

Current review on SARS-CoV-2 scientific knowledge

H.M. R. Gonçalves¹, A. Lino², F. Adegas², R. Chaves², and P. Martins-Lopes²

¹REQUIMTE LAQV Porto

²Universidade de Lisboa Instituto de Biosistemas e Ciencias Integrativas

March 07, 2024

Abstract

The current outbreak of COVID-19, caused by SARS-CoV-2, has resulted in millions of deaths and hospitalizations worldwide, as well as an extreme impact in our social-economic lives. The emergency to implement public health measures, such as, social distancing, high levels of testing and vaccination has shown the importance of continuous research in those areas. Here it will be presented the most relevant knowledge on the SARS-CoV-2 genomic features and mechanism that lies beneath its ability to surpass the immunological system. Moreover, it will be discussed the virus new variants and the potential impact that they can have on pathogenic factors and on the detection methods effectiveness. In order to better manage the pandemic, it is essential to maintain continuous research into the SARS-CoV-2 genome and a strict real-time genomic surveillance at the global level. This will allow the scientific community to understand the evolution of the virus and track the emergence of new mutations, which may affect the performance of COVID-19 tests. In this sense, the technologies developed for SARS-CoV-2 detection and their advantages and limitations will be fully explored.

Hosted file

Paper.docx available at <https://authorea.com/users/740838/articles/713483-current-review-on-sars-cov-2-scientific-knowledge>