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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

### Carbon nanotube to reduce vibrations in cars

Indian Institute of Technology Madras researchers have found that 'Carbon Nanotube Composites' contribute in absorbing the vibrations in automobiles quite efficiently. According computational simulation studies performed by researchers, Carbon nanotube (CNT)-reinforced polymers combine the viscoelastic properties of the polymer with the interfacial properties of the CNT, resulting in enhanced vibration damping

## New species of plant Didymocarpus discovered

A team of Indian Scientists have rediscovered four species of stoneflowers, and reported India's first record of a Didymocarpus species previously known only from Bhutan. The discoveries of new Didymocarpus species is particularly encouraging because like many other Gesneriaceae, they are indicators of "intact undisturbed forest ecosystems.

#### **Shycocan: Corona Cannon**

Bengaluru-based Centre for Advanced Research and Development (CARD), the research wing of organisation De scalene has come up with a device called shycocan (Scalene Hypercharge Corona Canon) which neutralizes the Coronavirus. The device was tested for its safety and efficacy and is soon going to be manufactured and marketed in the US under the Enforcement Discretion policy of USFDA and in Europe as the device is CE compliant and is CE marked.

### Two girls from Surat discover earth-bound asteroid

Two 14-year old girls, from the western Indian city of Surat, discovered an asteroid, called HLV2514, using specialized software to analyse the images taken by the Pan-STARRS telescope in Hawaii. The asteroid is presently near Mars and its orbit is expected to cross that of Earth in about one million years' time.

### Compendium on 'CSIR Technologies for Covid-19 Mitigation'

Council of Scientific and Industrial Research (CSIR) Compendium on 'CSIR Technologies for Covid-19 Mitigation' was launched on 30 July 2020. About 60 out of the 100 or so technologies listed in the compendium have already been transferred to industry partners. The COVID-19 technologies are licensed on a non-exclusive basis. With the onset of COVID 19 Pandemic, CSIR, through its 38 laboratories and expertise in diverse areas ranging from aerospace to buildings to genomics to chemicals, quickly sprang into action developing COVID-19 interventions. For effective planning and strategizing, CSIR swiftly set up five COVID-19 verticals including disease surveillance, drugs & vaccines, testing & diagnostics, PPEs and supply chain management.

#### India-Israel joint-cooperation start trial for rapid testing

In joint cooperation between Israel and India, rapid tests are being developed which will provide results in less than 30 seconds if successful. Trials have commenced at a special testing site at Dr Ram Manohar Lohia (RML) Hospital. It has been developed jointly in cooperation with DRDD Ministry of Defence Israel and DRDO, CSIR and PSA, India. Four different kinds of simple, non-invasive technologies have been used in the trials, which includes a voice test (that uses artificial intelligence to identify changes in the patient's voice), a breath analyser test (which requires patient to blow into a tube and detects virus using terra-hertz waves), isothermal testing (that enables identification of the virus in a saliva sample), and a test using Polyamino acids (that seeks to isolate proteins related to COVID-19).

#### 5 bio-repositories for clinical, viral COVID-19 samples set up

India has set up five dedicated bio-repositories for clinical and viral samples linked to the coronavirus disease (Covid-19) that will be shared with researchers from the academia and industry to speed up innovations to combat the pandemic. The Department of Biotechnology has supported the setting up of the bio-repositories at the NCR-Biotech Science Cluster-Translational Health Science and Technology Institute, Faridabad; Institute of Liver and Biliary Sciences, New Delhi; National Centre for Cell Science, Pune; InStem, Bangalore; and Institute of Life Sciences Bhubaneswar. The Department of Biotechnology has also supported vaccine development by a leading Indian pharmaceutical company called Zydus, which has already progressed to clinical trials in humans.

# **Special Update: National Tiger Conservation Authority (NTCA)/ Project Tiger**

The National Tiger Conservation Authority (NTCA) is a statutory body of the Ministry, with an overarching supervisory / coordination role, performing functions as provided in the Wildlife (Protection) Act, 1972. Project Tiger is an ongoing Centrally Sponsored Scheme of the Ministry of Environment, Forests and Climate Change. The role of Project Tiger /NTCA is to provide financial guidance and funding support. Among the main functions of NTCA/Project Tiger (GoI) is alerting and informing the States as and when required about poachers, preparing a national database of individual tiger photo ID Database of individual tigers, supporting states for raising, arming and deploying the Special Tiger Protection Force.

Further details can be found at: http://projecttiger.nic.in/