

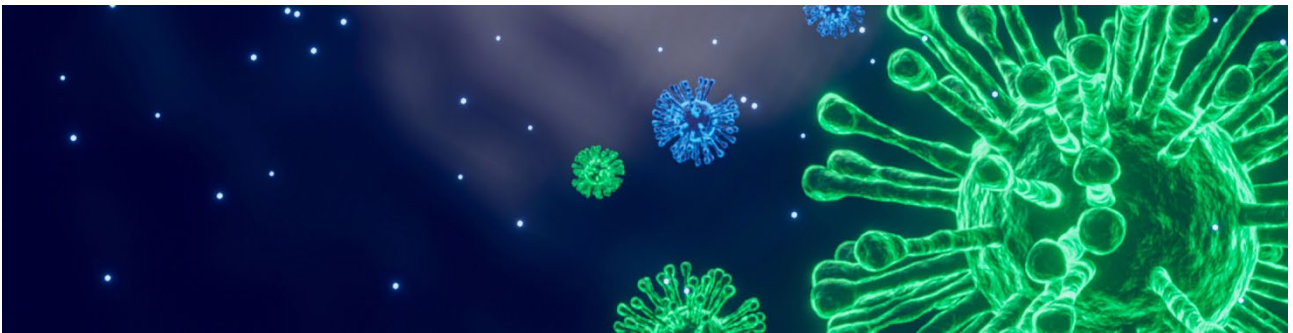


International Centre for Genetic  
Engineering and Biotechnology



NICOLAE TESTEMITANU STATE UNIVERSITY  
OF MEDICINE AND PHARMACY  
OF THE REPUBLIC OF MOLDOVA

## **“Strengthening epidemiological surveillance capacity to address COVID-19 and other epidemics”**



A Republic of Moldova-Italy cooperation



**with the support of the Autonomous Region of Friuli Venezia Giulia**

**Regional Law 19/2000**

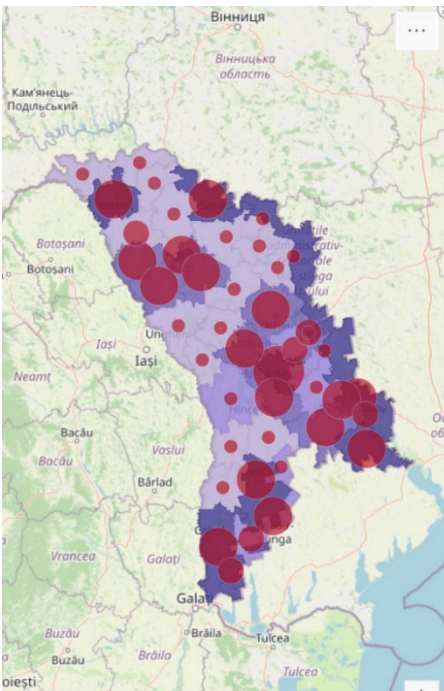
## Project Overview

<b>Project title</b>	"Strengthening epidemiological surveillance capacity to address COVID-19 and other epidemics"
<b>Partners</b>	International Centre for Genetic Engineering & Biotechnology – ICGEB, Italy <i>Nicolae Testemitanu</i> State University of Medicine and Pharmacy of the Republic of Moldova - SUMPh
<b>Duration</b>	February 2021 – July 2022 (12 months + 6-month extension)
<b>Priority</b>	Inclusive and sustainable growth for human development
<b>Country of intervention</b>	Republic of Moldova
<b>General purpose</b>	Contribute to improving the research and development capacities of Moldova, particularly in the areas of infectious diseases and health surveillance systems and creating the premises for evidence-based decisions of Moldovan authorities in this area.
<b>Specific objective</b>	Enhancing the domestic research capacities in detection and surveillance of SARS-Cov-2, contributing to the establishment of a permanent infrastructure for the surveillance of coronaviruses and other human viruses.
<b>Direct and indirect beneficiaries</b>	D: 5 researchers directly involved in the project, from the Moldova State University of Medicine and Pharmacy (SUMPh) I: Moldova research community, authorities (Ministry of health, labor and social protection, National Agency for Public Health) and national healthcare system, staff of the Microbiology and Immunology Department and Epidemiology Department of SUMPh.
<b>Expected results</b>	ER1 - Staff trained in relevant areas ER2 - Local SARS-Cov-2 analysed ER3 - International partnership consolidated

# Project results

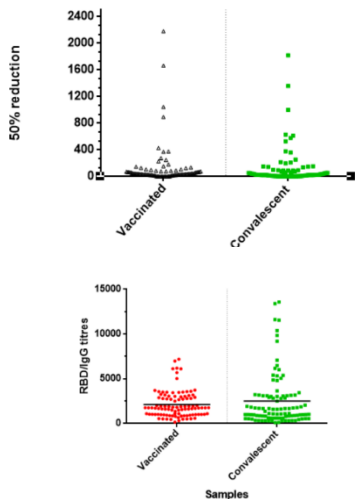
Moldova has a good, albeit small, national research system. Since the beginning, SUMPh has been actively involved in the fight against COVID-19 at the national level, in the treatment of affected patients, in the strategic preparation and response plan, in the development of clinical protocols and in the surveillance of post-COVID recovery. However, in absence of a virological laboratory, SUMPh is not able to fully contribute to the expansion of the SARS-Cov-2 testing capacity in the country, except by delegating highly qualified specialists to COVID-19 testing centres. Strengthening the capacity of the Laboratory of Microbiology is intended to both improving efforts in the diagnosis of infectious diseases in emergency situations as well as to solving methodological problems occurring in testing laboratories.

The project allowed the specialised training of local staff on virology methods and techniques by ICGEB experts, as well as the performance of joint experiments aiming to achieve the full-length sequencing of SARS-CoV-2 circulating in the Republic of Moldova, in collaboration with the Genomics Platform of Area Science Park, Trieste, and to study the level of immunity across convalescent and vaccinated people.

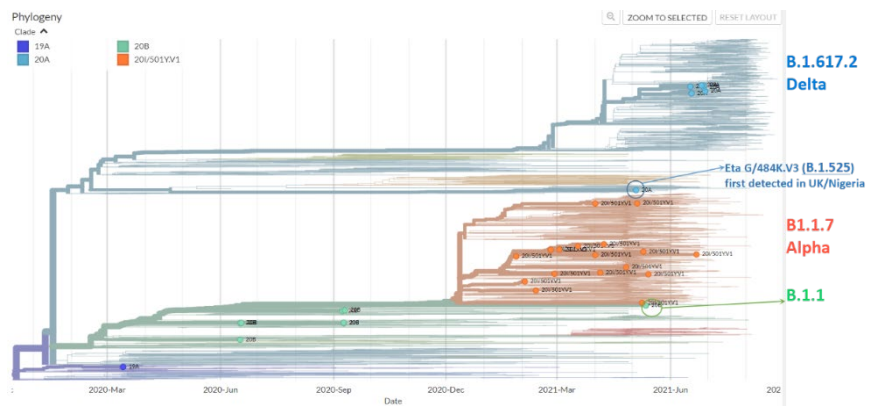


- Sample selection criteria**
- targeted sampling
  - samples collected from outbreaks epidemic area
  - different periods of time
  - patients with different demographic data
  - different severity of the disease
  - epidemiological criteria (outbreaks in high-risk groups population)
  - medical staff, or social assistance institutions.
  - clinical criteria (vaccinated patient infected with SARS-CoV-2)
  - travelers from countries with new variants

*“Moldovan staff was trained to a new protocol to test the neutralising activity of antibodies against SARS-CoV-2 using a 'high-throughput' platform. 296 samples (96 controls, 100 convalescents, 100 vaccinated with Sinovac) were tested with the ELISA. In addition, all samples were tested with the neutralisation assay using two different protocols (FACS and Operetta). Thanks to this collaboration, SUMPh was able to register more data on the complete genome of SARS-CoV-2 circulating in the country in the international GISAID repository”.*



Neutralization by FACS



Phylogenetic evolution of SARS-CoV-2 in Republic of Moldova

# PROJECT TIMELINE

"STRENGTHENING EPIDEMIOLOGICAL SURVEILLANCE CAPACITY TO ADDRESS COVID-19 AND OTHER EPIDEMICS"



## More information

### ICGEB

Alessandro Marcello, Project Scientific Coordinator, Group Leader of ICGEB Molecular Virology Laboratory

Email: [marcello@icgeb.org](mailto:marcello@icgeb.org)

Website: <https://www.icgeb.org/>

### SUMPh

Mariana Ulinici, Assistant Professor, Microbiology Discipline, Department of Preventive Medicine, Nicolae Testemitanu State University of Medicine and Pharmacy

Email: [mariana.ulinici@usmf.md](mailto:mariana.ulinici@usmf.md)

Website: <https://www.usmf.md/en>