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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

Indian and Finnish researchers develop an efficient HBV test

Team of Indian researchers from Department of Biotechnology (DBT) and researchers from University of Turku in Finland have developed an ultra-sensitive rapid diagnostic test, which showed 95.4% sensitivity in a comparison of assay performance among patients positive and negative for Hepatitis B surface antigen (HBsAg). The scientists are now planning to get the assay to the bedside in the form of a point-of-care kit and evaluate the function of the assay in clinical settings.

IIT researchers develop native CO2 battery for Mars mission

Prof Chandra Shekhar Sharma from IIT Hyderabad will be working to develop scientific understanding and Technical Development of Metal- CO2 battery with CO2 as an Energy Carrier for India's Mars Mission. Another parallel aspect of this research is to develop Metal-CO2 battery technology also as a promising clean strategy for restraining the climate effects of CO2 emissions.

Indian and Finnish researchers devise rapid test for malaria

A recent collaboration between Indian researchers from Department of Biotechnology (DBT) and researchers from University of Turku in Finland have developed a highly sensitive and robust point-of-care test that can detect Plasmodium falciparum infection at low levels of 0.2-2 parasites per microlitre and is stable even at 40 degrees Celsius for at least 5 months. The results indicate that the test can be used to detect infection, in populations from different regions and those affected by different strains.

IISF 2020 Festival is to be held virtually

CSIR-National Institute of Science, Technology and Development Studies (NISTADS), New Delhi will be organizing a virtual session of the India International Science Festival (IISF) 2020 from 22 December to 25 December 2020. During the session, students will be able to participate in 41 events, where they can go for virtual tours, 3D exhibitions, virtual events, panel discussions, lectures etc. This Science Festival is organized jointly by Department of Science and Technology (DST), Council of Scientific and Industrial Research (CSIR), Ministry of Earth Sciences, Ministry of Health & Family Welfare, and Department of Biotechnology (DBT). IISF will provide opportunities for experts from industries, faculty members and students from academic institutions, scientists from R&D institutes and technocrats to come to understand the strengths of each organisation, to explore new ideas for collaboration for accelerating mutual growth, to establish research and business relationship and to provide practical solutions for the benefits of the society.

Prof Roddam Narasimha passes away at 87

Prof Roddam Narasimha, noted aerospace scientist, aged 87, has passed away. Prof. Roddam has contributed to India's major scientific programmes, including ISRO and Light Combat Aircraft (LCA). He was the first student of Prof. Satish Dhawan, the father of fluid dynamics research in India. His major research interests are in transitional and turbulent flows, the design of aerodynamically efficient wings for turboprop aircraft, the flow within a shock wave, the atmospheric boundary layer in the Indian tropics, and the fluid dynamics of cumulus clouds. During his tenure at the National Aerospace Laboratories (NAL) as Director (1984-93), Prof Narasimha led the lab in playing a major role in designing carbon composite wings and flight control systems for the LCA, designing and using the first parallel computer in the country, and defining an Indian standard atmosphere.

DST researcher offers solution for improved predictability of droughts

A team from the Centre for Atmospheric and Oceanic Sciences (CAOS), Indian Institute of Science (IISc), supported in part by Department of Science and Technology (DST) under their climate change programme, showed that, in the past century, Indian monsoon droughts that occurred in non-El Nino years were sub-seasonal, as opposed to El Nino droughts, where the defecit presists throughout the season. The research team analysed daily rainfall during the two categories of droughts from 1900 to 2015 and noticed dramatic differences in the evolution of rainfall deficit. The The atmospheric tele-connection studied in this paper offers an avenue for improved predictability of droughts, especially in the absence of tell-tale signs in the Pacific.

Special Update: Indian Council of Agricultural Research (ICAR)

The Indian Council of Agricultural Research (ICAR) is an autonomous organisation under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture and Farmers Welfare, Government of India, established on 16 July 1929. The Council is the apex body for co-ordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences in the entire country. The ICAR has its headquarters at New Delhi. With 101 ICAR institutes and 71 agricultural universities spread across the country this is one of the largest national agricultural systems in the world.

Further details can be found at:
https://icar.org.in/