## Genetic markers to predict the risk of suffering from severe COVID-19

### BACKGROUND
The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection and its disease (coronavirus disease 2019, or simply COVID-19) reached pandemic level in March 2020. The development of vaccines against COVID-19 resulted in significant decrease in the proportion of hospitalizations and mortality. However, clinical presentation of COVID-19 still ranges from asymptomatic (40%) to fatal (1.7%).

Severe COVID-19, in particular, has been associated with cardiovascular (CV) and thrombotic complications and with hyperinflammatory syndrome. It has been that symptomatic COVID-19 patients with pre-existing CV risk factor or with overt CV disease are at higher risk of severe COVID-19 presentation. Additionally, some genetic variants have been associated with COVID-19 severity. However, there exists no reliable method to predict which patients will develop severe COVID-19 and there is a need in the art to provide new methods for risk-stratification of COVID-19 patients.

### THE TECHNOLOGY

In vitro method for predicting the risk of a subject to develop severe COVID-19. Said method comprising the step of determining, in a sample isolated from the subject, the presence or absence of a series of single nucleotide variant (SNV) markers that, when used in combination, are associated with a higher risk of developing severe COVID-19. The invention includes a kit for the SNVs recognition from the subject’s sample.

### STATE OF DEVELOPMENT

Preclinical studies have been performed.

### INTELLECTUAL PROPERTY

A European patent has been filed (EP22382342), priority date: 8th April 2022

### MARKET OPPORTUNITY

Clinical diagnosis sector

### RESEARCH TEAM

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