



CoVICIS represents a global approach to combatting the SARS-CoV-2 pandemic, coupling powerful state-of-the-art virologic and immunologic platforms with large genomic surveillance studies and diverse cohorts in Europe and sub-Saharan Africa (SSA).



**Our mission is to contribute to the early identification of emerging variants of concern (VOC) and obtain in-depth understanding of the risk and protective factors to SARS-CoV-2 infection as well as the evolution of the virus in different risk, gender, and age groups.**

Led by the Centre Hospitalier Universitaire Vaudois (CHUV) and running from 2022-2025 with funding from Horizon Europe, this highly integrated consortium features 14 partners from 7 countries – Switzerland, Italy, France, Germany, the Netherlands, Ethiopia, and South Africa – combining world class expertise in epidemiology, genomics, virology, immunology, data science, and public health.



## OUR OBJECTIVES



1 Identify emerging new VOC through genomic surveillance in different cohorts.



2 Decipher the risk and protective factors to infection in different risk, gender, and age groups.



3 Evaluate the impact of VOC on the effectiveness of vaccine induced humoral and cellular responses in different populations and regions in Europe and SSA.



4 Identify immune correlates of protection against VOC through the development of algorithms to predict the impact of emerging VOC on vaccine efficacy.



5 Inform the future vaccination strategy and design of next generation of vaccines.

## OUR PARTNERS



WP2, WP3,  
WP4

### 1. POPULATION COHORTS

CoVICIS has access to large population studies and diverse cohorts of different geographic areas, risks, gender, and age. This presents a unique opportunity to study virus evolution in different settings, where SARS-CoV-2-specific humoral and cellular immune responses are predicted to vary very significantly.



WP5

### 2. GENOMIC VIROLOGICAL SURVEILLANCE

Close surveillance of the genetic profile of emerging SARS-CoV-2 variants is of paramount importance to identify variants with increased virulence, altered pathogenicity or the ability to escape infection- or vaccine-induced immunity as well as antibody-based therapies or antiviral drugs.



WP6

### 3. IMMUNE SURVEILLANCE

The powerful immunological platforms of CoVICIS will utilize highly validated, high throughput and high content assays, in particular novel quantitative diagnostic tests for the measurement of neutralizing antibodies against wild type virus and VOC.



WP7

### 4. DATA SCIENCE

CoVICIS utilizes cutting-edge computational and statistical analysis methods to perform statistical and exploratory analyses with the goal to identify immune correlates of protection after disease or vaccination.

