

**Biography:**Background:

I matriculated in 1985 at Central High School, Beaufort West. I completed my B.Sc. and B.Sc. Hons. degrees (1988 and 1989, respectively) at the University of Stellenbosch and my M.Sc. degree (1997) under the supervision of Dr A.J.S. Benadé, Research Institute for Nutritional Diseases, MRC, Parow.

In 1993 I joined the Cardiovascular Research Group at the division of Medical Physiology, Tygerberg campus. During this time I have been actively involved in a large number of research projects. My major focus was the elucidation of the phenomenon of ischaemic preconditioning (PC), which has been shown to be the most effective intervention to protect the myocardium against ischaemia/reperfusion injury. Since this intervention is not advisable clinically, our research has focused on establishing the mechanism of this phenomenon with the aim of developing suitable drugs. In 2002 I obtained my Ph.D. degree (under the supervision of Prof Amanda Lochner) investigating the role of cyclic adenosine monophosphate (cAMP), cyclic guanosine monophosphate (cGMP) and p38 mitogen activated protein kinase (p38 MAPK) in PC of the ischaemic myocardium. Our work has been presented at 16 peer-reviewed, 11 international and 43 national scientific meetings. I have published 24 peer-reviewed papers since 1995 and was first author of 4 papers in prestigious journals. Our best research output in terms of citations was published in 1999 in the top journal *Circulation*.

Current research:

As principal investigator, I have obtained research grants from the NRF and MRC to investigate the significance of the Exchange Protein directly Activated by cAMP (Epac) in PC-mediated cardio-protection.

In addition I have expanded my research to evaluate the role of Epac in the development of cardiac hypertrophy in obesity. Since there is a strong association between obesity and cardiovascular diseases it necessitates the elucidation of underlying molecular mechanisms linking these pathologies.

Teaching:

I have been involved in postgraduate (1997-present) and undergraduate student teaching (2003-present) and since November 2009 I have been appointed as lecturer in the division of Medical Physiology. I am the chairperson for the Digestive System module for the MBChB2 programme (2012-present) and currently also co-ordinating the Honours programme of our division.

Personal:

I am married to Adriaan since 1998 and we have two beautiful, inquisitive children aged 5 and 8. Adriaan enjoys windsurfing and the children "boogie-board" while mother keeps a watchful eye from a safe distance.