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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

Biomarker identified to predict diabetic kidney failure

A group of researchers from NCL Pune, NIMHANS Bengaluru and Madras Diabetic Research Foundation (MDRF) have identified urine-based biomarkers for early prediction of diabetic kidney failure. The study identified the biomarkers Microalbuminuria (MIC) and Macroalbuminuria (MAC), for more than 500 patients, with 72% and 91% efficiency respectively.

Personal reading scanner for visually impaired

To help 4.7 million people in India who are visually impaired, Central Scientific Instruments Organisation, (CSIO) Chandigarh has developed a scanner-based reading device called 'Divyanayan, which scans and reads approximately fifty pages. According to Director of Central Electronic Limited (CEL), this product would be available in the market in 2-3 months.

Scientists in Pune develop miniature flow reactors

National Chemicals Laboratory, Pune has developed miniature glass-coated flow reactors with high performance and better compatibility. The reactor, which already has acquired US and European patents, will be used to manufacture agrochemicals and have applications in the pharma sectors.

IIT to set up research center in data science

The Indian Institute of Technology (IIT), Palakkad, will set up a top-class research centre in data science at Kanjikode: Center for Research and Education in Data Science (CREDS). CREDS will foster active collaboration with various institutions in the focus area of AI. While the immediate focus will be on sustainability and education, the center will also have researchers in other areas of relevance of data science. A major agenda of CREDS is to foster active industrial as well as academic collaborations.

CSIR ranked 1st in Nature Ranking Index-2020

Council of Scientific and Industrial Research (CSIR) has been ranked first in the Nature Ranking Index-2020. The rankings are based on total research output which the institutions have carried out from December 01, 2018 to 30th November, 2019. Indian Institute of Science (IISc), Bangalore, has been ranked second while the third place was given to Tata Institute of Fundamental Research (TIFR-Mumbai). Top subjects associated with research work include: Earth and Environmental Sciences, Physical Science, Chemistry and Life Sciences. CSIR files about 200 Indian patents and 250 foreign patents annually.

CSIR-IIIM Jammu and IndusScan sign major accord on cannabis research

The CSIR-Indian Institute of Integrative Medicine (IIIM), Jammu, signed a major agreement on cannabis research with IndusScan, a Canadian pharmaceutical company. This is the first-of-its-kind project in India and a historic moment for Jammu and Kashmir (J&K). The upcoming bio-technology park in Kathua, which is to be completed within 6 months, will also be a huge investment in the state of Jammu and Kashmir.

First academic-industrial venture to convert waste to sustainable materials

Assam-based Numaligarh Refinery Limited (NRL) has tied up with Indian Institute of Technology Guwahati (IITG) to set up 'NRL Centre of Excellence (CoE) for Sustainable Materials' for developing sustainable/bio-degradable materials from oil and bio refinery streams. This will be the first of its kind academic-industrial venture with the broad objective to convert waste from petroleum into sustainable materials. NRL has extended an initial research grant of INR 4 Crore through the CoE to the Chemical Engineering Department for the first project identified for 'Development of Bio-Degradable Plastics from Refinery and Bio-Refinery Streams'. This project will facilitate pilot scale production of blown film grade poly (e-caproecton) resin from bio-degradable waste products.

Special Update: National Aerospace Laboratories

National Aerospace Laboratories (NAL), a constituent of the Council of Scientific and Industrial Research (CSIR), India, established in the year 1959 is the only government aerospace R&D laboratory in the country's civilian sector. CSIR-NAL is a high-technology oriented institution focusing on advanced disciplines in aerospace. CSIR-NAL has several advanced test facilities, and many of them are recognized as National Facilities. These are not only the best in the country, but are also comparable to other similar facilities in the world. CSIR-NAL has provided significant value added inputs to all the Indian national aerospace programmes. Its contributions over the last five decades have enabled it to create a niche for itself in advanced aerospace research and technology development. CSIR-NAL has also developed many critical technologies for the strategic sector and continues to support the mission-mode programmes of the country. CSIR-NAL's mandate is to develop aerospace technologies with strong science content, design and build small, medium sized civil aircraft, and support all national aerospace programmes.

Further details can be found at: <https://www.nal.res.in/en>