

CSIR in Media



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IICT working on once-a-week diabetic pill

CSIR-IICT

14th June 2017



Dr S Chandrasekhar, director, CSIR-IICT said, “We have been working on a new structure for the last eight years. All the pre-requirements for Phase I are completed. The results so far are very promising.

Millions suffering from diabetes, who are popping pills and injecting insulin, may be freed from the daily chore. Scientists at the Indian Institute of Chemical Technology (IICT) are working on a drug that can regulate the glucose level in the body and patients instead of popping the pill daily would need to just pop it once a week.

Speaking to The Hans India,

The structure activity studies would start soon and what is interesting is the reactions are general.” Dr Saibal Das, senior scientist, says, “We are developing inhibitors that will sit on PPP-4 compound protein and regulate glucose level. Presently, patients pop a pill every day. We are working towards making a potential candidate that can work for a week.”

DPP-4 inhibitors work by blocking the action of DPP-4, an enzyme which destroys incretin. Incretins help the body produce more insulin. IICT scientists have been working with biologists from different countries towards increasing the half life of the compound. This means the time taken by the drug to be active in the body.

The results so far have been promising. The timeline for a drug discovery is a minimum of 15 years. IICT scientists have passed the half-way stage. Dr Chandrasekhar says, “It is a matter of when push comes to shove. We are forging ahead with several collaborations with institutes from across the world and the industry interface too is looking up. This new structure could be a boon for diabetic patients.”

Published in:

[Hans India](#)

These easy to assemble toilets developed by CSIR will be a boon to areas without toilets

CSIR-SERC

14th June 2017

Chennai's CSIR-SERC came up with an easy to assemble toilet that could solve all the problems regarding lack of toilets in the interior regions of India.

The Council for Scientific and Industrial Research and Structural Engineering Research Centre (CSIR-SERC) in Chennai has come up with an easy to assemble toilet that could reach interiors of India where there are a severe lack of toilets.

More about the easy to assemble toilets:

The toilet can be assembled in less than 5 hours

It will weigh less than 500kg

The toilet is made with a textile reinforced concrete (TRC) panels developed by CSIR

The life span of the toilet would be around 25-30 years

These sheets vary in thickness from 15mm to 25mm and there is absolutely no need for moulds in order to prepare these sheets

These sheets are corrosion free and are able to hold in rough winds; so, these sheets will withstand every kind of weather

For now, each toilet costs between Rs 12,000 and Rs.15,000. With buildtex--the textile used in building applications--being manufactured in India, the cost is expected to come down.

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As reported by The Hindu, on Saturday a memorandum of understanding was signed between CSIR-SERC and Smart Build Prefab Pvt. Ltd, Hyderabad for the transfer of manufacturing TRC panels required for the construction of such toilets.

The TRC panels can also be used as flooring, roofs, doors, walls, etc. The sheets are reinforced using a glass textile mesh along with a grained cementitious binder. It was in 2014 that the CSIR-SERC applied for a patent for this versatile piece of technology.

This memorandum is said to have been signed during the foundation day programme of CSIR-SERC, which was presided over by Santosh Kapuriya, Director, CSIR-SERC.

Published in:
[India Today](#)

Why do epilepsy drugs don't work for some women? Scientists find out

CSIR-IGIB

14th June 2017

A variation in a gene is responsible for some women to suffer from frequent epileptic seizures despite taking anti-epileptic drugs

Effective treatment is available for epilepsy, but doctors had found out that epilepsy drugs don't work in some women. Now scientists have figured out why some women suffer from recurrent seizures despite medication.

Scientists at the Institute of Genomics and Integrative Biology (IGIB) and Institute of Human Behavior and Allied Sciences (IHBAS), both in New Delhi, have found that a variation in a gene called Cytochrome P4501A1 (CYP1A1) is responsible for some women to suffer from frequent epileptic seizures despite taking one or a combination of known anti-epileptic drugs. The study results have been published in The Pharmacogenomics Journal.

CYP1A1 gene, known to make an enzyme that regulates the levels of female hormone estrogen in the blood, is also important in controlling drug response in epilepsy. "Since this gene is involved in dispersal of estrogen, we thought that perhaps an altered expression of it is contributing to higher levels of estradiol, which, in turn, was increasing susceptibility of women to seizure and causing poor response to drugs. Our studies showed this was indeed so," researchers explained. The study involved 579 patients with epilepsy, of whom 45% were women.

Based on the study results, the researchers have identified a genetic marker for predicting therapeutic response to drugs in epilepsy.

“Though genetic variation has been studied in other countries with variable results, this study in the Indian context is important. We are still trying to find out best management for intractable seizure. Hopefully, the new finding about genetic basis of intractable seizures will lead to some better enzyme regulation in anti-epileptic drugs in future,” commented Dr Vijaya Nath Mishra, professor of neurology at the Institute of Medical Sciences (IMS) BHU, who was not involved in this study.

The research team included P Talwar, N Kanojia, S Mahendru, R Baghel, S Grover, G Arora, G K Grewal, S Parween, A Srivastava, M Singh, S Vig, S Kushwaha, S Sharma, K Bala, S Kukreti, and Ritushree Kukreti.



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[Down to Earth](#)

CSIR-CBRI

14th June 2017

स्वच्छता के लिए किया जागरूक

सीबीआरआई की ओर से दी गई कूड़ा निस्तारण की जानकारी

अमर उजाला व्यूरो
रुड़की।

केंद्रीय पर्यावरण वन एवं मौसम परिवर्तन मंत्रालय भारत के निर्देशन में सीबीआरआई रुड़की स्थित पर्यावरण सूचना तंत्र की ओर से आयोजित स्वच्छ भारत पखवाड़ा के अंतर्गत लोगों को स्वच्छता के प्रति जागरूक किया गया।

इस दौरान कचरे को अलग कर उसके निस्तारण किए जाने के बारे में जानकारी दी गई। 15 जून तक चलने वाले पखवाड़े के अंतर्गत मंगलवार को कालोनी में स्थित गेस्ट हाउस, वैज्ञानिकों व आसपास रह रहे लोगों को सफाई की उपयोगिता बताते हुए कचरे के बारे में जानकारी प्रदान की गई। इस दौरान सूखा



सीबीआरआई में स्वच्छता पखवाड़ा के दौरान जानकारी देते विशेषज्ञ।

कचरा और गीला कचरा को अलग करने तथा इनके निस्तारण की जानकारी दी गई।

इस दौरान कालोनी परिसर में रहने वाले परिवार के सदस्यों को लाइव वीडियो के द्वारा सफाई के उपयोगिता और इसकी अनिवार्यता को लेकर ज्ञानवर्धन किया गया।

इसके साथ ही यह बताया कि स्वच्छ

पर्यावरण रखना हमारा नैतिक कर्तव्य है जिसे हमें हमारी भावी पीढ़ी के सुनहरे कल के लिए संजो के रखना है। इस दौरान एनविस टीम की ओर से डॉ. अतुल कुमार अग्रवाल, श्रीनिवास बी, इंद्रजीत त्यागी, विवेक कुशवाहा, दिलशाद अली, प्रतिभा शर्मा, शुभांगी शुक्ला आदि मौजूद थे।

Published in:

Amar Ujala

NGT orders probe into Essar's 'illegal' constructions in Gujarat's eco-sensitive zone

CSIR-NEERI

14th June 2017

The committee has been tasked to ascertain exact area which is being used by Essar Bulk Terminal (Salaya) Ltd (EBT)

The Pune bench of the National Green Tribunal appointed a three-member Court Commission comprising director of the Ministry of Environment, Forest and Climate Change (MoEFCC), senior scientist of National Environmental Engineering Research Institute (NEERI) and director of Marine National Park and Sanctuary, Jamnagar for local investigation to ascertain exact area which is being used by the Essar Bulk Terminal (Salaya) Ltd (EBT).

The green bench, comprising Justice U D Salvi and Ajay Deshpande, has directed the committee to ascertain the extent of constructions carried out by EBT.

The Salaya Fishermen's Association (SFA) had filed an application for appointment of Court Commissioner/Commission to investigate into illegal construction of soil bunds carried out by the EBT. The application also alleged that the EBT has encroached upon protected Eco-Sensitive Zone (ESZ) of Salaya Marine National Park and Sanctuary. It claimed that the encroachment resulted in the destruction of mangroves and obstruction to inter-tidal water in Salaya Creek.

The EBT, however, has replied that there is no illegal construction made by them. The probe order, which was passed on May 25, was uploaded on June 14 on the tribunal's website.

The SFA counsel Asim Sarode submitted before the NGT that the Notification dated August 22, 2013, declared 326.26 sq km area around Salaya Marine National Park and Marine Sanctuary as ESZ, of which area measuring 208.58 sq km is landward, 105.14 sq km is seaward and 12.54 sq km is covered by rivers.

The committee has to furnish its report before July 26.

Published in:

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