

February 2021

## Africa and European Union against the Covid-19

A growing coronavirus second wave is threatening to overwhelm fragile healthcare systems across Africa after months of relatively mild impact across the continent, while the EDCTP-funded project ITAIL-COVID-19 continues to optimize the laboratory capacities as response to SARS-CoV-2 pandemic.

Indeed, the project [ITAIL-COVID-19](#) aims at the implementation of novel and Integrated Testing Approaches and Intensive Laboratory training as strategy against **COVID-19** spread in Brazzaville, Republic of Congo.

The ITAIL-COVID-19 consortium of African and European universities and research institutions from Republic of Congo, France, Germany, Belgium and UK has strategically implemented different laboratory approaches to detect the SARS-COV-2 in Brazzaville (Republic of Congo), by means of the EDCTP Grant n. RIA2020EF-2947-ITAIL-COVID-19.

As part of the implementation of this project, the team of the *Foundation Congolaise pour la Recherche (FCRM)* attended online practical trainings on "SARS-CoV-2 capture by the ApoH". Supervised by the French Research Institute for Development ([IRD](#)), these practical trainings allowed participants to become familiar with this ultrasensitive virus detection technique. The trainings on this new technology were carried out by Dr. Carolyn Thibal ([ApoH-Technologies](#)) and Professor Francisco Veas from IRD, Montpellier - France.

"This technique can detect newly infected people with very low viral load, not possible to be detected with conventional methods, including classic RT-PCR, and can be implemented to monitor the healthcare workers who are at the forefront of the fight against the pandemic", said Prof. Veas, leading the project work package n. 2 "Compare the conventional RT-PCR method versus the addition of the ultra-sensitive ApoH-sample prep method to identify COVID-19 carriers".



To have this pandemic under control through an adjusted response as well as to support the government, the FCRM, through its health and research centres, got involved from the very beginning of the pandemic, not only in the screening of Covid-19, but also in the evaluation of the seroprevalence against this virus within the Congolese population. Indeed, from March 2020 FCRM is conducting a seroprevalence pilot study against SARS-Cov2 within the population of Brazzaville (Republic of Congo). Up to date, serology studies have been performed in 1,070 asymptomatic Congolese. "Through the use of the standard method – ELISA (Enzyme Linked ImmunoSorbent Assay) technique, this study on seroprevalence has found that 26,7% of the Congolese population had antibodies against SARS-CoV-2, indicating that they have been exposed to the virus. Besides, we have observed that men had higher antibody levels and were more frequently seropositive than women. These data are the first knowledge about the degree of collective herd immunity among the Congolese population residing in Brazzaville. Further studies are needed to evaluate the persistence and functionality of the antibodies", said Dr. Estefanía Rodríguez (*Bernhard-Nocht-Institut für Tropenmedizin – BNITM*, Germany), leading the project work package n. 4 "Sero-epidemiological investigation". These data have been recently submitted by Prof. Francine Ntoumi (FCRM) and Dr. Rodríguez (BNITM) for publication in a scientific journal.

The ITAIL-COVID-19 consortium is coordinated by the *Fondation Congolaise pour la Recherche Médicale* (FCRM, Republic of Congo), and it involves the *Bernhard-Nocht-Institut für Tropenmedizin* (BNITM, Germany), the *Institut de Recherche pour le Développement* (IRD, France), *R-Evolution Worldwide Community Interest Company* (UK) and *Coris BioConcept*, (Belgium).



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# ITAIL-COVID-19

*Integrated Testing Approaches & Intensive Laboratory training against COVID-19*



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