



Investigating the Long-term Neuropsychiatric Implications of COVID-19

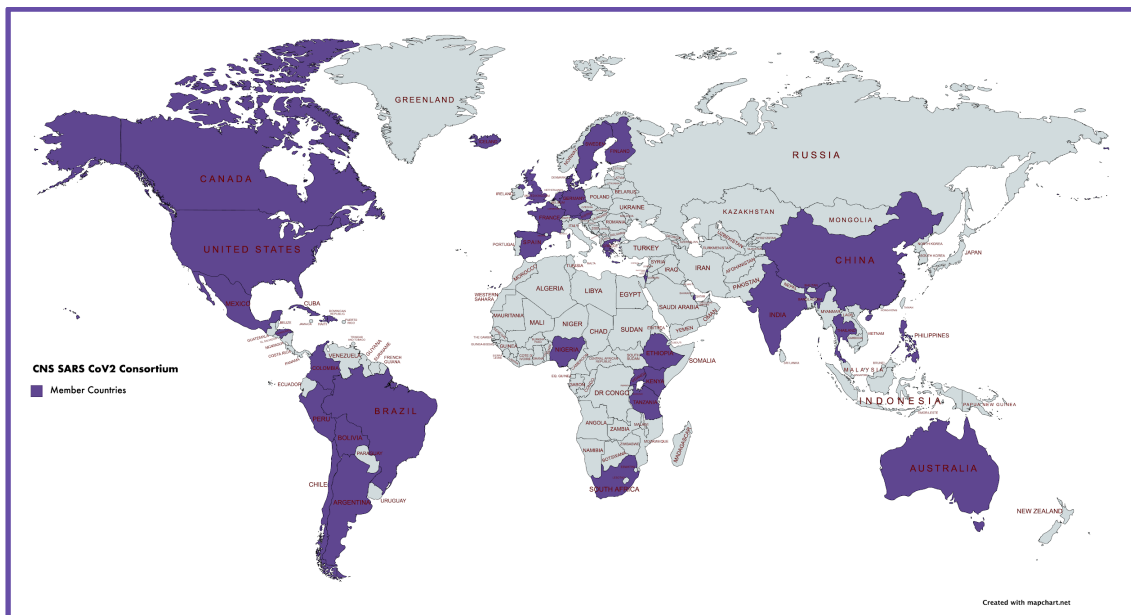
Supporting follow-up examinations, neuroimaging, cognitive battery and blood tests

Background

The ongoing SARS-CoV-2 (COVID-19) pandemic has focused health care resources on treating affected individuals, ensuring their survival and preventing the further spread of the infection. The medical community has increasingly shifted its attention to gaining a better understanding of the enduring consequences of the infection. Although little is known about the long-term consequences of SARS-CoV-2 infection, accumulating evidence suggests that SARS-CoV-2 impacts the central nervous system. This, in turn, raises key questions regarding possible risks of later life cognitive decline, Alzheimer's disease and other dementias.

Scientific leaders, including the Alzheimer's Association and representatives from more than 30 countries (see map), with technical guidance from the World Health Organization, have formed an international, multidisciplinary consortium to collect data and evaluate the long-term effects that SARS-CoV-2's could have on the brain. This project aims to better understand the long-term consequences that may impact cognition and functioning, and to clarify the underlying biology that may contribute to Alzheimer's disease and other dementias.

Dr. Galit Weinstein of the University's School of Public Health serves as the sole Israeli representative in this consortium. Dr. Weinstein meets regularly with her Israeli and international colleagues to plan and implement the study's protocols. In Haifa, she collaborates with neurologists from the Memory Clinic and the Infection Control Department at the Rambam Health Care Campus.



Member Countries of CNS SARS CoV2

Research Plan

In accordance with the consortium protocols, we plan to recruit 100 individuals aged ≥ 50 years who were hospitalized at the Rambam Health Care Campus, due to SARS-CoV-2 infection. These individuals will receive follow-up examinations at 6, 12 and 18 months following their discharge from the hospital. We will also recruit a comparison group comprised of 100 individuals from the same age and gender group who were hospitalized at Rambam for reasons other than SARS-CoV-2. At baseline milestone (6 months after discharge), we will collect information on demographic and

clinical factors, including comorbidities, medications and vaccination. In addition, at each examination, participants will undergo the following procedures: neurological examination, cognitive evaluation using validated computed battery, assessments of motor function and emotional reactivity. A subgroup of individuals (~100 participants from both groups) will undergo brain MRI and electrophysiological neuroimaging. In addition, blood samples will be drawn from consent participants for analysis of genetic and blood biomarkers.

This research promises to identify long-term effects of COVID-19 on the brain and thus may have tremendous impact on science and society. Findings from this study, both as part of the large consortium and from Israel independently, will be published in high impact scientific journals and presented at international conferences.

Funding Needs

The Canadian Friends of Haifa University generously donated funds that enabled our researchers to launch the study, recruit study participants and complete the initial round of interviews.

Additional funding of \$320,000 over a three-year period will enable us to implement the follow-up examinations, brain imaging, blood tests and computerized cognitive assessment components of the research plan.

Thank you for your kind consideration of this request.