WITSIE AT THE CUTTING EDGE: Researcher Profile

Dr Robyn Hetem
Brain Function Research Group
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Who are you and what is your academic/scientific background?

I am the Research Officer within the Brain Function Research Group, School of Physiology. I am a pure-bred Witsie, having completed my BSc, Honours and PhD at Wits. Throughout my studies, I integrated the disciplines of physiology, ecology and zoology. My research has been generously supported by grants from Faculty, Carnegie, NRF and a START PhD fellowship.

What is the nature of the research that you are currently undertaking?

I am interested in the physiological and behavioural mechanisms employed by free-ranging mammals in order to cope with the extreme temperatures and habitat transformation likely to occur with global climate change.

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

By challenging textbook theories on animal physiology and improving our understanding of physiological responses of free-living mammals to hot and dry environments, I hope that my research will ultimately help to improve the accuracy of climate change models so that we may better conserve South Africa's charismatic large mammals through future climate change.

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

I was fortunate enough to be supervised by Professor Duncan Mitchell, an A-rated physiologist. Despite officially retiring a number of years ago, Duncan remains an inspirational mentor through his continued support, valuable insight and approachable demeanour.

What do you do when you're not busy at work and carrying out cutting-edge research?

I love the outdoors and when we are not capturing wild animals to implant an array of physiological monitoring devices at field sites around the country, I enjoy hiking through beautiful landscapes, exploring unique ecosystems (like the Amazon) and taking in all that nature has to offer.

Read one of Robyn's papers:

Hetem R, Strauss W, Fick L, Maloney S, Meyer L, Shobrak M, Fuller A and Mitchell D (2010). Daily fluctuation in body temperature of free-living Arabian oryx (*Oryx leucoryx*): does water limitation drive heterothermy? *Journal of Comparative Physiology B Biochemical, Systems, and Environmental Physiology*, **180**: 1111-1119.

Hetem R, Strauss W, Fick L, Maloney S, Meyer L, Shobrak M, Fuller A and Mitchell D (2012). Does size matter? Comparison of body temperature and activity of free-living Arabian oryx (*Oryx leucoryx*) and the smaller Arabian sand gazelle (*Gazella subgutturosa marica*) in the Saudi desert. *Journal of Comparative Physiology B Biochemical, Systems, and Environmental Physiology*, **182**: 437–449.

To read Robyn's University profile click here