



### Where I work Christian Happi

Photographed by the African Centre of Excellence for Genomics of Infectious Diseases.

I study microbial diseases such as COVID-19, Lassa fever and Ebola. My research team at Redeemer's University in Ede, Nigeria, focuses on detecting and characterizing pathogens, so that we can identify the aetiology of previously inexplicable fevers in west Africa. The coronavirus pandemic fits neatly into the scope of my work, and our priority has shifted to COVID-19.

Since Nigeria confirmed its first case of the disease on 27 February, my team and I have been working in staggered shifts in my laboratory. We receive human-tissue samples from states in Nigeria, and then test them for traces of SARS-CoV-2, the coronavirus that causes the disease. We use a technique called polymerase chain reaction, which enables us to detect specific genetic material from the coronavirus if it is present.

On 1 March, I drove 90 kilometres from my lab to the airport in Ibadan, to receive clinical specimens of the coronavirus from the first person in Nigeria known to have contracted COVID-19. I confirmed the presence of the

SARS-CoV-2 virus in those specimens, and my team and I sequenced the virus's genome within 72 hours – an incredible feat. Here, I'm standing beside one of the two sequencing platforms in my lab.

We are now sequencing more coronavirus genomes and developing a rapid molecular diagnostic test that uses CRISPR gene-editing technology to detect SARS-COV-2. We hope to move this work to remote areas in Africa soon. The government considers our work essential, and my team and I all have passes to get into the lab during the lockdown.

People might have thought that this work was impossible in Africa, but we are demonstrating that the continent's scientists can generate crucial data in the global fight against COVID-19 – as well as contributing to the field of genomics. I feel inspired to be a part of this new narrative.

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