

---

## PLANT EXTRACTS STUDY PUBLISHED IN INTERNATIONAL JOURNAL



**The late Professor Cephas Musabayane with Dr Hlengiwe Madlala at her graduation.**

The legacy of the late Professor Cephas Musabayane lives on, says his former student and University of Cape Town Postdoctoral Research Fellow, Dr Hlengiwe Madlala, following the publication of a novel study the two researchers teamed up for in the online peer-reviewed journal: *PLOS ONE*.

The study, "Vascular Endothelium-Dependent and Independent Actions of Oleanolic Acid and Its Synthetic Oleanane Derivatives as Possible Mechanisms for Hypotensive Effects", was prompted by results the two had obtained from experiments they conducted at UKZN. The results showed that the plant-derived compound, Oleanolic acid and its derivatives which they isolated, lowered blood pressure in hypertensive animals by improving kidney function.

'We wanted to explore other mechanisms by which these compounds exert their blood pressure-lowering effects,' said Madlala, 'so in addition to the kidney, we investigated the effects of these compounds on other body systems which were the heart and the vasculature (blood vessels) – both known as the cardiovascular system.'

The study published demonstrated that in addition to improving excretion of electrolytes by the kidney, the compounds tested mediate their blood pressure-lowering effects by causing the relaxation of blood vessels hence allowing smooth blood flow. 'These results implicate that these compounds may be considered as a cheaper alternative treatment for hypertension.'

'This study was significant because plant-derived extracts have been used as therapeutic agents for hundreds of years by many cultures because of their accessibility and therefore research is needed to validate the efficacy and the action mechanisms of these plant extracts.'

Madlala said it was fulfilling to have the study published as it showed the quality of the PhD she obtained under Musabayane's supervision – the Full Professor in Human Physiology at UKZN's School of Laboratory Medicine and Medical Sciences who passed on in 2015, named a 'quintessential academic' for exemplifying the function and spirit of a teacher true to his calling.

'It was a blessing to be supervised by Professor Musabayane as he was very passionate about his work hence he collaborated with other scientists in KU Leuven which ranks amongst the best universities in Europe.'

Madlala has just completed her first postdoctoral year in the Division of Exercise Science and Sports Medicine in Cape Town and would like to work as a medical research scientist and conduct HIV research for the Department of Health in the future.

Lunga Memela