



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

Affordable tooth implants

A group of researchers from the Indian Institute of Technology (IIT) Delhi, and Maulana Azad Institute of Dental Sciences (MAIDS) have developed an indigenous technology for dental implants that will provide user-friendly and affordable solutions. The surface treatment for the implant was developed with a combination of grit blasting and acid etching for better Osseo integration of the implant with the surrounding bone. This was one of the key technologies in its success.

New molecule to combat multidrug-resistant bacteria

Researchers at the Indian Institute of Technology (IIT) Roorkee identified a potent molecule against multidrug-resistant bacteria like Escherichia coli, Acinetobacter baumannii, Klebsiella pneumoniae and Mycobacterium tuberculosis. The molecule kills the bacteria by damaging their DNA as well as by inhibiting cell division. The study was done in collaboration with Government Medical College and Hospital, Chandigarh, All India Institute Of Medical Science (AIIMS), Bhopal and AIIMS, Delhi.

Low Fat Ice Cream

Researchers at CSIR-Central Food Technological Research Institute have developed a low fat synbiotic ice cream enriched with prebiotic beta-mannooligosaccharides (beta-MOS) and probiotic Lactobacillus species. The team successfully developed a low-fat synbiotic ice cream using beta-MOS, a plant-derived fibre as a prebiotic component and Lactobacillus plantarum and Lactobacillus fermentum as probiotics.

IIT collaborates with institutions for earthquake engineering

Indian Institute of Technology (IIT), Hyderabad will collaborate with four Japanese institutions for research in areas including earthquake engineering, and for doctoral programs.

ISRO sets up Space Technology Cells in IIT and other science colleges

The Indian Space Research Organisation (ISRO) has announced the setting up of five space technology cells (STCs) at India's premier engineering and science colleges to conduct space research, build new applications and high-end technology. STCs have been installed at Indian Institute of Technology (IIT) campuses in, Bombay, Kanpur, Madras and Kharagpur, Bengaluru's Indian Institute of Science (IISc) and at the Joint Research Programme with Savitribai Phule Pune University (SPPU).

Tamil Nadu and Karnataka amongst highest renewable power generators

Tamil Nadu and Karnataka are leading the renewable energy growth in India with the two States accounting for a third of India's new capacity addition as well as the generation of clean energy. While solar power drives renewable power generation capacity for Karnataka, the wind energy produces the major chunk of power in Tamil Nadu. During April-October 2019, the renewable sector in India generated about 84,490 million units of energy, which was about 10 per cent of the total energy (including all sources) generated in the country during the period. India's total installed renewable energy capacity stood at 83,379 MW, of which wind and solar segments accounted for 37,090 MW and 31,696 MW respectively.

India ranking climbs to 9th in Climate Change Performance

According to Climate Change Performance Index (CCPI) released at the COP25 climate summit held at Madrid, India ranked 9th and is in the 'high category' countries. While the current per capita emission levels and energy use are low in India, India has ambitious 2030 targets and this resulted in India getting high performance rates under GHG emissions and energy use categories. The authors of the report state that only two countries among the G20, India (9th) and UK (7th) figure in the 'high category', while eight among the G20 countries are in the 'very low' category, including Australia, Saudi Arabia and USA. Since no country is already on the path to cut emissions that are compatible with the targets of the Paris Agreement, first three ranks in 'high category' are left unfilled.

Special Update: National Institute of Ayurveda [NIA]

NIA is an apex Institute under the Ministry of AYUSH, Govt. of India for promoting the growth and development of Ayurveda as a model Institute for evolving high standards of teaching, training, research and patient care and also to invoke scientific outlook to the knowledge of Ayurvedic System of Medicine. It is based in Jaipur.

The Institute has a glorious tradition of about 145 years when the Department of Ayurveda was started in 1865 in the Maharaja Sanskrit College, Jaipur which gained popularity as the "Jaipur School of Thought". An independent Ayurvedic College was established in August 1946 by the Government of Rajasthan and this College was merged to form NIA in February 1976.

After its establishment in 1976, the Institute had grown tremendously in the field of Teaching, Training, Research, Patient Care etc. as a result of which it has now 14 Specialties for PG Course and 9 Specialties for Fellowship Program leading to Ph.D., apart from the Graduate Course and a Diploma Course in AYUSH Nursing & Pharmacy. In the coming years, more Branches will be introduced for Post-Graduate Education and also for Fellowship Programs.

Further details can be found at:
<http://www.nia.nic.in/index.html>