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A Daily News Bulletin
24th to 27th November 2017

सीएसआइआर-इंस्टीट्यूट ऑफ माइक्रोबॉयल टेक्नोलॉजी (आइएमटीइएसी) सेक्टर-39 में स्थापना दिवस पर व्याख्यान देते प्रो. अनुराग एस राठौर ● जागरण

Commercial cultivation of banana in J&K through biotechnology

CSIR-IIIM 27th November 2017

JAMMU, Nov 27: In order to bring commercial cultivation of banana in J&K, the CSIR-Indian Institute of Integrative Medicine, a premiere R&D organization, has conceived a new biotechnology driven programme This work was jointly done by CSIR-IIIM, Jammu and Cadila Pharmaceutical, Ahmedabad. After full trial and established tissue culture and agriculture practice, Dr Ram Vishwakarma, Director IIIM, Jammu launched the J&K grown banana fruit here today While giving the detail of experimental works involved in growing the banana by tissue culture technique at IIIM, Jammu, Dr Vishwakarma, flanked by Desh Ratna, president Agro Divisional and Narendra Brahmbhatt, GM Finance & Costing, Cadila Pharmaceutical Limited, Ahmedabad, held a conference here and revealed that the samplings of this high quality tissue culture variety known as Bhim Grand Naine (G-9) banana were brought from Agro Division of Cadila Pharmaceutical Limited, Ahmedabad, Gujarat and the first trial of cultivation over 2 acres land of field experimental farm Chatha has been successfully completed.

It was further informed that this first cultivation trial was done by planting 2000 samplings of banana plants with the narrow spacing 2 X 2 m in the month of August 2016 and fruit setting commenced in the month of July-August, 2017 whileas the maturity and harvesting attained in 13 months. The plant grew to a height of 6.5 to 7.5 feet and gave yield 20-30 kg per plant and 20-25 tonnes/acre. In term of economy involved, as per market analysis, price of banana in Jammu is approximately Rs 20 per kg. Thus on an average, 20-30 Kg yield/plant gives Rs 250-300/Banana plant. On the basis of market demand, approximately Rs 2.5 lakh net return can be obtained by cultivation of this crop on one acre of land which is attractive business for farmers of the Jammu & Kashmir State as it involves very less inputs but lucrative profit.

Pertinently, in India, the most edible banana species are widely cultivated in Tamil Nadu, West Bengal, Kerala, Maharashtra, Gujarart, Karnataka, Assam, Andhra Pradesh and Bihar whileas many wild species of banana are reported from Northeast and South India. The next target of IIIM to introduce the banana cultivation in Kashmir region through modern biotechnology approach (Polyhouses) in 2018.

Published in:
Daily Excelsior

Fake peer review: CSIR orders probe

CSIR 26th November 2017

HIRUVANANTHAPURAM: A post-doctoral fellow's act of providing fake references as peer review for a genuine joint research work from reputed institutes has left other researchers and scientists in the lurch. After renowned journal publisher 'Frontiers' retracted four published research papers - including three from CSIR's National Institute of Interdisciplinary Science and Technology (NIIST) and one from ICAR-Central Tuber Research Institute (CTCRI) last week, CSIR has now ordered a probe. It is alleged that Nishanth Kumar - a post-doctoral research fellow and a common author in all four papers -.

created fake peer reviews for the original research work. The papers were published between August 2015 and October 2017 in three journals including Frontiers in Microbiology, Frontiers in Pharmacology and Frontiers in Cellular and Infection Microbiology. Kumar has now gone into hiding after resigning from his post.

CSIR-NIIST director A Ajayaghosh said that when the journal publisher tried to contact CSIR's scientist, we tried to cross-check and knew that there was something amiss. "We stood by the publisher's decision to retract the papers. I have ordered a departmental enquiry and asked scientists to be more vigilant. The research papers are genuine as there was no scientific data manipulation. There was no fabrication or plagiarism. It is unfortunate that the common author gave false references and fake email ids as peer review," he said Kumar came to NIST four years ago after completing his PhD from CTCRI.

known to be hardworking with excellent research rating, worked independently and collaborated with other scientists and researchers. It is sad that despite quality research, his shameful act has tarnished a reputed research institute, Ajayaghosh said. CSIR-NIIST ago-processing and natural products division head BS Dileep Kumar - co-author of three papers - said the research done by the team was genuine. "Our team had worked on isolating a potent anti-bacterial and anticancer molecule from a bacterium. We took the help of Regional Cancer Centre. I don't know why he gave fake references. We trusted him. He was doing independent research for one year. He is not even affiliated with CTCRI now and he gave fake references of retired scientists there. He came after Onam and said that he got a job. Later, when the journal tried to contact the peer review names there was no response. They contacted me and when I checked, I was shocked by his actions," said Dileep.

"I retire in four years. The young researchers in our team are worried that they have lost their research and career though there was no plagiarism in scientific data," he said.

CSIR-NIIST senior scientist Praveen Raj said that it was unfortunate that despite taking classes on `Ethics of publication' at an institute known for its culture, a fellow from there indulged in such unethical behaviour. TOI's efforts to reach Kumar were unsuccessful.

Published in:
Times of India

CSIR-CSIO

25th November 2017

NASA scientist shares his experience with CSIO researchers

TRIBUNE NEWS SERVICE

CHANDIGARH, NOVEMBER 24

An Indian origin scientist, Dr Krishen Kumar, who has worked with the US' National Aeronautical and Space Administration (NASA) for 52 years, shared his experience with researchers at the Central Scientifics Instruments Organisation (CSIO) here today.

He talked about successes as well as failures in his scientific pursuits. He worked on a NASA grant at Kansas State University from January 1965 to May 1969 and then worked on a NASA contract at Lockheed Electronics Company in Houston till February 1976. He completed 40 years with NASA on February 9, 2016.

Dr Krishen has put forward original concepts concerning remote sensing, health systems, science payloads, sensor systems, communications and tracking systems, mission support technologies, and automation and robotics technologies. Hailing from a small village in Kashmir, he has worked on NASA programmes starting from the Apollo mission to the present day.

NASA SCIENTIST DELIVERS TALK AT CSIR

HT Correspondent

chandigarh@hindustantimes.com

CHANDIGARH: In an interaction with scientists and researchers, Dr Kumar Krishen, senior scientist, shared his 52 years of experience working with NASA, at Council of Scientific and Industrial Research-Central Scientific Instruments Organisation (CSIR-CSIO), Chandigarh, on Friday. He talked about successes and failures in his pursuits.

He gave examples of successful technical projects that he had completed.

He talked about advanced original concepts concerning remote sensing, health systems, science payloads, sensor systems, communications and tracking systems, mission support technologies, and automation and robotics technologies.

Dr Krishen appreciated the confocal laser scanning microscope and was impressed by the instrumentation available in CSIR-CSIO. Dr Krishen worked on a NASA grant at Kansas State University from January 1965 to May 1969. After that he worked on a NASA contract at Lockheed Electronics Company in Houston till February 9, 1976.

DISCUSSED ADVANCED CONCEPTS CONCERNING REMOTE SENSING, AND HEALTH SYSTEMS, SCIENCE PAYLOADS

Scientist remembers over 5-decade stint with Nasa

Chandigarh: Dr Krishen shared the highlights of his 52-year service to NASA at the Central Scientific Instruments Organisation (CSIO) on Friday. He talked about both successes and failures. He worked on a NASA grant at Kansas State University from January 1965 to May, 1969. He completed 40 years with NASA on February 9, 2016. He cited examples of successful technical projects he completed and highlighted problems that still need to be solved. Dr Krishen elaborated on advanced original concepts concerning remote sensing, health systems, science payloads, sensor systems, communications and tracking systems, mission support technologies and automation and robotics technologies.

Published in:

The Times of India, Hindustan Times

Scientists re-confirm possibility of large earthquakes in the Himalayas

CSIR-4PI

24th November 2017

A new study has reconfirmed possibility that large earthquakes are imminent in the Himalayas. While high levels of strain are getting constantly accumulated along the Main Himalayan Thrust region, only a fraction of it is getting released through small earthquakes of magnitudes less than 5 on the Richter scale. The study is based on data collected from 70 continuous and three episodic GPS stations in different parts of country over a period of two decades from 1996 to 2015. Out of the 73 GPS stations, 43 were located all along the seismically active northern (Himalayas) and eastern (Indo-Burmese and Andaman Arc) boundaries of the Indian tectonic plate.

The study published recently in journal *Scientific Reports*, researchers said, "inverse modelling of India-fixed GPS rates of Himalayan sites (3 to 20 mm per year) from Ladakh Himalaya in the west to Arunachal in the east give the varying slip of 16-20 mm per year along MHT at a depth of 15 to 20 km with a width of about 70-100 km from the Frontal Himalayan Thrust (FHT) i.e. foot hills of Himalayas." "This indicates high strain accumulation along the MHT, a fraction of it being released by earthquakes of magnitude of less than 5.0. Thus, the elastic strain accumulated over a long period of time would be released by a slip along the locked MHT causing large Himalayan earthquakes in future," researchers said. The study is also significant as it has come up with a new angular velocity for the Indian plate. It has found that the plate had three per cent higher angular velocity than all previous estimates. This indicates more rapid variations in the rate and direction of the movement along the boundaries of the plate. The finding would

be of great use to researchers globally as it is expected to help determine the crustal motion within the Indian plate and its boundaries more accurately up to millimetre precision. Speaking to India Science Wire, Senior Principal Scientist at CSIR's Bengaluru-based Fourth Paradigm Institute (CSIR-4PI) and the leader of the team, Dr. Sridevi Jade, said the study is data intensive and unique as for the first time angular velocity of Indian tectonic plate is estimated using as many as 30 continuous GPS sites within the plate which include for the first time sites from both the western and eastern regions. The study has ruled out any segmentation of the Indian plate. "No doubt, there have been earthquakes within the Indian plate, notable being the 2001 Bhuj and 1993 Latur earthquakes. But, they were due to localized regional deformations along active faults in these regions. Strain rates estimated for the different parts of the plate interior clearly indicate that there is low or no deformation at all in the plate interior and the plate motion is best described with a single angular velocity", Jade said. The team has suggested a detailed investigation of the area around Thiruvananthapuram and Pune after they found that these two isolated GPS stations are moving at a rate of 3 mm per year. Calling for the setting up of dense networks of GPS stations in the two regions, the researchers noted that the movement may be due to some localised active deformation. "There is a need to delineate the regional deformations in the two regions", said Jade. Thiruvananthapuram and neighbourhood comes within what is called Achankovil Shear Zone, which covers a 130 km long swathe of land cutting across Kerala and Tamil Nadu, while Pune falls in the Panvel Flexure zone on the western continental margin of the Indian plate. The research team included TS Shrungeshwara of CSIR-4PI; Kireet Kumar of GB Pant National Institute of Himalayan Environment and Sustainable Development, Almora; Pallabee Chaudhury and Rakesh K Dumka of Institute of Seismological Research, Gandhinagar; and Harish Bhu of ML Sukhadia University, Udaipur. The study was funded by CSIR under its Advanced Research in Engineering & Earth Sciences (ARiEES) project and the Ministry of Earth Sciences

Published in:
Business Line

CIDCO aims at 2019 start for Navi Mumbai airport

CSIR-CIMFR

24th November 2017

Ulwe hill to be cut down; corporation promises controlled blasting to prevent damage

The first flight from the Navi Mumbai International Airport is expected to take off in December 2019, which is when the City and Industrial Development Corporation (CIDCO) expects Phase 1, which includes the terminal and runways, to be ready. "While this is the target we have set for ourselves, even with delays the airport will be ready before the monsoon of 2020," said Joint Managing Director Prajakta Lavangare, CIDCO. The corporation, which is the nodal agency for the airport, is working on developing the land at the site. The work has been divided into two phases. The first involves creating a flat land 5.5 metres above sea level, for which the Ulwe hill will be cut down to 8 metres, and the earth from the hill would be used to level the rest of the area. The second phase involves raising the height of the land from 5.5 metres to 8 meters above sea level, which will protect the runway from flooding. Utility lines such as storm water drains and sewage would also be put in place by Mumbai International Airport Pvt Ltd (MIAL). "The long monsoon prevented us from starting work sooner, but we are confident of meeting the target. We are also seeking permission for three shifts in order to increase the pace of work," said Ms. Lavangare. One of the biggest concerns among local villagers is the fear that blasting a hill would affect their homes. CIDCO officials say they have adopted a controlled blasting technique to prevent damage and

have appointed the Council of Scientific & Industrial Research, Central Institute of Mining and Fuel Research (CSIR-CIMFR) as technical advisor. “We are ensuring that the vibrations are under 10mm/sec, which will be felt only within a radius of 300 metres,” said a scientist from CSIR-CIMFR. CIDCO officials say most of the villages lie outside this periphery.

The corporation is also carrying out a tree census to decide which trees to cut and which to transplant. It is expected that around 10,000 trees will be affected by the project. Officials are also confident that with the revised package offered, most villagers will move to the rehabilitation and resettlement pockets built for 3,000 families from the ten affected villages.

Published in:
The Hindu

Hyderabad is not prepared to deal with earthquakes: experts

CSIR-NGRI 24th November 2017

HYDERABAD: After 122 micro-earthquakes of less than 1 magnitude were registered at the six seismic stations located in and around Borabanda and a similar one off-earthquake in Jubilee Hills, experts at the National Geophysical Research Institute (NGRI) say the swarm of micro-earthquakes are 'dead in the rocky terrain' of the city. Before a micro-earthquake was recently felt at Jubilee Hills a few days back, Borabanda recorded 122 micro-earthquakes between October 21 and November 8. "The micro-earthquakes at Borabanda were last recorded on November 8. The Earth movement is dead now and there is no need to worry," said Dr Srinagesh Davuluri, Chief Scientist, Seismology Observatory, NGRI.

However, seismic stations located at NATCO school and five other places will continue to record the Earth activity for a month to further examine the faults and fractures of the earth. "If we look at Jubilee Hills particularly, there were more than 400 micro-earthquakes recorded there in the year 1994. But, this time it has been around Borabanda. We will have to examine further faults and fractures in that area," said the chief scientist. Many buildings in the city, not earthquake resistant

After examining the recent swarm of seismic activity, researchers and scientists point that even the minimum precautions to be taken in constructing buildings according to Bureau of Indian Standards (BIS) are not followed. "Almost 90 percent of buildings do not follow the IS 456-2016 code for plain and reinforced concrete and IS 1893- 2016 code of seismic design and structure," observed Prof Ramancharla Pradeep Kumar, Head of Earthquake Engineering Research Centre, IIITH.

The present condition of earthquakes triggered due to rainfall is not just the reason but a series of rock blastings that took place decades ago to expand the city which now houses the IT corridor and all other surrounding areas is a reason for the tremors, he added. “When the whole rocks at Gachibowli were blasted to expand the city two decades ago, there were similar sounds that occurred. People need to take necessary precautions to be psychologically strong and invest a little more in strengthening buildings,” suggested the professor.

Hydro Seismicity triggered micro-earthquakes. According to NGRI, the recent micro-earthquakes were triggered due to Hydro Seismicity Hydro Seismicity is a condition wherein earthquakes are caused due to excess water inflow into already built up pressure inside the fractures and faults inside the Earth causing hollow sound

Such Earthquakes can either be felt or not felt depending on the magnitude recorded on the Richter Magnitude Scale which is usually less than 1 Earthquakes triggered due to Hydro seismicity is historically common which is generally during the months of September to Nov

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CSIR-IMTECH

24th November 2017

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आम आदमी की पहुंच वाली दवाएं हों इजाद : प्रो. राठौर

आइआइटी दिल्ली के केमिकल इंजीनियरिंग विभाग के प्रो. अनुराग एस राठौर ने कहा कि देश में अभी भी ऐसी दवा बनाने की जरूरत है, जो आम व्यक्ति की पहुंच में हो

जागरण संवाददाता, चंडीगढ़ : सीएसआइआर-इंस्टीट्यूट ऑफ माइक्रोबॉयल टेक्नोलॉजी सेक्टर 39 में स्थापना दिवस पर व्याख्यान का आयोजन किया गया। इस अवसर पर आइएमटीईएसी के निदेशक डॉ. अनिल कौल ने कैंपस में आए सभी अतिथियों का स्वागत किया और आइआइटी दिल्ली के केमिकल इंजीनियरिंग विभाग के प्रो. अनुराग एस राठौर ने अपने व्याख्यान में बताया कि देश में अभी भी ऐसी दवा बनाने की जरूरत है जो आम व्यक्ति की पहुंच में हो।

कैंसर जैसी बीमारी में भी जैव प्रौद्योगिकी का काफी प्रयोग किया जा रहा है। जैवप्रौद्योगिकी या जैव तकनीकी वो विषय है जो अभियांत्रिकी और तकनीकी के डाटा और तरीकों को जीवों और जीवन तंत्रों से संबंधित अध्ययन और समस्या के समाधान के लिये उपयोग करता है। जिन विश्वविद्यालयों में ये अलग निकाय नहीं होता, वहां इसे रासायनिक अभियांत्रिकी, रसायन शास्त्र या जीव विज्ञान निकाय में रख दिया जाता है। इस क्षेत्र में सरकार भी काफी काम कर रही है, परंतु बायोटेक्ट मेडिसीन काफी महंगी है। ऐसी स्थिति में वैज्ञानिकों को चाहिए कि वह रिसर्च कर रहे हैं उसमें इंडिजिनियस की तरह काम करें। जिससे दवा की कीमत व लागत कम हो। देश में काफी काम हो तो रहा है, परंतु दवा बनाने की तकनीक तो बाहर से ही आती है ऐसे में कीमत बढ़ जाती है। दूसरे व्याख्यान में आइआइटी मुंबई के प्रो प्रमोद पी वांगीकर ने इंजीनियरिंग और जीव विज्ञान के बारे में बताया। वहीं ब्रिटिश डिप्टी हाईकमिश्नर एड्यूज अयरे ने भी सभा को संबोधित किया। कार्यक्रम के अंत में आइएमटेक के निदेशक डॉ. अनिल कौल ने इस आयोजन में आए सभी अतिथियों का धन्यवाद किया।

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Dainik Bhaskar

CSIR-IMTECH

24th November 2017

Lectures mark CSIR foundation day

CHANDIGARH, NOVEMBER 23

The Institute of Microbial Technology (IMTECH) celebrated the Council for Scientific and Industrial Research's foundation day here today by organising several events which included lectures by experts on chemical engineering from the Indian Institutes of Technology (IITs).

In his talk on 'Challenges and Opportunities in Development of Biosimilar Products, Prof Anurag S Rathore from Delhi IIT discussed economic drivers and challenges faced during the development and commercialisation of biosimilars. Discussing 'Opportunities at the interface of Engineering and Biology," Prof Pramod P Wangikar from the IIT, Mumbai, said research issues in biology and medicine require an engineering approach. Though engineering and biology were generally perceived as distinct and possibly mutually exclusive fields, opportunities that were available at their interface range from physiologically based "pharmacokinetic" models to systems and synthetic biology, he added.

Andew Ayre, British Deputy High Commissioner, Chandigarh, said the UK was a global leader in science and innovation and international collaboration was essential to maintain the excellence of the UK's research base and the competitive advantage of its innovative businesses. The UK and India had been close partners in science and innovation for many years and Britain looks forward to strengthening and deepening this partnership to help drive economic growth and deliver social and developmental goals, he said.

IMTECH Director Dr Anil Koul highlighted achievements of CSIR.

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