

INNOVATIONS IN COVID-19

Bridging opportunities
at Oswaldo Cruz Institute

PROPOSITION OF NEW MOLECULES THAT MODULATE SARS-COV-2 REPLICATION: SCREENING AND VIRTUAL STRUCTURAL OPTIMIZATION, SYNTHESIS, ANTIVIRAL EVALUATION IN VITRO, PHARMACEUTICAL FORMULATION AND PHARMACOKINETIC STUDIES (COD. 2020.027)

COORDINATOR

Milene Dias Miranda

RESEARCH AREA

New Drugs

DEVELOPMENT STAGE

Level 4 - TRL - Component and/or breadboard validation in laboratory environment.
MRL - Capability to produce the technology in a laboratory environment.

PROPOSITION / APPLICATION

Recently, the SARS-CoV-2 pandemic has posed major challenges in providing fast, safe and effective responses aimed at preventing and treating COVID-19. The project aims to search for new molecules with anti-SARS-CoV-2 activity, with less toxicity and greater inhibition efficiency than those already tested in clinical trials to date. In addition, the search for molecules with different mechanisms of action increases the portfolio of possible drugs, which can be used in combination with those already used.

INNOVATION

The present innovation proposes molecules that offer less toxicity, greater efficiency and/or different mechanisms of action than those already described as main targets. Thus, the present innovation aims molecules capable of replacing the molecules currently used, or even optimizing the inhibitory effect on viral replication including through its insertion in nanoparticle formulations.

OPPORTUNITY

Bioprospecting of molecules of natural and synthetic origin, nanoformulations, and the repositioning of already existing ones.

CONTACT

nit@ioc.fiocruz.br