Embassy of India, Berne
19 October 2020

INDIA SCIENCE AND INNOVATION WEEKLY

Ask the right questions, and nature will open the door to her secrets.
- Dr. C.V. Raman, The Nobel Prize in Physics 1930

NIPGR scientists find methodology to control crop rot

A recent study, conducted by the researchers at the New Delhi based National Institute of Plant Genome Research (NIPGR), has discovered that silencing one of the transcription factors, C2H2 Zn finger transcription factor (RS_CRZ1), impairs the functions of pathogen responsible for sheath blight in tomato, rice and other crops. The team has outlined suitable methodologies, to downregulate the expression of R. solani genes in tomatoes to silence fungal genes during infection process.

Scientists devise bioremediation techniques to fight oil spill

National Institute of Ocean Technology, Chennai (NIOT) has successfully developed an eco-friendly crude oil bioremediation mechanism technology using consortia of marine microbes wheat bran (WB) immobilized on agro residue bacterial cells. The immobilized bacterial cells were found to be more effective, which could remove 84% of crude oil spills within 10 days as compared to free bacterial cells, which could remove 60% of crude oil.

CIRB scientists test clones bulls to produce more milk

Under a project funded by the Indian Council of Agriculture Research (ICAR), team of scientists from the Central Institute for Research on Buffaloes, Hisar (CIRB) have developed multiple clones of Murrah breed bulls to produce more milk. In a recent development, the semen and the fertility profiles of the cloned bulls have found to be normal in testing and artificial insemination will be further used to create more clones and boost milk production.

IISc researchers test shielding mechanism of tardigrades

Researchers at the Indian Institute of Science, Bengaluru have found a new species of tardigrade, part of the Paramacrobiotus genus. This new species can endure ultraviolet (UV) light so lethal, it is regularly used to get rid of hard-to-kill viruses and bacteria.

DST restructures FIST programme to cater to high-end science and startups

The Department of Science and Technology is restructuring its Fund for Improvement of Science and Technology Infrastructure in Universities and Higher Educational Institutions (FIST) to cater to high-end requirements of startups and industries and align it with the Government's 'self-reliant India' campaign. The FIST programme will now be reinvented as FIST 2.0 to orient it towards the goal of 'Aatmanirbhar Bharat' to create research and development infrastructure not only for experimental work but also to cater to theoretical work, ideas and entrepreneurship. This would not only encourage Indian-origin researchers in academic institutes but also urge research organisations across the world and resident counterparts to explore collaborative joint ventures to strengthen the science and technology base in India.

Microsoft & AICTE partner to skill students in new-age technology

Tech giant Microsoft and All India Council For Technical Education are partnering to empower learners and educators in new-age technologies, including artificial intelligence (AI), Internet of Things (IoT), data science and cloud computing by integrating the learning resource center Microsoft Learn with ELIS platform to provide access to personalised learning paths and resources for students. The collaboration will also provide educators access to online learning paths and instructor-led training material through the Microsoft Learn for Educators platform.

Zoological Survey of India lists 62 species

A recent publication by the Zoological Survey of India (ZSI) reveals that India is home to 62 species of skinks and about 57% of all the skinks (33 species), found in all kinds of habitats in India, from the Himalayas to the coasts and from dense forests to the deserts, are endemic. The publication, Skinks of India, is a result of four years of work and study of over 4,000 specimens. The book also gives a phylogenetic and bio-geographical analysis of distribution of these species in all the 11 bio-geographic zones of India and a detailed account on the historical studies on this group of lizards from the British era to the present.

Special Update: Central Institute for Research on Buffaloes, Hisar

The Central Institute for Research on Buffaloes (CIRB) was established in the year 1985. A highly pedigreed breeding herd of Murrah is established at main campus in Hisar and that of Nili-Ravi buffaloes at sub-campus Nabha. The institute carries out research on various aspects of buffalo improvement including conservation, improvement and propagation of germplasm, development of optimum rations and feeding systems for different categories of buffaloes, enhancement of reproductive efficiency, health management practices for augmenting milk, meat and draught performance of the species. The institute is aiming to improve buffaloes through identification, conservation and propagation of elite germplasm having high efficiency of reproduction and nutrient utilization for sustainable production and commercialization. Its mandates are: To undertake research and transfer of technology on all aspects of buffalo production; To establish nucleus breeding herds of important buffalo breeds; and To act as repository of information on all aspects of buffalo production and development.

Further details can be found at:
https://cirb.res.in/