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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

Scientists develop two mobile indoor disinfection sprayers

Scientists at CSIR-CMERI, Durgapur, have developed two mobile indoor disinfection sprayer units to be used for effectively cleaning and disinfecting pathogenic micro-organism present on areas in hospital, which are touched constantly. The mobile sprayers are BPDS (Battery-Powered Disinfectant Sprayer) and POMID (Pneumatically Operated Mobile Indoor Disinfection).

NAL develops SwasthVayu

National Aerospace Laboratories Bengaluru, has developed a non-invasive BiPAP Ventilator in a record time of 36 days to treat COVID-19 patients. The BiPAP Non-Invasive ventilator is a microcontroller-based precise closed-loop adaptive control system with a built-in biocompatible 3D printed manifold & coupler with HEPA filter (Highly Efficient Particulate Air Filter).

Wastewater surveillance to alert to COVID-19

According to Department of Earth Sciences, Indian Institute of Technology (IIT) Gandhinagar, routine wastewater surveillance, could be used as a non-invasive early-warning tool to alert communities to COVID-19 infections. The collected sample of RNA (genetic material in viruses) present in sewage water could be used in gene sequencing to assess how much genetic material of coronavirus is available.

IIT and CSIR Scientists shed light on Parkinson's disease

Scientists from IIT (ISM) Dhanbad and CSIR-Indian Institute of Chemical Biology, Kolkata, teamed up to understand how alpha synuclein (ASyn), found at the tip of neurons, aggregates in the midbrain of patients suffering from Parkinson's disease. Using Z-scan technique, non-linear behaviour of ASyn, was monitored in early and late stages of its aggregation.

Ministry of AYUSH and CSIR to validate 4 drugs against COVID 19

The AYUSH Ministry and the Council of Scientific and Industrial Research (CSIR) are working to validate four Ayush formulations against Covid-19: Ashwagandha, Yashtimadhu (Mulethi), Guduchi + Pippali (Giloy) and AYUSH-64. A clinical study multi-centric on different parts of the country and variable design will be conducted. The result will come within three months. These formulations will be tried as an add-on therapy and standard care for COVID-19 patients.

CSIR joins hands with IIT-H and Intel against COVID 19

CSIR is working with Intel India and International Institute of Information Technology (IIIT)-Hyderabad to help achieve faster and less expensive COVID-19 testing and coronavirus genome sequencing to understand epidemiology and AI-based risk stratification for patients with co-morbidities. CSIR constituent labs will work with various hospitals and diagnostic chains in carrying out comprehensive diagnostics. Intel India is developing an end-to-end system that consists of multiple applications, testing devices, data collection/aggregation gateways, a data exchange SDK and an AI model-hub platform. IIIT-Hyderabad will develop risk stratification algorithms that can help in drug and vaccine discovery for long term preparedness to combat the epidemic.

Plasma therapy clinical trial to begin in Kolkata after DCGI nod

Clinical trial of convalescent plasma therapy is set to begin in Kolkata with the Drug Control General of India giving its final nod to a collaborative effort by CSIR and the State Government of West Bengal. The purpose of the trial is to study the efficacy of blood plasma from recovered COVID-19 patient on a positive patient undergoing treatment. The therapy involves taking antibodies from the blood of a person who has recovered from COVID-19 and transfusing those antibodies into an active coronavirus patient to help the immune system to fight the infection.

Special Update: Traditional Knowledge Digital Library

Traditional Knowledge Digital Library (TKDL) is a pioneering initiative of India to protect Indian traditional medicinal knowledge and prevent its misappropriation at International Patent Offices. Traditional Knowledge (TK) is a valuable yet vulnerable asset to indigenous and local communities who depend on TK for their livelihood.

Traditional Knowledge Digital Library has overcome the language and format barrier by systematically and scientifically converting and structuring the available contents of the ancient texts on Indian Systems of Medicines i.e. Ayurveda, Siddha, Unani and Sowa Rigpa as well as Yoga, into five international languages, namely, English, Japanese, French, German and Spanish, with the help of IT tools and an innovative classification system - Traditional Knowledge Resource Classification (TKRC). As on date, more than 3.6 lakh formulations/ practices have been transcribed into the TKDL database.

TKDL is proving to be an effective deterrent against bio-piracy and has been recognized internationally as a unique effort. TKDL has set a benchmark in TK protection around the world.

Further details can be found at: <https://pharmaceuticals.gov.in>