

# STAFF PROFILE CONTENT BRIEF

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## DESIGNATION

### (HEAD OF DEPARTMENT)



**Title & Name:**

**Qualification & Institution:**

**Contact Number:**

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**Campus:**

**Area of Expertise:**

Dr Ignatious Matimati

PhD Botany, University of  
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Plant Protection, Plant  
Ecophysiology

**Short Bio:** My journey in plant sciences began at University of Zimbabwe with a BSc Hons in Crop Science (1999), majoring in horticultural science, and then a part-time MPhil Agriculture (2006). I joined the Horticulture Research Centre as a research officer and then Midlands State University as a horticulture lecturer. Between 2007 and 2009, Biodiversity Transect Africa (BIOTA) funded my internship in the Climate Change & Bio-Adaptation Division at SANBI's Kirstenbosch Research Centre. I used the opportunity to register for an MSc Botany at University of The Western Cape (2007-2009). On the BIOTA project, I investigated how rare succulents of the Namaqualand region relied on fog and dew for their survival in a warming climate characterised by long dry summers. I continued with research in plant ecophysiology for a PhD in Botany at University of Cape Town (2010-2013). My thesis explored how the availability of nutrients regulates water fluxes (i.e. transpiration and hydraulic redistribution) in plants. As a postdoctoral fellow at Rhodes University, I used instantaneous measurements of stomatal conductance to model rates of evapotranspiration from eutrophic rivers infested with water hyacinth (*Eichhornia crassipes*). In 2014 I was appointed as a senior lecturer at Cape Peninsula University of Technology where I lectured plant physiology and plant tissue culture. One of my research areas was developing propagation protocols for selected endangered endemic succulents of the Namaqualand. After the three year contract, I joined Durban University of Technology as a senior lecturer in the Department of Horticulture.

**Academic Interests:** My research focus is in understanding how plants relate to environmental variation, especially water and nutrient availability. Unifying themes of this research are plant nutrient acquisition, water use efficiency, plant-water fluxes and the use of stable isotopes in understanding plant ecology. My current projects explore the effects of enhanced ultraviolet-B radiation, drought, and their combination on UV-absorbing secondary compounds of selected priority South African medicinal plants. I lecture Research Methodology and Integrated Pest and Disease Management.

**Collaborations:**

Viloshnie Reddy, Tissue Culture Lab, EThekweni Municipality.

Prof Mike Cramer, Department of Biological Studies, University of Cape Town.

Research Links: [Orchid](#)