



15 May 2020

UCT young researchers selected for prestigious fellowship to contribute to Science in Africa

Four young researchers from the University of Cape Town (UCT) have been selected to form part of the 2020 cohort of Future Leaders – African Independent Research (FLAIR) fellows. These fellowships are awarded to talented African early-career researchers whose work is focused on solving the needs of the continent.

The initiative is a partnership between the African Academy of Sciences (AAS) and The Royal Society, supported by the Global Challenges Research Fund. This year, the 30 promising young researchers will receive up to R6 756 297 each to conduct research over two years.

The 2020 cohort was selected from a competitive pool of more than 700 applicants. Among the 30 successful candidates, four are based at UCT. They are Dr Lauren Arendse from the Drug Discovery and Development Centre (H3D); Dr Rondrotiana Barimalala and Dr Ross Blamey, both from the Department of Oceanography; and Dr Felix Sizwe Dube from the Department of Molecular & Cell Biology.

Dr Arendse is leading a drug discovery programme that aims to explore novel treatments for malaria by building on the knowledge gained from using human kinase inhibitors to treat cancer. “This fellowship will give me an incredible opportunity to establish myself as an independent researcher and the freedom to explore my own scientific ideas, while providing me with a strong support network and excellent training opportunities,” said Dr Arendse.

Historically, tropical cyclones that form on the south-eastern coast of Africa have been considered ‘too weak’ for inclusion in hazard planning. But with the catastrophic damage caused by cyclones Idai and Kenneth in 2019, it has become clear that these weather events are intensifying.

To understand what’s behind this change, Dr Barimalala is investigating the role that ocean eddies, upper ocean temperature and salinity play in the occurrence of tropical cyclones in this region. “For FLAIR, I will particularly focus on the role of the oceanic processes on tropical cyclone intensification in the Mozambique Channel,” Dr Barimalala explains. “The FLAIR fellowship will allow us to focus on developing our research and building our careers as independent researchers. It is also an opportunity to showcase the importance of science for the development of a country, which is usually significantly undermined in Africa.”

Along with collaborators at UCT and in the United Kingdom, Dr Blamey is currently investigating the role large thunderstorms play in the climate along the tropical edge of southern Africa. “Compared to other regions of the world, little is known about these storms

in southern Africa, yet they are an important component of our climate system,” said Dr Blamey.

Through the FLAIR fellowship, he seeks to address this gap in African climate science using a combination of newly available observations and state-of-the art climate model output. A better understanding of the present and projected future climate of this region will help address some of the complex socio-economic and environmental issues it faces in relation to water and food security.

He added that one of the exciting things about being a FLAIR fellow is having access to a network of other young African academics doing research that is relevant to the continent.

Dr Dube said a recent, but rapidly expanding component of his research is around the evolution of the microbiome at different body sites in African children. “[I’m looking at] the relationship between the microbiome and child health, with a specific focus on respiratory and skin infections, as well as antimicrobial resistance.”

As part of his FLAIR research, he will lead the microbiological aspects of a clinical trial that seeks to understand the effects of a proposed long-term treatment (the antibiotic azithromycin) on the microbiome in the lungs and airways of children with HIV and chronic lung disease in sub-Saharan Africa. “Much of my research has been done with collaborators and other established research groups,” he said. “While it’s been a great training ground, I would like to start carving out my own research niche. This award is key to setting this in motion.”

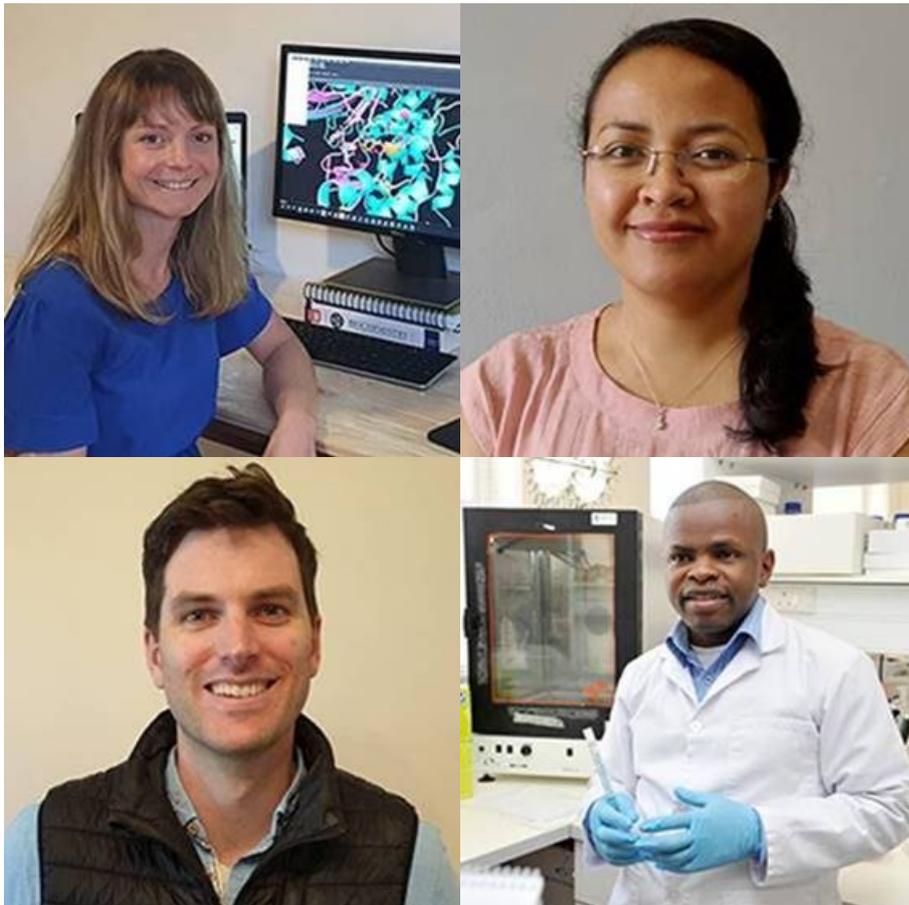


Photo Captions:

Top left: Dr Lauren Arendse

Top right: Dr Rondrotiana Barimalala

Bottom left: Dr Ross Blamey

Bottom right: Dr Felix Sizwe Dube

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