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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

Researchers Found Novel Way to Target Triple-Negative Breast Cancer

Researchers at Cancer Biology Division of CSIR-Central Drug Research Institute (CDRI), Lucknow found a novel way to target Triple-Negative Breast Cancer. Researchers discovered that selective hyper-activation of functional EZH2 (Enhancer of zeste homolog 2) over NC-EZH2 (Non-Canonical EZH2) alters TNBC metastatic landscape and fosters its peritoneal metastasis, particularly splenic. The process, further, significantly reduces TNBC migration, invasion, and peritoneal metastasis (spread of cancer from other organs). The team screened samples from the biorepository of the Rajiv Gandhi Cancer Institute and Research Centre, New Delhi for TNBC tumour. Preclinical findings suggest a rationale for targeting TNBC with EZH2 inhibitors. New treatment modalities can be further developed to target TNBC based on these findings.

Data from India's Antarctic Mooring System Successfully Retrieved

Researchers from the National Centre for Polar and Ocean Research (NCPOR), successfully retrieved essential data from the ice-tethered mooring system at the Bharati Station at Prydz Bay in Antarctica. The study is a part of one of the newly initiated research observatory projects of NCPOR. The main aim of the observatory is to study the Air–Ice–Sea interactions by measuring various environmental variables from these three spheres. Researchers added that this project would help develop a proper monitoring system for the polar oceans, resulting in better policy making and climate change mitigation plans.

CeNSE Developed a New Method for Energy-Efficient Computing & Storage

Researchers at the Centre for Nano Science and Engineering (CeNSE), Indian Institute of Science developed an energy-efficient computing platform that offers promise in building next-generation electronic devices and storage. Researchers used components called memristors that could store data & perform computation instead of using complementary metal-oxide semiconductors (CMOS), the building blocks of most electronic circuits today. By designing unique memristors based on metal-organic complexes, the researchers could cut down the number of components needed in a circuit, resulting in significantly increased speed and efficiency. Researchers also commented that the platform "outperforms" current state-of-the-art technologies by orders of magnitude and with this researchers are now able to make arrays of devices that are more robust, consistent and stable even compared to commercial technologies like flash memories.

Expansion of Wind Energy Projects - MNRE

Ministry of New and Renewable Energy (MNRE) reported that Indian Govt. has taken various steps to promote renewable energy, including wind energy, and highlighted the following:

i. Permitting Foreign Direct Investment (FDI) up to 100 percent under the automatic route

ii. Declaration of trajectory for Renewable Purchase Obligation (RPO) up to the year 2030

iii. Setting up of Ultra Mega Renewable Energy Parks to provide land and transmission to RE developers on a plug and play basis

iv. Setting up of Project Development Cell for attracting and facilitating investments

Special Update: Researchers at CSIR Developed Copper-Based Low-Cost Water Purification Device

Researchers from the CSIR-Central Scientific Instruments Organization (CSIR-CSIO) and the CSIR-Institute for Microbial Technology (CSIR-IMTech), developed low-cost and an antimicrobial water purifying device that is simple to fit into any wide-mouth opening water bottle. The device is based on the surface-to-volume ratio of copper for improving the quality of stored drinking water. It is efficient against microbiological contamination and enhances the water's quality with minerals. The novel design of the copper ionic device makes it a good option for travellers, office goers, children, campaigns, homes, outdoor, on-site personnel, hikers, etc. Researchers also added that the developed copper device releases the copper ions over time that interacts with germs and prevents the spread of pathogens.