



## Qatar Biobank: COVID-19 biorepository project

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### ABSTRACT

**Background:** The rapid spread of the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) and its resulting disease (COVID-19) is one of the greatest global public health crisis of the recent decades<sup>1</sup>. The COVID-19 Biorepository is a national project aimed to support the high demand of biomedical research by multiple groups and the need to have access to high quality, curated clinical data, and specimens contributing to the understanding of, and response to, the COVID-19 pandemic and its impacts in Qatar<sup>2, 3</sup>.

**Methods/Case presentation:** Patients with a laboratory diagnosis of COVID-19, who were Qatar residents that could communicate in Arabic, English, Hindi, and Urdu were eligible to participate in the study. COVID-19 diagnosed patients were recruited at the time of their disease period from the main three public hospitals (Communicable Disease Center, Cuban, and Hazm Mebaireek Hospitals) serving as isolation facilities of symptomatic patients in Qatar, during a 7-month period from March 2020 until September 2020. Consented participants were followed up on a weekly basis until recovery, and then monthly for a year. Sociodemographic and clinical data were collected in electronic questionnaires via a face-to-face interview by trained Qatar Biobank (QBB) staff.

**Results:** A total of 2097 consented participants were recruited up to September 2020, males (N=1050) and females (N=1047), with a mean age of 41 years (SD: 15.5). 61.0% of the participants had at least one follow up while 27% adhered to monthly follow up visits. Data was collected for 99.7% of the participants, while the follow up process is still ongoing. In total there are 107,171 high quality specimens in the biorepository including plasma, erythrocytes, buffy coat, serum, PAXgene whole blood, nasopharyngeal secretions, and DNA.

**Conclusion:** The COVID-19 Biorepository is a national asset to illuminate the pathophysiological and identify markers of disease prognosis as well as to describe the clinical features and epidemiology of COVID-19 in Qatar and worldwide.

**Keywords:** COVID-19 biorepository, Qatar Biobank, prospective cohort study, change management, biobank sustainability

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**Ethical approval/IRB statement:** The COVID-19 biorepository study protocol's ethical approval was obtained from the Hamad Medical Corporation Ethics Committee (MRC-05-042) and from Qatar Biobank Institutional Review Board (E-2020-QBB-RES-ACC-0228-0134) in 2020.

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