CSIR in Media

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Kerala: Artificial wetlands to curb hyacinth growth in water

CSIR-NEERI

28th March, 2018

The technology uses specific plants to absorb nutrients from waste water and only the treated water entered the water bodies.

ALAPPUZHA: In order to tackle the sewage waste management crisis in Alappuzha's canals and lagoons, Nagpur-based CSIR-National Environmental Engineering Research Institute (NEERI) has offered support of its 'phytorid' technology that involves a constructed wetland exclusively designed for treatment of municipal, urban, agricultural and industrial wastewater. Dr. Joy Elamon, Director, Kerala institute of Local Administration (KILA), which invited a team of NEERI scientists to study the situation in Alappuzha, said that the team of scientists led by Dr Ritesh Vijay (NEERI's centre for strategic urban management and technical cell) had offered their service. "We already have a collaboration with IIT Mumbai. They had introduced NEERI's technology. We invited them since it's a public sector institution. The Memorandum of Understanding (MoU) will only be signed at the government level,", said Dr Elamon.

KILA decided to consider the technical support of NEERI after all canals in the area got completely covered with water hyacinths.

The study found that the reason as the dumping of organic wastes including those from kitchens and septic tanks. The study also found that removing hyacinths was not a permanent solution. The only solution was that waste water had to be treated at the source to stop hyacinths growing.

In this technology, it's understood that the quality of treated water is excellent and it meets the prescribed and amended norms of the Central Pollution Control Board (CPCB). A scientist with NEERI told DC that they had technology to revive the canal. NEERI research under Dr Vijay, who is the expert in the field, has developed technology to treat wastewater. "The technology uses specific plants to absorb nutrients directly from waste water. NEERI will be able install phytorids at the land adjacent to the canals. The treated water with the technology can be used for gardening or floriculture. The technology can ensure treated water enters the canals to increase the dilution. The team visited Alappuzha to study the geographical features of Alappuzha," the scientist said.

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Deccan Chronicle

Neeri to clean Amritsar's drain and solid waste

CSIR-NEERI

28th March, 2018

NAGPUR: City-based CSIR-National Environmental Engineering Research Institute (Neeri) is all set to provide technical support to the Punjab government in solid waste management and sewage treatment. As per a recent Memorandum of Understanding (MoU) signed between the two, Neeri will be using a combination of technologies for completely clearing out "over 6 million tonnes" of municipal solid waste which is said to be lying in the dumping ground at Amritsar for more than 30-35 years.

Recently, the Supreme Court had lashed out at the centre for "not doing enough work on solid waste management". While hearing a petition last month, the apex court gave the government a time of three weeks to file a chart showing which states and union territories (UTs) have constituted state-level advisory boards, as required by the Solid Waste Management Rules, 2016. Neeri director Rakesh Kumar said that using mining and other technologies, the waste would be segregated in a way that some materials can be reused. "Plastic waste can be converted into RDF and used at cement plants, silt can be used for making tiles or bricks," said Kumar. Apart from this, Neeri will be implementing in situ drain cleaning technology for reviving 2.2 kilometres-long Tung Dhab drain in Amritsar, which is also known as the Hudiara drain. Since many years, the drain has been highly polluted. Around three years back, Amritsar-based Pollution Control Committee (PCC), an NGO working in the

field of environment, had taken up the case of pollution in Tung Dhab Drain with the National Green Tribunal (NGT). According to Kumar, technologies like flo-raft and nano bubble diffuser system will be used to clean the drain. “It would be converted into a system where silt, Biochemical Oxygen Demand (BOD) in water will be reduced,” he said.

The pilot experiment of in situ cleaning technology will be carried out in Nagpur.

Both the projects are a part of Amritsar’s Smart City project. “As per the agreement, we will take about nine months to complete the drain cleaning and two years for the dumping ground,” said Kumar.

In October 2016, the Maharashtra government had signed a Memorandum of Understanding (MoU) with Neeri under the Swachh Maharashtra initiative according to which the institute has to provide technical guidance on various developmental aspects of smart cities including solid waste management, sanitation, urban planning, health, water supply and sewage treatment.

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Times of India

CSIR-IICT to support organic farming in Bhupalpally district

CSIR-IICT

28th March, 2018

Bhupalpally: The central research institute CSIR-IICT has come forward to lend technological support towards promotion of organic farming and sustainable agriculture practices in the district. A team of scientists from Council of Scientific & Industrial Research (CSIR)- Indian Institute of Chemical Technology (IICT) has visited the district on Tuesday and held discussions with the District Collector, D Amoy Kumar and other senior officials. They held talks on the technological initiatives to be taken for the development of district selected under backward districts development programme by NITI Aayog. The Collector asked the scientists to offer technical advice towards promotion of organic farming on large scale.

He also wanted the technological support to increase output in agriculture with minimum expenditure and allied activities, reducing usage of chemical fertilisers and pesticides to help farmers reduce inputs costs. Similarly, Amoy Kumar also solicited technology to address the issues of seasonal diseases, malnutrition, ensure quality drinking water. Efforts were also needed to enhance educational standards in government schools and colleges, besides job oriented to unemployed youth. The team of scientists comprising R Srinivas, M Sridhar Reddy, Hari Singh, and others told the Collector that they would offer pheromone technology to control the pink worm in cotton crop. About one lakh pheromone traps would be provided to cotton farmers along with extension of technical support to prevent spread of diseases like malaria and filariasis. Similarly, mobile teaching labs would be set up to enhance professional skills of

teachers and to maintain quality educational standards, CSIR-IICT scientists told the Collector. District revenue officer P Mohan Lal, district agriculture officer Anuradha, district educational officer Srinivas Reddy and others took part in the meeting.

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The Hans India

Guess how many research papers did CSIR scientists publish in last four years?

CSIR

23rd March, 2018

CHENNAI: As many as 22,499 research papers authored by scientists working in the laboratories of the Council of Scientific and Industrial Research (CSIR) have been published in reputed national and international journals in the last four years, minister for science and technology and earth sciences Harsh Vardhanhas informed the Lok Sabha. The minister was responding to questions in the Lok Sabha, a few days ago, on CSIR assistance to publish findings in international journals. As many as 5,824 papers were published in 2014 followed by 5776 in 2015. In 2016, scientists wrote 5,549 research papers that were published, and the number was at 5,350 in 2017. The CSIR has 38 laboratories across the country. "The CSIR encourages scientists working in its laboratories/institutions to carry out research and development in identified areas and publish their research findings in scholarly journals. It provides infrastructural, technical, administrative as well as financial support to carry out the research and publish the original research work," he said. The CSIR had taken cognisance of a couple of instance of malpractices followed by scientists with regard to research publications in its laboratories, the minister said. Action had been taken on the erring researchers, he added. Vardhan said the concerned CSIR laboratories -- CSIR- Institute of Microbial Technology (CSIR-IMTECH), Chandigarh, and CSIR- Centre for Cellular and Molecular Biology (CSIR-CCMB), Hyderabad -- had conducted detailed

investigations into the cases. The concerned scientists in those labs were removed. He said the laboratories had put a system in place to check plagiarism. “The system uses available software,” he said.

“CSIR-IMTECH, Chandigarh has constituted an ombudsman authority to randomly check the authenticity of the data in research papers before they are published by its scientists,” he said.

The CSIR had formed a committee of its three senior directors to look into ethical issues on scientific culture in the CSIR and present a course of action to prevent such incidences in future, he added.

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The Times of India

NGRI experts aim to meet future water challenges

CSIR-NGRI

23rd March, 2018

Children from various schools listen to speeches by the dignitaries during a seminar on World Water Day at YVS Murthy Auditorium inside AU Engineering College Campus in Visakhapatnam on Thursday. (Photo: DC)

Visakhapatnam: Water resources are exhausting day-by-day across the globe. Identifying the water problems, the experts of National Geophysical Research Institute (NGRI) have been developing a model for the policy makers to take right decisions in preserving the water bodies in the country. According to NGRI director Prof VM Tiwari, they are analysing the future water requirements based on the demand from the agriculture, industry and household population. They are on a mission to give a scientific solution to address the myriad water-related challenges. Depletion, scarcity and contamination of water resources are the main challenges before the scientists of NGRI. Above all, the climatic vulnerability is another major problem. They are collecting the basic data to identify the solutions and to develop hydrological model. "We have already conducted a geophysical survey to know the aquifers using Geographic Information System (GIS). This has helped in constructing the check dams at the right place. Our hydrological models will find out each component of the water cycle to make projection of the groundwater," Mr Tiwari said. An aquifer is an underground layer of permeable rock which can transmit the groundwater. Aquifer mapping is the most important determinant of future water resources. CSIR-NGRI Hyderabad chief scientist Prof Shakeel Ahmed has been working on managing ground water in over-exploited

areas. On the occasion of World Water Day, the NGRI-Association of Hydrologists of Indian (AHI) awards were distributed in Andhra University on Thursday. Mr Ahmed has received NGRI-AHI National Hydrology Lecture award, while NRSC ISRO Brahm Prakash professor Dr J.R. Sharma bagged Lifetime Achievement Award.

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Deccan Chronicle

Hydrologists meet begins in Vizag

CSIR-NGRI 22nd March, 2018

Visakhapatnam: Water is necessary for everyone and one has to pay attention to every component in hydrological cycle for seeking nature-based solutions to face water challenges, Dr VM Tiwari, director, National Geophysical Research Institute (NGRI), Hyderabad, said. He was delivering the inaugural address at the annual convention of Association of Hydrologists of India (AHI) and National Seminar on 'Hydrology' with a colloquium on 'Nature-based solution to Water Challenges', on the occasion of World Water Day here on Thursday. A book on 'Rainfall Characteristics of Coastal Andhra Pradesh' by Prof. VV Jagannadha Sarma, president, AHI, was released on the occasion besides a souvenir volume.

Around 60 paper presentations and ten keynote addresses are scheduled during the three-day seminar on various aspects of Hydrology. Delegates from different varsities such as Anna University, Annamalai University, Pondicherry University, SRTM, Nanded, BRAU, Adikavi Nannaya University and scientific institutions like NGRI, NIH, CWRDM, CWRPS, NCESS, IIG, IMD, APGW Department, apart from the academic departments of Andhra University are participating. Inauguration was followed by NGRI-AHI Hydrology Award function in which eminent scientists who contributed significantly in the field of Hydrology, Dr JR Sharma, BrahmPrakesh professor, NRSC, ISRO, and Prof Anny Cazenave, LEGOS, CNES, Toulouse, France shared NGRI-AHI Lifetime Achievement Award. Prof Shakeel Ahmed, chief scientist, CSIR-NGRI, received NGRI-AHI National Hydrology Lecture Award. Rector of Andhra University Prof K Gayathri Devi gave away the awards.

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Telangana Today

More microplastics on M'rashtra, K'taka beaches than Goa:

CSIR-NIO

22nd March, 2018

Microplastics, one of the carriers of pollution to the marine environment, have been found more on the beaches of Karnataka and Maharashtra as compared to Goa, according to a scientific study.

The microplastics are extremely small pieces of plastic debris in the environment, resulting from the disposal and breakdown of consumer products and industrial waste. During a study conducted on different beaches along the coast of Maharashtra, Karnataka and Goa, the researchers found significant variations in the distribution pattern of plastic contaminants on various locations in the three states.

They claimed to have found a high abundance of microplastics - like films, fibres, fragments and pellets - on the beaches of Maharashtra and Karanataka. "However, comparatively fewer microplastic pellets were found along the coast of Goa," says the research paper of scientists of the Goa-based National Institute of Oceanography (NIO), one of the constituent laboratories of the Council of Scientific and Industrial Research (CSIR).

The NIO scientists presented the paper, detailing the research on microplastics on the beaches in the three states, during the sixth International Conference on Ecotoxicology and Environmental Science held in New Delhi last month. "During a comprehensive study on the identification and ecotoxicological impact of microplastics in the coastal Arabian Sea, we observed 5,095 pieces of plastic pollutants in total, ranging from 3 to 100 mm in size, on 10 beaches along the west coast of India during 2016-17," the scientists said in the research paper.

The microplastic pellets, generally of less than 3 mm in size, tend to accumulate persistent organic pollutants (POPs), and easily get transported and enter the marine food chain, they said. “The microplastic pellets of variable colours were abundant on all the beaches of Maharashtra while a moderate amount were observed along the Karnataka coast and the lowest abundance was found along the coast of Goa,” said the paper.

The researchers said these microplastic pellets were made of polyethylene and polypropylene, and a few of them were unidentified polymers. “Due to the long residence time of microplastics in the sea water and on beaches, specially in polluted marine environments, they tend to adsorb various pollutants, and may act as vector transferring toxic chemicals from the environment to the marine organisms,” the paper said.

The researchers claimed that these findings may enhance the understanding about the deleterious impact of microplastics and associated POPs on the marine ecosystem. This may provide crucial information on the complex chemico-biological interplay and give early warnings of the impending invisible threat, said the study, conducted by NIO’s senior scientist Mahua Saha and her team comprising Dusmant Maharana, Chaynika Rathore and R A Sreepada. PTI

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Tribune India

In four years, CSIR earned ₹1,908 crore

CSIR

22nd March, 2018

Significant improvement anticipated

The Council of Scientific and Industrial Research (CSIR), India's largest chain of laboratories, earned ₹1,908 crore in the past four years, according to the response to a question in the Rajya Sabha. This roughly works out to about 12% of the 38-lab-strong organisation's budgetary outlay of about ₹16,000 crore over the same period.

Funds hit a rough patch last year. In a letter to staffers last June, Director-General, Girish Sahni had said that there was only ₹360 crore left for funding new research.In 2017-18 (updated till February), the CSIR earned ₹746 crore, mostly from licensing its technology and its consultancy services, a little higher than the ₹727 crore of 2016-17.

"There are several other sources of revenue, earnings and deliverables from new licensing schemes and projects implemented over the last two years."I believe the number this year will be much higher and will be clearer in 2-3 months," Dr. Sahni told *The Hindu*." I expect our earnings to be 25-30% of the budget, a significant improvement."

The year-wise numbers reported by *The Hindu* are sourced from the CSIR. They are higher than the numbers presented to Parliament because they include interest payments due to various labs. In 2015, the CSIR had decided to generate about 50% of its budget through external sources.

Published in:
The Hindu

Desi skin Bacterium can help cure skin diseases in US: Study

CSIR-IMTECH

22nd March, 2018

CHANDIGARH: A bacterium, Staphylococcus epidermidisthat is present in large numbers on skin of all humans, is so evolved and tolerant in Indian population that its extract can be used to protect people in the United States from skin ailments. Not only this, the bacterium on the Indian skin has less disease-causing ability as compared to the strain of the bacterium present on the skin of the US population.

"This coating (extract) can also be used for Indians who have skin ailments," Dr Prabhu Patil, the lead author of the study published in leading international journal, "Frontiers in Microbiology." Patil and his team of research scholars from Chandigarh-based Institute of Microbial Technology (Imtech), for the first time, have compared the whole genome study of multiple strains of Staphylococcus epidermidisfrom the skin of healthy individuals in India and those in the United States.

They found that the healthy individuals from India harbour a novel strain of the bacterium on their skin that is absent on the skin of healthy individuals in the United States. This strain, named SP691, was identified for the first time in the world by this team. The same bacterium of the skin is evolving differently in the US and India. When we compared these strains, we found that the bacterium on the skin of the American population has lost the genes for protection against skin ailments, but this gene is found in the strain present on our skin," said Patil.

The research will soon be applied to derive a probiotic from the Indian skin bacterium that can be made into a coating and used to treat skin ailments of the Americans.

"The antimicrobial compounds released from the secretions of Staphylococcus epidermidis can be used either as a cream or a natural coating for any other country outside India. We have considered the US as there was a reference study readily available," said Patil.

The five-year study started in 2012 where the scientists collected 28 isolates of the Indian bacterium and compared them with 21 isolates of the North American population.

"It is because of the harsh climatic conditions, that our bacterium are more tolerant and evolved. In contrast, it was also found that in Americans if this epidermis bacterium which has pathogenic genes can easily get inside blood stream and cause sepsis — infection. The same is not present in our skin bacteria," said Patil.

The institute is planning to soon collaborate with industrial partners to launch the medicine.

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The Times of India

CSIR-NAL

22nd March, 2018

Saras is about to connect India on its own wings – linking smaller towns for an aviation market set to boom

Harsh Vardhan

India is laying claim to the club of aviation manufacturers. The aviation industry in India is still in its infancy, though Hindustan Aeronautics Limited has been working on smaller aircraft mainly for defence requirements – like Dhruv, the advanced light combat helicopter and Tejas, the light combat aircraft. These, though, are just kids on the block with lots to prove.

India over the last 70 years has never taken aviation manufacturing seriously – though a country as vast as ours should have an indigenous, dependable aircraft manufacturing facility to cater to burgeoning domestic transportation requirements. The first attempt to design and develop a multi-role light transport aircraft began in 1999, with then Prime Minister Atal Bihari Vajpayee giving green signal to a project by National Aerospace Laboratories (NAL) under the Council for Scientific & Industrial Research (CSIR). With no prior experience, NAL designed and developed the first prototype from scratch, which took to skies on May 29, 2004.

Saras was the first indigenous civil aircraft programme in the country. So naturally, NAL faced many challenges in design and manufacturing of airworthy aircraft grade components, assemblies, tooling and certification for test flying. The UPA government flagged down the project, after an accident involving an improved version of Saras in March 2009, though the accident was not due to any design flaws.

India, being a powerhouse of talents in almost all disciplines, should allow our experts to find solutions to our national problems, instead of continuing with our colonial mindset

When I took charge of the ministry of science & technology and met the technologists at NAL, I could read their disappointment. As a medical professional I knew that science is an art of balancing imponderables. You reach success only after several failures and if you stop, you will never innovate. So I decided to convince the government that NAL and other agencies involved in the design and development of Saras should get another chance.

It worked. A team of 40 young and enthusiastic scientists at CSIR-NAL have started working on various modifications like high power engine, new nacelle, enhanced rudder, linear flap tracks, improved environmental and flight control systems and digital avionics to overcome deficiencies observed during earlier flight testing. The upgraded Saras took to the sky in a record period of 14 months on January 24 this year and then again on February 21 – both to textbook precision. By 2022 it will be ready for induction, first into the Indian Air Force and later for civilian use.

Saras Mk2 will have speeds in excess of 500 kmph, range in excess of 700 km with full pay load, and lower operational/ acquisition cost compared to contemporary aircraft of this class. The cost of the aircraft, with more than 70% indigenous content, will be around Rs 40-45 crore as against Rs 60-70 crore for an imported one.

India has the potential to be among the top three nations in the world in terms of domestic and international passenger traffic. It has an ideal geographical location between the eastern and western hemisphere, a strong middle class of about 30 crore Indians and a rapidly growing economy. Despite these advantages, the Indian aviation sector has not achieved the position it should have and is at present ranked 10th in the world in number of passengers. But it is expected to grow at a faster pace, which will create demand for new aircraft, air aviation service technologies and increased infrastructure.

Looking at the present civil aviation policy scenario, India needs a 19-seater commuter transport aircraft like Saras for remote and tier 2 and 3 cities. It is estimated that the potential demand for small civil and military aircraft is to the tune of 120 to 160 in the next 10 years.

India, being a powerhouse of talents in almost all disciplines, should allow our experts to find solutions to our national problems, instead of continuing with our colonial mindset of depending on foreign sources to meet our critical requirements. While scientists and technologists of Indian origin contribute to high technology evolution of several foreign countries, we have so far not encouraged and given them the required space. Science does not emerge from vacuum; even a conjecture should not be left without probing the possibility. Like Vasco da Gama, you would either land up in America or India – but let us first venture out.

The writer is Union Minister for Science & Technology

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The Times of India, page no. 18

CSIR-CDRI

21st March, 2018

CDRI launches nutraceutical to prevent osteoarthritis

PIONEER NEWS SERVICE ■ LUCKNOW

Director, CSIR-CDRI, Alok Dhawan launched a nutraceutical with a special dietary ingredient from palak (spinach) to prevent osteoarthritis. "Nutraceuticals can be considered non-specific biological therapies used to promote general well-being, control symptoms and prevent disease processes," said media incharge of CDRI Sanjeev Yadav.

He said that the product would be available as 'Joint Fresh' in the market after a scientific validation to maintain by CSIR-CDRI. It had been launched with Pharmanza Herbals Pvt Ltd and its 'marketing partner Aeran Lab (India) Pvt Ltd. "This nutraceutical has extra health benefits for osteoarthritic joints in addition to the basic nutritional value found in Spinacea oleracea (palak). The product will now be available in the market at medical stores and online at longlivelives.com. The nano formulation was licensed to Pharmanza Pvt Ltd on July 31, 2017. Executive director, Aeran Lab (India) Pvt Ltd, Sanjeev Agarwal and a team of researchers were present on the occasion," he added. The team of researchers behind this success story included scientists Ritu Trivedi, Prabhat Ranjan Mishra, Rakesh Maurya, SK Rath, Brijesh Kumar and PK Shukla. The research students, who were a part of this project, were Dharmendra Choudhary, Priyanka Kothari, Ashish Tripathi, Sudhir, Naresh Mittapelly, Kapil Dev, Gitu Pandey, Naseer Ahmad and Sulekha Adhikary, and among the supporting staff were SC Tiwari and GK Nagar.

Yadav said that the CSIR-CDRI had identified Spinacea oleracea (deshi palak) for the prevention of osteoarthritis and degeneration of cartilages. "It imparts no toxicity and is effective at lower doses with nano formulation. Presently no oral drug was available to cure osteoarthritis, he said.

He said: 'Nutraceutical' stands for two words – 'nutrient' (a nourishing food component) and 'pharmaceutical' (a medical drug) or it means that 'let food be your medicine.' Talking about osteoarthritis, he said that it was a condition which affected the joints. "The surfaces within joints get damaged so they do not operate as smoothly. It afflicts mainly the weight-bearing joints such as hips and knees and causes physical disability. Both men and women are affected by osteoarthritis. Only symptomatic treatments are available with pain killers like Ibuprofen and Naproxen. These drugs on long term use show liver and renal toxicity and also have a negative impact on the gastric and cardiac status of the patients," he added.

http://www.dailypioneer.com/todays-newspaper

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The Pioneer

CSIR-NGRI

21st March, 2018

प्रशिक्षण कार्यक्रम आयोजित

हैदराबाद, 21 मार्च-(मिलाप ब्यूरो) राष्ट्रीय भू-भौतिकीय अनुसंधान संस्थान (एनजीआरआई), हैदराबाद में वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद (सीएसआईआर) के तत्वावधान में गत 12 से 21 मार्च तक भू-रसायन विज्ञान की आधुनिक विश्लेषण तकनीकों के विभिन्न विषयों पर प्रशिक्षण कार्यक्रम आयोजित किया गया।

कार्यक्रम में देश के अनेक विश्वविद्यालयों एवं अनुसंधान संगठनों के युवा शोधकर्ताओं ने भाग लिया। कार्यक्रम के उद्घाटन समारोह में जामिया मिल्लिया इस्लामिया विश्वविद्यालय, नई दिल्ली के कुलपति प्रो. तलत अहमद ने भाग लिया। अवसर पर भू-विज्ञान से संबंधित अनेक वैज्ञानिक उपकरण, उनका संक्षिप्त विश्लेषण, उपयोग आदि के बारे में विस्तृत जानकारी दी गई। समापन समारोह में राष्ट्रीय समुद्र विज्ञान संस्थान, गोवा के निदेशक प्रो. सुनील सिंह ने प्रतिभागियों को प्रमाण-पत्र प्रदान किए। सत्र की अध्यक्षता सीएसआईआर-एनजीआरआई के मुख्य वैज्ञानिक डॉ. शकील अहमद ने की। कार्यक्रम में सीएसआईआर-एनजीआरआई निदेशक डॉ. वी.एम. तिवारी, वैज्ञानिक डॉ. सी. माणिक्यांबा, डॉ. एम. राममोहन, डॉ. डी. श्रीनिवास शर्मा ने सहयोग प्रदान किया।

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Hindi Milap, page no. 1

CSIR-CDRI

21st March, 2018

मिलेगी राहत

सीडीआरआई ने लॉन्च की न्युट्रास्युटिकल, गुजरात की कंपनी ने ज्वाइंट फ्रेश के नाम से पीने के लिए दवा कम पेय पदार्थ उतारा, अगले सप्ताह से मार्केट में

गठिया के मरीजों को अब दर्द से छुटकारा दिलाएगी 'पालक'

अमर उजाला ब्यूरो

लखनऊ। सीडीआरआई के वैज्ञानिकों ने गठिया (ऑस्टियो आर्थराइटिस) के मरीजों को घुटनों और जोड़ों के दर्द से छुटकारा दिलाने के लिए गुजरात की फार्मा कंपनी की मदद से दवा कम पेय पदार्थ (न्युट्रास्युटिकल) बाजार में उतारा है। सीडीआरआई में खोजी यह न्युट्रास्युटिकल पालक से तैयार की गई है।

पाउडर के रूप में लांच इस न्युट्रास्युटिकल को पानी में घोलकर पिया जा सकता है। वैज्ञानिकों का दावा है कि यह गठिया सही करने को पहली विकसित न्युट्रास्युटिकल है। इसे अब तक गठिया की वजह खत्म करने वाली दवा भी कहा जा सकता है। दो महीने में 'जॉइंट फ्रेश' को फार्मा कंपनी और सीडीआरआई टेबलेट के रूप में भी लाने वाले हैं। पाउडर को स्वादिष्ट और स्वास्थ्यप्रद बनाने के लिए नींबू फ्लेवर और शुगर फ्री वैरिएंट में लाया गया है।

गठिया के मरीजों के लिए दवा 'जॉइंट फ्रेश' को सीडीआरआई के निदेशक ने मंगलवार को लॉन्च किया।

गठिया के इलाज की पहली दवा

गठिया के लिए अब तक कार्टिलेज रिपेयर करने को कोई दवा मौजूद नहीं थी। सीडीआरआई ने ही इस पर काम शुरू किया। ज्वाइंट फ्रेश में मौजूद नैनो फॉर्मूला ओस्टियोआर्थराइटिस में जोड़ों के मूवमेंट को प्रभावित करने वाली वजह को खत्म करता है। पुरुष और महिलाओं दोनों में समस्या होती है, जोकि आगे चलकर विकलांगता का कारण भी बन जाती है। वर्तमान में गठिया की कोई दवा न होने से मरीजों को पेनकिलर इबुप्रोफेन और नैपोरोक्सन लेनी पड़ती है। लंबे समय में यह किडनी और लिवर की दिक्कत शुरू कर देती हैं।

न्युट्रास्युटिकल को जानें

न्युट्रास्युटिकल दो शब्द न्यूट्रीएंट (एक पौष्टिक भोजन घटक) और फार्मास्युटिकल (चिकित्सीय औषधि) से मिलकर बना है। दूसरे शब्दों में इसका मतलब है कि भोजन जो आपकी दवा भी हो। न्युट्रास्युटिकल का इस्तेमाल सामान्य रूप से स्वस्थ रहने के लिए विशिष्ट उपचार पद्धति के रूप में किया जाता है। इससे बीमारी की प्रक्रिया रोकने और उसके लक्षणों को नियंत्रित करने में मदद मिलती है।

बड़ी राहत देगा न्युट्रास्युटिकल

मंगलवार को सीडीआरआई के निदेशक प्रो. आलोक धवन ने इसे विकसित करने वाली वैज्ञानिकों की टीम और बाजार में ला रही फ ार्मा कंपनी के कार्यकारी निदेशक डॉ. संजीव अग्रवाल की मौजूदगी में लॉन्च किया। प्रो. धवन का कहना है कि ओस्टियोआर्थराइटिस में राहत देने को पालक से बना यह न्युट्रास्युटिकल बड़ी राहत देगा। यह आम तेलों की तरह केवल फौरी राहत ही नहीं देता। पालक में मौजूद स्पीनेशिया ऑलरेसी का नैनो फॉर्मूलेशन हड्डियों के कार्टिलेज के क्षरण को रोककर उसकी मरम्मत शुरू करता है। इस पेय पदार्थ में विषाक्तता भी नहीं है। नैनो फोर्मूलेशन से यह कम मात्रा में भी प्रभावी है।

106 रुपये में एक दिन की खुराक

ज्वाइंट फ्रेश के एक पैकेट की कीमत करीब 106 रुपये है, जो एक दिन की खुराक होगी। कंपनी कम आय वर्ग के मरीजों को राहत देने के लिए दवा को टेबलेट के रूप में ला रही है। दो महीने में इसे भी लांच कर दिया जाएगा। इससे कीमत प्रति डोज 50 प्रतिशत तक कम हो जाएगी। दवा के पूरी तरह हर्बल होने से इसके साइड इफेक्ट भी नहीं माने जा रहे हैं।

एक पैकेट मतलब एक किलो पालक

नैनो फॉर्मूला से बनाई दवा का असर इससे समझा जा सकता है कि एक पैकेट में करीब एक किलो पालक के तत्व शामिल हैं। वैज्ञानिकों का कहना है कि एक किलो पालक से करीब एक ग्राम नैनो फॉर्मूलेशन तैयार होता है। यानी, एक डोज में करीब एक किलो पालक मरीज लेगा। इस मात्रा को केवल 100 मिली पानी में घोलकर पिया जा सकता है।

इस टीम ने बनाई दवा

वैज्ञानिक डॉ. रितु त्रिवेदी, डॉ. प्रभात रंजन मिश्रा, डॉ. राकेश मौर्य, डॉ. एसके रथ, डॉ. बृजेश कुमार, डॉ. पीके शुक्ला।

Published in:

Amar Ujala

Nehru Yuvak Kendra students get exposure of Research Environment at CSIR-NML

CSIR-NML

21st March, 2018

A group of 66 students from Nehru Yuva Kendra, Sakchi accompanied by three teachers visited at CSIR-National Metallurgical Laboratory, Jamshedpur and interacted with scientists and research scholars this morning under the aegis of "Gigyasa programme", recently launched by Ministry of Human Resource Development, Government of India, in association with Council of Scientific & Industrial Research. The objective of the programme is to provide exposures of research environment and simultaneously inculcate interest towards science among school students and further pursue carrier in the science stream. The students were thrilled to visit the laboratory and interact with the working group. The programme was scheduled for four and half hours, Dr.P.N. Mishra, Principal Scientist, started the programme with welcome address and introduced students with the members of SNIP programme and further discussed about CSIR-NML R&D activities and programme. Dr. S.K. Mandal, chief scientist and coordinator of the programme discussed about the functional division and activities of NML and further discussed about the fundamentals of science and its various branches to inculcate interest towards science among students and request to pursue science as career for further study. The vote of thanks was addressed by Dr. A. K.Sahu, Sr. Technical Officer. After brief up, a laboratory visits programme was organized, in two groups and make arrangement to interact with scientists and research scholars.

The students expressed their fillings, asked numbers of question, and clarify doubt with scientists. Students visited creep testing units of MST Division and knew about fatigue, creep, fractures prevailing in different types of industrial components. A live demonstration was arranged at chemistry division with conventional as well as non-conventional methods applied in chemical analysis. Students asked question and sort it out by deputed research scholars. Students shown keen interest in the Electronic Waste Unit and acquainted knowledge about the extraction of metals from electronic waste. Students get exposure of different machine like Servo Hydro Testing Machine, Servo Electrical Machine and Furnace. They further visited at Mechanical Testing Division and observed the practical demonstration of forging, shaping and rolling machine, wire Drawing Machine, Trolly furnace chamber operated at 1200o centigrade.

Students were surprised to observed the 68 years' history of NML at museum and they asked different question based on sample and poster pertaining to minerals based product and facilities.

A separate interaction session was organized and feedback was taken from the students and teachers. They expressed the usefulness and necessity of the programme. Majority of the students individually share their experience.

Teachers and students requested for their next visit to the laboratory for gain deeper knowledge. Teacher expressed their view and was satisfied to know about the consistent effort and research emphasis in various sectors for the ultimate development of India.

Published in:
Avenue Mail

Vitamin B12 supplements may reduce diabetes risk

CSIR-CCMB

20th March, 2018

In general, Indians have low levels of B12

Vitamin B12 is the perfect example of the phrase "small yet powerful". Though just 2 microgram is required per day, it has now been shown to have a major influence on type 2 diabetes. Researchers from CSIR-Centre for Cellular and Molecular Biology (CCMB), Hyderabad along with scientists from Pune, Singapore and UK studied the molecular pathway to understand how B12 supplements are associated with Type 2 diabetes and its associated genes.

"Previous studies from our lab have shown that B12 supplementation for a year was able to bring down the level of homocysteine (a marker for cardiovascular diseases). Indians in general have low levels of B12, possibly due to vegetarian diet.We wanted to explore further as we know that B12 plays an important role in many reactions of the body and influences risk for many diseases including cardio-metabolic disorders," says Dr. Giriraj R. Chandak, scientist at CSIR-CCMB and corresponding author of the paper published in *Epigenomics*.

The study involved 108 children from the Pune maternal nutrition study (PMNS). The children were randomly divided into four groups. One group was not given any supplements while the second was given B12 supplements (10 microgram/day), third B12 with folic acid (known to influence homocysteine levels) and fourth only folic acid.

After a year, their blood samples were collected and genomic DNA was isolated and studied for differences before and after supplementation.

Crucial factor

"We found that B12 was a crucial factor in the one-carbon metabolic cycle of the body which determines the levels of different proteins by regulating methylation of their genes. The expression of various genes associated with diabetes was found to be less by methylation. We found four top genes that were associated with diabetes to be less expressed(downregulated)," he adds.

"Bioinformatics study helped us to identify the location of the genes and further human cell culture studies were carried out to validate the results. Other studies are ongoing in the lab to understand more about how B12 affects the molecular network and signaling pathway of the genes associated with Type 2 diabetes," says Dr Smeeta Shrestha, postdoctoral fellow and coauthor from CCMB. "Almost 40-70% of the Indian population is vitamin B12 deficient. We don't give it much importance as it is a micronutrient. But this study clearly provides evidence that a micronutrient can immensely influence the risk for a commonly occurring disease like diabetes. B12 can be obtained from foods like meat, fish, eggs, dairy products," says Dr. Chandak.

Published in:
The Hindu

NAL GETS APPROVAL FOR NEW 'NEXT-GEN' TRAINER AIRCRAFT

CSIR-NAL

20th March, 2018

Decks have finally been cleared for the development of a 'Made in India' next generation ab initio trainer aircraft. Hansa-NG, which is the next generation aircraft of the two-seater Hansa-3 aircraft designed and developed by National Aerospace Laboratories (NAL), has got the in-principle approval from the Council of Scientific and Industrial Research (CSIR). In an update, NAL stated that "CSIR accords in-principle approval for CSIR- NAL and MESCO Aerospace collaborative project on design, development and certification of next generation trainer" which would have. improved features and state-of-the-art display systems. "We had sought approval and CSIR has given the nod. The number of aircraft to be developed and the budget for the same will be announced soon," an official said. During the last edition of the Aero India held in Bengaluru, NAL had said that a collaborative agreement with MESCO Aerospace for design and certification of HANSA-NG was in the advanced stage and now, a year later, CSIR has accorded its in-principle approval for the same. The NAL-developed two-seater Hansa-3 is the country's first all-composite light aircraft. Twelve Hansa-3 aircraft are being used by flying clubs for pilot training courses across the country and, according to NAL, Hansa-3 fleet has accumulated a total of more than 4,000 hours. In order to meet the latest requirements of the flight training schools in the country, NAL had initiated the need for designing and developing a next generation trainer Hansa-NG.

NAL was also looking for private partnership for licensed production and marketing of the next generation trainer At the air show, NAL had showcased the static display of Hansa-NG glass cockpit and one Hansa-3 aircraft was handed over to Mesco Aerospace.

It was also announced that this agreement between NAL and Mesco Aerospace was the first step to produce and market Hansa-NG

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Banglore Mirror

Oneer – CSIR's answer to the problem of safe drinking water

CSIR-IITR 16th March, 2018

Clean drinking water is an essential prerequisite for good health. Drinking contaminated water leads to diseases like cholera, diarrhoea, dysentery, hepatitis A and typhoid. In a country like India, where 21% of communicable diseases spread through unsafe water, and more than 500 children under the age of five die each day from diarrhoea, the accessibility to clean drinking water is paramount. A new device developed by the Council of Scientific and Industrial Research's (CSIR's) Indian Institute of Toxicology Research (CSIR-IITR) may soon put an end to clean water woes.

Water purification systems are not new in the market. However, most of them are either too expensive for everyone to afford, or need heavy maintenance. The water purifier developed by the researchers at CSIR-IITR, named Oneer, is different. It is an electronic device that runs on solar energy and provides clean water for less than two paise per litre. Unlike Ultra Violet (UV) water purifiers that kill microorganisms from clear water, Oneer can also treat brackish or turbid water with microorganisms.

The water purifier works on the principle of anodic oxidation, an electrochemical method commonly used for the production of oxide films. "The innovative technology used in the device eliminates all disease-causing pathogens such as virus, bacteria, fungi, protozoa and cyst. It provides safe drinking water to communities as per National and International standards prescribed for potable water by World Health Organization (WHO) and Environmental Protection Agency (EPA)", said Prof. Alok Dhawan, Director of CSIR-IITR, in a statement to Research Matters.

Oneer comes in two versions -- domestic and commercial. The domestic version can supply 10 litres of water in 5 minutes, and the commercial version produces 450 litres of treated water per hour. The unique modular design allows for scaling up of the process from 5000 to 1 lakh litres per day. Since the device operates on solar energy, it can provide clean drinking water to remote areas without electricity, and to street vendors.

The water purifier is the first of its kind that has almost zero maintenance. "An inbuilt smart sensor system in the device' provides real-time information of operational steps. It comes with a self-clean mode, and automatic tank filling ensures 24x7 availability of safe drinking water", said Prof. Dhawan. Also, it doesn't require a membrane for the filtration process, and hence the frequent replacement of membranes is unnecessary. If there are higher levels of total dissolved solids (TDS) or other chemical contaminants in the water, specific pre-filters can be used.

Oneer is also designed to conserve essential minerals in the purified water, unlike other technologies. "One common concern related to the use of reverse osmosis (RO) water purifiers is the probability of losing a majority of essential minerals during the purification process. The unique disinfection process of Oneer retains essential natural minerals, and thus is beneficial for our health and well-being", Prof. Dhawan said.

The scientists at CSIR-IITR have also released a commercial prototype of Oneer, and have successfully tested it on various occasions.

In fact, the drinking water from Oneer is being regularly used by the CSIR-IITR staff. The device was also used during the CSIR Sports Meet and in a Krishi Mela in Lucknow with more than 5000 participants, to provide drinking water.

Oneer promises clean drinking water for all and is a step in the right direction towards a healthy country. So how soon can we see some in the market?

“CSIR-IITR is in the process of setting up 5-6 experimental units across Lucknow for receiving feedback from the public. The technology is ready for commercialisation, and many private companies have shown their interest in the technology”, signed off Prof. Dhawan.

Published in:
Research Matters

CSIR

16th March, 2018

किसान अलग तरीके से बढ़ाएं अपनी कमाई

सभी किसान चारों ओर से परेशान हैं। वे खेती से ज्यादा कमाना चाहते हैं लेकिन तय नहीं कर पाते कि इसके लिए क्या करें? यदि तय भी कर लें तो ज्यादातर यह नहीं जानते कि किस काम को कब, कैसे व कहां करें? खेती की उपज से खाने–पीने की अनगिनत चीजें बनती हैं लेकिन उनके लिए तकनीक सीखनी पड़ती है। किसान खेती की तकनीकों के लिए भारतीय कृषि अनुसंधान परिषद के रिसर्च स्टेशनों से उम्मीद करते हैं लेकिन हमारे देश में किसानों के काम की खोज, तरीके, तरकीब व तकनीक की जानकारी कहीं एक छत के तले नहीं मिलती। लिहाजा किसानों को उन्हें हासिल करने के लिए भी जहां–तहां भट. कना पड़ता है। ज्यादातर किसान नहीं जानते कि विज्ञान व उद्योग से जुड़ी संस्था वैज्ञानिक एवं औद्योगिक अनुसंधान परिषद, सीएसआईआर ने किसानों के लिए भी बहुत ही उम्दा तकनीकें व मशीनें निकाली हैं। इसी संस्था ने साल 1967 में पहला देसी ट्रैक्टर स्वराज निकाला था। साथ ही चंद हफ्तों में ही बांस पर फूल खिलाने की तरकीब निक. ाली जबकि बांस पर कुदरती फूल 20 साल बाद आते हैं। सीएसआईआर ने मैसूर में केंद्रीय खाद्य प्रौद्योगिकी अनुसंधान संस्थान सीएफटी आरआई खोल रखा है। इस संस्थान ने किसानों व कारोबारियों के लिए किफायती तकनीकें व बहुत से नए तरीके खोजे हैं। उन्हें अपना कर किसान खेती की उपज से खाने का सामान बनाकर बेच सकते हैं और कामयाब कारोबारी बन सकते हैं।

सीएफटीआरआई ने अनाज, फल, सब्जी व मसालों की प्रोसेसिंग व बेहतर पैकिंग के 300 तरीके निकाले हैं। साथ ही गन्ना, हल्दी, टमाटर, नारियल, आम व केले से तैयार (शेष पेज दो पर)

किसान अलग... (पेज एक का शेष) होने वाले नए उत्पाद बनाने की तकनीक व मशीनें ईजाद की हैं। इनमें से बहुत सी तकनीकों को अपनाकर कई इलाकों में किसान खेती से ज्यादा कमाई में कामयाब रहे हैं। तमाम किसान इस रास्ते पर अपने कदम बढ़ा सकते हैं। कई दालें बाजार में 100 रूपए किलोग्राम से ऊपर निकल गई हैं। दाल के कारोबारी खूब पैसा कमा रहे हैं लेकिन दाल उगाने वाले किसान अपनी लागत के साथ–साथ अपनी जान गंवा रहे हैं। उड़द–मूंग हो या अरहर–चना, किसान दलहनी उपज को साबुत बेचने की बजाय उसकी दाल बनाकर बेचें। इससे किसानों को ज्यादा कीमत हासिल हो सकती है। मामूली किसान अपनी निजी दाल मिल नहीं लगा सकते लेकिन यदि वे आपस में मिल जाएं तो सहकारी संस्था या साझेदारी में दाल मिल लगा भी सकते हैं। केंद्रीय खाद्य प्रौद्योगिकी संस्थान, मैसूर के माहिरों ने बड़ी ही कामयाब मिनी दाल मिल बनाई है। यह एक फेस की बिजली पर एक हार्स पावर की मोटर से प्रति घंटा 150 किलोग्राम तक दाल दलती है। मिनी दाल मिल से दाल निकालने में सिर्फ 30–40 रूपए प्रति क्विंटल की दर से खर्च होता है। इस छोटी दाल मिल की कीमत 75 हजार रूपए है और सारी दालें बनाने वाली मल्टी मिनी दाल मिल की कीमत सवा लाख रूपए है। खास बात यह है कि इस मिनी मिल से बनी दालें क्वालिटी व देखने में बड़ी दाल मिल से निकली दालों जैसी ही होती हैं। मिनी मिल से दाल बनाने में दाल से निकला छिलका किसान पशुओं को चारे में खिला सकते हैं। इससे दूध उत्पादन बढ़ेगा। दाल बनाने में एक–दो फीसदी दाल टूट जाती है। उससे डोसा पाउडर, सांभर बेस, बड़ियां व पापड़ बनाए जा सकते हैं। चकले बेलन से प्रति घंटे 60 पापड़ बनते हैं लेकिन सीएफटीआरआई, मैसूर ने जो प्रेस पापड़ मशीन निकाली है, उससे प्रति घंटे 350 उम्दा पापड़ बनते हैं। इससे समय बचता है और थकान भी कम होती है। बेहतर तकनीक से खेती की बिखरी कड़ियां जोड़ने का यही फायदा है। सीएफटीआरआई ने नीरा पेय निकालने व शुद्ध नारियल तेल बनाने की एक नई व किफायती तकनीक निकाली है। इस तकनीक से केरल में पलक्कड़ जिले के 26 हजार नारियल उत्पादकों की आमदनी बढ़ी व उनकी दुनिया बदल गई। वहां के किसान नारियल की गिरती कीमतों से परेशान थे, इस तकनीक ने उन्हें बचाया। गन्ना किसान कम कीमत मिलने व चीनी मिलों पर अटकी बकाया कीमतों से परेशान रहते हैं। उन्हें कारोबारी बन जाना चाहिए। सीएफटीआरआई ने कोल्ड ड्रिंक की तरह गन्ने के ताजे रस को कार्बोनेशन तकनीक के जरिए बोतलबंद करने का नायाब व कामयाब तरीका निकाला है। इसमें गन्ने का रस तीन से चार महीने तक पीने लायक बना रहता है जबकि सादा रस कुछ घंटों बाद ही खराब होने लगता है। रोज 25 क्विंटल गन्ना पेराई की कूवत वाला 13 लाख 20 हजार रूपए कीमत का यह प्लांट रोज एक हजार लिटर रस तैयार करता है। साफ, शुद्ध व पीने में मजेदार इस गन्ने के रस को नींबू, अदरक व पुदीने वगैरह के कई जायकों के साथ एल्यूमीनियम कैन में भी भरा जा सकता है। गौरतलब है कि गन्ने का यह पैक्ड रस ठेलों पर बिकने वाले रस से कई गुना बेहतर व किसानों के लिए फायदेमंद है। बहुत से किसान प्रोसेसिंग न कर पाने की वजह से हल्दी नहीं उगाते। सीएफटीआरआई की किफायती तकनीक अपना कर मैसूर व उसके आसपास में हल्दी उगाने वाले किसान बहुत सुकून से हैं। अब उन्हें भटकना नहीं पड़ता। भारतीय स्टेट बैंक उन्हें कर्ज देता है और होपकाम्स नाम की कोऑपरेटिव संस्था अपने बिक्री केंद्रों पर उनकी मार्केटिंग कर रही है यानी अब हल्दी की प्रोसेसिंग भी आसान है। तमिलनाडु में केले की खेती बहुतायत से होती है, लेकिन जल्दी खराब होने से केला उगाने वालों को अक्सर नुकसान उठाना पड़ता था। सीएफटीआरआई ने शहद व चाकलेट की परत चढ़ाकर केले को 6 महीने तक खाने लायक बनाने की तकनीक निकाली है। उससे केले की खेती करने वालों का नुकसान कम हुआ है। आंध्र प्रदेश के किसानों में सौर ऊर्जा से टमाटर सुखाने तथा कृष्णागिरी के बागबानों में आम के गूदे से कई तरह के उत्पाद बनाने का कारोबार तेजी से बढ़ रहा है। इसकी बुनियाद में भी सीएफटीआरआई के माहिरों द्वारा सुझाए गए एग्री बिजनेस के कामयाब मॉडल और निकाली गई तकनीकें व मशीनें हैं। सीएफटीआरआई लाइसेंसिंग कराने, राय–मशविरा देने के अलावा जांच–परख वगैरह की सहूलियतें भी देता है। इस संस्था ने किसानों के लिए गांव–कस्बों में करने लायक खेती से जुड़े बहुत से नए काम–धंधे खोजे हैं। इन काम–धंधों में जल्द पकने वाली सूखी अंकुरित दालें व सांभर मिक्स जैसे उत्पाद, अनाज से बनने वाले उत्पाद, परंपरागत भोजन के लिए मिक्स मसाले व मसालों के पेस्ट जैसे उत्पाद, स्नैक्स फूड, कार्नफ्लेक्स की तरह गेहूं, धान व ज्वार जैसे अनाजों की खीलें व फूले और कई तरह के मांस उत्पाद तैयार करना शामिल हैं। कई तरह के खमीर उत्पाद, डिब्बा बंद फल, फोजन फ्रूट्स, स्क्वैश, कैचप, सास, अचार, चटनी, सीरप, गाजर का रस व फलों के जूस जैसे पेय, जैम, जैली, मार्मलेड, कैंडी व फलों के पाउडर, सूखी व कटी पैक्ड सब्जियां, कच्चे पपीते से टूटी–फ्रूटी, बेकरी के तमाम उत्पाद और अदरक के उत्पाद बनाने के लिए फूड प्रोसेसिंग की 40 तरह की किफायती मशीनें सीएफटीआरआई ने बनाई हैं जो खेतिहरों व कारोबारियों के मतलब की हैं। इनके जरिए किसान खुद कारोबारी बनकर कमाई कर सकते हैं। बस जरूरत पहल करने की है।

Published in:

Focus News, page no. 1

CSIR-IIP

15th March, 2018

International Conference on "Advances in Analytical Sciences" begins in IIP

By OUR STAFF REPORTER

DEHRADUN, 15 Mar: A three-day international conference on "Advances in Analytical Sciences (ICAAS-2018)", being jointly organised by CSIR-IIP and Indian Society of Analytical Scientists (Delhi Chapter), was inaugurated, here, today.

The programme began with lighting of the ceremonial lamp by the Chief Guest, Dr SSV Ramakumar, Director (R&D), IOCL, and Guest of Honour Dr Anjan Ray, Director, IIP. In his inaugural speech, Dr Ramakumar highlighted the importance of analytical chemistry in understanding the underlying science of finding solutions to various unsolved problems. Advances in analytical chemistry had helped in the development of high quality lubricating oil, grease, BS-VI grade gasoline and diesel. He stressed on the enhanced cooperation between analytical groups of different organisations in exploring new frontiers.

Dr Anjan Ray emphasised the importance of analytical chemistry in various disciplines of science like petroleum, pharmaceuticals, environment, forensic science, minerals, etc.

Dr Michael Palmer, Vice President, Sales, XOS, USA, delivered the keynote address on the topic, "Advantages of Real Time Process Analysis in Petroleum Industry".

Dr J Christopher, General Manager, IOCL (R&D), and the Chairman, Indian Society of Analytical Scientists (Delhi Chapter), gave the welcome address. Dr GS Kapur, Chief General Manager, IOCL (R&D), and Secretary, Indian Society of Analytical Scientist (Delhi Chapter), highlighted the importance and achievements of ISAS. He revealed that the Delhi Chapter was celebrating its Silver Jubilee this year. He also briefed the audience about the conference in details.

The Inaugural Function concluded with a Vote of Thanks proposed by Dr Raj Kumar Singh, Scientist, IIP, and Convener, ICAAS-2018.

An abstracts booklet was also released on this occasion.

The inaugural session was followed by two technical sessions and one business session. The technical sessions were chaired by Dr S S Ray of CSIR-IIP, and Dr GS Kapur, IOCL (R&D). The speakers presented various technical papers in these sessions.

The house also mourned the death of the world famous scientist, Stephen Hawking, by observing two minutes' silence.

The general body meeting of the ISAS was also held in the evening. More than 300 delegates/participants from India and abroad are attending this conference.

The programme was anchored by Tripti and Arfin, Research Scholars of IIP.

Published in:
Garhwal Post

CSIR, Vietnam National University (VNU) To Collaborate For Joint Research

CSIR

14th March, 2018

NEW DELHI: Council of Scientific and Industrial Research (CSIR) and Vietnam National University (VNU) would undertake joint research in research and development areas of mutual interest. A high profile delegation from Vietnam National University (VNU), Hanoi, visited the CSIR and met the Director General of CSIR - Dr. Girish Sahni.

The VNU delegation was led by the varsity President Dr. Nguyen Kim Son.

The objective of the visit was to discuss the modalities of collaborative R&D activities.

In the meeting, various modes of partnership which could be considered for operationalization were discussed.

CSIR and VNU would collaborate initially through student exchange programmes at the Ph.D. level.

According to a statement from Ministry of Science & Technology, the two sides would set up a Joint Working Group to execute research projects of mutual interest in the areas of material science, biotechnology, pharmaceuticals and general technology applications.

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NDTV

CSIR

14th March, 2018

अब टीबी की आयुर्वेदिक दवा के लिए होगा शोध

पीएम के निर्देश पर आयुष और स्वास्थ्य मंत्रालय करेंगे काम

अमर उजाला ब्यूरो

नई दिल्ली।

मधुमेह के बाद जल्द ही टीबी की आयुर्वेदिक दवाएं भी अस्पतालों में मिलेंगी। हालांकि, इसमें थोड़ा समय है। लेकिन वैज्ञानिकों ने शोध की तैयारी शुरू कर दी है। दावा है कि प्रधानमंत्री नरेंद्र मोदी के निर्देश पर आयुष और स्वास्थ्य मंत्रालय ने आयुर्वेद के शोध को बढ़ावा देने का फैसला लिया है।

सूत्रों के मुताबिक, वैज्ञानिकों की टीम हिमाचल में करीब 350 प्रजातियों के पौधों पर शोध करने वाली है। वहीं, आयुर्वेद की प्राचीन ग्रंथों में भी क्षय रोग (टीबी) के इलाज की चर्चा है। इन्हीं आधार पर वैज्ञानिक अपने शोध को जल्द ही शुरू करने वाले हैं।

आयुष्मान भारत में टीबी भी है शामिल: केंद्रीय स्वास्थ्य मंत्रालय के एक अधिकारी ने बताया कि आयुष्मान भारत में मधुमेह के साथ साथ टीबी भी शामिल है। सरकार हेल्थ एंड वेलनेस केंद्रों की स्थापना करने वाली है। इसमें आयुर्वेद दवाओं के जरिये भी मरीजों को उपचार मिलेगा। केंद्रीय स्वास्थ्य मंत्री जगत प्रकाश नड्डा के अनुसार, सरकार देश भर के अस्पतालों में सभी चिकित्सा पद्धति को एक साथ लाकर मरीजों को स्वास्थ्य सुविधाएं मुहैया कराना चाहती है। दिल्ली एम्स के बाद अब अन्य सभी एम्स में आयुष और एलोपैथी का उपचार मिल सकेगा। जिससे इस बीमारी से पीड़ित मरीजों का उपचार हो सकेगा। इसकी तैयारी जोरों पर की जा रही है।

शोध से तैयार की गई थी मधुमेह की दवा

बता दें कि कुछ समय पहले काउंसिल फॉर साइंटिफिक एंड इंडस्ट्रियल रिसर्च (सीएसआईआर) ने मधुमेह के इलाज के लिए करीब 500 से ज्यादा पौधों पर शोध कर बीजीआर-34 नामक आयुर्वेदिक दवा विकसित की थी। जिसके बाद इसे एमिल फार्मास्यूटिकल्स ने मरीजों के लिए उपलब्ध कराया। शोध के बाद अस्पतालों में भी सरकार यह दवा उपलब्ध करवाई। ताकि मरीजों को यह पांच रुपये में मिल सके। ठीक इसी तरह किडनी के लिए नीरी केएफटी शोध के बाद विकसित की गई।

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How IP leaders like Tata, Reliance and Intel do more with les to create maximum IP value

CSIR

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Even among the largest global patent owning companies, most IP executives will have plenty of experience operating in an IP function with less budget than they would like in an ideal world.This is as true in India as it is anywhere else. A news item from yesterday illustrates a key dilemma perfectly. The country's biggest patent filer is the Council of Scientific & Industrial Research (CSIR), a national R&D organisation with 38 member labs. Despite its central role in the innovation system it is facing significant budget shortfalls, if this latest account is to be believed. The head of one regional lab focused on cellular and molecular biology states: "The funding available this year is short by half of what is needed."

This poses a dilemma when it comes to thinking about the IP function. One approach would be to cut down on filing patents, which can contribute significantly to the cost base. You saw this line of thinking two years ago when CSIR's head criticised "indiscriminate" patent filing and announced that member labs would have to take on a greater portion of filing costs in the future. But it has also pushed the organisation to try to create more revenue, partly through patents. CSIR director general Girish Sahni recently said the group "earns about 25% of its budget from external sources and is strengthening its patent portfolio" – and it has managed to license out about 14% of its patents.

At today's IPBC India conference, the head of the IP group at one of India's biggest private-sector patent filers – Tata Consultancy Services (TCS) – described a similar dynamic when advising IP executives how to make the most of limited budgets in the opening "What success looks like" session. "Do you want to protect your current business strategy, or start to monetise in order to earn more money?" was the first question

Ganapathy Narayanan suggested patent owners in that situation must answer. TCS does not face such severe IP budget pressure, Narayanan added, for a simple reason. He estimates that about 40% of the inventions within the organisation are produced by the business units in the course of solving customers' problems, rather than in the R&D function proper. When it is the revenue generation engines of your business that are producing a large share of patents, justifying your IP budget becomes much less of an issue. Of course, this didn't just happen – it took a concerted effort from the IP team to identify where innovation was happening outside of the dedicated research teams.

Anindya Sircar, the former head of IP at IT giant Infosys and now a consultant, explained that it is becoming more common for Indian corporates to see IP as a potential profit centre. But it requires great feats of communication from IP function leaders. General manager Anand Bopardikar credited that as the key at Reliance Industries: "The basic strength of our in-house team is they understand the technology and articulate to the business team as a cost-value analysis."

A point the entire group agreed on, including Intel's Asia-Pacific patents director Guojun Zhou, is one thing they don't do in resource-constrained situations, and that is to differentiate outlay based on what kind of patent is in question – a defensive right, a monetisable right or a strategic one.

Pruning also becomes a crucial part of patent strategy in scarce resource situations. After all, maintenance cost structures mean that you can't continue even a flat rate of patent filings without consistent budget increases. Renewals are often the first thing to get axed in such a scenario, Sircar suggested. Zhou confirmed that for Intel, which maintains one of the world's biggest portfolios, it is a key decision point. "Towards the end of a patent's life, the maintenance fee is so expensive that it can be a relatively easy decision," he suggested, "but that doesn't mean we drop everything that old". Aside from consolations with engineers and business people, Zhou acknowledged that the renewal decision sometimes

comes down to a hunch in the end – and not every decision is right.One open question is whether increased efforts by Indian corporates to create business value from IP rights will result in those rights assuming a more prominent position on the balance sheet. Sircar, who has helped companies figure out how much patents contribute to the bottom line, said that for now, such efforts are more about internal resources. "The objective is to make next year's budget come in smoothly," he commented.

One of the relatively unique features of Indian patent law is the requirement to show commercial working of granted patents annually in a disclosure called Form 27. The more rigid recent enforcement of this requirement has been one of the hot topics for discussion throughout the day here in Mumbai. One positive outcome, suggested attorney Essenese Obhan, is that it does get patent owners thinking about how much value individual patent rights contribute to their businesses. "You have that information in house about how each patent is worked," Obhan reminded IP managers. "Perhaps that can result in more tangible numbers on the balance sheet."

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