



INGRID WEBSTER

PRINCIPAL RESEARCHER OFFICER

CONTACT

Faculty of Medicine and Health
Sciences
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Research Focus Areas

Cardiovascular Physiology
Vascular Biology and
Endothelial Function
Isolated heart perfusions
Human / clinical studies

EDUCATION

University of Stellenbosch
PhD In Medical Physiology
Post Doctoral Fellow

EXPERIENCE

April 2002 – April 2020

Research assistant, Division of Medical Physiology,
University of Stellenbosch

April 2020 - Present

Technical Officer, Division of Medical Physiology, University
of Stellenbosch

January 2022 - present

Principal Research Officer, Division of Medical Physiology,
University of Stellenbosch

REFERENCES

Prof Hans Strijdom
Division of Medical Physiology, Department of Biomedical Sciences
Faculty of Medicine and Health Science, University of Stellenbosch,
POBox 241, Cape Town 8000
Tel. +2721 938 9387 E-mail: jgstr@sun.ac.za

RESEARCH OUTPUTS

PEER REVIEWED JOURNAL ARTICLES:

1. Webster I, Friedrich SO, Lochner A, Huisamen B. AMP kinase activation and glut4 translocation in isolated cardiomyocytes. *CARDIOVASCULAR JOURNAL OF AFRICA* Vol 21, No 2, March/April 2010
2. Webster I, Huisamen B, du Toit EF. The Effect of long term swim training on physiological stress levels in the rat. Short Communication. *Medical technology Journal of South Africa*. Volume 24, no. 2, Dec 2010.
3. Webster I, Huisamen B, du Toit EF. Creatine and Exercise – Strong Evidence for Stronger Muscles? *JEPonline* 2011;14(5):85-108 (<http://faculty.css.edu/tboone2/asep/JEPonlineOctober2011.html>)
4. Webster I, Huisamen B, du Toit EF. The effect of creatine supplementation on myocardial function, mitochondrial respiration and susceptibility to ischemia/reperfusion injury in sedentary and exercised rats. *Acta Physiologica*, 2012, 206, 6–19
5. Webster I, Smith A, Lochner A, Huisamen B. Sanguinarine non- versus re-circulation during isolated heart perfusion – a Jekyll and Hyde effect? *Cardiovascular Drugs and Therapy* (2014) 28: 489-491
6. Strijdom H, De Boever P, Walzl G, Essop MF, Nawrot TS, Webster I, Westcott C, Mashele N, Everson F, Malherbe ST, Stanley K. Cardiovascular risk and endothelial function in people living with HIV/AIDS: design of the multi-site, longitudinal EndoAfrica study in the Western Cape Province of South Africa. *BMC Infectious Diseases*. 2017 Jan 7;17(1):41.
7. Webster I, Salie R, Marais E, Fan WJ, Maarman G, Huisamen B, Lochner A. Myocardial susceptibility to ischaemia/reperfusion injury on obesity: a re-evaluation of the effects of age. *BMC Physiology* (2017) 17:3.
8. Webster I, Smith A, Lochner A, Huisamen B. The Role of MKP-1 in Insulin-Induced Cardioprotection. *Cardiovascular Drugs and Therapy* (2017) May 27.
9. Truter D, Chellan N, Strijdom H, Webster I, Rawstorne J, Kotzé SH. Histomorphological changes in the pancreas and kidney and histopathological changes in the liver in male Wistar rats on antiretroviral therapy and melatonin treatment. *Acta Histochemica* (2018); 120; 347-355.
10. Webster I, Imperial EG, Westcott C, Strijdom H. The cardiovascular effects of *Aspalathus linearis* supplementation in male Wistar rats receiving fixed dose combination first-line antiretroviral therapy. *Cardiovascular Journal of Africa*, 2019 Mar/Apr 23;30(2):95-102.
11. Everson F, De Boever P, Nawrot TS, Goswami N, Mthethwa M, Webster I, Martens DS, Mashele N, Charania S, Kamau F and Strijdom H. Personal NO₂ and Volatile Organic Compounds Exposure Levels are Associated with Markers of Cardiovascular Risk in Women in the Cape Town Region of South Africa. *International Journal of Environmental Research and Public Health* 2019, 16, 2284.
12. Berner K, Strijdom H, Essop MF, Webster I, Morris L, Louw Q. Fall history and associated factors among adults living with HIV-1 in the Cape Winelands, South Africa: an exploratory investigation. *Open Forum Infect. Dis.* October 2019; 6(10):
13. Everson, F., Martens, D.S., Nawrot, T.S., Goswami, N., Mthethwa, M., Webster, I., Mashele, N., Charania, S., Kamau, F., De Boever, P., Strijdom, H., Personal exposure to NO₂ and benzene in the Cape Town region of South Africa is associated with shorter leukocyte telomere length in women, *Environmental Research* (2020), doi:.
14. Marincowitz C, Webster I, Westcott C, Goswami N, de Boever P, Seidel G, Strijdom H. Vascular health assessment with flow-mediated dilatation and retinal image analysis: a pilot study in an adult population from Cape Town. *Cardiovasc J Afr* 2021 32 (3):133-140.
15. Nkeh-Chungag BN, Goswami N, Engwa GA, Sewani-Rusike CR, Mbombela V, Webster I, De Boever P, Kessler HH, Stelzl E, Strijdom H. Relationship between Endothelial Function, Antiretroviral Treatment and Cardiovascular Risk Factors in HIV Patients of African Descent in South Africa: A Cross-Sectional Study. *J Clin Med*. 2021 Jan 20;10(3):392.
16. Williams CP, Kamau F, Everson FP, Kgokane B, De Boever P, Goswami N, Webster I, Strijdom JG. HIV and Antiretroviral Therapy Are Independently Associated with Cardiometabolic Variables and Cardiac Electrical Activity in Adults from the Western Cape Region of South Africa. *Journal of Clinical Medicine* 2021; 10(4112):1-14.
17. Berner, K., Gouelle, A., Strijdom, H., Essop, M.F., Webster, I. and Louw, Q., 2021, September. Mobility Deviations in Adults With Human Immunodeficiency Virus: A Cross-Sectional Assessment Using Gait Analysis, Functional Performance, and Self-Report. In *Open forum infectious diseases* (Vol. 8, No. 9, p. ofab425). US: Oxford University Press.

POST GRADUATE STUDENT SUPERVISION

2012	Angelique Smith (BSc Honours) supervisor
2013-2015	Angelique Smith (MSc)
2015	Clara Marincowitz (BSc Honours) – supervisor
2015-2017	Emiliana Imperial (MSc) – supervisor
2017	Maryna van Antwerp (BSc Honours) – supervisor
2016-2018	Jordyn Rawstorne (MSc) – supervisor
2023	Kheya Mokoena (MSc) – co supervisor

CONFERENCE OUTPUTS International:	26
National:	21

RESEARCH TECHNIQUES

Langendorff Isolated Heart Perfusions
Working heart perfusions
Balloon model perfusions
Ventricular cardiomyocyte isolation
Western Blotting
High Pressure Liquid Chromatography (HPLC)
ELISA, RIA
Mitochondrial isolation and oxygen consumption analysis (oxygraph)
Use of Ultrasound MyLabFive and CardioSuite for Flow Mediated Dilation
Retinal image capture using Canon CR2
IMT measurements (Intima Media Thickness)
LIMS (Redcap)

RESEARCH COLLABORATIONS

EndoAfrica project 2014 – 2020

The putative interface of emerging cardiovascular risk factors affecting populations living with and without HIV in Sub-Saharan Africa.

Prof Benedicta Nkeh Chungag (Walter Sisulu University, Mthatha, Eastern Cape, South Africa)
Prof Carla Fourie (North West University, Potchefstroom, North West Province, South Africa)
Prof Patrick de Boever (VITO (Flemish Institute of Technological Research), Belgium)
Prof Nandu Goswami (Medical University of Graz, Austria)

MitoSAKen project (NIH) 2023 – 2024

Altered mitochondrial function and HIV-associated cardiometabolic disease in populations from South Africa and Kenya (MITO-SAKen)

Professor Fred Bukachi (University of Nairobi, Nigeria)
Professor Irene Schauer (University of Colorado, USA)
Professor Kristine Erlandson (University of Colorado, USA)

VOLUNTEER WORK

2003– present	Volunteer member of Scout Association of South Africa.
2010-2017	Troop Scouter at 1st Durbanville Scout Troop
2010	Stage III Training Wood Badge
2007	Received Provincial Commissioners Award
2015	Received long service medal
2008, 2012	Chief Judge Gordon Shield
2011	Patrol leaders training course (PLTC) Course leader
2012	Patrol Leaders Training Unit (PLTU) Course Leader
2010-present	Springbok Award co-ordinator for Kanonkop District Regional support for Western Cape

References

Raymond Middleton
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Nigel Foreshaw
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Greg Stopford
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