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Ask the right questions, and nature will open the door to her secrets.

- Dr. C.V. Raman, The Nobel Prize in Physics 1930

IITian Researchers identify a cure to insulin resistance

Researchers from Indian Institute of Technology (IIT), Mandi have identified a critical protein molecule, called SIRT1, which is repressed in hyperinsulinemia, that in turn activates another protein called NFkB, which causes inflammation. The researchers found that low-dose naltrexone (LDN), a drug commonly administered for opiate addiction, can activate SIRT1, thereby reducing inflammation and increasing insulin sensitivity of cells.

Scientists develop new tools to fight diarrhoea

Team of researchers at DBT-National Agri-Food Biotechnology Institute (DBT-NABI), Mohali have developed a probe based on assDNAaptamer, which are low molecular weight biomolecules, widely used for bio-detection of E. coli; the most common foodborne bacteria.

BNHS launch web platform to understand Konkan coast

The Bombay Natural History Society (BNHS), in association with Shell, jointly launched a web platform, called Coastal and Marine Biodiversity Assessment Tool (CoMBAT) to identify ecologically important pockets along the Konkan coast for effective conservation. The tool affords easy navigation and accessibility to a wide range of scientifically-vetted information related to the coastal biodiversity of Maharashtra.

Rare yellow turtle found in West Bengal

A rare yellow turtle, which is a morph of yellow albino Indian flapshell turtle, known as Lissemys punctata and commonly found in South Asian countries, was discovered in Burdwan village pond in West Bengal. The rare colour of the turtle, found in the whole shell and body, is attributed to the deficiency of pigment called tyrosine present in high amounts in reptiles.

India's PSLV successfully launches Earth observation satellite

India's Polar Satellite Launch Vehicle, in its fifty first flight (PSLV-C49) on 7 November, successfully launched Earth Observation Satellite (EOS-01) along with nine international customer satellites from the First Launch Pad of Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota. EOS-01 is an earth observation satellite, intended for applications in agriculture, forestry and disaster management support. The nine customer satellites from Lithuania (1), Luxembourg (4) and USA (4) were launched under a commercial arrangement with NewSpace India Limited (NSIL). PSLV-C49 is the 2nd flight of PSLV in 'DL' configuration (with 2 solid strap-on motors).

CSIR-SERC licenses makeshift hospital's technology to L&T

Council of Scientific and Industrial Research (CSIR)'s Chennai based constituent laboratory Structural Engineering Research Centre (SERC) has signed an agreement for licensing of technology – Portable lightweight foldable module for makeshift hospitals and other needs (PoliTal-M), with Larsen & Toubro Limited (L&T), Mumbai. PoliTal-M is a lightweight foldable modular unit for fast deployment in the critical need of shelters, which can be transported and erected quickly using a crane and two-three manpower. This technology is first of its kind in India, and has a high potential for multi-functional use for different needs.

Fifty times more economic benefit from National Monsoon Mission

According to the report by National Council of Applied Economic Research 2020 (NCAER), India's investment of around INR 1000 crore (approx. USD 133 million) in National Monsoon Mission and high-performance computing facilities has brought a profit of nearly INR 50,000 crore (approx. USD 6.7 billion). The advisories given by Ocean State Forecast (OCF), funded by the investment, was used by six times as many fishermen, on a daily basis as compared to five years ago. This investment has helped farmers avoid empty trips and additionally helped fishermen save INR 18.25 crore (approx. USD 2.4 million) of operational costs and generated INR 1.92 crore (approx. USD 256,000) of additional income from the potential fishing zone advisories.

Special Update: National Institute of Rock Mechanics (NIRM)

National Institute of Rock Mechanics (NIRM) situated in Karnataka is the only institution in South Asia exclusively devoted to research in rock mechanics. Over the period of last 25 years, the Institute has the privilege to provide its expertise to various central, state government agencies and public sector undertakings in the field of mining, hydroelectric projects, nuclear power projects, oil and gas sector and various infrastructure project authorities including rail, road, airports, hospital etc. The Institute has been developed as a Centre of Excellence for Rock Engineering, with the following broad areas of activities: Design of mine workings for improved safety and productivity; Design of rock excavations, support systems for safety and stability; Optimal site characterisation for strategic constructions; Instrumentation and monitoring for ensuring stability of excavations; In-situ and laboratory based tests as per ISRM standards; Rock deformability Characteristics; and, Information dissemination by training program. Further details can be found at: <https://www.nirm.in/about.php>