



## Science REPORTER

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# Mitigating a Health Crisis CSIR FIGHTS CORONA

THE coronavirus pandemic has made its presence known the world over as no other event in recent history. With more than 2.5 million confirmed cases of infection and around 1,79,725 deaths, and no signs of a let up so far, it is already turning into one of the deadliest pandemics of recent times.

And it has called upon every individual in the world to contribute in some measure to stop the onward progression of the disease. While citizens of the world are expected to observe simple measures such as maintaining hygiene and social distancing, governments and authorities have been pushed hard to maintain lockdowns and grapple with the varied ramifications of the pandemic.

The world scientific community, at the same time, is racing against time to study and get to understand the new SARS-CoV-2 virus, develop diagnostics to detect the presence of the COVID-19 disease it causes, develop drugs that can treat COVID-19 and vaccines that could protect the populations from future attacks by the virus. Indian S&T organisations have also been working overtime to tackle the disease, a glimpse of which we provide to you in this month's cover story.

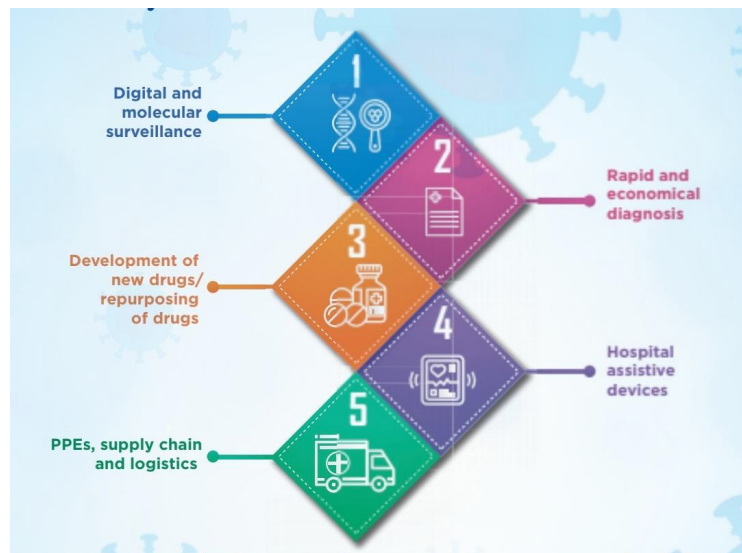
The Council of Scientific and Industrial Research (CSIR), the organisation that brings you this magazine, has also intensified its efforts at controlling the pandemic. CSIR, a pan-India network of 38 laboratories, has always contributed with its expertise, technologies and innovations whenever the country has faced natural disasters or moments of crisis, such as this.

As an immediate measure, CSIR labs throughout the country contributed extensively to control the spread of the coronavirus by developing and distributing effective and affordable sanitisers, soaps, masks, protective equipments and ready to eat food. Simultaneously, the laboratories of CSIR got down to working on diagnosis and treatment of COVID-19 for which five verticals have been set up: Digital and molecular surveillance; Rapid and economical diagnosis; Development of new drugs/repurposing of drugs; Hospital assistive devices, and PPEs, supply chain and logistics.

Working on this strategy, CSIR has already notched up quite a few successes. It has developed a paper-strip based rapid diagnostic kit. Considerable headway has already been made in sequencing of the viral genome. Development of new drugs takes anywhere from 5-8 years, and so CSIR labs have been working on repurposing existing drugs to tackle COVID-19. Since in the coming times the import of key starting materials for drugs could face restrictions, CSIR has also drawn a roadmap for developing indigenously key starting materials, which are being imported currently, for several essential drugs. At the same time, CSIR is also working on developing a vaccine for the disease.

Besides, CSIR labs have come up with disinfection machines and sanitising walkways to keep public and workplaces sanitised. It is also working on exigencies such as developing protective masks, suits and gowns for medical personnel, and has developed and transferred technology to make ventilators and oxygen-enrichment machines in case infections and hospital admissions scale up in the future.

In this moment of grave health crisis that the country faces, the Council of Scientific and Industrial Research, while joining hands with other arms of the government to overcome this crisis, will also come up with innovations and developments that would go a long way in mitigating such crises in the future too.



Hasan Jawaid Khan

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