

# Core-NB

Collision of three global pandemics: the effect of tuberculosis and HIV on the epidemiological, clinical, virological and immunological trajectory of COVID-19 in Botswana and Namibia.



**Acronym**

Core-NB

**Full Title**

Collision of three global pandemics: the effect of tuberculosis and HIV on the epidemiological, clinical, virological and immunological trajectory of COVID-19 in Botswana and Namibia

**Programme**

The Second European & Developing Countries Clinical Trials Partnership Programme (EDCTP2)

**Contract number**

RIA2020EF-2963

**ABSTRACT**

The COVID-19 pandemic has had an unprecedented impact on public health and society more generally. Virus epidemiology is poorly understood, as are factors influencing the diverse clinical picture. The novel coronavirus spread especially fast in high-income countries in early 2020, and consequently, COVID-19 diagnostics and research were first set up in these settings. Outstanding questions include an understanding of how the virus spreads and how it causes pathology.

A particular gap in current knowledge is the effect of HIV and tuberculosis (TB) on the outcomes of COVID-19 disease, as these two conditions impair the host immune response to other infectious diseases. Understanding how these three pandemics interact is crucial. The Core-NB consortium aims to answer critical questions concerning COVID-19 disease epidemiology in the context of low resource countries with a high burden of poverty and high rates of TB and HIV, namely, Namibia and Botswana. The project will document how the virus spreads within susceptible populations. Core-NB is a highly collaborative and interdisciplinary project, with investigators from Namibia and Botswana working closely with colleagues in Europe. The consortium will also work with an NGO in Namibia, Health Poverty Action, to support rapid implementation.

The project includes two studies that will be conducted sequentially. The first study will follow the WHO protocol for household transmission investigations in the context of COVID-19. It will explore transmission frequency and describe the clinical spectrum of disease. Samples collected will also serve as basis for COVID-19 molecular epidemiology and host immunological response. The second study will evaluate the presentation, diagnosis and clinical characteristics of individuals presenting to sentinel health facilities in both countries. The project will have a strong laboratory strengthening component

which will enhance COVID-19 laboratory and research capacity. This will include the development of skills and knowledge for diagnostic testing and COVID-19 sequencing and will build scientific and research capacity.

The consortium will focus on developing skills and knowledge for diagnostic testing and COVID-19 sequencing and build scientific and research capacity. Core-NB's findings will provide robust data to guide national responses to COVID-19 in both countries. Further, the study will improve our understanding of the pathogenesis of the coronavirus in the context of TB and HIV, in turn providing vital information on how to deliver clinical care and how to design therapeutics and vaccines.

### **Duration**

18 months (1/09/2021 - 28/02/2023)

### **Project Funding**

499,997 EUR

### **Partners**

- Forschungszentrum Borstel Leibniz Lungenzentrum (FZB), Germany
- University of Namibia, Namibia
- Health Poverty Action, United Kingdom
- Victus Global Botswana Organisation, Botswana

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