

CENTRAL UNIVERSITY OF TAMIL NADU

RESEARCH INITIATIVES ON COVID-19

In December, 2019, a new corona virus, now named as COVID-19, emerged in Wuhan, China and resulted in outbreak in China and expanded globally including India. It is a potential zoonotic disease and person to person transmission may occur through droplets or contacts. The mortality rate is low to moderate. There is no vaccine and drug available till now. Various organisations across the world have initiated many research on diagnostics, drugs, vaccines and social and economic impact of COVID-19. The Central University of Tamil Nadu also prepared itself to carryout various meaningful research on all aspects of COVID-19. The following 22 research proposals are initiated:

S. No	Title	Investigator(s)
1	Fungal very long chain polyunsaturated fatty oil as the anti-viral agent for the replication membrane compartment.	Prof. Ram Rajasekharan
2	Cholesterol lowering drug as anti-viral agent that targets the SARS-CoV2 entry into host cells	Prof. Ram Rajasekharan
3	Development of LAMP for low-cost detection of SARS- CoV-2	Dr. Praveen Balabaskaran Nina & others
4	Functional quality of natural killer cell phenotypes in active SARS-CoV2-infected and convalescent individuals	Prof. EM Shankar & others
5	Development and Validation of a Rapid on site Non- Invasive Diagnostic Method for COVID-19	Dr. Sujit Kumar Behera & others
6	Taking back the control of SARS-CoV2 antiviral immune responses as a mean to neutralize COVID-19 disease pathogenesis	Prof. EM Shankar & others
7	Potential repurposing of approved drugs for the treatment of COVID-19: In vitro screening of small molecules to identify SARS-CoV-2 entry inhibitors. Since the outbreak of COVID-19, Dr.Siva Sundara Kumar has been actively involved in conducting anti-COVID-19 research. He has recently obtained a COVID-19 therapeutic grant from the Department of Biotechnology, Government of India titled "Virtual and in vitro screening of spiropyrrolidine derivatives and Diverset™ core library small molecules to identify SARS-CoV-2 entry, fusion and protease inhibitors: An anti-COVID-19 drug discovery and development program" Ref: BT/PR4094/ COT/142/20/2021 ; (Amount INR 70.24 Lakh). This proposal involves in silico and in vitro screening of in-house made novel molecules	Dr. D. SivaSundara Kumar & others

	with spiropyrrolidone oxiindole core structure and a library of small molecules from Diverset-Core library Chembridge™, to identify SARS-CoV-2 entry, fusion and protease inhibitors.	
8	In silico prediction of plant biomolecules as green drugs against COVID-19	Prof. S.Manivannan & others
9	Development of Antiviral Masks to Combat COVID19 Pandemic	Dr. Kaushik Rajaram & Dr. Gunasekaran Venugopal
10	Potential repurposing of approved drugs for the treatment of COVID-19: In vitro screening of small molecules to identify SARS-CoV-2 fusion, protease, and polymerase inhibitors	Dr. D. Siva Sundara Kumar & others
11	Health Anxiety and Psychological Well-being of people during COVID-19	Dr. Mamman Joseph C & Sandra Liz Denny
12	Understanding the effects of COVID-19 on society, economy, and environment through geospatial technologies	Dr. Balasubramani.K & others
13	Personality, Loneliness and Well-being of people during COVID-19	Dr. Mamman Joseph C & Anagha KT
14	Influence of Polymorphic Opinion Leadership in the Adoption of Health Messages During COVID19 Pandemic: A Case Study of Rural Tamil Nadu	Dr. Nikhil Kr. Gouda & others
15	Impact of COVID-19 on Education/Educational Institutions and need for On-line learning during the "Lock Down."	Dr. TaddiMurali
16	Experiences of Online Learning Among The Students In Higher Education Institutions - A Case Study From Central University of Tamil Nadu, Thiruvarur.	Dr. N. Sivakami
17	Mental health, Resilience and Well-being during COVID- 19	Dr. Mamman Joseph C & others
18	Interstate Enquiry of Nationwide Lockdown and Preparedness to Manage SARS-CoV2 (COVID-19) Pandemic - Evidence from India	Prof. Prasant Kumar Panda, & others
19	COVID-19 outbreak and its impact on Mental Health : A cross sectional study among the General Population in the Delta Regions, Tamil Nadu	Dr. P. Udhayakumar & Prof. Sigamani P
20	Awareness of COVID19 among Students of Higher Education Institutes	Prof. P. Srinivasan & Dr. Poornima Rajendran
21	Impact of Fake News on the Mental health and well- being of Young Indians during COVID-19	Dr. Manash P Goswami & Dr. Mamman Joseph C
22	Global Health Governance in Managing Public Health Emergencies and Changing Role of India- A Case of SARS CoV2 (COVID-19) Outbreak	Prof. Sigamani P & others
23	Can chest X-ray images and machine learning algorithms a diagnostic tool for COVID-19?	Prof. B Ramakrishnan & Dr. V.P. Ramesh

24	Developing Cobalt Porphyrin Phospholipid for a SARS- CoV-2 vaccine	Dr. V. Rajendiran & Dr. Weichiao Huang
25	Label-Free Rapid Detection of COVID-19 Viral RNA using Peptide Nucleic Acids & Gold Nanoparticles	Dr. V. Rajendiran & Others