CSIR in Media

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75 Years of

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2nd to 5th September 2017

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PMO Headhunts young minds to lead India

CSIR 1st September 2017

NEW DELHI: Prime Minister Narendra Modi wants a young brigade of scientists to be groomed at central laboratories to find economical solutions to problems facing the country. He wants them to focus on socio-economic needs in the field of health, water, sanitation, waste management, smart cities, solar energy, irrigation, and food. The PM also emphasised that the scientific departments should work in tandem with the developmental ministries and government agencies. Modi directed to create special opportunities for scientists below the age of 45 years on a competitive basis. These special opportunities may include early recognition and support, creation of special groups such as Academy of Young Scientists, involvement in scientific committees that set the directions and evaluate projects, Centre of Excellence headed by a young scientist.

"The selected laboratories should be functional by April 1, 2018," stated the minutes of the meeting prepared after the meeting in July. The meeting was attended by heads of scientific departments—department of biotechnology, department of science and technology, ministry of earth sciences, Council of Scientific and Industrial Research (CSIR), Department of Agricultural Research and Education and Department of Health Research.

On similar lines, young IAS officers and DRDO scientists are also being trained. Since 2015, a batch of 160 young IAS officers is being selected by the Department of Personnel and Training (DoPT) and are being trained in central ministries.

The PM had also advised the country's premier defence research agency Defence Research and Development Organisation (DRDO) to hire young scientists, not over the age of 35 years to head at least five laboratories of defence research agency.

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CSIR-IHBT

3rd September 2017

वाइन पर चढ़ा चाय का सुरूर

- पालमपुर स्थित सीएसआइआर-आइएचबीटी ने बनाई टी वाइन
- चाय की हरी व काली पत्तियों से किया जाता है तैयार
- कैटेकिन के पूरे गुण मौजूद, दिल के मरीजों के लिए वरदान

100 लीटर क्षमता का प्रोजेक्ट लगाने में आएगा करीब 10 लाख रुपये का खर्च

01 साल का समय लगता है टी वाइन तैयार करने में

रविवार विशेष

मुकेश मेहरा • पालमपुर

हिमाचल प्रदेश के पालमपुर स्थित सीएसआइआर (काउंसिल ऑफ साइंटिफिक एंड इंडस्ट्रीयल रिसर्च) के आइएचबीटी (इंस्टीट्यूट ऑफ हिमालयन बायोसोर्स टेक्नोलॉजी) के वैज्ञानिकों ने चाय की पत्तियों से ऐसी वाइन तैयार की है, जो न केवल सेहत के लिए लाभदायक है, बल्कि स्वाद में भी बेहतर है। टी वाइन तैयार करने में वैज्ञानिकों को करीब तीन साल का समय लगा।

वैज्ञानिक बताते हैं कि चाय पर चल रहे शोध के दौरान इसकी पत्तियों के औषधीय गुणों का पता चला। उसी के आधार पर इसके विभिन्न उत्पाद तैयार करने का काम शुरू कर दिया गया। कुछ तकनीकी कारणों का समाधान हो जाने पर इसे बाजार में उतारा जाएगा।

प्रोजेक्ट लगाने का खर्च

वैज्ञानिकों के अनुसार 100 लीटर क्षमता का प्रोजेक्ट लगाने में करीब 10 लाख रुपये का खर्च आएगा। पहले साल वैज्ञानिक प्लांट लगाने वाले की नि:शुल्क मदद करेंगे। प्लांट लगाने के लिए लघु एवं मध्यम उद्योग निगम से सब्सिडी पर कर्ज लिया जा सकता है। इसके लिए निवेशक के पास वाइन उत्पादन व बिक्री का लाइसेंस होना जरूरी है।

टी वाइन की खूबियां

चूंकि टी वाइन चाय की पत्ती से तैयार की जाती है इसलिए इसमें चाय की पत्तियों में पाया जाने वाला एंटी ऑक्सीडेंट कैटेकिन भरपूर मात्रा में होता है, जो रक्तचाप की दिक्कत से जूझ रहे लोगों के लिए फायदेमंद है। इससे हृदय रोग की संभावना कम रहती है। यह शरीर में वसा को कम करने में सहायक है और धमनियों में रक्त संचार को सामान्य बनाए रखता है। इसके सेवन से त्वचा चमकती है और चेहरे में भी निखार आता है।

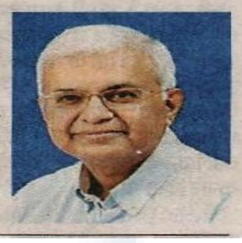
इन पत्तियों का प्रयोग

टी वाइन बनाने में हरी व काली चाय की पत्तियों का प्रयोग होता है। ये द्वितीय श्रेणी की पत्तियां होती हैं, जिनका प्रयोग चाय बनाने में नहीं हो पाता। न बिकने वाली इन पत्तियों का इसमें बेहतर प्रयोग हो जाता है। टी वाइन तैयार करने में करीब एक साल का समय लगता है।

दक्षिण अफ्रीका की भी रुचि

टी वाइन तैयार करने की तकनीक का प्रयोग करने में दक्षिण अफ्रीका ने भी दिलचस्पी दिखाई है। दक्षिण अफ्रीका की कंपनी के साथ संस्थान की बात चली है। इसके प्रतिनिधि यहां आकर तकनीक देख चुके हैं।

वैज्ञानिकों के प्रयास से चाय के गुणतत्वों का प्रयोग कर विभिन्न उत्पाद बनाए जा रहे हैं। टी वाइन भी उनमें से एक है। अगर उद्यमी इस तकनीक का प्रयोग कर टी वाइन बनाते हैं तो उनकी आर्थिक स्थिति मजबूत होगी। साथ ही चाय उत्पादकों को भी फायदा होगा, जिनकी पत्तियां द्वितीय श्रेणी की होने के कारण बिक नहीं पाती।



-डॉ. संजय कुमार, निदेशक, सीएसआइआर-आइएचबीटी, पालमपुर

Published in:

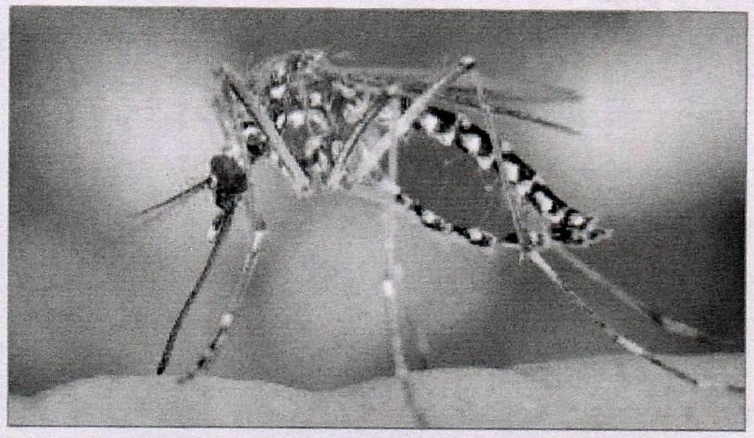
Dainik Jagran, Page no. 14

CSIR-IICT

3rd September 2017

Climate-based system to predict dengue spread

PRESS TRUST OF INDIA
London, September 2



The yellow fever mosquito spreads dengue, chikungunya, etc

SCIENTISTS HAVE DEVELOPED a system that can predict the spread of dengue in different parts of India, based on climatic factors, an advance that may help take preventive measures against the deadly infection.

Researchers from the University of Liverpool in the UK identified the climatic risks for dengue disease outbreaks in different climatic zones in the country through the states of Punjab, Haryana, Rajasthan, Gujarat and Kerala.

The team, in collaboration with researchers from Indian Institute of Chemical Technology (IICT) in Hyderabad and National Institute of Pharmaceutical Education and Research (NIPER) in Guwahati, focussed on changes in a factor called 'extrinsic incubation period (EIP)' of the dengue virus by taking into account daily and monthly mean temperatures in these areas.

EIP is the time taken for incubation of the virus in the mosquito. During this period, after the mosquito draws a virus-rich-blood meal, the virus escapes the gut, passes through the mosquito's body and reaches it salivary glands. Once this happens, the mosquito is infectious and capable of transmitting the virus to a human host. It has been found that climatic conditions play an important role in EIP.

Lower temperatures (17-18 degrees Celsius) result in longer EIPs thereby leading to decreased virus transmission. With increasing temperatures, feeding increases because of enhanced metabolism of the mosquito, leading to shorter

The scientists focused on changes in a factor called 'extrinsic incubation period' of the dengue virus by taking into account daily and monthly mean temperatures in these areas

EIPs. Even a five-day decrease in the incubation period can hike transmission rate by three times, and with an increase in temperature from 17 to 30 degrees Celsius, dengue transmission increases fourfold. However, a further increase in temperature beyond 35 degrees Celsius is detrimental to the mosquito survival.

Researchers observed that except for Gujarat which comprises of arid regions, there was a strong correlation between rainfall and dengue disease burden. They propose an increase in breeding grounds for mosquitoes as a major reason for this finding.

The study found that Kerala being warm (temperature range 23.5-30 degrees Celsius) and wet and with short EIPs (9-14 days) experiences the highest number of dengue cases. It has been found that EIP is the shortest during the monsoon season in most states and therefore there is an enhanced risk of dengue during this time. It is important to take into account the dynamic EIP estimates in different regions in assessing disease burden.

"This climate-based dengue forecasting model could help health authorities assess the disease intensity in a geographic region and plan disease control operations well in advance," said Srinivasa Rao Mutheneni. Changes affecting the incubation period of the virus effects spread of diseases.

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Rastriya Sahara

CSIR-NCL hold Crystallography and Society Satellite meeting

CSIR-NCL

3rd September, 2017

Pune: CSIR-National Chemical Laboratory (CSIR-NCL), Pune organised a Crystallography and Society Satellite meeting as a part of the 24th Congress and General Assembly of the International Union of Crystallography (IUCr).

Ashwini Kumar Nangia, Director, CSIR-NCL, introduced the idea behind organising the Satellite meeting. He said this is the right time to include domain experts in the field, who work not only in the field of natural sciences, but also in the social sciences, who are speaking at the satellite conference. The satellite meeting at CSIR-NCL aimed at the outreach of Crystallography and Science in the South-East Asia region, particularly addressing issues that concern the countries in and around India. Gautam Desiraju of the Indian Institute of Science, Bengaluru gave a talk on the subject 'Science and Society, What do they owe each other?'. "Science is objective and scientists are viewed as being neutral and impersonal, dispassionate and far from the madding crowd. It is felt that they are not concerned with the delusive politics, indeed they should not be concerned with these matters if their science is to be pure and environomist. A quote by the famous crystallographer John Desmond Bernal said 'Science is an integral part both of material and economic life and of ideas which guide and inspire it'," said Desiraju. Dr Amitava Das, CSIR-Central Salt and Marine Chemicals Research Institute, Bhavnagar, spoke on 'Salt and its opportunities in India'. He talked about the main sources of salt in India, salt manufacturing, large scale production, consumption of salt, salt purity.

He explained the factors that add to the overall cost of salt, brine treatment in chloralkali industry. He gave information about the salt demands and projected world and Indian scenarios.

The 24th Congress and General Assembly of the IUCr was held between August 21 to August 28 at the Hyderabad International Convention Centre, Hyderabad.

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Hyderabad CSIR research Directors outline their commercial direction

CSIR-CCMB 2nd September 2017

HYDERABAD: The directors of three primer research institutes in India, Council of Scientific and Industrial Research (CSIR)—Indian Institute of Chemical Technology (IICT) , Centre for Cellular and Molecular Biology (CCMB) and National Geophysical Research Institute (NGRI) said that the institutes are collaborating with private firms and converting their research projects into revenue generating commercial products.

CSIR had lined up 120 fast-track translation of research projects that can be converted to commercially viable products. “We are working on a thermal paint which will reduce indoor room temperature by 4 degrees. This will help bring down the cost of air conditioning and also make it comfortable for people who cannot afford it, We will be launching this as a product in mid-March or April,” said S Chandrasekhar, director CSIR. The Prime Minister is expected to launch the product. “We have identified a synthetic molecule obtained from marine sponge Eribulin, for cancer treatment used when existing drugs don’t work on the patient. The project is now completed and an industry partner will be making a generic version of it,” he added.

CCMB has two projects that are nearing completion stage. One is a cow pregnancy test kit that will help farmers make better economic decisions. “Presently, it takes more than two months to determine if the cattle is pregnant or not, now with this kit we can tell within 30 days. We are looking for companies that can do mass production,” said Rakesh K Mishra, director, CCMB.

“We are developing a cheap and easy to use detection kit for sickle cell anaemia, a genetic disease within a years time. This will help doctors in the tribal belts where the disease is

more prevalent," he added. NGRI director says his research facility will focus on 'knowledge development'. NGRI researchers are focusing on studying rocks along the earthquake prone Indo-Gangetic plains and are mapping them.

"Developing a full wave form tomography of seismic waves which will allow us to map different kinds of rocks accurately, this technology will be a big game changer in exploration of gas hydrates. It will solve two decades of energy needs of the country," he added.

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World Coconut Day: CSIR scientist discusses how climate change affects coconut plantations

CSIR

2nd September 2017

Covering the diet of nearly one-third of the population, this drupe, serves more than just one benefits. The drink refreshes one in hot tropical summers, the lovely aroma of coconut milk adds flavour to meals, and the hot coconut oil message calms the exhausted nerves. Thus the fruit, no doubt, deserve a special day to appreciate the various ways it has helped human beings. World Coconut day, a celebration, that began in 2009, is conducted on 2 September every year to bring all coconut lovers together and educate the masses about the goodness of this fruit. However, there is a lot more to it than just health benefits.

In an exclusive interview with IBTimes Singapore, Council of Scientific & Industrial Research, India, scientist Naresh Kumar Soora told about his journey and experience in his research on coconuts. He also gave an insight on how climate change has affected the growth and cultivation of the plant and his current work on improving the productivity.

Coconut cultivation, its growth and climatic conditions go hand in hand. Adverse climatic conditions have a negative impact on the plant. Being one of the most abundantly used products in South Asian countries, its maintenance and constant supervision thus become a necessity.

"Agronomic adaptations like soil moisture conservation, summer irrigation, drip irrigation, and fertilizer application cannot only minimize losses in majority of coconut growing regions but also improve productivity substantially," says Soora. However, these sustainable methods are not enough to safe guard the plants from the climatic changes the region facing. He also said that the cultivation can only flourish if the climate conditions are right. The right kind of climate, management and intensive genetic, agronomic adaptation can substantially benefit the coconut production in India.

Such a strategy can increase the productivity by 33% in 2030, and by 25–32% in 2080, said the scientist. In fact, productivity can be improved by 20% if all coconut plantations in India are provided with the above-mentioned management.

Soora also said that further research on how to increase the productivity of this fruit is going on. Meanwhile, the importance and uses of coconut and its bi-products have caught the attention of people around the world and he believes that its medicinal and therapeutic properties can help create a more sustainable future.

World Coconut Day also coincides with the establishment of the Asian and Pacific Coconut Community (APCC), its headquarters being in Jakarta, Indonesia. "A Healthy Wealthy Life with Coconut" is this year's theme for the "World Coconut Day".

Published in:
lbtimes.sg

Hyderabad-based CCMB selected to host 'Atal Incubation Centre'

CSIR-CCMB

4th September 2017

CCMB is the only centre in Telangana State and Andhra Pradesh to have been chosen by the Niti Ayog to host such an incubation centre.

Hyderabad: Hyderabad-based Centre for Cellular and Molecular Biology (CCMB) has been selected by the Niti Ayog to host 'Atal Incubation Centre', aimed at creating an ecosystem of facilities and identify start-ups with promising ideas and guide them towards assured success in the field of biotechnology. The CCMB is one among 10 others institutions in the country selected by the Niti Ayog for setting up 'Atal Incubation Centres'. Incidentally, CCMB is the only centre in Telangana State and Andhra Pradesh to have been chosen by the Niti Ayog to host such an incubation centre "In all, 3,800 government institutions and private companies in India applied to Niti Ayog to host this incubation centre. In fact from Telangana State alone, close to 230 institutes and companies had applied to host the incubation centre out of which CCMB was the only institution that got selected," said Director, CCMB, Dr Rakesh K Mishra.

The Niti Ayog will be funding close to Rs 10 crore to CCMB to set-up the special incubation centre, which will come-up at the CCMB Annex-2 located in Uppal. "Stress will be more on big ticket ideas that will succeed. We want to reduce the failure rate of start-ups in this incubation centre and that's why our screening process in the initial stages will be very stringent. The aim is to make sure that only promising ideas that have chance of succeeding in the market should be incubated," Dr Mishra added.

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Telanganatoday.com

Over 5000 Students attend CSIR fair in Hyderabad

CSIR 2nd September 2017

Student gather at one of the stalls at the science exhibition

HYDERABAD: As a part of their double platinum jubilee celebrations, the Council of Scientific and Industrial Research (CSIR) and its reseach lands in the city opened their doors to school children for a six-day science exhibition in the grounds of a IICT-run high school in Habsiguda.

The first day of the event, organised by the research labs on Friday, saw over 5,000 children from different schools visit the exhibition. Rikitha Reddy, a class eighth student of Tejasvi Vidyaranya school said, "I never knew science was so interesting. The scientists told me how maths and science are very much related."

IICT, CCMB and NGRI set up numerous stalls designed along nine science based themes.

G Satheesh Reddy, scientific advisor to defence minister and director general, missiles and strategic systems who inaugurated the event, said exhibitions such as the ones organised by CSIR needed to be taken to smaller towns as they aid in instilling scientific temper among students and public.

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newindianexpress.com

Also published in:
Thehansindia.com
Telangana.com

Fostering scientific temperament, NTTF students visit NML

CSIR

Jamshedpur, Sept. 2: A second group of 44 diploma course students of the Tata Steel Technical Institute (NTTF), Burmamines accompanied by two teachers, Baby Girja and Debesh Mandal visited CSIR-National Metallurgical Laboratory, Jamshedpur and interacted with scientists and research scholars this morning under the aegis of Social Connect programme, i.e. CSIR-NML-School Interactive programme.

The students were thrilled to visit the laboratory and interact with working group.The programme was scheduled for two and half hours, Dr.PNMishra, Principal Scientist, coordinated the 2nd September 2017 programme, started with welcome address, introduced students with the members of SNIP programme, and further discussed about CSIR-NML R&D activities and programme. He discussed about the contributions of CSIR- NML to the Nationin the area of Minerals, Metals, Metallury and Materials. Science. Dr. AK Sahu, Senior Technical Officer motivated the students to interact with the scientist and query as much as possible while visiting to the different divisions of the laboratory and Dr. Sahu also proposed the vote of thanks.

After brief up, a lab visitprogramme was organized under the leadership of P N Mishra, S N Hembram and A K Sahu, where all the students are divided into twoseparate groupsfor managing to interact with scientists and research scholars.

The students expressed their desire, feeling, asked numbers of question, and clarify their doubts with working scientists.

Students have visited creep testing units of MST Division and come to know about fatigue, creep, fractures prevailing in different types of industrial components. Theyhave gather exposure of various kinds of machines like Servo Hydro Testing Machine, Servo Electrical Machine and furnace.

Geopolymer section of Waste Management Unit is also covered in this visit. They further have visited Mechanical Testing Unit and come to know about forging, shaping, rolling & wire Drawing Machine, Trolley furnace chamber operated at 12000C.
NML Workshop units are the centre of attraction among students. They discussed in detail about function and operation of different machines.

Students are surprised to observe the 66-year's history of CSIR-NML at museum and they ask various questions based on samples and posters pertaining to minerals based product and facilities.

Teachers and students have requested for their next visit to the laboratory for gaining deeper knowledge. Teachers express their exciting views and are completely satisfied to know about the consistent effort and research emphasis in various sectors for the ultimate development of make India.

Published in:
Avenuemail

CSIR-IGIB

5th September 2017

उपलब्धि आइजीआइबी ने विकसित की जीनोमिक्स एंड अदर ओमिक्स टेक्नोलॉजी फॉर इनेवल मेडिकल डिसीजन प्रणाली

बीमारियों के बारे में पहले ही बता देगा 'गोमेद'

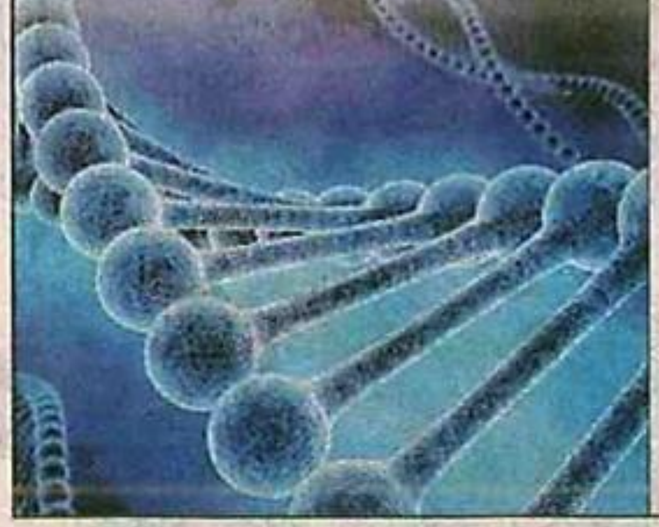
अरविंद पांडेय ● नई दिल्ली

यदि आपको होने वाली बीमारी के बारे में पहले ही पता चल जाए तो निश्चित ही आप उससे बचाव की कोशिश करेंगे और उसमें काफी हद तक सफल भी होंगे। जीनोम पर काम करने वाली सीएसआइआर (वैज्ञानिक एवं औद्योगिक अनुसंधान परिषद) की संस्था आइजीआइबी (इंस्टीट्यूट ऑफ जीनोमिक्स एंड इंटेग्रेटिव बायोलॉजी) ने ऐसी ही एक प्रणाली विकसित की है, जिसकी मदद से अब एक ही जांच में बीमारियों का पहले ही पता चल जाएगा। खास बात यह है कि इस प्रणाली की मदद से जेनेटिक और सामान्य दोनों ही तरह की बीमारियों का पता लगाया जा सकेगा।

आइजीआइबी ने फिलहाल इस प्रणाली को गोमेद (जीनोमिक्स एंड अदर ओमिक्स टेक्नोलॉजी फॉर इनेवल मेडिकल डिसीजन) नाम दिया है। यह डीएनए पर आधारित है। इसके जरिये किसी भी व्यक्ति के सिर्फ डीएनए की जांच करके यह बताया जा सकेगा कि आने वाले दिनों में उसे कौन-कौन सी बीमारियां हो सकती हैं। आइजीआइबी के वैज्ञानिक डॉ. अनुराग अग्रवाल के मुताबिक, इस प्रणाली को वर्षों के लंबे क्लीनिकल ट्रायल के बाद व्यावसायिक स्तर पर बाजार में उतारने की तैयारी है। इसे लेकर देश-दुनिया की तमाम बड़ी पैथोलॉजी एजेंसियों ने भी रुचि दिखाई है। इनमें से कई एजेंसियों के साथ विज्ञान एवं प्रौद्योगिकी मंत्रालय की अंतिम दौर की चर्चा भी हो गई है। सूत्रों की मानें तो प्रणाली की अच्छी कीमत मिलने के बाद मंत्रालय जल्द ही इसको बाजार में उतार देगा। डॉ. अग्रवाल के मुताबिक यह प्रणाली काफी किफायती भी होगी, क्योंकि इसकी जांच में सिर्फ तीन से पचास हजार रुपये तक का ही खर्च आएगा। उन्होंने बताया कि दुनिया में अपनी तरह की यह अनूठी प्रणाली है। यह एक ही जांच में शरीर के भीतर मौजूद और भविष्य में होने वाली बीमारियों के बारे में जानकारी देगी।

3000
से पचास हजार रुपये तक का खर्च आएगा जांच में

सिर्फ एक जांच में बीमारियों के प्रति आगाह कर देगा गोमेद



इन बीमारियों का लग सकेगा पता

दावा है कि इस प्रणाली की मदद से हार्टअटैक से लेकर शुगर, ब्लड प्रेशर, लीवर से जुड़ी बीमारियां सहित उन सभी प्रमुख बीमारियों का पता चल सकेगा जिनसे देश में बड़ी संख्या में लोग पीड़ित हैं। साथ ही इस प्रणाली की मदद से गर्भ में पल रहे बच्चे की बीमारियों और सभी तरह की जेनेटिक बीमारियां का भी पता लगाया जा सकेगा।

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CSIR-IHBT

5th September 2017

फलों को कुरकुरा बनाने वाली फैक्टरी

नई दिल्ली। विज्ञान एवं प्रौद्योगिकी मंत्रालय ने उत्तराखंड में करारे फलों की (क्रिप्सी फ्रूट) की फैक्टरी लगाने के प्रस्ताव को मंजूरी दे दी है।

फैक्टरी की स्थापना सीएसआईआर की प्रयोगशाला हिमालयन जैव संपदा प्रौद्योगिकी संस्थान पालमपुर द्वारा की जाएगी। इसके उत्तराखंड में पैदा होने वाले फलों को सात-आठ महीनों तक सुरक्षित रखना संभव हो सकेगा। आईएचबीटी के निदेशक डॉ. संजय कुमार ने 'हिन्दुस्तान' को बताया कि विज्ञान एवं प्रौद्योगिकी विभाग ढाई करोड़ की लागत से उत्तराखंड में क्रिप्सी फ्रूट यूनिट लगाने पर सहमत हो गया है। **(विसं)**

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