



## **Busisiwe Ncube KANYIKA**

**Home Country:** Zambia

**Degree:** PhD in Biology

**Expertise:** Plant Biotechnology

**Research Focus:** Viral Infection of Cassava Crops

**Host University:** University of Witwatersrand, South Africa

**Fellowship Awarded:** 2016

Busisiwe Ncube Kanyika was born in Kitwe and spent her teenage years in Ndola, two of the three largest cities in Zambia. Her mother had financial problems during Busisiwe's childhood and had trouble paying for education as well as being evicted when she could not afford the rent. Despite these difficulties, Busisiwe excelled at school and went on to win awards as an outstanding student in Grade 9 and the best senior secondary science student. She developed a strong interest in the education of young people and is currently involved with projects that teach mathematics to children in South African townships.

Busisiwe was inspired to pursue a career in academia by her mother, who developed a sustainable business in horticulture. Busisiwe attended the University of Zambia, Lusaka, where she obtained a BSc in Cell Molecular Biology and Genetics followed in 2014 by an Msc in Plant Breeding and Seed Systems. Her masters' dissertation looked to identify genetic markers that can be used in breeding studies for resistance to Early Leaf Spot, a fungal infection that damages groundnut crops.

The PhD project is focused on cassava, a staple crop that is crucial to rural farmers in the Sub-Saharan region, many of whom are women. These crops are prone to disease caused by viruses transmitted by whitefly. Busisiwe's research hopes to better understand these viruses to identify gene mechanisms that might be utilized to counteract infection. The results of the work could be extended to other viral interactions that limit the yield of other useful crops in Sub-Saharan Africa.

After completion of her PhD, Busisiwe plans to return to the University of Zambia to perform teaching and research. Over the longer term she hopes to become a Professor in plant sciences and facilitate international research collaborations and funding for projects to improve agricultural yield.