

WITSIE AT THE CUTTING EDGE: Researcher Profile

Dr. Eliton Chivandi

Lecturer in the School of Physiology



Who are you and what is your academic/scientific training and background?

I have a BSc (Hons) in Animal Science (University of Zimbabwe), a MSc in Animal Science (University of Malawi) & a PhD in Physiology (Applied Nutritional Physiology) from Wits. I am an NRF C3-rated Scientist and lecturer in the School of Physiology and have recently been promoted to Senior Lecturer. I am an Associate Editor of the South African Journal of Animal Science, Life member of the Golden Key International Honour Society (on the recommendation of the Wits University Registrar based on my exceptional performance during my PhD studies), Council Member of the Physiology Society of Southern Africa, and was recently awarded a six-year NRF Incentive Funding Grant for rated researchers.

Explain the nature of the research that you are currently undertaking.

My main research interest is on the nutritive value of indigenous tree seeds and other non-conventional food/feed sources and their biochemical/physiological effects in animals. Secondly I focus on the potential prophylactic and or therapeutic effects of indigenous tree extracts on obesity, metabolic dysfunction and diabetes mellitus using animal models.

What do you think is the most pertinent/relevant/significant contribution you have made to research/science/your field?

From my research it has become clear that *Kigelia africana*, *Mumisops zeyheri* and *Ximenia caffra* seeds have a high oil yield which is non-toxic *in vitro*. The oils are rich in oleic acid, linoleic and alpha-linolenic acid. Due to the seed oils high content of oleic acid and essential fatty acids (EFAs), it could potentially be used as nutritional supplements. Currently we are investigating the potential of oleic acid- and EFAs-rich seeds and seed oils to mitigate obesity and metabolic dysfunction in high-fructose diet induced metabolic dysfunction using rat models.

Did you have a particular mentor or supervisor who inspired you in research?

Professor J.P. Mtimuni (Bunda College, University of Malawi) and Associate Professor K. Erlwanger (University of the Witwatersrand), my MSc and PhD supervisors, respectively have been inspirational in my research. The two are established scientists who afforded me the opportunity to explore my ideas and add my own flare when it came to writing journal articles.

Tell us about what you do when you're not busy at work and carrying out cutting-edge research.

On Saturdays I am at Church – I am a Seventh Day Adventist. I like listening to Oliver Mutukudzi's music – as it has a certain touch and is both educative and inspirational. When I am in Zimbabwe I often visit my rural home to watch and tend my herd of cattle and flock of goats.