

DBT-Center of Innovative and Applied Bioprocessing (DBT-CIAB), Mohali

Scientist plan to develop anti COVID drugs using natural garlic essential oil

Department of Biotechnology's Center of Innovative and Applied Bioprocessing (DBT-CIAB) at Mohali, has planned a bouquet of research projects aimed at generating products that could be used for prevention, diagnosis or cure of for the deadly COVID 19 infection that is currently sweeping over the entire world.

The plan has been designed so as to utilise the expertise of its scientists, who come from a diverse range of research backgrounds including chemistry, chemical engineering, biotechnology, molecular biology, nutrition, nanotechnology.

While Under the preventive platform, the institute has planned to work on lignin derived

Noble metal nanocomplexes for developing antiviral coating materials, and rose oxide-enriched citronella oil, carbopol and triethanolamine formulated alcoholic sanitizer,

under the therapeutics platform, the effort will be focussed on polypyrrollic photosensitizers

and their nanoformulations for antiviral photodynamic therapy, microbial production of

immunomodulatory and antiviral fructan biomolecules, and development and commercial

manufacturing of nasal spray kit to ease chest congestion suffered in Corona Infection etc.

Under the Drug discovery platform, in turn, the research will explore separation of therapeutic and valuable medicinal components from the peel and seeds of fruits and

utilisation of natural garlic essential oil as a ACE 2 protein inhibitor for preventing SARS-CoV-2 invasion.

Besides, studies are to be conducted for development of lignin derived nanocarriers (LNCs) with potential for antiviral drug delivery and using curcumin fortified whey protein

Powder as a nutraceutical.

The researchers would endeavour to come out with products that are biocompatible, low

cost and scalable and have set out with a timeline of six months to one year. The studies

Would be conducted in collaboration with chemical industries and other government

Laboratories with BSL-3 facility.

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