

## Researcher informations

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**Title of the project**: Strategies for drug prospection and repurposing against SARS-CoV-2 based on bioinformatics, structural biology, enzymology, organic synthesis and pre-clinical toxicity techniques

**Keywords**: SARS-CoV-2, bioinformatics, drug repurposing, enzymology, organic synthesis, pre-clinical toxicological tests

**Abstract**: The emergence of SARS-CoV-2 virus, responsible for the current pandemic, is bringing to light the need of new treatments and effective diagnostic tests. Research groups are making available a large amount of data regarding epidemiological and clinical aspects of the disease, as well as genomic sequencing, biochemical characterization, enzymology and crystallographic structures of proteins that constitute the virus. All this information is important to answer questions regarding the phylogenetic origin, relationship to possible natural reservoirs, identification of viral epitopes, as well as for the process of drug development or repurposing. However, despite all efforts from the scientific community, the current treatments have not shown satisfactory results against the virus, and the proposed molecules caused unacceptable side effects to patients infected with SARS-CoV-2. Thus, to assist in the fight against the current pandemic, our research project will employ bioinformatics, molecular and structural biology techniques, followed by cellular tests, to seek new molecules and/or suggest the repurposing of available ones for a new therapeutic treatment against COVID-19. We are confident that, with the engagement of highly qualified national and international research groups, it will be possible to achieve all goals.



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