

NEW THERAPEUTIC STRATEGY FOR SARS-COV-2 INFECTED PATIENTS

A research group from CIBER, IDIBAPS, HCB, UB, ISGlobal and BSC have developed a human anti SARS-CoV-2 monoclonal antibody targeting SARS-CoV-2 epitopes of the variants of concern (VOCs)

The Need

Unfortunately, 628 million people have been infected with a burden of 6 million reported death worldwide due to the fast spread of this new coronavirus. Despite of the global efficacy of SARS-CoV-2 vaccines in reducing COVID severity, some fully vaccinated populations such as immunocompromised patients or those with high number of comorbidities still are at high risk of severe COVID-19 because they have low levels of antibodies against SARS-CoV-2. Consequently, there is still a need of new therapeutic approaches, useful independently of the arise of new variants of concern (VOCs).

The Solution

We have developed and produced a monoclonal antibody (mAb) that binds to Spike SARS-CoV-2 protein epitopes preserved in all VOCs. Thus, this new mAb is not affected by Delta, Alpha or Omicron mutations becoming a new potential therapy to manage SARS-CoV-2 severe infection cases.

Innovative Aspects

- Patients with COVID-19 and with low levels of antibodies against SARS-CoV-2 at hospital admission are vulnerable populations that could specially benefit from this technology.
- It is a versatile tool due to is not affected by the current Delta, Alpha or Omicron mutations
- We offer an additional therapeutic strategy to manage the pandemic and the healthcare system overload.

Stage of Development:

Preclinical development. The epitopes have been selected based on two quality filter steps:

- 1) using a serum samples collection of 500 COVID-19 seroconverted patients for the initial epitope screening and
- 2) afterwards using a library containing 1.19x10¹⁰ different clones of anti-SARS-CoV-2 binders with high affinity, specificity and/or blocking activity.

Finally, based on these results we produced the monoclonal antibodies.

Intellectual Property:

European patent application filed (May 17th, 2022)
Suitable for international extension (PCT application)

Aims

Looking for a partner interested in a license and/or a collaboration agreement to develop and exploit this asset.

Contact details