



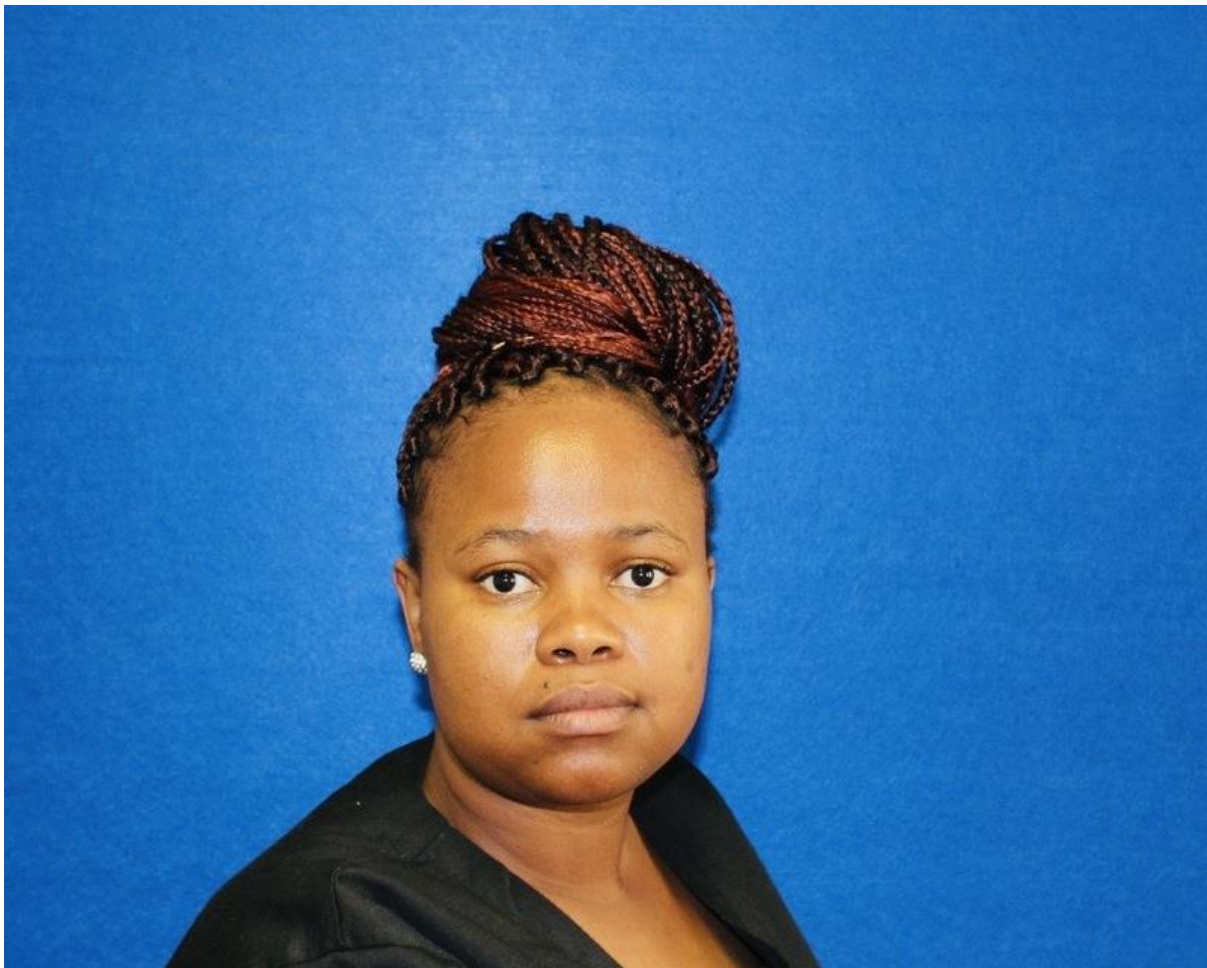
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UCT researcher pioneers kidney genetics research in Africa with unyielding passion



Dr Khuthala Mnika

Photo: Supplied

Dr Khuthala Mnika, a researcher and lecturer in the Division of Human Genetics at the University of Cape Town's (UCT) Faculty of Health Sciences, is passionately committed to pushing the boundaries of our understanding of the genetics of kidney disease in African populations. Her inspiring journey to this crucial work has been filled with challenges, but her dedication and enthusiasm have never wavered.

When Mnika was just 11 years old, she lost her mother, leaving her and her two sisters orphaned in the rural town of Matatiele in the Eastern Cape. Their father had passed away when she was only four years old. With no living relatives to take care of them, Mnika's older sister, then aged 16, had to drop out of school to get a job to support her younger siblings.

She had not initially planned to become a scientist; for a time, she believed her best path would be as a school teacher. However, various internship opportunities eventually led her to join Professor Ambroise Wonkam's research group in the Division of Human Genetics. It was there that she discovered her passion for research, and her remarkable potential was recognised.

Building the foundations

"Finances have always been the big challenge in my life," said Mnika, reflecting on her journey to where she is now. "And this challenge is not because there are no resources or opportunities out there, there are. But the difficulty comes in knowing how to find them."

Mnika always understood that transforming her family's life circumstances would require hard work and perseverance. Despite attending primary and high school in rural Eastern Cape, she earned marks good enough to secure funding to study at the University of the Free State. There, she completed an undergraduate degree, followed by honours in genetics. After graduating, she took up an internship opportunity in the Eastern Cape through the Dinaledi programme, where science graduates were placed in schools to teach science. Following a year in this teaching internship, she applied for a research internship with the National Research Foundation (NRF), which allowed candidates to be placed at the university of their choice.

"My strategy was, and still is, to apply and try to tap into every opportunity I hear of. If I fail, I fail, but at least I know I tried."

Mnika's application for this internship was successful and she was placed in Professor Wonkam's research group, now known as GeneMAP (Genetic Medicine of African Populations). Although she was passionate about the work, financial pressures made it difficult for her to continue the internship for an extended period.

"At this stage my little sister was in Grade 12 and would need support to go to university," said Mnika. "My older sister had lost her job and I needed to step in to take care of my sisters."

She found a funding opportunity to pursue a teaching degree, postgraduate certificate in Education (PGCE), and was successful. However, when she informed Professor Wonkam about her plans, he was resolute that true calling was in research and he offered his support to help her stay on that path.

"He told me, teaching is not you, research is for you," she said.

Following Professor Wonkam's suggestion, Mnika applied to the NRF for funding to pursue her MSc. Her application was successful, and Wonkam supplemented the NRF funding she received, enabling her to support herself and her family.

"Despite having limited bench design training Khuthala quickly demonstrated remarkable qualities: motivation, curiosity, a fast-learning capacity, resilience, and, above all, kindness towards those around her," said Wonkam.

Her MSc research was so successful that she was allowed to convert it into a PhD, which she completed in two years. She submitted her PhD in 2019 and immediately started a postdoctoral position in Wonkam's group.

Choosing between career stability and research

But the financial insecurity that comes with being a postdoc was a huge problem for Mnika. She needed job security and the benefits that came with that. She began hunting for a more stable job. When Wonkam heard her concerns though, he was able to help her secure a more stable position as research co-ordinator within one of his projects.

But Mnika was eventually offered a permanent position at the National Health Laboratory Services (NHLS) which she decided to take. This was a joint position between NHLS and the University of Witwatersrand (Wits).

It was here that she awarded the Female Academic Leaders Fellowship (FALF) by the Wits vice-chancellor.

But the work at the NHLS was primarily diagnostic and Mnika missed her time in research.

"I realised that all this time Prof Ambrose had been right, research is the path for me," said Mnika with a laugh.

Forging ahead on a research career path

She successfully applied for an open post in UCT's Division of Human Genetics and moved back to UCT in 2023 to pursue her research on the genetic mutations that cause kidney disease in African populations.

"Too often diagnosis of chronic kidney disease is missed in Africa, and then patients cannot be properly treated," said Mnika. "This can be particularly tragic in children who may die before they are properly diagnosed."

Despite the continent's vast genetic diversity, African genomes remain largely understudied, which has negative implications for African populations. For Mnika, this underscores the importance of supporting and mentoring more young African researchers to address these gaps and advance genetic research on the continent.

Supporting the next generation of researchers

"We have dreams and potential, but the challenge comes in trying to navigate the spaces, find the opportunities and climb the ladder," she said.

She notes that funding accompanied by mentorship and support is extremely valuable for young researchers new to the field. The FALF provided financial support and access to seminars and webinars on essential topics such as strategic planning and communicating with stakeholders.

Mnika's advises young researchers or students who are passionate about research but unsure of how to advance to seek help and apply for every opportunity that comes their way.

"People out there are willing to help. Trust me, they want to help. I have realised that many young researchers from underprivileged backgrounds are likely to just keep quiet and try to figure things out by themselves."

"It is about focusing on the future," she said. "I think too often people think their own background determines their future, and that belief can hold too many of us back. Your focus should not be on your past, it should be on your future."

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