

# SUMMARISED CURRICULUM VITAE OF SHANTAL LYNN WINDVOGEL

## CURRENT PROFESSION OCCUPATION

Senior lecturer in the Division of Medical Physiology, Stellenbosch University

## CONTACT INFORMATION

Telephone: 021 9389613

Email: [shantalw@sun.ac.za](mailto:shantalw@sun.ac.za)

Address: Biomedical Research Institute, Division of Medical Physiology, Faculty of Medicine and Health Sciences, Stellenbosch University, Francie van Zijl Drive, Parow, 7505

## LANGUAGES

Fluent in English and Afrikaans (Written and verbal)

## ACADEMIC DEGREES AND POSTGRADUATE TRAINING

I was awarded Bachelor of Science (**1998**: Physiology, Medical microbiology), Bachelor of Science Honours (**2002**: Physiology) and PhD in Medical Biosciences (**2007**: Physiology) degrees from the University of the Western Cape. Postgraduate training included a Research Internship (Medicinal plants, Antioxidants: **2005**) and Postdoctoral fellowship (**2007**: Antioxidants, Medicinal plants, Maternal nicotine exposure) at the South African Medical Research Council.

## ACADEMIC AND ADMINISTRATIVE POSITIONS (2010-2023)

I am currently the **Module convenor** for the EHP 271 Essentials of Human Physiology **module**, and since **2011**, the **convenor** for AHS 278 Physiology. I have been an MBChB 4th and 5<sup>th</sup> year internal elective supervisor at Stellenbosch University since 2018. I have been an external moderator for a number of modules at the University of the Western Cape including (**2020-2015**: MBS 214, 217, MBS 231; **2020 -2011**: MBS 331,332; **2011-2010**: MBS 217, 218, University of the Western Cape; I have also been an external moderator at the Cape Peninsula University of Technology (**2015-2013**: Research Methods (Somatology); **2014-2013**: Physiology II Emergency Medical Care. I have been an examiner for the college of Medicine of South Africa (**2015, 2011**). I was an **Animal ethics committee member (2022-2015)**. My community engagement positions include being the **Chairperson and member of the Division of Medical Physiology Social Impact Organizing Committee (2023-2018) and Visual Redress Committee (2023-2022)**.

## POSTGRADUATE SUPERVISION AND EXAMINATION EXPERIENCE

I have supervised 12 honours students, two masters students and one postdoctoral fellow. I have also co-supervised one honours, six masters and four doctoral students. I am currently co-supervising one masters student. I have been an examiner of honours, masters and doctoral level students, as well as an examiner for the College of Medicine of South Africa (FC Urol. Primary) and various undergraduate and postgraduate modules.

## CONFERENCES (INCLUDES STUDENT PRESENTATIONS)

<b>2022</b>	International Symposium on Service Learning, University of Nicosia, Cyprus
<b>2018</b>	Annual Academic Research Day, Stellenbosch University, Cape Town
<b>2017</b>	Physiological Society of South Africa, University of Pretoria, Pretoria
<b>2017</b>	Annual Academic Research Day, Stellenbosch University, Cape Town
<b>2016</b>	Annual Academic Research Day, Stellenbosch University, Cape Town
<b>2015</b>	Annual Academic Research Day, Stellenbosch University, Cape Town
<b>2014</b>	Physiological Society of South Africa, University of Kwazulu Natal, Durban
<b>2012</b>	Physiological Society of South Africa, Stellenbosch University, Cape Town
<b>2011</b>	Physiological Society of South Africa, University of the Western Cape, Cape Town
<b>2010</b>	Physiological Society of South Africa, Walter Sisulu University, East London

## PUBLICATIONS AND THESIS

- 2021 Omolaoye TS, Windvogel SL, Du Plessis SS. **Testicular oxidative stress and apoptosis status in streptozotocin-induced diabetic rats after treatment with rooibos (*Aspalathus linearis*), honeybush (*Cyclopia intermedia*), and sutherlandia (*Lessertia frutescens*) infusions.** Asian Pacific Journal of Reproduction. 2021 10 (1): 11-20. doi: 10.4103/2305-0500.306432
- 2021 Omolaoye TS, Windvogel SL, Du Plessis SS. **The Effect of Rooibos (*Aspalathus linearis*), Honeybush (*Cyclopia intermedia*) and Sutherlandia (*Lessertia frutescens*) on Testicular Insulin Signalling in Streptozotocin-Induced Diabetes in Wistar Rats.** Diabetes Metab Syndr Obes. 2021 Mar 19; 14:1267-1280. doi: 10.2147/DMSO.S285025
- 2021 Obasa Z, van Vuuren MA, Huisamen B, Windvogel SL. **The modulating effects of green rooibos (*Aspalathus linearis*) extract on vascular function and antioxidant status in obese Wistar rats.** Cardiovasc J Afr. 2021 Feb 18; 32:1-11. doi: 10.5830/CVJA-2020-048
- 2020 Smit-van Schalkwyk M, Windvogel S, Strijdom H. **Rooibos (*Aspalathus linearis*) protects against nicotine-induced vascular injury and oxidative stress in Wistar rats.** Cardiovascular Journal of Africa (Advance online publication, February 2020). DOI: 10.5830/CVJA-2019-052
- 2020 Millar D, Bowles S, Windvogel S, Louw J, Muller C. **Effect of Rooibos (*Aspalathus linearis*) extract on atorvastatin-induced toxicity in C3A liver cells.** Journal of Cellular Physiology 2020: 1-10.  
<https://doi.org/10.1002/jcp.29756>
- 2019 Windvogel S. 2019. Rooibos (*Aspalathus linearis*) and honeybush (*Cyclopia* spp.): from bush teas to potential therapy for cardiovascular disease. In: Hueda, C. H. (eds.) 2020. **Nutraceuticals - past, present and future.** IntechOpen, doi:10.5772/intechopen.86410
- 2007 Windvogel SL. 2007. **An investigation into the effect of maternal exposure to nicotine and copper on neonatal lung development.** PhD thesis, University of the Western Cape, Bellville, South Africa
- 2005 Maritz GS and Windvogel S. 2005. **Effect of maternal nicotine exposure during different phases of lung development on neonatal lung development: long term consequences.** Abstracts of 15<sup>th</sup> ERS Annual Congress, Copenhagen, Denmark. European Respiratory Journal. 26 (suppl. 49): 366s
- 2005 Maritz GS and Windvogel S. 2005. **Does maternal nicotine exposure during different phases of lung development influence the program that regulates the maintenance of lung integrity in the offspring? A comparative morphologic and morphometric study.** Trends in Biochem. Physiol. (10)
- 2003 Maritz GS and Windvogel S. 2003. **Chronic maternal nicotine exposure during gestation and lactation and the development of the lung parenchyma in the offspring. Response to nicotine withdrawal.** Pathophysiology. 10 (1): 69-75
- 2003 Maritz GS and Windvogel S. 2003. **Is maternal copper supplementation during alveolarization protecting the developing rat lung against the adverse effects of maternal nicotine exposure? A morphometric study.** Experimental Lung Research. 29 (4): 243-260

## RESEARCH FOCUS

As the leading cause of worldwide deaths, cardiovascular disease is a major public health and socio-economic concern. Risk factors for cardiovascular disease include among others, tobacco smoking, diabetes, obesity and hypertension. I am interested in investigating the impact of these risk factors on the organ systems and vasculature using selected animal models. The focus is on elucidating the mechanistic effects of these risk factors on cardiovascular disease by focusing on oxidative stress and vascular effects. We therefore investigate the effects of interventions such as antioxidants and the use of plants with known antioxidant properties such as rooibos (*Aspalathus linearis*), honeybush (*Cyclopia* spp.) and others, as safe therapeutic options in the alleviation of cardiovascular risk.

## RESEARCH COLLABORATORS

1. Prof. Barbara Huisamen, Medical Physiology Division, Faculty of Medicine and Health Sciences, Stellenbosch University, Tygerberg. [bh3@sun.ac.za](mailto:bh3@sun.ac.za). Tel: 021 938 9688.
2. Dr Gerald Maarman, Division of Medical Physiology, Faculty of Medicine and Health Sciences, Stellenbosch University, Tygerberg. [gmaarman@sun.ac.za](mailto:gmaarman@sun.ac.za). Tel: 021 938 9392.
3. Dr Erna Marais, Medical Physiology Division, Faculty of Medicine and Health Sciences, Stellenbosch University, Tygerberg. [et4@sun.ac.za](mailto:et4@sun.ac.za). Tel: 021 938 9254.
4. Prof. Stefan du Plessis, Mohammed Bin Rashid University of Medicine and Health Sciences (MBRU), Dubai, UAE, [Stefan.duplessis@mbru.ac.ae](mailto:Stefan.duplessis@mbru.ac.ae). +9714 383 8734.
5. Prof. Hans Strijdom, Division of Medical Physiology, Faculty of Medicine and Health Sciences, Stellenbosch University, Tygerberg. [jgstr@sun.ac.za](mailto:jgstr@sun.ac.za). Tel: 021 938 9387.
6. Prof. Christo Muller, South African Medical Research Council, Diabetes Discovery Platform. [christo.muller@mrc.ac.za](mailto:christo.muller@mrc.ac.za). Tel: 021 938 0894.