

## MEMO

### **SUBJECT: SEROPREVALANCE PILOT STUDY AGAINST SARS-COV2 WITHIN THE POPULATION OF BRAZZAVILLE**

### ***THE CONGOLESE FOUNDATION FOR MEDICAL RESEARCH (FCRM) WORKING ALONGSIDE THE GOVERNMENT ON THE FIGHT AGAINST THE COVID-19 PANDEMIC***

#### **TO SUMMARIZE**

*Between April and July 2020*

- *At least 15% of Brazzaville's residents are estimated to have been in contact with the Virus between April and July 2020, without being aware and with no symptoms developed.*
- *7.4% of individuals, residents of Brazzaville and who were screened, were all carriers of the virus with no symptoms (asymptomatic carriers).*
- *There is a steady increase of the seroprevalence of IgG and IgM antibodies, especially within the women population. The Congolese women appear to control the infection better than the men.*

The first Covid-19 patient was recorded on March 14, 2020. In order to respond to the challenges and consequences from this new virus "SARS-COV2" on the congolese population, from the early beginnings, the government came up with a structured response and equally sounded a wake-up call to health and research institutions to detect suspected cases and manage positive cases. As a means 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 (Fig. 1 and Fig. 2), got involved from the very beginning, not only on the screening of Covid-19, but also in the evaluation of the seroprevalance against this virus within the Congolese population.

**Fig. 1 : Consultation and Medical Laboratory Analyses Centre (CCLAM)**



**Fig. 2 : Christophe MÉRIEUX Research Centre on Infectious Diseases (CeRMI-CM)**



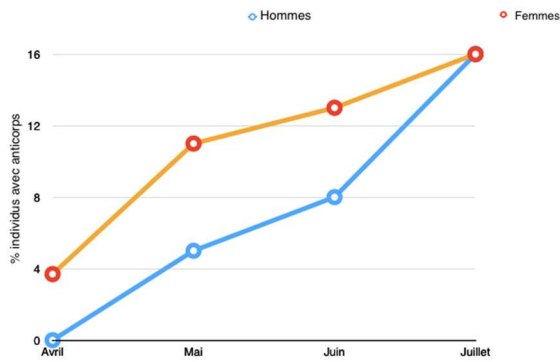
Since March 30, 2020, the FCRM through support from its partners has within this context, been carrying out *a study monitoring the circulation of the SARS-CoV-2 coronavirus causing Covid-19 in Brazzaville as the first results of this study indicated.*

This study started on March 30, 2020 and the results as presented here, include data collected up to July 31, 2020. Healthy residents of the different neighbourhoods of Brazzaville wishing to be aware of their status (carrier of the virus or not), were part of the study through their informed consent. Hence, 754 individuals (463 men and 291 women) participated in this study. A nasopharyngeal swab (for RT-PCR) and a blood test (for serum and antibody screening) were performed.

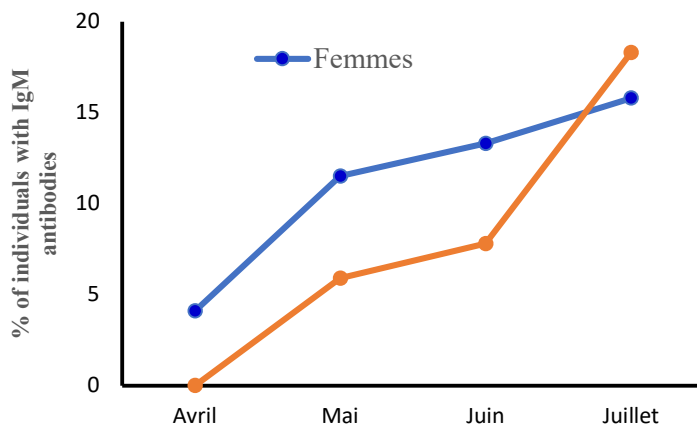
Within this study population, 7.4% was found positive by RT-PCR testing. The rapid serological tests (RDTs) used in the first phase for the detection of IgG and IgM antibodies showed that 15% of the population, in total unawares and with no visible symptom (RT-PCR negative and the presence of IgG and/or IgM), had been infected by the virus.

### **The woman at the center of an enigma**

Data from around the world show that the death rate due to the Covid-19 within the women populace is very insignificant as compared to the men's, even though data vary differently among countries. SITREPs related to the Covid-19 pandemic in Congo show that less than 30% of the women population are infected with SARS-COV-2. An analysis on preliminary data on antibody detection shows that women are much more likely than men to contact the virus and get rapidly healed from it in a state of unawareness and without any visible symptoms (Fig, 3 and Fig, 4).



**Figure 3:** The Evolution of IgG antibodies against SARS-COV2 in women and men residents of Brazzaville, screened between April and July 2020 (RT-PCR negative cases).



**Figure 4:** The Evolution IgM antibodies against SARS-COV2 in women and men residents of Brazzaville screened between April and July 2020 (RT-PCR negative cases).

### Projections

Through the use of the standard method – ELISA (Enzyme Linked ImmunoSorbent Assay) technique, this study on seroprevalence will continue with the quantification of antibodies, where samples of the months of August and September 2020, will be included. This study will enable the assessment of the degree of collective herd immunity among the Congolese population residing in Brazzaville over the months.