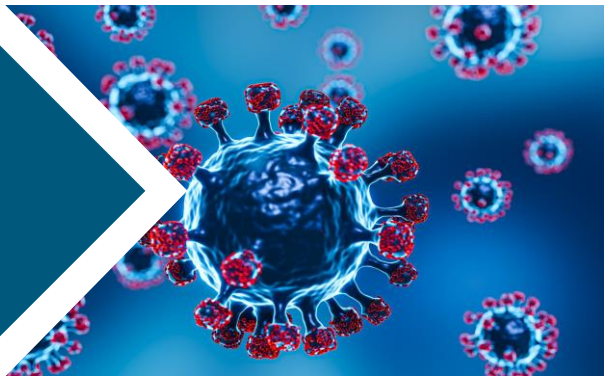
Prognostic biomarker in COVID-19 patients

Genetic biomarker that allows the classification of COVID-19 patients according to their expected evolution and prognosis.



Medical Need

COVID-19 is a global health problem due to its high infection rate, the severity of the disease, the pressure on healthcare systems, its socioeconomic impact and the challenges in its control and prevention.
Having a prognostic marker for the evolution of patients with COVID-19 is critical to effectively manage the disease, allocate resources efficiently and improve patient outcomes.

Tecnology

Non-invasive method to predict the clinical deterioration of patients with COVID-19, based on the study of the mRNA expression of a gene.
The sample is taken from nasopharyngeal exudate, which offers two advantages: it is non-invasive, and it improves sensitivity (the primary impact of the virus occurs in the upper respiratory tract).
The method allows results to be obtained quickly and affordably by RT-PCR, a technique widely used in the health sector.

Oportunity

Prevalence	Market	Other solutios
During 2019: 15% of COVID-19 patients developed severe disease, 5% life-threatening critical illness.	The market for COVID-19 diagnostic kits is estimated to grow at a CAGR of 8% over the period 2024-2028.	No other genetic prognostic biomarkers linking clinical deterioration and death have been validated.

Results

Two cohorts of patients were used:
- Discovery cohort (149 patients): Panel analysis of genes related to inflammatory and immune response. A single gene was obtained with differential expression in patients who were discharged vs. admitted to ICU/exitus.
- Validation cohort (168 patients): Analysis revealed a significant association ($p<0.05$).

Roadmap

IBIMA plataforma BIONAND is looking for a partner to further develop the technology through a co-development or licensing agreement.

Patent:
National patent application
Priority: 12/15/2023

Team:
Translational Research Group in Cancer and other Prevalent Chronic Diseases

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