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Manipur Governor speaks at launching programme of CSIR

CSIR-NEIST 21th September 2017

mphal, Sep. 19 (EMN): Manipur Governor Dr Najma Heptullah on Tuesday expressed her desire to decommission the Ithai barrage in Manipur.
Ithai barrage (35ft high dam) across Manipur River with three spillway bays is major component of 34 year old Loktak multipurpose project to provide regulated storage to plans to generate 105 MW of power and lift irrigation.
Dr Heptulla was speaking at the launching programme of Council of Science and Industrial Research (CSIR)-Aroma Mission and Anthropogenic impact and their management options in the different ecosystems of the Indian Himalayan region (Imphal/Manipur river basin) at CSIR-North East Institute of Science and Technology (NEIST), Branch laboratory Imphal. CSIR-NEIST laboratory in Manipur was established to generate and develop knowledge products, which meet high international standards in terms of quality, cost & efficiency. Informing that she was working very hard for removal of Ithai Barrage, Dr Heptullah said she had met the Ministry of Environment at the centre. Loktak Lake, the largest lake in the Northeast, is shrinking because of the barrage. Water cannot flow to downstream and many rare species both flora and fauna are vanishing from its natural habitat. Assuring help from Raj Bhawan in pertain to plant research work, she also asked for not to fight with nature in the name of modernization. Expressing serious concern over the threat by exotic species, she appealed to stop planting Eucalyptus plant which was brought from Australia during British period as it helps in decreasing the rich biodiversity of the State. She also appealed to the Scientists of Manipur for starting a movement against the planting of eucalyptus plant in the region. The plant has negative effect to the region's environment like inducing soil degradation, decline of ground water level and also harm to other plants. Director Dr D Ramaiah of CSIR-NEIST,

Jorhat, Chief Scientist Dr P Sengupta, CSIR-NEIST, Jorhat and renown economist Prof N Mohendro Singh,Former Member, Steering Committee NER Vision, 2020 DoNER, Government of India attended the function. In the day's programme, a memorandum of understanding between the CSIR-NEIST Imphal and farmers of the State was also signed and distributed quality planting variety of lemon grass and citronella plant which were developed by the CSIR-NEIST.

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Eastern Mirror

Scientists develop DNA test to predict diseases

CSIR-IGIB 22th September 2017

Apart from gene-linked diseases, it will also be able to predict general ailments, a step that enable people future-ready regarding their health.

An institute under the Department of Science and Technology has developed technology that it says can predict future ailments by analysing a person's DNA. Apart from gene-linked diseases, it will also be able to predict general ailments, a step that enable people future-ready regarding their health. A number of international labs and scientists have shown interest in the technology, said Dr. Anurag Agarwal of the Institute of Genomics and Integrative Biology (IGIB), which is part of the Council of Scientific and Industrial Research (CSIR).

"We have already conducted trials of the test and are now ready to launch it commercially. Some of the international labs have also shown interest in the test and we are at the final stages of discussing the pricing and launch," he said. Agarwal added that the test would not be expensive and is likely to be launched commercially as soon as the institute finalises a price.

The technology, named Gomad (Genomics and Other Omix Technology for In-well Medical Decision), is expected to predict the kind of ailments a person is are likely to get, including high blood pressure, diabetes, liver disease, and other gene-linked diseases.
It will also be able to predict diseases/ailments of a foetus by analysing its DNA, including genetic disorders like asthma, diabetes, cleft palate, obesity, infertility and some cancers, as well. There are some disorders that are linked to Y chromosome and are passed on only if the father has the ailment, while those linked to the X chromosome linked are more dominant.

Food for thought

Advocate Arvind Singh says Food Panda & Dunkin Doughnuts use his personal info for marketing purposes

He has never given consent for such messages, nor was he told his data was being stored

Published in:
DNA

Substandard material used in 'killer' Chandigarh Airport Road: Punjab VB

CSIR-CRRI

20th September 2017

At least 11 accidents have taken place on Airport Road since January, in which two people have lost their lives. The road is riddled with pits making it a commuters' nightmare.

Punjab VB chief director BK Uppal along with PWD and GMADA officials inspecting Airport Road in Mohali on Tuesday.(HT Photo)

A team of Punjab Vigilance Bureau (VB) and road construction engineers on Tuesday found the use of substandard material in constructing the Airport Road. At least 11 accidents have taken place on Airport Road since January, in which two people have lost their lives. The road is riddled with pits making it a commuters' nightmare. VB spokesperson said on basis of complaints, bureau chief director BK Uppal along with public works department (PWD) and Greater Mohali Area Development Authority (GMADA) engineers and experts of the Central Road Research Institute (CRRI) excavated the 200 feet road at two points. He said it has been found "prima facie" that the road was not designed properly taking into consideration the actual soil (clay) and traffic conditions (heavy vehicles) at the site and the material used was not as per the prescribed specifications in the contract. 'Killer' Chandigarh Airport Road continues to be commuters' nightmare Uppal said GMADA had already received a sampling report from the CRRI. The CRRI experts have been asked to collect some more samples from the locations selected by the technical teams of VB, PWD and GMADA and submit a report after a thorough analysis so that the exact findings could be reviewed by the bureau. The vigilance chief said further action will be taken against the guilty engineers and contractor on the basis of the CRRI reports. After digging the road for

fresh samples, senior engineers present on the spot also confirmed that irregularities were committed during its construction, due to which the road got damaged in a short span.

Sources said the 28-point report submitted by the CRRI to GMADA officials a few days ago lacked remedial measures and did not include the recommendations made by the National Institute of Technical Teachers Training and Research (NITTER). Not satisfied with the "sugar-coated" report, GMADA has asked the institute to send another report within a week.

"Given the importance of the case, the report lacked depth and samples taken by the authorities were from a select few places," said a senior GMADA official. The report had mentioned that pebbles found at the riverside were used to make the road against the rules.

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CSIR-IITR

21th September 2017

हिन्दी में कार्य करने वाले सम्मानित

विष विज्ञान केंद्र

लखनऊ | निज संवाददाता

भारतीय विषविज्ञान अनुसंधान संस्थान में बुधवार को हिन्दी सप्ताह के पुरस्कार वितरण समारोह का आयोजन किया गया। इस मौके पर हिन्दी में कार्य करने वाले 11 कर्मचारियों को सम्मानित किया गया।

संस्थान के जैदी सभागार में आयोजित समारोह का आयोजन किया गया। संयोजक और संस्थान के हिन्दी अधिकारी चन्द्र मोहन तिवारी ने मुख्य अतिथि व बायोटेक पार्क के सीईओ पद्मश्री प्रमोद टंडन का स्वागत किया। कार्यक्रम की अध्यक्षता संस्थान के निदेशक प्रोफसर आलोक धावन ने की।

भारतीय विषविज्ञान अनुसंधान संस्थान में बुधवार को सम्मान समारोह आयोजित हुआ

इस मौके पर कुल 27 प्रतिभागियों के बीच विजयी रहने वालों को प्रमाणपत्र और पुरस्कार बांटे गए।

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CSIR-IITR

21th September 2017

हिन्दी में अपने शोध पत्र तैयार करें वैज्ञानिक : प्रो. प्रमोद टंडन

❑ भारतीय विष विज्ञान संस्थान में हिन्दी दिवस पर हुआ कार्यक्रम

लखनऊ। प्रभात

राजधानी के बायोटेक पार्क, के सीई ओ पद्मश्री प्रोफेसर प्रमोद टंडन, ने कहा कि

वैज्ञानिक अपने शोध पत्र हिन्दी में प्रकाशित करें जिससे आम जनता वैज्ञानिकों की शोध का लाभ उठा सके। तभी हिन्दी को आगे बढ़ाया जा सकता है और उसे सशक्त बनाया जा सकता है।

श्री टंडन सीएसआईआर-भारतीय विषविज्ञान अनुसंधान संस्थान, के एस.एच. जैदी सभागार में हिंदी सप्ताह के पुरस्कार वितरण समारोह मे मुख्य अतिथि के रूप मे सम्बोधित कर रहे थे। उन्होंने कहा कि हिंदी से जुड़े कार्यक्रम में आकर हमें अपार प्रसन्नता हो रही है। श्री टंडन ने कहा कि हिंदी में वैज्ञानिक कार्य करने वाले संस्थान कम हैं, । आईआईटीआर में वैज्ञानिक एवं तकनीकी कार्य हिंदी में काफी किए जा रहे हैं, यह प्रसन्नता की बात है। शोध पत्र हिंदी में लिखे जा रहे हैं, यह बहुत अच्छी बात है। अनेक पुरस्कार प्राप्त संस्थान की राजभाषा पत्रिका ''विषविज्ञान संदेश'' एक उल्लेखनीय प्रयास है, जो कि अति प्रसंशनीय है और यह हमारे लिए प्रेरणास्रोत है । इस संस्थान में जिस प्रकार हिंदी में कार्य किया जा रहा है, वह अपने आप में एक अनुकरणीय उदाहरण है ।

संस्थान के निदेशक, प्रोफेसर आलोक धवन ने अपने अध्यक्षीय संबोधन में कहा कि विज्ञान को आगे ले जाने हेतु भाषा एक सशक्त माध्यम है।

अंग्रेजी भाषा में शब्द सीमित हैं, वहीं हिंदी के पास विस्तृत शब्द भण्डार है, वैज्ञानिक और तकनीकी कार्य इसमें आसानी से किए जा सकते हैं। हम अपनी राजभाषा को कैसे आगे ले जाएं, यह सोच हम सभी के अंदर होनी चाहिए। संस्थान से छमाही राजभाषा पत्रिका विषविज्ञान संदेश प्रकाशित की जा रही है और पर्यावरण और स्वास्थ्य से संबंधित पुस्तकें शीघ्र प्रकाशित की जाएंगी, जिससे आम जनता इनका लाभ उठा सके । हम वैज्ञानिक उपलब्धियों को आम जनता तक पहुंचाने के लिए अग्रसर हैं ।

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Sapasth Aawaz, Page no. 2, Amar Ujala, Page no. 4

CSIR-NML

22th September 2017

एनएमएल. 25 स्कूलों के छात्र-छात्राओं ने किया प्रदर्शनी का भ्रमण, 23 को होगा समापन

सीएसआईआर के 13.86 फीसद पेटेंट को लाइसेंस

लाइफ रिपोर्टर@जमशेदपुर

वैज्ञानिक एवं औद्योगिक अनुसंधान परिषद की स्थापना के 75 वर्ष पूरे होने पर देश की 38 राष्ट्रीय प्रयोगशालाओं में से एक राष्ट्रीय धातुकर्म प्रयोगशाला, जमशेदपुर में तकनीकी प्रदर्शनी सह औद्योगिक विचार गोष्ठी का आयोजन गुरुवार को किया गया. इसमें सीएसआइआर की ओर से रेडियो और अंतरिक्ष भौतिकी, महासागर विज्ञान, भू भौतिकी, रसायन, औषध, जीनोमिकी, जैव प्रौद्योगिकी, नैनो प्रौद्योगिकी से खनन, वैमानिकी, उपकरणन, पर्यावरण इंजीनियरिंग तथ सूचना प्रौद्योगिकी के बारे में बताया गया. पहले दिन जमशेदपुर के 25 स्कूलों के करीब 2000 से अधिक छात्रों ने प्रदर्शनी का भ्रमण किया. इसमें एनएमएल जमशेदपुर की ओर से भी तीन स्टॉल लगाए गए थे. छात्रों को देश की प्रयोगशालाओं की ओर से लोगों की आवश्यकता से जुड़े पर्यावरण, स्वास्थ्य, पेयजल, खाद्य, आवास, उर्जा, कृषि, गैर कृषि सहित वैज्ञानिक एवं तकनीकी मानव संसाधन विकास में सीएसआईआर की भूमिका के बारे में बताया गया. प्रदर्शनी 23 सितंबर तक चलेगी. इसमें हर दिन स्कूली बच्चे भ्रमण करेंगे.

- उद्योग जगत के दिग्गजों के बीच देश के शोध एवं रिसर्च संस्थान से अपेक्षा पर हुआ मंथन
- वर्ष 2012 में 5007 तथा वर्ष 2013 में 5068 शोध पत्र साइंस जर्नल में हुए प्रकाशित

हर साल 200 भारतीय, 250 विदेशी पेटेंट : प्रदर्शनी के दौरान बताया गया कि सीएसआईआर की ओर से देश को अंतरराष्ट्रीय स्तर पर नेतृत्व दिलाने के लिए पेटेंट पोर्टफोलियो को मजबूत किया जा रहा है. सीएसआईआर प्रतिवर्ष औसतन लगभग 200 भारतीय पेटेंट तथा 250 विदेशी पेटेंट फाइल करता है. सीएसआईआर के लगभग 13.86 पेटेंट को लाइसेंस प्राप्त है. यह संख्या वैश्विक औसत से अधिक है. वर्ष 2012 में साइंस जर्नल में 5007 तथा वर्ष 2013 में 5068 शोध पत्र प्रकाशित हुए हैं.

औद्योगिक जरूरतों पर मंथन

एनएमएल में आयोजित प्रदर्शनी सह औद्योगिक विचार गोष्ठी में टाटा स्टील के प्रेसीडेंट टीक्यूएम एवं स्टील बिजनेस आनंद सेन बतौर मुख्य अतिथि मौजूद रहे. एनएमएल के निदेशक डॉ. आई चट्टोराज ने अतिथियों का स्वागत किया. विभिन्न औद्योगिक जगत की हस्तियां ने संगोष्ठी के दौरान अपने विचार रखे। देश की 38 राष्ट्रीय प्रयोगशालाओं, 39 दूरस्थ केंद्रों, तीन नवोन्मेषी कॉम्प्लेक्सों एवं पांच यूनिटों में सेवा देने वाले 4600 सक्रिय वैज्ञानिकों से औद्योगिक जगत की अपेक्षा के बारे में बताया गया. कार्यक्रम में उषा मार्टिन के अमिताभ सिरकर, टाटा ब्लू स्कोप के डॉ. आशीष भादुरी, एनआइएफएफटी के प्रो. पीपी चट्टोपाध्याय, एक्सएलआरआई के प्रोफेसर अतुल पाठक, टाटा मोटर्स के हेड एबी लाल, आरएसबी ग्लोबल के एसके बेहरा ने अपने विचार रखे.

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CSIR-NML

22th September 2017

एनएमएल में तीन दिवसीय प्लेटनियम जुबली समारोह का आगाज, आनंद बोले

समन्वय से विकसित बनेगा देश

जमशेदपुर | संवाददाता

बिजनेस प्रेसिडेंट बोले

- उद्योगों को वैश्विक रूप से मिल रही चुनौतियों को रिसर्च संस्थान के शोध ही मदद कर सकते हैं
- कम कीमत पर उत्पादन, कम गुणवत्ता वाले अयस्कों से बेहतर उत्पाद जैसी चुनौतियां

शोध संस्थानों और उद्योगों के बीच समन्वय बेहद जरूरी है। इस समन्वय से ही उद्योगों में हो रही समस्याओं के समाधान और भविष्य की जरूरत पर कार्ययोजना तैयार कर भारत को विकसित देश की श्रेणी में खड़ा किया जा सकता है। यह कहना था टाटा स्टील के बिजनेस प्रेसिडेंट आनंद सेन का।

राष्ट्रीय धातुकर्म प्रयोगशाला में गुरुवार से तीन दिवसीय प्लेटनियम जुबली समारोह के उद्घाटन समारोह में गुरुवार को आनंद ने कहा कि भारतीय उद्योगों को वैश्विक रूप से मिल रही चुनौतियों को रिसर्च संस्थान के शोध ही मदद कर सकते हैं। कम कीमत पर उत्पादन, कम गुणवत्ता वाले अयस्कों से बेहतर उत्पाद जैसी चुनौतियां उद्योगों के सामने हैं। वहीं, इस दौरान एनएमएल के निदेशक डॉ. आई चट्टोराज ने कहा कि अब सीएसआईआर देशव्यापी स्तर पर उद्योगों में नई तकनीकों, अविष्कार आधारित उद्योग, भविष्य के लिए मानव संसाधन और सशक्तिकरण व आर्थिक मजबूती के क्षेत्र पर ध्यान केंद्रीत कर रहा है।

शोध से उद्योगों का विकास संभव : इंडस्ट्री कान्क्लेव भी आयोजित हुआ। पैनल डिस्कशन में शोध संस्थाओं से उद्योगों की अपेक्षाएं विषय पर चर्चा हुई। अतिथियों ने कहा कि शोध से ही उद्योगों का विकास संभव है। नए उत्पाद और तकनीक के विकास से ही वैश्विक चुनौतियों का सामना संभव है। देश के रिसर्च संस्थानों का बजट भी सरकार बढ़ाए। पैनल में ऊषा मार्टिन के सीओओ अमिताभ सिरकर, टाटा ब्लूस्कोप के सीओओ आशीष भादुड़ी, एनआईएफएफटी के निदेशक पीपी चट्टोपध्याय, एक्सएलआरआई के स्ट्रैटिक मैनेजमेंट के प्रोफेसर अतुल पाठक, टाटा मोटर्स के एमएंडसीवीबीयू हेड एबी लाल, आरएसबी के एमडी एसके बेहरा और एनएमएल के निदेशक डॉ. आई चट्टोराज ने भाग लिया।

गुरुवार को एनएमएल में आयोजित समारोह का उद्घाटन करते अतिथि। ● हिन्दुस्तान

शोध और अविष्कारों को मॉडल से दिखाया : एनएमएल के प्लेटिनम जुबली समारोह के तहत कैप्सूल प्रदर्शनी का उद्घाटन आनंद सेन ने किया। प्रर्दशनी के माध्यम से देश भर में स्थित 38 सीएसआईआर के रिसर्च और अविष्कारों को प्रदर्शित किया गया। विज्ञान, गणित, पर्यावरण, खनिज, खाद्य प्रस्संकरण समेत कई विषयों पर मॉडल प्रदर्शित किए गए। शहर के 75 स्कूलों के विद्यार्थी मौजूद थे।

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Also published in:
Dainik Bhaskar, Dainik Jagran,
New Ispat Mail, Life Jamshedpur.

हिंदी सभी भाषाओं की नदी है

जागरण संवाददाता, देहरादून: भारतीय पेट्रोलियम संस्थान (आइआइपी) में हिंदी माह का समापन हिंदी भाषा के चहुंमुखी विकास के संकल्प के साथ किया गया।

मंगलवार को आयोजित हिंदी माह के समापन कार्यक्रम का शुभारंभ हिंदी साहित्यकार वाधवा ने किया। उन्होंने अपने हिंदी सीखने से लेकर हिंदी लेख में सक्रिय होने की यात्रा पर प्रकाश डाला। उन्होंने कहा कि महात्मा गांधी ने वर्ष 1914 में कहा था कि हिंदी जनमानस की भाषा है। हिंदी भाषाओं की नदी है और इसका विकास हर हाल में किया जाना चाहिए। वहीं, आइआइपी के निदेशक डॉ. अंजन रे ने हिंदी माह के दौरान आयोजित विभिन्न प्रतियोगिताओं और सरकारी कामकाज में हिंदी के बेहतर प्रयोग करने वाले कार्मिकों को पुरस्कृत किया गया। इस अवसर पर संस्थान के वरिष्ठ हिंदी अधिकारी एमसी रतूड़ी, प्रशासन नियंत्रक जसवंत राय, देवेंद्र राय, तिलक कुमार आदि उपस्थित रहे।

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Dainik Jagran, page no. 05

IGIB researcher reverse cancer drug resistance

CSIR-IGIB

23th September 2017

Small molecules used along with anticancer drug makes cancer cells sensitive to the drug.

Resistance to anticancer drugs is a major problem in oncology affecting a large number of cancer patients. Now, researchers at the CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB), New Delhi have found a way to make cancer cells that are resistant to two commonly used anticancer drugs — doxorubicin and topotecan — to once again become sensitive to the drugs. Improving or regaining the sensitivity of existing anticancer drugs is a quicker way to address the problem of cancer drug resistance than developing new drugs. The results were published in the journal *Scientific Reports*.

Chemotherapeutic drugs like doxorubicin and topotecan act by inducing DNA damage. Once the DNA damage gets induced it leads to the activation of an important protein called p21, which gets produced in larger quantities. The p21 protein helps stop the growth of cells and triggers senescence or apoptosis in cancer cells thereby killing them. However, in many drug-resistant cancer cells the production of p21 is compromised, there by preventing the destruction of cancer cells even in the presence of these drugs. "A few years ago we and others groups noted the telomere repeat factor 2 (TRF2), which protects the end of human chromosomes called telomeres (much like small clips at the end of shoelaces that keep the ends from fraying), can bind to the genome outside the telomeres," says Dr. Shantanu Chowdhury from CSIR-IGIB who led the team. "So we wanted to find out where else the TRF2 binds in the genome." That search led the team to the p21 protein and they found that the promoter of p21 protein has a TRF2 binding site. The TRF2 specifically binds to a DNA structure called G-quadruplex (G4) which is present in the p21 promoter. "Once we found that TRF2 binds to the p21 promoter, we wanted to know if it also controls how p21 mRNA is made [mRNA produces the p21 protein]. And that led to

the basic finding that TRF2 is a repressor and inhibits the expression of p21 mRNA in multiple cell types," says Dr. Chowdhury. Once the researchers understood the mechanism by which the TRF2 binds to p21, they used small molecules that were available (from other researchers) to disrupt the binding of TRF2 to the p21 promoter site. "The small molecules were able to disrupt the binding of TRF2 to the p21 promoter. And when TRF2 is not able to bind to the p21 promoter the expression of p21 does not get compromised," he says.

"When the small molecules are given along with the anticancer drug doxorubicin there is increased amount of p21 produced and cancer cells that were unresponsive to doxorubicin once again become sensitive to the drug," says Dr. Chowdhury.

The researchers used fibrosarcoma and breast cancer cell lines to test the combination of small molecules and doxorubicin in reversing cancer drug resistance. "The drug sensitivity increases by over 50% when we use small molecules along with doxorubicin. Drug sensitivity becomes as high as over 80% depending on the dosage of small molecules," he adds.

"This is a proof-of-concept study to show that cancer cell sensitivity to existing drugs can be regained by using small molecules. This way the existing cancer drugs can be used instead of discovering new drugs," he says.

Since existing small molecules were used for the study, the researchers do not rule out the possibility of the small molecules binding to other G4 sites in the genome. So the focus of the team is to design specific small molecules that bind only to the G4 site in the p21 promoter.

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The Hindu

CCMB to develop diagnostic kits for sickle cell anaemia

CSIR-CCMB

23th September 2017

India accounts for 50% of the five lakh children born with SCA worldwide every year

A project to develop an affordable and accurate diagnostic kit for rapid diagnosis of Sickle Cell Anaemia (SCA) is being taken up by the Centre for Cellular and Molecular Biology (CSIR-CCMB). The project is sanctioned by Council of Scientific and Industrial Research (CSIR). The Mission Mode Project, to be led by Dr. Giriraj Chandak of CSIR-CCMB in close association with Sickle Cell Institute of Chattisgarh, will also make attempts to discover and develop new lead molecules for management of SCA, which will improve the quality of life with better life expectancy.

"Since there aren't too many treatment strategies for SCA, genome editing and stem cell based approaches will be investigated,"said Dr. Chandak, who addressed a press conference here along with the CCMB Director Rakesh Kumar Mishra. The project will involve generating human induced pluripotent stem cells (hiPSCs) from peripheral blood mononuclear cells of SCA patients and correction of the SCA mutation through gene editing.

Under a State-sponsored programme efforts would be made to confirm the genetic status of the people who have already been screened and then perform screening in the extended families to identify carriers. It is also possible to offer pre-pregnancy counselling, prenatal diagnosis and genetic counselling to the target couples at risk of having a diseased child, Dr. Chandak said. Based on the success of the programme, the protocol may be implemented in other States where sickle cell disease is quite prevalent including Telangana. At the same time, he felt that the Government can fund compulsory screening

of children and newborns so that SCA can be effectively tackled or diagnosed early. The Maharashtra Government has created facilities for screening of newborns for the disease, he said.

The SCA is one of the most common blood related disorders in India. Every year approximately five lakh children are born with SCA worldwide with India accounting for nearly 50% of the cases.

Published in:
The Hindu

The afterlife of Subramaniam Bhupathy

One of great India's nature researchers is being immortalized in the form of a newly-discovered frog

CSIR-CCMB

25th September 2017

The purple-skinned, pig-nosed Nasikabatrachus bhupathi. Photo: S. Jegath Janani

When S. Muralidharan and Subramaniam Bhupathy were roommates—they were also college-mates and later colleagues at work—one subject of friendly contention was the mirror in the room. Muralidharan is 5'11' in height while Bhupathy was 5'1'. "So the mirror would move up and down a hook every day," recalls Muralidharan, when remembering the late scientist. Herpetologist Bhupathy died in 2014 when he slipped on the Agasthyamalai Hills while returning from a research trip, doing what he loved most—field work. But his memory came alive recently when a bunch of scientists decided to honour him. Scientists who discovered a new species of frog in the Western Ghats—with shiny, purple skin, a light blue ring around its eyes, and a pointy pig-nose—named it Bhupathy's purple frog (Nasikabatrachus bhupathi)

The scientists, S. Jegath Janani, Karthikeyan Vasudevan and Ramesh K. Aggarwal from the Centre for Cellular and Molecular Biology (CSIR-CCMB), Elizabeth Prendini from the American Museum of Natural History, and Sushil Kumar Dutta from Nature Environment and Wildlife Society (NEWS) put their findings in *Alytes*, an international journal that publishes articles on batrachology (a branch of zoology that studies amphibians) and the conservation biology of amphibians. "The first clue to this new species came from work on the 'barcoding of anurans of India', a DBT (government of India) funded project. While working on the project, we found that the DNA barcode signatures of some of the 'larvae and froglet samples that resembled

those of the pig-nose frog' were distinct from those of our earlier described species. It was indeed a pleasant surprise as we realized that we had discovered a new member species of the monotypic family of the pig-nose frog," says Aggarwal, chief scientist at CCMB, in an email.

The rarity of the discovery lies in the fact that the frog comes to the surface just two to three days in a year. Bhupathy, a wildlife biologist with a deep-rooted interest in natural history, worked on lizards, amphibians, and some birds too. His contributions, though, were more focused on reptiles. He started his career in the mid-1980s, at a time when laboratories were not well-equipped, and training was limited. He came from a background which focused on just being there—to walk, search, and document. When Bhupathy's name was suggested for the newly-discovered species, all the authors of the article readily agreed, having collaborated with him in some form or being familiar with his large body of work. "That (field work) is no less an important technique when compared to what we do today. That's one of the reasons why we don't want people's names to vanish," says Vasuedevan, explaining their choice to name the species after their late colleague and friend.

Long association

Muralidharan, now a senior principal scientist (ecotoxicology) at the Salim Ali Centre for Ornithology and Natural History (Sacon) in Coimbatore, knew Bhupathy from 1983, when they were studying for their MSc at the AVC College in Mayiladuthurai in Tamil Nadu.

While Bhupathy subsequently worked in the Bombay Natural History Society in Bharatpur, Rajasthan, the two men later got back together—staying in the same room as bachelors and students of the University of Rajasthan in Jaipur during their PhD.

"As a student, he already had an interest in reptiles and frogs," says Muralidharan over the phone from Coimbatore. "His interest in birds was second in line. In college, he was fond of just looking at snakes."

The two men were also colleagues at Sacon, where Bhupathy was last employed as a principal scientist. In over a quarter of a century, Bhupathy published several papers on reptiles, particularly on the python, and on soft-shell and sea turtles, while at BNHS between 1985 and 1995.

The Sacon website provides a list of over 60 co-authored papers from 1985 till 2012. His other works (1995-2000) include studies on the horse-shoe pit viper, lizards, migratory waterfowl and some seminal reports on turtle trade in South Asia that made a significant difference in the field of conservation.

He also devised a method to identify individual pythons using their blotch patterns, just like the stripes on a tiger, or the human fingerprint. He worked in the Western Ghats, conducted ecological studies on reptiles in Sikkim in the Himalayas and did surveys for sea turtles on the coastline of south India—covering many ecosystems.

“I cannot think of anyone who has done better, more rigorous search of freshwater turtles around the country after his time,” says Vasudevan over the phone from Hyderabad. “He travelled everywhere in the country to find illegal trade. Based on his work, the extent of exploitation was highlighted and the organization that monitors trade and traffic published a report with a poster.”

The challenge in 1993-4, says Vasudevan, was people didn’t know what these species looked like. Illegal traders would take the turtles in the garb of fish and people inspecting wagons were not skilled in identification.

With help from some others, Bhupathy produced the first pictorial representation of the

species, which was a big hit and helped people to identify the species. “Scientific data is relevant at the policy level; on the field level, you need to empower people interested in cracking down wildlife trade mafia,” adds Vasudevan, who knew Bhupathy since 1992.

India has around 23 species of turtles and there is heavy trade in these animals—as pets, and for their eggs, meat and shells.

“His work helped clamp down on exploitation of the species, probably why we find such species alive today,” says Vasudevan. “If the trade had continued (as it was), some species would have been gone by now.”

Humble, confident, blunt

Friends and members of the scientific community remember him fondly—as humble, mild-mannered, well-liked and dedicated to his research. He was gentle with his students, a good colleague and no one saw him getting annoyed.

Muralidharan describes him as being confident, someone who never felt any constraints—scientifically or academically. “He had no compromising stand in any issue. He had a view and it was available. He was blunt with no diplomacy,” Muralidharan says.

“We used to fight and not talk to each other for months. Then, we would speak as if nothing happened in between. There never was a rift in our basic friendship.”

Dutta, now a retired professor and honorary curator at the National Centre for Biological Sciences in Bengaluru, says Bhupathy’s interest was in field ecology, taxonomy and natural history; not only in amphibians and reptiles, but in birds too.

"He believed in God, he was deeply religious," adds Dutta, who knew Bhupathy for around 30 years.

The discovery of the new species of the pig-nosed frog, Nasikabatrachus bhupathi, was five years in the making, according to people who worked on the project. It was not just about finding the animal, but getting enough information to make a convincing case for its distinctiveness as a species. It included the kind of field work that Bhupathy would have been proud of.

"Even if he was alive, we may have been tempted to name after him," says Vasudevan.

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Rescued star tortoises to be released in Karnataka national park

CSIR-CCMB 21st September 2017

THANE: As many as 285 star tortoises that were rescued by the Thane forest department and were kept under the care of the Wildlife Crime Control Bureau and various wildlife NGOs over the past few years will be released in their natural habitat in Karnataka on Friday morning as part of the forest department's unique repatriation initiative.

The endangered tortoise had undergone a gene mapping test at the Centre for Cellular and Molecular Biology (CCMB) in Hyderabad to identify their habitat and sub-species. They were then found to be belonging to the south-western coast of India. So, they will transported to Bangalore and released in Bannerghatta National Park. Hundreds of endangered star tortoises were seized over the past few years from poacher who would sell them to earn a small fortune.

However, their change of habitat and long period of captivity resulted in high mortality. So wildlife activists realise that these creatures must be connected to their original homes and soon they initiated the repatriation initiative.

"A number of these NGOs, including Thane SPCA and RAWW approached us and asked us that it was not advisable for these tortoises to live here as they did not belong to this area and the climate was harsh for them. Due to this, their mortality rate was increasing. While the Thane forest department's anti-poaching wing had 23 star tortoises under their care, the Thane SPCA had another 60. Dahanu's WCAWA had around 17, while WCCB itself had over 100 star tortoises," said Dr. Jitendra Ramgaokar, deputy conservator of forests (Thane).

Speaking about the repatriation process, honorary wildlife warden Pawan Sharma, said, "Even within the star tortoise family, there are sub species that can be identified by their DNA or gene mapping. Under this process, the DNA of the tortoise is analysed at the CCMB in Hyderabad, which is then matched with the DNA of start tortoise families across the country. This process ensures that if a star tortoise is originally from north Maharashtra or Gujarat, it isn't sent to the south or vice versa."

Published in:
Times of India

‘Bureaucrats, scientists should join hands on environment issues’

CSIR-NEERI 23rd September 2017

NAGPUR: There is disconnect between bureaucracy and scientists when it comes to solving environmental issues. But scientists need to be more forward. In the wake of an environmental disaster, the executives find it difficult to solve the problem and turn to scientists. But scientists need time to research on the subject before they arrive at a conclusion, said Rakesh Kumar, director of National Environmental Engineering Research Institute (NEERI), on Friday. By the time they are done, the bureaucrats are transferred and the problem starts and therefore scientists must initiate a formal dialogue with the state and central governments, Kumar said while addressing a symposium on 'Interdisciplinary approaches towards environmental management' at Neeri auditorium. Seven research students of Neeri gave presentations on environment protection on the occasion. The purpose of this symposium is to bring students of chemistry, bio-technology, physics and other research fields together so that they can share the perspectives on environmental protection from their areas. This way, one can look at a bigger picture about its management, said Kumar. According to Kumar, proper environmental management will be possible when it is practised at the grass-roots level. "At some places in India, it is evident that people have adopted eco-friendly practices in solid waste management in their locality. That is because they have realized the repercussions of haphazard management not only on environment but also on their personal health," he said. "We have come a long way in protecting our environment but there is still a need to spread more awareness," added Kumar. Solid waste management has become a difficult topic to understand than water management because not much attention has been paid to it, opined Kumar. "People get worried when there is looming water shortage, so they start making prior arrangement. However, once waste is dumped, it is forgotten, which shouldn't be the case," he said.

Kumar suggested introducing a value-based system for waste management. He said, "If each prabhag in the city is graded on the basis of how well citizens there dispose their waste we could see an overall improvement. So, in order for citizens in one prabhag to seek resolutions to other issues by the civic body, they will need to maintain a good rating." Head of technical cell at Neeri Atya Kapley said 70 students had submitted their presentations for the symposium out of which seven were selected. Students discussed topic on water and air pollution as well as waste management.

Published in:
Times of India

This PU girl has three patents under her belt

CSIR-IMTECH 22nd September 2017

Chandigarh: At 23, when most students are figuring out which subject to major in, a Panjab University student has already turned an innovator, technologist and entrepreneur. Meet Shivanshi Vashist, who has already two patents in her kitty, was successful in filing her third patent for her innovation of "hyper-thermo incubator shaker with air and vacuum control," the product which was launched in the university on Thursday.

The product launched by Vashist would help micro-organisms grow at higher temperatures. The high- value commercials used in the pharmaceutical industry cannot be produced unless there are enzymes made from micro-organisms cultivated at this high temperature. So, this product will help create the enzymes used in the high-value commercials.

Dr Rohit Sharma, chief coordinator, Cluster Innovation Centre in Biotechnology, Panjab University, explained that these micro-organisms are used to produce enzymes like nitrilase, which are further used in pharmaceuticals, textiles, paints.Anil Koul, director, Institute of Microbial Technology (IMTECH), Chandigarh, said that innovators today should have the burning desire to innovate.

Published in:
Times of India

India International Science Festival 2017 in October

CSIR-CLRI 22nd September 2017

The 3rd series of IISF will be organized from 13-16 October 2017, Chennai, Tamil Nadu.'

Image credit: scienceindiafest.org

NEW DELHI: Third India International Science Festival (IISF) will begin on 13 October 2017. The four day long event will be held at IIT Madras, Anna University, Central Leather Research Institute (CLRI), Structural Engineering Research Centre (SERC) and National Institute of Ocean Technology (NIOT). IISF, which began in 2015, is being held every year and witnesses a great participation nationwide. After New Delhi, consecutively for two years, Chennai has been chosen for this year. The official website of IISF is scienceindiafest.org. The organisers include Ministry of Earth Sciences, Ministry of Science and Technology, Vijnana Bharati (VIBHA) and National Institute of Ocean Technology. 'VIBHA has become the Guinness Book World Record Holder for the successful conduct of the 'Largest Practical Science Lesson' by 2000 students from prestigious schools of Delhi,' in the first IISF. Contrary to previous years, this year the fest is being held early in October; earlier it was held in December.

The four day long event will include the following activities:

•Special Thematic
• Session on 'Deep Ocean Research' at NIOT
•Science and Technology Ministers Conclave at IS & SR Auditorium, IIT Madras
•SYPOG-Young Scientist's Conclave at Anna University
•Science Village-'Parliament to Panchayat' at CLRI
•National Meet on Social Organisations and Institutions at UCIC Auditorium, Anna University
•Women Scientist and Entrepreneur's conclave at TAG auditorium, Anna University
•National science teachers' workshop (focusing north-east states) at Vivekananda Auditorium, Anna University
•Industry academia interaction at SERC Auditorium, SERC
•Mega science, technology and industry expo at Anna University
•Indian international science film festival at NCSCM Auditorium, Anna University
•Grassroots innovator's summit at Henry Maudslay Hall, Anna University
•National startup summit at Expo at Anna University Grounds; Valedictory at Maxwell Auditorium Anna University
•Round table meet on mass communication at NIOT Auditorium
•Attempt of students in Guinness book of world records at Anna University
•National level competition at NIOT Auditorium
•Outreach programme
•Cultural events at Anna University

Published in:

NDTV

‘CSIR capsule exhibition’ showcases R&D capabilities, 1800 students visit

CSIR-NML

22nd September 2017

Jamshedpur: As a part of Council of Scientific & Industrial Research (CSIR) platinum Jubilee celebration, National Metallurgical Laboratory (NML), Jamshedpur, ‘CSIR capsule exhibition’ was organised based on contribution to the nation building . It emphasised to bring industries, research institutes and academic organisation closer to each other for the explosive development of Indian economy in terms of CSIR technologies, products and technological services. More than 1800 students from 28 schools, colleges, technical institutions, and engineering colleges visited exhibition stall. The students were happy to learn the various CSIR products being marketed today all over India, for example, Swaraj Tractor, Amul baby food, Asmon (drug for Asthama), Saheli, E-Mal (malarial drug), leather goods, supercomputer, precious metals, agro products, etc. The students were thrilled to visit the laboratory and interact with the scientists. Most of the students were of the view that visit to the capsule exhibition gave them a brief idea of how one can plan and get prepared to take further course after they pass out. The objective of this event is to disseminate the knowledge in terms of technologies, products & technological services of CSIR as a whole to attract academia, industries, R&D fraternity and common people of India to know the contributions of CSIR since 75 years of it’s journey towards the development of new India. The exhibition provides the industries an ample opportunity to know the latest development of CSIR in the

field of Science & Technology and also, it will encourage the industries the possibilities of tying up with any laboratories of CSIR.

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