CSIR in Media



News Bulletin

11th to 19th June 2018











होता है : वीपी बदनोर



A REAL PROPERTY AND A REAL PROPERTY AND A REAL PROPERTY.	A DESCRIPTION OF A DESC
सिटी रिप्टेर्टर चंडीग्रह	इम्यून सिस्टम तेजी से
टीवायोटिक्स के ज्यादा इस्तेमाल बॉडी की रजिस्टेंस पावर घटती ा रही है। एंटीवायोटिक्स के ज्यादा तेमाल से भविष्य में सबसे वड़ी नौती यह सामने आ रही है कि रे-धीरे डोज बढ़ती जा रही है। से में इसका नुकसान बॉडी ऑर्गन ो हो रहा है। लोग बिना किसी बिटरी सलाह के एंटीवायोटिक्स ले है हैं। जो उनके लिए घातक सिद्ध	कमजोर हो रहा इमटेक के इप्रदेक्टर अनित कौत ने कहा कि अत्पतालों और आम जनता में एंटीवायोटिक दवाओं के दुरुपयोज के चलते मानव शरीर के घट रहे इन्टूझ तिस्टन तेजी से कमजोर हो रहा है। अजर ऐसा ही रहा एक दिन ऐसा होजा जब ज्यावा पावरपुल एंटीवायोटिक भी नानव शरीर पर बेअसर हो जाएंने। जाने मने साइटिस्ट और आईसीएमआर के पूर्व डीजी 'डॉ. एन के जांजुली, एंटी माइक्रोबाइल रजिस्टेस 'एएमआर' से
सकते हैं। हॉस्पिटल्स में दवा	and the statement of the state of

ত

Published in:

Dainik Bhaskar

Produced by Unit for Science Dissemination, CSIR, Anusandhan Bhawan, 2 Rafi Marg, New Delhi

हा सकते हो हास्पटल्स म दवा प्रतिरोधी बैक्टीरिया को सुपरवग या एटीमाइक्रोवियल कहा जा रहा है। हमें जल्द इसका विकल्प ढूंढना होगा। यह बात सोमवार को इंस्टीट्यूट ऑफ माइक्रो बेल टेक्नालॉजी 'इमटक' में एटीमाइक्रोवियल रेजिस्टेंस- नीड फॉर युनाइटेड फोर पर आयोजित एक कान्फ्रेंस में साइंटिस्ट्स ने रखी। इस आयोजन में पंजाब के गवनरे





CSIR-IMTECH

18th June, 2018

Symposium on rise in drug resistant bacteria held

at IMTECH

Press Trust of India | Chandigarh June 18, 2018 Last Updated at 22:50 IST

The CSIR-Institute of Microbial Technology, a microbial institute under the Ministry of Science and Technology, organised a one-day symposium here today on the issue of the rise in drug resistant bacteria or super-bugs.

The symposium, titled 'Antimicrobial Resistance (AMR): Need for a United Front' aims to develop new collaborative research networks for building multi-institutional projects with specific focus on the discovery of novel anti-bacterials, exploring policy measures and developing tools to tackle issues of AMR in India.

The conference was presided over by Punjab Governor and Chandigarh Administrator V P Singh Badnore.

The governor suggested that it was crucial that the scientific community, along with other public health stakeholders, work towards delivery of new solutions for bacterial drug resistance.

The governor appreciated IMTECHs role in developing new drugs that can counter drug resistance bacteria.

He also stressed on the urgent need of Indian research and development institutions to deliver new solutions on the issues of AMR.

Eminent scientist N K Ganguly, former DG, ICMR, Delhi, advised steps India must take to tackle the vital issue of AMR.

Speaking on the occasion IMTECH Director Anil Koul said, "We are witnessing an alarming rise in the levels of antibiotic-resistant bacteria linked to misuse of antibiotics in hospitals and general population. The rise of drug-resistant pathogens is a global challenge. The IMTECH is a key stakeholder in developing new drugs to tackle AMR."

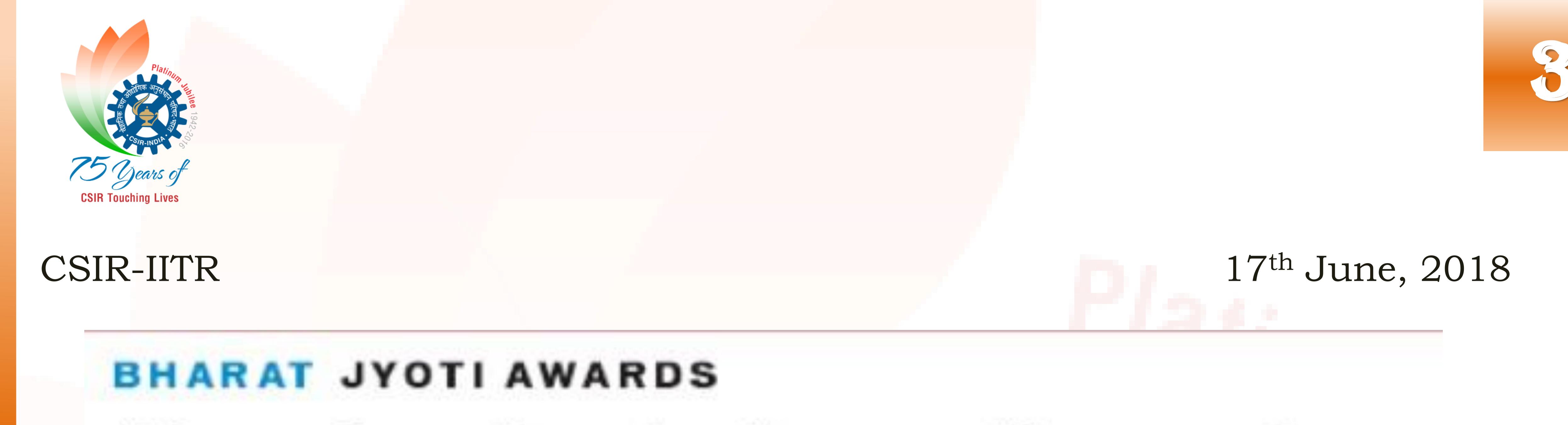
He stressed that the IMTECH also has a national centre for Microbial Type Culture Collection and Gene Bank which has more than 30,000 unexplored microbial strains, that can serve as goldmine for discovery of new antibiotics, the way penicillin, streptomycin and other antibiotics were discovered in early 19th century.

The institute is also part of the Union Governments National Action Plan for antimicrobial resistance containment and aims to tackle issue of antimicrobial resistance via new research in drugs, vaccine and diagnostics.

The IMTECH is entering into new collaborations for tackling drug resistant bacteria with international and national companies like Johnson & Johnson & Cadila Healthcare Ltd respectively, Koul informed.

Published in:

Business Standard



'People who dedicatedly work for society are an inspiration'

LUCKNOW: Governor Ram Naik on Friday said that people who worked for the society with dedication were an inspiration for everyone. He was addressing an NAIK SAID HE HAD ESTABLISHED A GRAHAK PANCHAYAT IN 1960 UNDER WHICH ITEMS OF MONTHLY USE WERE PURCHASED FOR 100 PEOPLE COLLECTIVELY

Vijay Acharya, founder president of Bharat Jyoti gave a detailed presentation on the objectives of the award ceremony and also shared the work being

event organised by Bharat Jyoti at ITR campustohonourvarious people for their work in holistic humanwelfare.

Among the recipients of Bharat Jyoti award were Prof KM Singh, former vice-chancellor, KGMU who got the lifetime award for medico-legal, Abha Singh for women's empowerment, Kanak Rekha for literature, Prof Alok Dhawan for sci-

The governor said he was associated with a consumer organisation of Mumbai. He said he had established grahak panchayat in 1960 under which items of monthly use were purchased for 100 people collectively that earned certain profit percentage for the society. done by the organisation. Dr RM Mathur, senior vicepresident of the organisation, conducted the event. "We are already working in the area of consumerprotection. Our aim is to further motivate people to work in areas such as education for underprivileged children," said Acharya. "Such events and recognitions motivate individuals to do more for the society,

ence and research, Prof Kavita Rastogi for education and Prof MLBBhat.

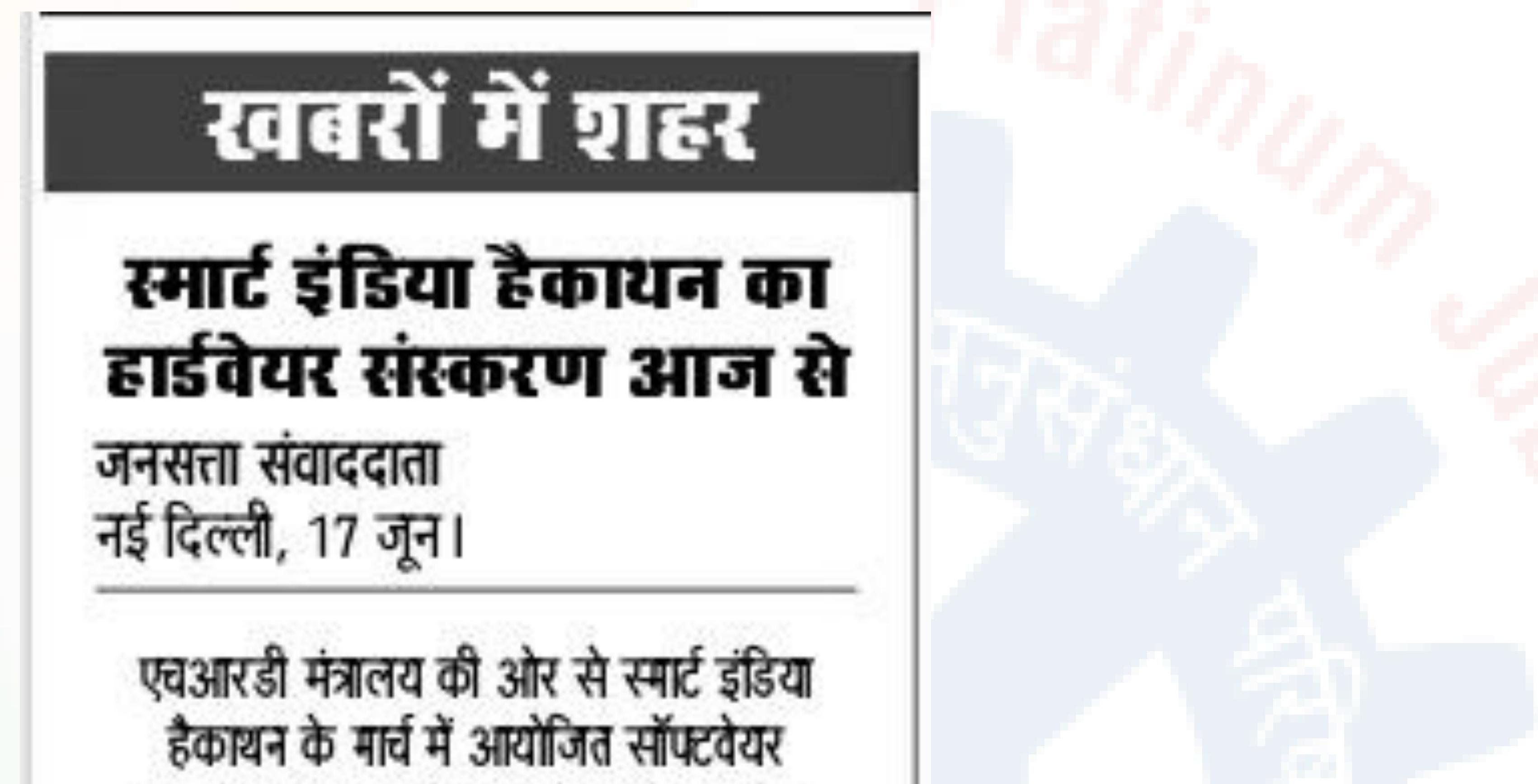
especially young individuals who can also motivate others to do so," said Prof KM Singh.

Published in:

Hindustan Times

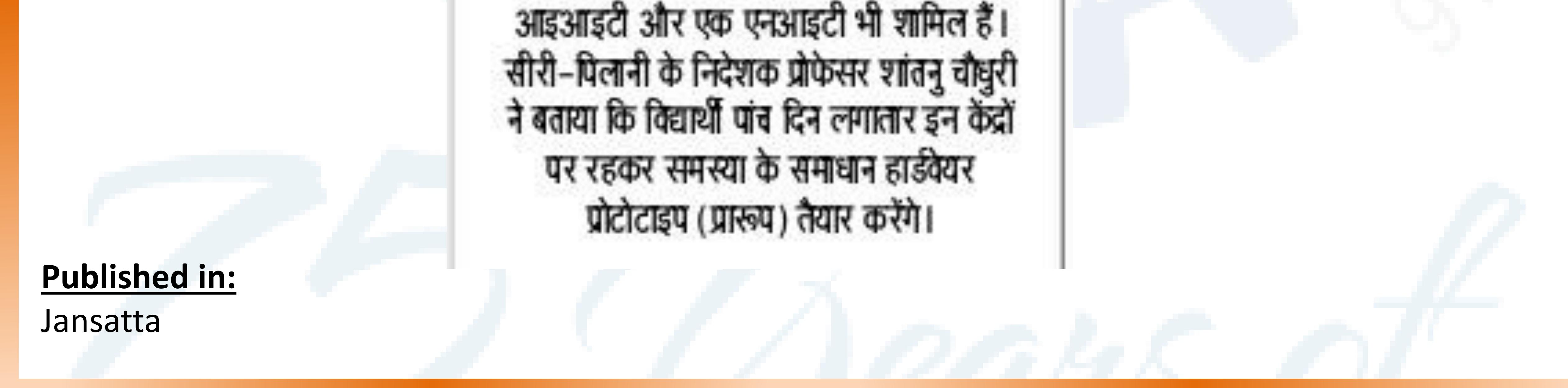


CSIR-CEERI



17th June, 2018

संस्करण के बाद सोमवार से इसके हार्डवेयर संस्करण के अंतिम चरण शुरू होगा। पांच दिनों तक आयोजित होने वाले हैकाथन में दस समस्याओं के हार्डवेयर समाधान के लिए 106 टीमों के 636 विद्यार्थी भाग लेंगे जो दस समस्याओं पर काम करेंगे। स्मार्ट इंडिया हैकाथन का आयोजन 10 केंद्रों पर होगा, जिसमें सीरी– पिलानी, भारतीय विज्ञान संस्थान, बंगलुरु, तीन





In 2017, then Union Minister Y.S. Chowdary, in a written reply in the Lok Sabha, said that plastic can be converted into petrol, diesel and other hydrocarbons. He elaborated on how CSIR-Indian Institute of Chemical Technology, Hyderabad has developed a catalyst that can be used for conversion of waste plastics to fuel oils. He added that CSIR-Indian Institute of Petroleum, Dehradun in collaboration with GAIL (India) Ltd. has developed a process by which waste polyethylene and polypropylene type plastics can be converted into petrol and diesel. The estimate was that 1 kg of waste polyethylene and polypropylene can be converted to either about 600-650 ml of petrol or 700-750 ml of diesel along with LPG,

with the process developed at the bench scale. Why does it not translate into action on the ground (Editorial page, "A plastic charter", June 13)?

> **Published in:** The Hindu



डा. केएम सिंह को 'भारत ज्योति एवं लक्ष्मी रमण आचार्य लाइफन्टाइम अचीवमेंट अवार्ड'

राज्यपाल ने कहा कि जो लोग समर्पित होकर समाज के लिये कार्य करते है तो उनके व्यक्तित्व से समाज को प्रेरणा मिलती है। ऐसे आयोजन के माध्यम से समाज के सामने एक उदाहरण जाता है। समाज को कुछ देने का संकल्प करें। राज्यपाल ने इस वात पर प्रसन्नता व्यक्त की कि सम्मान प्राप्त कराने वालों को महिलाओं का वरावर का प्रतिनिधित्व है। उन्होंने कहा कि दीक्षान्त समारोह के माध्यम से महिला सशक्तीकरण का नया चित्र देखने को मिल रहा है। समाज में छात्राओं का वदलता चित्र 1998 में पूर्व प्रधानमंत्री श्री अटल विहारी वाजपेई द्वारा आरम्भ की गई 'सर्व शिक्षा

योजना' तथा वर्तमान प्रधानमंत्री श्री नरेन्द्र मोदी

की 'वेटी वचाओन्वेटी पढ़ाओं' का परिणाम

है। उन्होंने कहा कि वेटियों को आगे वढ़ाने में



जिसमें सौ लोगों की मासिक जरूरतों को

सामूहिक रूप से क्रय किया जाता था, जिससे

सोसाइटी को कछ प्रतिशत का आर्थिक लाभ

भी होता था। उन्होंने यह भी वताया कि

लखनऊ (एसएनबी)। राज्यपाल श्री राम नाईक ने शुक्रवार को भारत ज्योति संस्था द्वारा भारतीय विषविज्ञान अनसंधान संस्थान के प्रेक्षागृह में आयोजित एक समारोह में किंग जार्ज चिकित्सा विश्वविद्यालय के पूर्व कलपति डा. केएम सिंह को 'भारत ज्योति एवं लक्ष्मी रमण आचार्य लाइफन्टाइम अचीवमेंट अवार्ड' से तथा भारतीय विषविज्ञान अनसंधान संस्थान, लखनऊ के निदेशक प्रोफेसर अलोक धवन, किंग जार्ज चिकित्सा विश्वविद्यालय के कलापति प्रो. एमएलाबी भट्ट , लाखनऊ विश्वविद्यालय की प्रोफेसर कविता रस्तोगी, महिला एवं समाज कल्याण के क्षेत्र में कार्य करने वाली वरिष्ठ अधिवक्ता डा. आभा सिंह एवं समाज सेवी श्रीमती कनक रेखा चौहान को वर्ष 2018 के ' उपभोक्ता श्री' सम्मान से सम्मानित किया। श्री नाईक ने वताया कि वे भी मंवई में उपभोक्ता संस्था से जड़े रहे है। 1960 में उन्होंने ग्राहक पंचायत की स्थापना की गई थी

पेट्रोलियम मंत्री रहते हुए उनके प्रयास से गैस कि प्रधानमंत्री श्री नरेन्द्र मोदी की अपील पर समाज समर्थन करें। कार्यक्रम में भारत ज्योति कनेक्शन की प्रतिक्षा सूची तो समाप्त हुई करोड़ों उपभोक्ताओं ने गैस सिलेन्डर पर संस्था के संस्थापक विजय आचार्य, उसके साथऱ्साथ वड़ी संख्या में नये मिलने वाली सव्सिडी को स्वतः जरूरतमंदों कार्यकारी अध्यक्ष फादर पौल रोडरिक्स सहित कनेक्शन भी आवंटित किये गये। उन्होंने कहा के लिये छोड दिया। अन्य विशिष्ट जन उपस्थित रहे।



Published in:

Rastriya Sahara





Assam: Breather for farmers, Jorhat based NEIST comes up with healing ointment







CSIR-NEIST to those who are affected especially during the annual floods in the State. Mantu Bhuyan, senior scientist, Aromatic and medicinal division of CSIR-NEIST said that the ointment named Kisan Guard, which was totally herbal was launched in Majuli last year on a trial basis. "During the sowing of Sali

paddy, our farmers spend more than a month Think water borne diseases and what working in knee deep water in the usually comes to mind is diarrhoea and other fields. Majuli is also flooded during the gastro enteric diseases. Seldom do we relate rainy season and people have to make their the gouged out flesh between toes and way through puddles and watery fungal infections which follow to the ravages patches. They are often affected by fungal of a water borne affection which infects infections which may result in Athletes lakhs of our farmers and others, who spend foot," Bhuyan said. In fact in Assam during days working in watery conditions. To the rainy season there is large scale provide relief to the intolerable itching and incidence of such infections apart from the pain, the North East Institute of Science occupational exposure hazards of farmers and Technology here has come up with an and people retrieving wet sand from the ointment which not only effectively treats banks of the Brahmaputra and other rivers. the infection but heals the broken skin. If Bhuyan said that the feedback received was required the ointment will be supplied in very good. Pradeep Das, a physician based in large quantities free of cost by Majuli who also runs an NGO, Majuli Seva





Samiti said that he had distributed several tubes of the ointment to people who had been suffering from fungal infections and had found that they got cured. "I had several people asking me for more. They told me that this was better than a similar ointment supplied by the government from time to time especially during the annual floods, "he said over phone from Majuli. The cream had to be applied prior to going into the waters and once again during the night before going to bed. NEIST director D Ramaiah said that the Institute was in position to supply in large scale, free of cost, if the need arose as part of its societal obligation. "This cream and another one for protection of domestic animals from fungal infections work wonders and we are ready to market them as well," he said.

Jatin Kalita, head of Research Training and Business development, NEIST said that the technology for preparing Kisan Guard was in readiness for the past eight months or so but was yet to be transferred for commercial production. He further said that about 1000 tubes of the anti fungal ointment for cows and buffaloes had also been sought by the Veterinary department at Kakajan in Jorhat district. The letter seeking the same had reached them yesterday.

The team of scientists who had produced the ointment included Bhuyan, Sanjay Chanda, PR Bhattacharyya (retired) and resident doctor PK Baruah.







Novel gold nanocomplex for cancer drug delivery





human proteins such as hemoglobin and so it can escape from the macrophages in our body," explains Dr. Nakul C. Maiti, Senior Scientist at the Structural Biology and Bioinformatics Division of CSIR-IICB and one of the corresponding authors of the paper published in ACS Omega. The s porphyrin molecule was found to be uniformly distributed on gold nanoparticles Anti-tumour drugs could target the and the porphyrin–gold complex was stable. diseased cell The anti-tumour drug doxorubicin was then Using gold nanoparticles coated with a successfully loaded on the porphyrin-gold simple organic molecule (porphyrin), nanosurface. "Doxorubicin is selectively researchers from CSIR-Indian Institute of released when it reaches the low-pH Chemical Biology, Kolkata, have designed an environment seen in cancerous cells," efficient drug nanocarrier. The nanocarrier explains Kaushik Bera, research scholar at was found to effectively deliver doxorubicin the institute and one of the first authors of (anti-tumour drug) to the nucleus of the the paper. diseased cell and bring about programmed cell death. Porphyrin was armoured on the Activity of the complex gold nanosurface via continuous stirring Its activity was then tested on brain and method. "Porphyrin is a simple organic lung cancer cells and normal healthy cells. compound and it gives the necessary The porphyrin-gold complex without the protection and stability to the nanosurface. drug showed no toxicity to healthy and Porphyrins are essential co-factors in many cancerous cells.





The nanoparticles coated with the drug showed very low toxicity to normal cells and caused programmed cell death both in brain and lung cancer cells. Multidrug resistance is one of the major barriers in cancer cells, where the drug is quickly ejected out, reducing the effective drug concentrations within the cells and thus decreases its sensitivity.

"We found that the drug-coated nanoparticles were retained well inside the cells thus showing higher activity," says Samarpan Maiti, another research scholar at the institute and one of the first authors of this paper in an email to The Hindu.

"There are several pathways by which the drug can damage the DNA. Currently we are studying the pathways, and trying to design a system that can release the drug more efficiently. We are also studying how the system works in real scenario of tumour model," says Prof. Chitra Mandal from the Cancer Biology & Inflammatory Disorder division of this institute and one of the corresponding authors of the paper.







For two PMC school students, a chance to work with scientists, chase their dreams







school, has completed a two-month-long internship under the mentorship of scientist Chetan Gadgil. The internship was organised by the Exciting Science group, operating under the aegis of CSIR-NCL and the Indian Institute of Science, Education and Research (IISER), Pune. This is the fourth year the team has been offering summer internships to students studying at Suraj Thorat was ecstatic when he got the corporation schools, but they have been opportunity to use a computer for the first actively organising science talks and time in his life, while he was pursuing a competitions for over a decade. "I was summer internship under a team of assigned to collect data on the length of scientists at the CSIR-National Chemical rivers, and trace the paths of all rivers Laboratory (NCL). Suraj, who has just across continents like Asia, North America started Class IX, hails from a small village and Africa, using histograms plotted by called Tondpur in Hingoli district. He has computers. I have learned so much about the been studying at a Pune Municipal thousands of rivers in these continents," Corporation (PMC) school, Vidya Niketan: said Suraj. He added, "I was so excited to Hutatma Balveer Shirishkumar, for about a get a chance to work on a computer... in my year. But his dreams are about a galaxy, or school, students are introduced to galaxies, far, far away. "I want to study computers only in class IX.... I am lucky galaxies and now I know how to use that I know the various parts, their uses and computers," said Suraj, who, along with how to operate one before my classmates". Muskan Singh, another student of the same For him, learning how to use computers was Produced by Unit for Science Dissemination, CSIR, Anusandhan Bhawan, 2 Rafi Marg, New Delhi





the highlight of the internship. "He is so happy... Suraj doesn't want to return to our village," said Suraj's father, Bhaskar Thorat. Muskan, a Class X student who was also part of the internship, was assigned the task of studying mountains in various continents. "Though I had worked on computers and was comfortable with Windows 7, the systems at the labs were

far advanced. The atmosphere was friendly and our guides addressed even the smallest of our

queries," she said.

Muskan said she considers herself lucky to get such a hands-on opportunity to learn science. "Since Class VI, my summer vacations have been spent in some science-related activity or the other..," she said, adding that she also loves Maths.









CSIR invention BGR-34 enlisted as major achievement in Delhi





The Union Science and Technology Ministry enlisted the cost-effective, herbal drug for diabetes - BGR 34, as one of their major achievements of the last four years under the Modi government at a conference in Delhi. Created by the Council for Scientific and Industrial Research (CSIR), the drug has already acquired number one slot in an antidiabetic ayurvedic product category in the IMS Health ranking. "Derived from Ayurvedic plant extracts, the BGR-34 anti-diabetic herbal drug is matching the efficacy level of any branded modern medicine in controlling the sugar level," said Dr Girish Sahni, Director General, Council for Scientific and Industrial Research (CSIR). Dr Harsh Vardhan, Union Minister of Science and Technology pointed out that the Ayush ministry too has approved it after it was tested on patients over a period of 18 months in Delhi, Himachal Pradesh, Haryana, Punjab, and Karnataka.

The drug has been developed jointly by scientists of National Botanical Research Institute (NBRI) and Central Institute for Medicinal & Aromatic Plants (CIMAP), the Lucknow, based research units of the CSIR. The drug is taken as an add-on or adjuvant to existing diabetes treatment. It helps in maintaining normal blood glucose level, releasing antioxidants and checking free radicals. About 67 per cent of the patients showed normal blood sugar levels within three to four days of drug usage. A study published in the Journal of Traditional and Complementary Medicine, an international journal too has found that BGR-34, is effective in cutting down heart attacks by 50 per cent in diabetic patients. According to the experts, in 2015, there were 415 million adults living with diabetes and this number is expected to increase to around 642 million by 2040. Published in: DNA Produced by Unit for Science Dissemination, CSIR, Anusandhan Bhawan, 2 Rafi Marg, New Delhi

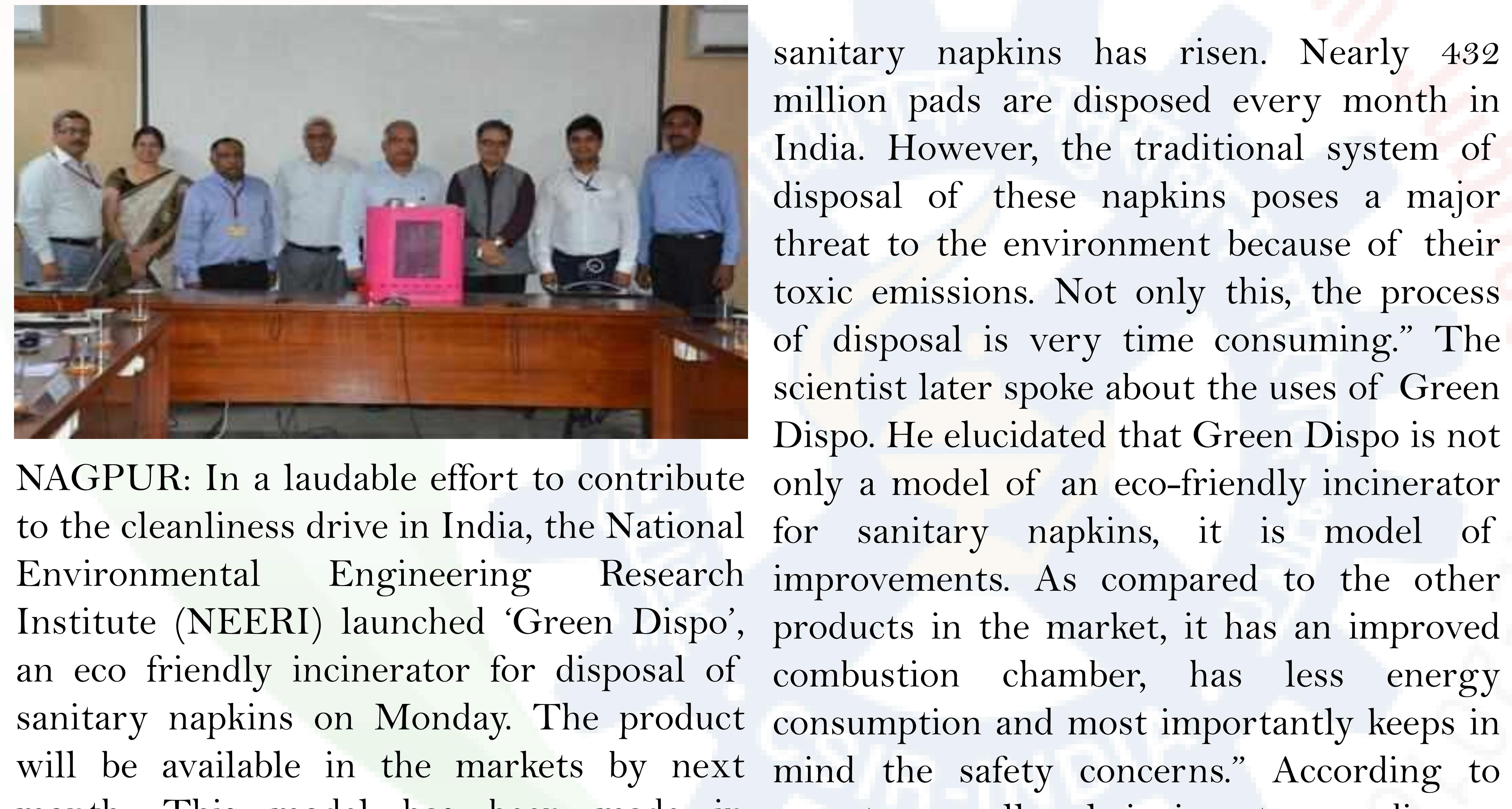




NEERI launches eco-friendly sanitary napkin incinerator







sanitary napkins has risen. Nearly 432 million pads are disposed every month in India. However, the traditional system of disposal of these napkins poses a major threat to the environment because of their toxic emissions. Not only this, the process of disposal is very time consuming." The

month. This model has been made in reports, a small scale incinerator can dispose collaboration with the International 5-10 pads. However, NEERI's model can Advanced Research Centre for Powder incinerate around 60 pads in an hour. About Metallurgy and New Materials (ARCI) and maintenance issues, Labhsetwar said, "We Sowbal Aerothermics (SA). Scientist and have made sure that our contract mentions head of energy and resource management that the maintenance of such a sensitive division, Nitin Labhsetwar said, "With device is a must and the same must be done increasing awareness about hygiene, use of every six months."





Director of CSIR-NEERI Ramesh Kumar addressed the gathering and spoke about the institute's efforts to tackle environmental issues. Director of ARCI Padmanabham was the guest of honour. Representative of Girl Child Industries N Sushma gave a live demonstration of the model. Roy Johnson from ARCI and VVS Rao from SA gave a presentation about the contribution of their institutions in this model. The vote of thanks was proposed by Labhsetwar. Madhubala Sabu from We Dare social organization and Anusuya Kale Chhabrani from Swachh organization were also present at the event.





CSIR-CDRI

CSIR Touching Lives

BP team interacts with CDRI scientists

semisynthesis and synthesis of biologically-active compounds along with generation of pseudonatural products," he said. Srikanth Kumar Rath (CDRI) gave a detailed presentation of the achievements and facilities of the institute in the pharmaceutical sector and for the 'Affordable Healthcare for All'. He also discussed skill development and other training programmes and biological screening facilities by which bilateral collaboration could be established. Wahajul Haq discussed the

12th June, 2018





A four-member delegation **A**from Guwahati Biotech Park (GBP), Assam, led by Bula Choudhury and MG Barthakur, visited Central Drug Research Institute (CDRI) on Monday. The objective of the visit and interaction with the scientists was to seek collaboration for the betterment of science and technology entrepre-

Choudhury said it was a vision- tunities for the citizens of ence and technology entreprein northeastern India," she covery of new chemical entities ary project launched by an north-eastern and eastern said. neurship related with the (NCE) from natural products Barthakur explained the of various targets and developautonomous society under the India. GBP aims to be a place healthcare and pharmaceutical Assam government. "The where educators, researchers role of GBP to the CDRI scienindustry in northeastern India. ment in vitro testing as well as



neurship related with health- founders of GBP hope to and business class come togethic validation and technical opportunities at CDRI and product profiling and clinical how both GBP and CDRI care and pharmaceuticals in change the economic condition er as collaborative partners for database. Besides this, we are could work in close coordinaof the region and the state, the betterment of science and north-eastern India. GBP, thereby increasing the opporalso aiming at promoting dis- tion for the betterment of scitechnology entrepreneurship Introducing

tists stating that it with its facilities would like to promote the healthcare and pharmaceutical sector of northeastern India with emphasis on the exploration of its natural resources for providing maximum benefits to the people residing there. "The focus on GBP is to boost the state's renowned healthcare practices of Ayurveda by synergising traditional knowledge with scientif-



The Pioneer



जानकीपुरम विस्तार स्थित सीडीआरआई में पहुंची चार सदस्यीय टीम।	
स्वास्थ्य क्षेत्र में सुधार ला सके। यह बात गुवाहाटी बायोटेक पार्क (जीबीपी) के एक प्रतिनिधिमंडल ने सेंट्रल ड्रग रिसर्च इंस्टीट्यूट (सीडीआरआई) का दौरा करने के दौरान कही। जानकीपुरम विस्तार स्थित सीडीआरआई में सोमवार को जीबीपी से डॉ.	डॉ. एमजी बारठाकुर ने बताया कि बायोटेक पार्क अपनी सुविधाओं के माध्यम से पूर्वोत्तर में स्वास्थ्य देखभाल और फार्मास्यूटिकल्स सेक्टर को बढ़ावा देना चाहता है। इसका मुख्य फोकस प्राकृतिक संसाधनों की खोज पर जोर देना है, जिससे लोगों को अधिकतम लाभ मिल सके। वहीं, डॉ. बुला चौधरी ने बताया कि असम सरकार ने एक स्वायत्त सोसायटी की मदद से एक परियोजना तैयार की है। इसके माध्यम से

को एक बैठक की। मंडलायुक्त कार्यालय में हुई बैठक में कई विभाग के अधिकारी मौजूद रहे। यहां मंडलायुक्त ने सभी विभागों की जिम्मेदारियां तय कर दी। गर्ग ने बताया कि महोत्सव 5 से 8 अक्टूबर के बीच होना है। इसमें देश-विदेश से कई वैज्ञानिक सहित अन्य अतिथि भाग लेंगे। साथ ही सुरक्षा व्यवस्था के पुख्ता इंतजाम करने के निर्देश दिए। इसके अलावा पर्यटन विभाग को अतिथियों के रुकने और अन्य सुविधाओं का

नेतृत्व में चार सदस्यीय प्रतिनिधिमंडल ने राज्य की आर्थिक स्थिति को बदलने का पूरा ध्यान रखने को कहा। नगर दौरा किया। इसका मकसद सीडीआरआई प्रयास किया जाएगा। सीडीआरआई की ओर निगम सहित स्वास्थ्य, लोक निर्माण के वैज्ञानिकों से चर्चा कर पूर्वोत्तर राज्यों में से डॉ. श्रीकांत कुमार रथ ने फामां सेक्टर से विभाग, लेसा, परिवहन, सूचना और स्वास्थ्य और दवा से संबंधित सहयोग की संबंधित उपलब्धियों और सुविधाओं के बारे एलडीए को उनकी जिम्मेदारियों से तलाश करना है। में प्रतिनिधिमंडल को जानकारी दी। अवगत करवाया।

Published in:

Navbharat Times





Green concrete set to flood the market soon





The cement industry is one of the primary producers of carbon dioxide, a highly polluting greenhouse gas. To combat this, the city-based CSIR-Structural Engineering Research Centre (CSIR-SERC) has created a technology to enable the commercialisation of geopolymer concrete, which eliminates the carbon dioxide emission and is produced with industrial waste, creating a sustainable model.

Chennai: Senior scientist PS Ambily and her team have created a geopolymer concrete technology, built using industrial waste such as fly ash from thermal plants, rice husk from paddy and ground-granulated blast-furnace slag (GGBS). "There are different methods used for creating polymerisation – most of which involve either an energy treatment or high alkaline reaction generation technology. But the one we have invented has polymerisation taking place at room-temperature and doesn't require water during the curing process, as in conventional methods," explained the scientist. The technology requires less energy for production, has a low carbon footprint and high strength, and creates sustainability through the systematic use of industrial waste.

"The technology has been demonstrated during pilot studies and has been used in the building of an annex structure in CLRI Kendra Vidyalaya School. In fact, the cost-effective and eco-friendly material can be easily adapted to suit diverse needs by modifying design parameters. Geopolymer concrete can be used in construction, landscaping, container yards, footpath construction, for parking lots among others. This is a highly profitable business for Micro, Small & Medium Enterprises (MSMEs)," added Ambily. While research on geopolymer concrete has been ongoing, the first attempt towards commercial production has been made on Sunday, when the technology was transferred to Kiran





Global Geocements Limited, thanks to a tripartite agreement signed by CSIR-SERC, National Research Development Corporation (NRDC) and the private entity. Speaking to DT Next, S Singaravelu, Managing Director of the city-based manufacturing cement unit, said that this "green" concrete technology can be mass produced at a faster rate than conventional







Please Follow/Subscribe CSIR Social Media Handles

