

Project title:**UNVEILING THE IMMUNE RESPONSE TO SARS-CoV-2 INFECTION. THE UnIRSa COHORT STUDY****Acronym/working title:****UnIRSa****Principal Investigator**Prof. Fabrizio Faggiano, DIMET UPO, 28100 Novara fabrizio.faggiano@uniupo.it**Registration number of the Ethical approval**

Comitato Etico Interaziendale di Novara N° 84/20

Project summary

The ongoing pandemic emergency caused by the of the 2019 novel coronavirus (SARS-CoV-2) makes necessary to acquire knowledge aimed at implementing ready measures to counter the spread of the infection as well as for the treatment and prevention of the disease. Very little is known about the nature of the response in terms of antigen-specificity, timing of antibody appearance and detectability in the blood, correlation with disease outcome, and more importantly its duration overtime. Therefore, the development of data and tools to understand and monitor its spread and immune responses to it are needed. Overall, the reported observations substantiate our reasons to study the immune response in selected cohorts of individuals, including SARS-recovered patients and health workers. More specifically, the project aims are:

- To evaluate the immune response to SARS-CoV-2 in patients recovered from COVID-19 with different diseases courses and in different times from recovery.
- To assess the immune response to specific SARS-CoV-2 epitopes and to determine the efficacy of specific anti-SARS-CoV-2 antibodies as neutralizing agents.

The research promotes the acquisition of knowledge contributing to better understand the nature of the immune response to SARS-CoV2 infection by evaluating the immune response to SARS-CoV-2 in patients recovered from COVID-19 with different diseases courses (from asymptomatic infection to severe disease) and in different times from recovery, assessing the immune response to specific SARS-CoV-2 epitopes and determining the efficacy of specific anti-SARS-CoV-2 antibodies as neutralizing agents. The implications of this knowledge for public health can be considerable.

Duration of Study*Total duration of the study: 1 year**Study start: May 2020**Study end: June 2021***Total number of participants involved:**

100

Biological samples collected:

- ✓ serum
- ✓ plasma sodium-citrate
- ✓ buffy coat
- ✓ plasma EDTA
- ✓ Saliva