हैं।

वेबिनार की अध्यक्षता सीएसआईआर-सीरी, पिलानी के निदेशक डॉ पी सी पंचारिया ने की। अपने स्वागत उद्बोधन में उन्होंने डॉ अनुराग को देश में जिनोमिक्स के क्षेत्र में प्रमुख हस्ताक्षर बताया। डॉ पंचारिया ने कहा कि डॉ अनुराग अग्रवाल देश में जिनोम सीक्वेंसिंग के सर्वश्रेष्ठ वैज्ञानिक हैं। उन्होंने आशा व्यक्त की कि सभी श्रोता डॉ अनुराग के व्याख्यान से लाभान्वित होंगे।वेबिनार का संचालन करते हुए बूट कैंप के मेन्टर ऑफ चेंज श्री प्रमोद कुमार तँवर, प्रधान वैज्ञानिक ने डॉ अनुराग अग्रवाल का औपचारिक परिचय दिया। उन्होंने बताया कि देश की किशोर जनशक्ति को वैज्ञानिक नवाचार की ओर आकर्षित करने और उद्यमिता (एन्टरप्रिन्योरशिप) के लिए प्रेरित व प्रोत्साहित करना ही ऐसे कार्यक्रमों का उद्देश्य है। व्याख्यान के उपरांत छात्रों के लिए वैज्ञानिक क्विज़ का भी आयोजन किया गया जिसमें विद्यार्थियों से ए आई, स्वास्थ्य और सामान्य विज्ञान संबंधी विषयों पर प्रश्न पूछे गए। क्विज़ का संचालन संस्थान के वरिष्ठ वैज्ञानिक डॉ गौरव पुरोहित ने किया।इससे पूर्व मुख्य वैज्ञानिक एवं कौशल विकास कार्यक्रम के प्रमुख डॉ अभिजीत कर्माकर ने बूट कैंप की पृष्ठभूमि से अवगत कराते हुए कहा कि जिज्ञासा विज्ञान महोत्सव 2022 के अंतर्गत बूट कैंप का आयोजन आजादी का अमृत महोत्सव के एक भाग के रूप में किया जा रहा है। मीडिया को जानकारी देते हुए संस्थान के निदेशक डॉ कर्माकर ने बताया कि अटल इनोवेशन और जिज्ञासा मिशन के अंतर्गत सीएसआईआर प्रयोगशालाओं के वैज्ञानिक अटल टिंकरिंग लैब्स को मेन्टर कर रहे हैं और झुंझुनूँ के चयनित विद्यालयों के लिए संस्थान के प्रधान वैज्ञानिक प्रमोद तँवर 'मेन्टर ऑफ चेंज' हैं जो ऑनलाइन माध्यम से विद्यार्थियों का मार्गदर्शन कर रहे हैं। अटल इनोवेशन मिशन द्वारा छात्रों के लिए यूट्यूब के माध्यम से वेबिनार की श्रृंखला आयोजित की जा रही है। कार्यक्रम के माध्यम से देश की युवा प्रतिभाओं को न केवल श्रेष्ठ वैज्ञानिकों एवं उद्योग जगत के विशेषज्ञों से संवाद का अवसर उपलब्ध कराया जा रहा है अपितु उन्हें नवीनतम तकनीकों को सीखने व समझने का शानदार अवसर भी प्राप्त हो रहा है। उन्होंने बताया कि बूट कैंप में प्रतिभागिता करने वाले पंजीकृत विद्यार्थियों को प्रतिभागिता प्रमाणपत्र भी प्रदान किए जाएँगे। अंत में डॉ अभिजीत कर्माकर, मुख्य वैज्ञानिक ने धन्यवाद ज्ञापित किया।

Published in:

Mridul Patrika, Dainik Bhaskar

Purple revolution J&K's gift to StartUp India: Dr Jitendra Singh

CSIR-IIIM, IHBT, CIMAP, NBRI, NEIST 16th January, 2022

New Delhi: Union Minister of State in PMO Dr Jitendra Singh on Sunday said that "Purple revolution" was Jammu & Kashmir's gift to "StartUp India", an initiative that was launched by the Prime Minister Narendra Modi in 2016.

On the occasion of first National StartUp Day, Dr Jitendra was briefing about the Aroma Mission launched by the Union Ministry of Science & Technology through the Council of Scientific & Industrial Research (CSIR), which led to the well known "Purple revolution" in India.

He informed that the CSIR had, to begin with, introduced high-value essential oil bearing lavender crop through its Jammu based laboratory, Indian Institute of Integrative Medicines (IIIM) for cultivation in Doda, Kishtwar, Rajouri districts and later also in the other districts including Ramban, Pulwama, etc.

In a brief span of time, aroma or lavender cultivation had become a popular option in farming for agricultural StartUps, he said.

Sharing a lesser known fact, Dr Jitendra Singh, who is also Union Minister of State (independent charge) Science & Technology; Minister of State (independent charge) Earth Sciences besides MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, disclosed that a youth Bharat Bhushan hailing from remote village Khillani in district Doda had become a role model success story.

"Bhushan started lavender cultivation in just about 0.1 hectare of land with the support of CSIR-IIIM but as profits started showing, he converted a larger area of maize plantation around his house also into lavender plantation. Today, he has 20 others working on his

lavender fields and Nursery while around 500 farmers from his district have also followed him by switching over from maize to perennial flowering lavender plant," he said.

Dr Jitendra said unfortunately it was never reported in the local media that IIIM Jammu was helping the StartUps in aroma and lavender farming to sell their produce. "Prominent companies like Mumbai based Ajmal Biotech Private Limited, Aditi International and Navnaitri Gamika, etc., are the primary buyers," he informed.

In commemoration of Azadi ka Amrit Mahotsav, Dr Jitendra Singh announced that CSIR launched phase-II of Aroma Mission after the completion of phase-I. In addition to IIIM, CSIR-IHBT, CSIR-CIMAP, CSIR-NBRI and CSIR-NEIST were also participating in the Aroma Mission.

Aroma Mission is attracting StartUps and agriculturists from across the country and during phase-I CSIR helped cultivation on 6000 hectares of land and covered 46 'Aspirational' districts across the country.

"More than 44,000 persons have been trained and several crores of farmers' revenue generated. In the second phase of Aroma Mission, it is proposed to engage over 45,000 skilled human resources with the aim of benefitting more than 75,000 farming families across the country," it was informed.

Published in:
Greater Kashmir

CSIR-IHBT

15th January, 2022

किसानों की आर्थिकी सुधारेगा जंगली गेंदा

संवाद सहयोगी, पालमपुर : जंगली गेंदा किसानों की आर्थिकी में सुधार करेगा। वैज्ञानिक और औद्योगिक अनुसंधान परिषद ने सगंध क्षेत्र में परिवर्तन लाने के लिए जुलाई 2017 में अरोमा मिशन परियोजना शुरू की है।

सीएसआइआर-आइएचबीटी के निदेशक डा. संजय कुमार ने बताया कि पहाड़ी क्षेत्रों में जंगली गेंदे की भरमार है। सगंधित फसलों से प्राप्त तेल का उपयोग फार्मास्यूटिकल, अरोमा थैरेपी, भोजन, पेय, स्वाद, सुगंध और सौंदर्य प्रसाधन उद्योगों में किया जाता है। उन्होंने कहा कि सगंधित फसलों को न तो जंगली जानवरों और न ही बेसहारा पशुओं से कोई खतरा होता है। डा. संजय कुमार ने बताया कि 2021 के दौरान जब अधिकांश युवा नौकरी खोकर घरों को लौट आए थे तो संस्थान ने इस दौरान आजीविका उत्पन्न करने के लिए किसानों को 700 किलोग्राम से अधिक जंगली गेंदा बीज वितरित किया। संस्थान के प्रयासों से हिमाचल प्रदेश भारत में सगंधित तेल उत्पादन में अग्रणी राज्य बन गया है। युवाओं को इस ओर ध्यान देना चाहिए।

Published in:

Jagran

CSIR-NGRI, IICT, CCMB

14th January, 2022

Celebrations of WORLD HINDI DAY - 2022 at CSIR-NGRI, CSIR-IICT, & CSIR-CCMB on 13-01-2022.

नराकास में वैज्ञानिक संगोष्ठी एवं कवि सम्मेलन संपन्न

हैदराबाद, 13 जनवरी-(मिलाप ब्यूरो) नगर राजभाषा कार्यान्वयन समिति (का.), हैदराबाद (3) के तत्वावधान में सीएसआईआर-राष्ट्रीय भूभौतिकीय अनुसंधान संस्थान (सीएसआईआर–एनजीआरआई), सीएसआईआर-भारतीय रासायनिक प्रौद्योगिकी संस्थान (सीएसआईआर-आईआईसीटी) और सीएसआईआर-कोशिकीय एवं आणविक जीवविज्ञान केंद्र (सीएसआईआर–सीसीएमबी) द्वारा संयुक्त रूप से विश्व हिन्दी दिवस-2022 के उपलक्ष्य में ऑनलाइन वैज्ञानिक संगोष्ठी एवं कवि सम्मेलन का आयोजन किया गया।

आज यहाँ जारी प्रेस विज्ञप्ति के अनुसार, समारोह में पंजाब विश्वविद्यालय के पूर्व कुलपति और सीएसआईआर-एनपीएल की अनुसंधान परिषद के अध्यक्ष प्रो. अरुण कुमार ग्रोवर मुख्य अतिथि के रूप में उपस्थित थे। उन्होंने समारोह का औपचारिक उद्घाटन कर 'आज़ादी के अमृत महोत्सव पर भारत में विज्ञान–प्रौद्योगिकी, कृषि और परमाणु अनुसंधान एवं उच्चतम शिक्षा संस्थानों की स्थापना पर एक अवलोकन' शीर्षक विषय पर वक्तव्य दिया। उन्होंने स्वतंत्रोत्तर भारत में विज्ञान-प्रौद्योगिकी, कृषि और परमाणु अनुसंधान एवं उच्चतम शिक्षा संस्थानों की स्थापना पर विस्तृत रूप से

नराकास में आयोजित वैज्ञानिक संगोष्ठी एवं कवि सम्मेलन का दृश्य।

सरल एवं सुलभ हिन्दी में प्रकाश डाला। उन्होंने आधुनिक भारत निर्माण के कर्णधरों और उन महान व्यक्तित्वों का जिक्र किया, जिन्होंने देश के विकास के लिए कई महत्वपूर्ण संस्थानों का निर्माण एवं परिकल्पना की। व्याख्यान के दौरान उन्होंने सीएसआईआर, आईसीएआर, आईसीएमआर, बीएआरसी, अणु शक्ति आयोग जैसी संस्थाओं के बारे में, उनकी स्थापनाओं के बारे में विस्तृत रूप से ऐतिहासिक दृष्टिकोण को शामिल करते हुए विस्तृत अवलोकन कराया।

समारोह की अध्यक्षता करते हुए सीएसआईआर-एनजीआरआई तथा सीएसआईआर-आईआईसीटी के निदेशक के अतिरिक्त प्रभारी डॉ. वी.एम. तिवारी ने सभी का हार्दिक स्वागत एवं अभिनन्दन किया। राजभाषा हिन्दी में ऐसे कार्यक्रमों के आयोजन के महत्व एवं प्रासंगिकता पर अपने विचार व्यक्त किए। तत्पश्चात कार्यक्रम के सह-अध्यक्ष एवं सीएसआईआर-सीसीएमबी के निदेशक डॉ. विनय के. नंदिकूरि ने सीएसआईआर-सीसीएमबी की गतिविधियों का संक्षिप्त परिचय दिया।

कार्यक्रम के पहले सत्र में सीएसआईआर-राष्ट्रीय भूभौतिकीय अनुसंधान संस्थान, हैदराबाद के मुख्य वैज्ञानिक डॉ. एन. पूर्णचन्द्र राव ने 'पर्यावरणीय भूकंप विज्ञान, भू-आपदाओं की पूर्व चेतावनी के लिए एक नया साधन', सीएसआईआर-भारतीय रासायनिक प्रौद्योगिकी संस्थान, हैदराबाद के मुख्य वैज्ञानिक डॉ. अशोक कुमार तिवारी ने 'पारंपरिक स्वास्थ्यपरक आहार : प्रोबायोटिक्स', सीएसआईआर-कोशिकीय एवं एवं आणविक जीवविज्ञान केंद्र, हैदराबाद के मुख्य वैज्ञानिक डॉ. जी.आर. चाण्डक ने 'भारत में सिकल सेल एनीमिया का सर्वग्राही प्रबंधन' तथा डीएनए फिंगर प्रिंटिंग एवं निदान केंद्र (सीडीएफडी), हैदराबाद की स्टाफ वैज्ञानिक डॉ. वर्षा श्रीवास्तव ने 'डीएनए फिंगर प्रिंटिंग-एक परिचय' पर अपने कार्यक्षेत्रों से संबंधित वैज्ञानिक जानकारी को आम जनता की भाषा हिन्दी में साझा किया। दूसरा सत्र के तहत कवि सम्मेलन का का आयोजन किया गया। इसमें हैदराबाद के राजीव सिंह, अभिजीत पाठक, चन्द्रप्रकाश दायमा, संतोष रज़ा, सुनीता लुल्ला, सुरभि दत्त ने काव्य पाठ किया। सीएसआईआर मुख्यालय, नई दिल्ली के सुदेश कुमार ने भी अपनी कविताएँ प्रस्तुत कीं। अनुराधा पाण्डेय (अनुवाद अधिकारी, एएसएल) ने कवि सम्मेलन का संचालन एवं समन्वयन किया। समारोह नगर राजभाषा कार्यान्वयन समिति (का.), हैदराबाद (3) के सदस्य सचिव एवं सीएसआईआर-एनजीआरआई के वरिष्ठ हिन्दी अधिकारी चि.वें. सुब्बाराव द्वारा प्रस्तुत धन्यवाद ज्ञापन के साथ सम्पन्न हुआ। संपूर्ण समारोह का समन्यवयन सीएसआईआर-एनजीआरआई, सीएसआईआर-आईआईसीटी और सीएसआईआर-सीसीएमबी के हिन्दी अनुभागों द्वारा किया गया।

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