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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

IIT Delhi researchers develop affordable COVID-19 tests

Researchers at the Indian Institute of Technology (IIT) Delhi have developed a cost-effective test to detect unique regions in COVID-19, not present in other viruses. Once the National Institute of Virology (NIV), Pune validates the assay, the method can be scaled up to meet domestic demands. The "probe-free detection assay" has been developed at the IIT Delhi's Kusuma School of Biological Sciences.

Cellular mechanism in Huntington disease unravelled

Researchers from National Center for Cell Science (NCCS) in Pune have conducted study on a progressive genetic disorder, which affects the brain, called Huntington Disease (HD). The HTT genes, which are responsible for producing the protein called Huntington, were studied in fruit flies to show how Orb2 protein molecules, necessary for long-term memory, were sequestered by the Huntingtin clumps.

Spacetech Agnikul raises funds

Chennai-based Agnikul, an spacetech startup that creates 3D-printed rocket engines, announced that it has raised USD 3.2 million in a pre-series A funding lead by Pi Ventures. Agnikul is developing a configurable satellite launch vehicle that can support a payload capacity of 30 to 100 kilograms, while the engine is fully 3D-printed, cutting the time to put the satellites in orbit to two weeks.

CSIR-IIP develops a safer and cost-efficient gas burner

CSIR (Council of Scientific and Industrial Research) - Indian Institute of Petroleum has developed an exclusive gas burner specifically for Piped Natural Gas (PNG) supply head. The PNG supply heads are 20% more efficient than retrofitted LPG burners and could save the country INR 800 crore (approx. USD 105 million) yearly.

Scientists develop sanitisers without harmful chemicals

CSIR-Institute of Himalayan Bioresource Technology (CSIR-IHBT) based in Palampur, Himachal Pradesh, developed a new type of hand sanitiser. Natural flavours, active tea constituents and alcohol content in the hand-sanitiser have been used as per the guidelines of the World Health Organisation (WHO). The technology has been transferred to Palampur based company M/s A.B. Scientific Solutions for the commercial production of this newly developed hand-sanitiser. Chemicals like parabens, triclosan, synthetic fragrance and phthalates have not been used in this product.

NBRC shed light on the effects of music to the human mind

Researchers at the National Brain Research Center (NBRC), Manesar (Haryana) in a recent study exposed the auditory power of music to cause emotions. Researchers played excerpts from twelve ragas from Hindustani music, online to 144 people from many parts of India, and 112 participants from non-Indian cultural backgrounds (from the U.S., the U.K., parts of Europe, Japan, Korea). The encultured listeners from India and the non-encultured group from abroad felt emotions in the auditory domain and thus a universality to music was shown to be exhibited by all listeners.

Cipla and IICT to develop antiviral drugs to combat COVID-19

Mumbai-based drug major Cipla, credited with innovations in respiratory and flu therapy, could become one of the first domestic companies to roll out new drugs for the coronavirus. Cipla will work with Hyderabad-based Indian Institute of Chemical Technology (IICT) to develop three broad-spectrum antiviral drugs; Favipiravir, Remidesivir and Bolaxavir, against novel coronavirus (COVID-19). As part of the announcement, IICT, which is part of the publicly funded Council of Scientific and Industrial Research (CSIR) will develop active pharma ingredients (APIs) of the three antiviral drugs. Cipla will take care of testing, regulatory approvals and subsequent mass production. The plan is to get the pilot batch ready in the next 6-10 weeks.

Special Update: ATAL Mission for Rejuvenation and Urban Transformation (AMRUT)

The national priority of ATAL Mission for Rejuvenation and Urban Transformation is to provide basic services, e.g. water supply, sewerage, storm water drainage to reduce flooding, non-motorized urban transport as well as green space parks to households and build amenities in cities which will improve the quality of life for all, especially the poor and the disadvantaged. Five hundred cities have been selected under AMRUT. Besides creating infrastructure for basic amenities, Mission also focuses on Reforms and capacity building of the Urban Local Bodies (ULBs). The reforms aim at improving delivery of citizen services, bringing down the cost of delivery, improving financial health, augmenting resources and enhancing transparency. The Mission sets aside 10% of annual budgetary allocation to be given away as incentive to States/UTs for accomplishing the reforms within specified timelines.

Further details can be found at:
www.amrut.gov.in