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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

AI aids in eye testing

A study conducted in Aravind Eye Hospital, Madurai and Sankara Nethralaya, Chennai, which screened over 3,000 patients with diabetes, has shown that the Artificial Intelligence (AI's) performance exceeded the conventionally used manual grading method used to identify diabetic retinopathy. The AI had a specificity of around 90%.

IIT Kanpur researchers develop low-cost ventilators

Nocca Robotics, incubated at IIT Kanpur, have developed a locally-sourced prototype for the portable ventilator. The prototype, valued at INR 70,000, is an invasive type mechanical ventilator capable of operating in pressure-controlled mode and is almost six times cheaper than those currently available in the market.

IIT Kharagpur researchers develop hand sanitisers

Researchers from IIT Kharagpur have developed two alcohol-based sanitizers on WHO guidelines amid the coronavirus outbreak. Both the teams have made the hand sanitisers available to employees of the institute who are providing essential services to students and staff on the campus.

IIT Kharagpur study examines quarantine measure on people

A study, covering 400-plus cities in 28 States and 4 Union territories (UTs) of India, was conducted by researchers at IIT Kharagpur to examine closely the travel and social distancing perspectives of Indian citizens during COVID-19. The study showed an increase in the number of people opting to work from home from 40% to 75% within a week's time. A significant share of respondents (i.e., over 30%) were aware about possible city quarantine and were getting prepared for it. While on 17 March 2020 only about 60% respondents were considering cancellation/postponing long distance travel for various purposes, the share increased to 75% on 22 March 2020.

First Made-in-India COVID-19 test kit gets commercial approval

Pune-based molecular diagnostics company Mylab Discovery Solutions Pvt Ltd, which specialises in molecular diagnostic kits has developed first made-in-India test kit for COVID-19 in a record time of six weeks. The kit - Mylab PathoDetect COVID-19 Qualitative PCR kit - is the first one to receive commercial approval from the Indian FDA/ Central Drugs Standard Control Organisation (CDSCO). Besides, Mylab is the only Indian company to have achieved 100 per cent sensitivity and specificity in the ICMR evaluation. With emphasis on 'Make in India' and support from local and central government, the COVID-19 kit has been made as per WHO/CDC guidelines. Mylab promised that it can manufacture up to 1 lakh tests in a week that can be further scaled up if needed.

Healthtech startup is enabling social distancing at clinics

Guwahati-based healthtech startup *Oxyfind* has developed an application for patients and doctors to enable contactless appointments that can be tracked in real time, helping reduce the spread of coronavirus at hospitals and clinics. *Oxyfind* has developed two applications - OXYQR and OSS (*Oxyfind* Smart Screen), that enables patients to book appointments with doctors using a QR code, and track the appointment in real time. Clinics can also store medical records of patients in the *Oxyfind* application and search patients' details using their *Oxyfind* ID or phone number.

CSIR Labs working on genome sequencing of COVID-19

The Hyderabad-based Centre for Cellular Molecular Biology (CCMB), which is one of the 38 research institutes under the Government of India's Council for Scientific and Industrial Research (CSIR), is working on sequencing the whole genome of the Covid-19 virus taken from "isolates" from people who have tested positive. CCMB is also scaling up to build up its capacity to test 1000 samples a day. Another CSIR institute, the Kolkata-based Indian Institute of Chemical Biology (IICB), has also stepped up to the task, by designing a research proposal to find biochemicals that will prevent the coronavirus from gaining entry into human cells.

Special Update: Centre for Infectious Disease Research (CIDR)

The Centre for Infectious Disease Research (CIDR) is based at the Indian Institute of Science, Bengaluru. It integrates research activities in the area of infectious diseases with interactions and collaborations and provide avenues for multi-disciplinary activities. It is involved in two primary activities: first, providing the intellectual and infrastructural support for infectious disease research; second, enable researchers to perform studies in the Biosafety Level- 3 (BSL-3) facility, a state-of-the-art biocontainment space to perform research with high infectious organisms, e.g. *Mycobacterium tuberculosis* etc. The final goal is to better understand the basic biology during infection and explore possible therapeutic avenues.

Research activities in CIDR are spearheaded by senior fellows, e.g. Ramalingaswami, DBT-Wellcome, Ramanujan etc, who have procured competitive grants for studies related to infectious disease research.

Further details can be found at:

<http://cidr.iisc.ac.in/>