

ABBREVIATED CURRICULUM VITAE:

HANS STRIJDOM



PERSONAL INFORMATION:

- Name: Hans Strijdom
- Address: Cape Town, South Africa
- Date of birth: 18 November 1968

CURRENT POSITIONS:

- Professor and Head: Division of Medical Physiology, Faculty of Medicine and Health Sciences, Stellenbosch University
- Deputy Director: Centre for Cardio-metabolic Research in Africa (CARMA), Stellenbosch University
- Senior Lecturer: Undergraduate and postgraduate human physiology (MChB; BSc Physio; BSc Dietetics; B Nursing; Hons BSc; MMed / MChD)

PROFESSIONAL CAREER, EMPLOYMENT HISTORY:

- **November 2021 – Present**: Head: Division of Medical Physiology, Faculty of Medicine and Health Sciences, Stellenbosch University
- **July 2020 - Present**: Professor: Division of Medical Physiology, Faculty of Medicine and Health Sciences, Stellenbosch University
- **2010-2020**: Associate Professor: Division of Medical Physiology, Faculty of Medicine and Health Sciences, Stellenbosch University
- **2007-2010**: Senior Lecturer / Registrar: Division of Medical Physiology, Faculty of Medicine and Health Sciences, Stellenbosch University
- **1998-2007**: Lecturer / Registrar: Division of Medical Physiology, Faculty of Medicine and Health Sciences, Stellenbosch University
- **1997-1998**: Medical Officer: Karl Bremer Hospital, Bellville, Cape Town
- **1996-1997**: Medical Officer at various hospitals in the United Kingdom
- **1995**: Medical Intern: Ngwelezane Hospital, Empangeni, Kwazulu-Natal

TERTIARY EDUCATIONAL QUALIFICATIONS:

- **2006**: PhD (Medical Physiology) [Stellenbosch University]
- **1994**: M.B.Ch.B. [Stellenbosch University]
- **1991**: B.Med.Sc (Majors: Physiology and Pharmacology) [Stellenbosch University]

HONOURS, AWARDS, PRIZES, AND SCIENTIFIC, TEACHING AND SCHOLARLY RECOGNITION:

- Winner: Annual Student Academic Day for Best Oral Presentation, Faculty of Health Sciences, Tygerberg, 1991
- Winner: Best Poster for Basic Health Sciences Session, South African Heart Association Annual Conference: Stellenbosch (2001) and Wild Coast Sun (2008)
- First Year Academy Prestige Evening award of recognition for being selected as outstanding lecturer by top first year achievers in the Faculty of Medicine and Health Sciences: 2008, 2011, 2014, 2015, 2016, 2017, 2018, 2020, 2021, 2022, 2024

- Rector's award for General Performance (teaching, research and service): 2011, 2013, 2015
- Nominated for the South African Association of Health Educationalists Distinguished Educator and Research Award: 2014, 2015
- SA Heart Association / Louis Vogelpoel travel award: 2018
- National Research Foundation of South Africa (NRF): C2 rated scientist: 2021
- Recipient of the inaugural Eugene Cloete Outstanding Postdoc Mentor Award, Stellenbosch University: 2022

RESEARCH

RESEARCH: EXPERTISE, INTERESTS, FOCUS AREAS AND FUNDING

- Cardiovascular physiology, pathophysiology, risk factors and disease
- Vascular biology, endothelial function and dysfunction
- Emerging cardiovascular risk factors (HIV-infection, antiretroviral treatment, air pollution)
- Experienced researcher in *in vitro*, animal and human / epidemiological studies
- Experienced in research project management
- Total research grant income (as lead or co-lead) since 2004: ~ZAR 30-million.

RESEARCH: LEADERSHIP, MANAGEMENT, SERVICE AND RECOGNITION

- Head: Cardiovascular Research Group, Division of Medical Physiology, Faculty of Medicine and Health Sciences: 2006 - 2019
- Co-founder and Deputy Director: Centre for Cardio-metabolic Research in Africa (CARMA), Faculty of Medicine and Health Sciences: 2019 - present
- International Coordinator and Principal Investigator: EndoAfrica Research Consortium (RSA, Belgium and Austria): 2014-2020 (EU FP7 ERAfrica Programme)
- Principal Investigator: MITO-SAKen Study (NIH R21 grant 2023-2024 / NRF CPRR grant 2023-2025)
- Chair of Annual Research Day Organizing Committee, Faculty of Medicine and Health Sciences: 2007 and 2008
- Chair of the local organizing committee of the Annual Congress of the Physiology Society of Southern Africa (PSSA); Stellenbosch: September 2009
- Vice-President of the PSSA Council: 2009
- Member of PSSA Council: 2009-2013 and Secretary / Treasurer: 2010-2013
- Co-Founder of the Southern Africa Society for Cardiovascular Research (SASCAR) and member of Executive Committee: 2009-2014
- Guest Associate Editor and Research Topic Editor for *Frontiers in Physiology*: 2016 – 2019, Editor for *PLOS One*: 2016.
- Invited chair of sessions at several meetings of the Physiology Society of Southern Africa (PSSA) and SA Heart Association since 2004
- Chair of scientific session at the International Society for Heart Research – European Society for Cardiology Meeting (Frontiers in Cardiovascular Biology); Barcelona: July 2014
- Member of judging panels for best presentations at several meetings of the PSSA and SA Heart Association since 2004
- Invited reviewer for various SA Medical Research Council, SA National Research Foundation, Austrian Science Fund and UK MRC research grant applications since 2004

- Invited reviewer for several international, high impact scientific journals, including: *Molecular and Cellular Biochemistry*, *Life Sciences*, *J Histochem Cytochem*, *Renal Failure*, *Cardiovascular Research*, *Circulation*, *Cardiovascular Journal of Africa*, *Journal of Cellular and Molecular Medicine*, *PLOS One* and others.
- Stellenbosch University Rector's award for Outstanding General Performance (teaching, research and service): 2011, 2013, 2015
- Member: Local Organizing Committee: Nobel in Africa – STIAS Nobel Symposia Series: 2020 – present.

RESEARCH OUTPUTS SUMMARY:

- 56 peer-reviewed published articles
- 2 peer-reviewed book chapters
- 80+ conference papers, of which 50 published as peer-reviewed abstracts; keynote / invited speaker at 14 international conferences and scientific meetings
- PhD Supervision / co-supervision: 17 candidates (15 graduated); MSc Supervision / co-supervision: 19 candidates (16 graduated).
- Host and supervisor: 9 post-doctoral fellows since 2015
- Thesis / dissertation examination: 30 MSc theses and 15 PhD dissertations

PUBLICATIONS DURING THE LAST 5 YEARS (2019 - 2024):

- Marincowitz C, Genis A, Goswami N, De Boever P, Nawrot TS, **Strijdom H**. Vascular Endothelial Dysfunction in the wake of HIV and ART. *FEBS J*. 2019; 286(7): 1256-1270. doi: 10.1111/febs.14657.
- 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. *Cardiovasc J Africa*. 2019; 30: 95-102. DOI: 10.5830/CVJA-2018-075
- Katoto PDMC, Byamungu L, Brand AS, Mokaya J, **Strijdom H**, Goswami N, De Boever P, Nawrot TS, Nemery B. Ambient Air Pollution and Health in Sub-Saharan Africa: Current Evidence, Perspectives and a Call to Action. 2019. *Environ Res*. 2019; 173: 174-188. DOI: 10.1016/j.envres.2019.03.029
- Everson F, De Boever P, Nawrot TS, Goswami N, Mthethwa M, Webster I, Martens DS, Mashele N, Charania S, Kamau F, **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. *Int. J. Environ. Res. Public Health*. 2019; 16(13): 2284. DOI: 10.3390/ijerph16132284.
- Kamau F, **Strijdom H**, Mwangi P, Blackhurst D, Imperial E, Salie R. Antiretroviral drug-induced endothelial dysfunction is improved by dual PPAR α / γ stimulation in obesity. *Vasc Pharmacol*. 2019; 121: 106577. DOI: 10.1016/j.vph.2019.106577.
- 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): ofz401. DOI: 10.1093/ofid/ofz401.
- Everson F, Martens DS, Nawrot TS, 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. *Environ. Res*. 2020; 182:108993. DOI: 10.1016/j.envres.2019.108993.
- Smit-van Schalkwyk M, Windvogel S, **Strijdom H**. Rooibos (*Aspalathus linearis*) protects against nicotine-induced vascular injury and oxidative stress in Wistar rats. *Cardiovasc J Africa*. 2020; 31(2): 81-90. DOI: 10.5830/CVJA-2019-052.

- Fourie CMT, Botha-Le Roux S, Smith W, Schutte AE, Breet Y, Mels CMC, Gafane-Matemane L, Lammertyn L, Uys L, Burger A, Joseph JS, Goswami N, De Boever P, **Strijdom H**. Vascular function and cardiovascular risk in a HIV infected and HIV free cohort of African ancestry: Baseline Profile and Rationale of the Longitudinal EndoAfrica-NWU Study. *BMC Infect. Dis.* 2020; 20: 473. DOI: 10.1186/s12879-020-05173-6.
- Hudson PAJ, Woudberg NJ, Kamau FM, **Strijdom H**, Frias MA, Lecour S. HIV-related Cardiovascular Disease: Any role for High-density Lipoproteins? *Am J Physiol Heart Circ Physiol.* 2020; 319(6): H1221 – H1226. DOI: 10.1152/ajpheart.00445.2020.
- Marinowitz C, Webster I, Westcott C, Goswami N, De Boever P, Seidel G, **Strijdom H**. Vascular health assessment with flow-mediated dilation and retinal image analysis: A pilot study in an adult population from Cape Town. *Cardiovasc J Africa.* 2021; 31: 133-140. DOI: 10.5830/CVJA-2020-046
- Lederer AM, Fredriksen PM, Nkeh-Chungag BN, Everson F, Strijdom H, De Boever P, Goswami N. Cardiovascular effects of air pollution: current evidence from animal and human studies. *Am J Physiol Heart Circ Physiol.* 2021; 320(4): H1417-H1439. DOI: 10.1152/ajpheart.00706.2020. PMID: 33513082.
- Nkeh-Chungag BN, Goswami N, Engwa GA, Sewani-Rusike CR, Mbombela V, Webster I, De Boever P, Kesler H, 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; 10(3): 392. DOI: 10.3390/jcm10030392.
- Swart C, Fourie CMT, De Boever P, Goswami N, Lammertyn L, **Strijdom H**, Kamau F, Botha-Le Roux S. Comparison of endothelial function and cardiometabolic profiles of people living with HIV in two South African regions: the EndoAfrica study. *Cardiovasc J Africa.* 2021; 32: 1-6. DOI: 10.5830/CVJA-2021-026. Epub ahead of print.
- Berner K, Gouelle A, **Strijdom H**, Essop MF, Webster I, Louw Q. Mobility deviations in adults living with HIV: a cross-sectional assessment using gait analysis, functional performance and self-report. *Open Forum Infectious Diseases.* 2021; 8(9): ofab425. DOI: 10.1093/ofid/ofab425.
- Williams C, Kamau FM, Everson F, Kgokane B, De Boever P, Goswami N, Webster I, **Strijdom H**. HIV and antiretroviral therapy are independently associated with cardiometabolic variables and cardiac electrical activity in adults from the Western Cape region of South Africa. *J Clin Med.* 2021; 10(18): 4112. DOI: 10.3390/jcm10184112.
- Nyawo TA, Dlodla PV, Mazibuko-Mbeje SE, Mthembu SXH, Nyambuya TM, Nkambule BB, Sadie-Van Gijsen HS, **Strijdom H**, Pheiffer C. A systematic review exploring the significance of measuring epicardial fat thickness in correlation to B-type natriuretic peptide levels as prognostic and diagnostic markers in patients with or at risk of heart failure. *Heart Fail Rev.* 2022; 27(2): 665-675. doi: 10.1007/s10741-021-10160-3. Epub ahead of print. PMID: 34671870.
- Nyawo TA, Pheiffer C, Mazibuko-Mbeje SE, Mthembu SXH, Nyambuya TM, Nkambule BB, Sadie-Van Gijsen H, **Strijdom H**, Tiano L, Dlodla PV. Physical exercise potentially targets epicardial adipose tissue to reduce cardiovascular disease risk in patients with metabolic diseases: Oxidative stress and inflammation emerge as major therapeutic targets. *Antioxidants.* 2021; 10: 1758. DOI: 10.3390/antiox10111758.
- Botha-Le Roux S, Elvstam O, Björkman P, De Boever P, Goswami N, Magnusson M, Nilsson PM, **Strijdom H**, Fourie CMT. Cardiovascular profile of South African adults with low-level HIV-1 viraemia during antiretroviral therapy. *J. Clin. Med.* 2022; 11: 2812. DOI: 10.3390/jcm11102812.
- Solanke T, Kamau, F, Esterhuizen, T, Maartens, G, Khoo, S, Joska, JA, Kellermann T, **Strijdom H**, Decloedt E. Concentrations of efavirenz, tenofovir, and emtricitabine in obesity: a cross-sectional study. *J. Acquir. Immune. Defic. Syndr.* 2022; 91(1): 101-108.

- Cunningham C, Bolcaen J, Bisio A, Genis A, **Strijdom H**, Vandevoorde C. Recombinant Endostatin as a Potential Radiosensitizer in the Treatment of Non-Small Cell Lung Cancer. *Pharmaceuticals*. 2023; 16: 219.
- Shaw JA, Meiring M, Snyders C, Everson F, Sigwadhi LN, Ngah V, Tromp G, Allwood B, Koegelenberg CFN, Iruken EM, Lalla U, Baines N, Zemlin AE, Erasmus RT, Chapanduka ZC, Matsha TE, Walzl G, **Strijdom H**, du Plessis N, Zumla A, Chegou N, Malherbe ST and Nyasulu PS (2023) Immunologic and vascular biomarkers of mortality in critical COVID-19 in a South African cohort. *Front. Immunol.* 2023; 14:1219097. doi: 10.3389/fimmu.2023.1219097
- Frias MA, Pagano S, Bararpour N, Sidibé J, Kamau F, Fétaud-Lapierre V, Hudson P, Thomas A, Lecour S, **Strijdom H** and Vuilleumier N. People living with HIV display increased anti-apolipoprotein A1 auto-antibodies, inflammation, and kynurenine metabolites: a case–control study. *Front. Cardiovasc. Med.* 2024; 11:1343361. doi: 10.3389/fcvm.2024.1343361
- Dinnie Y, Everson F, Kamau FM, Webster I, Kgokane N, De Boever P, Goswami N, and **Strijdom H**. The temporal relationship between body composition and cardiometabolic profiles in an HIV-infected (on ART) vs. HIV-free Western Cape study population. Submitted to: CVJA. Accepted for publication: February 2024.

RESEARCH GRANTS AND FUNDING:

- Total research funding of ≈ R30-million received as principal or co-investigator since 2004

	Description	Role	Year	Amount awarded
1.	MRC self-initiated research grant	Principal Investigator	2004-2006	R 120,000.00
2.	Cardiovascular Disease Research Fund	Co-investigator	2005-2007	R 160,000.00
3.	MRC self-initiated research grant	Principal Investigator	2007-2008	R 238,000.00
4.	NRF Focus Area Research grant	Principal Investigator	2007	R 151,000.00
5.	NRF Institutional Research Development Programme	Co-investigator	2009-2013	R 1,071,666.67
6.	MRC self-initiated research grant	Principal Investigator	2010-2012	R 390,000.00
7.	FINLO Medical Education grant	Co-investigator	2010	R 10,000.00
8.	NRF Competitive Support for Unrated Researchers grant	Principal Investigator	2014-2016	R 993,000.00
9.	European Union FP 7 ERAfrica Grant (Interfacing Challenges)	Principal Investigator	2014-2017	EUR 564,324.00
10.	Wellcome Trust Nutrition and Dietetics Grant	Co-investigator	2006	GBP 30,000.00
11.	Fondation Gustave et Simone Prévot, Switzerland	Co-investigator	2017-2019	CHF 40,300.00
12.	Fondation Ernst et Lucie Schmidheiny, Switzerland	Co-investigator	2017-2019	CHF 15,000.00
13.	Academic Consortium (AC) 21 Special Project Fund, Nagoya, Japan	Co-investigator	2020-2021	USD 9,533.00
14.	Erasmus+ KA 107 Call 2020 Award (Student and Staff Research exchange / mobility)	Co-lead	2020-2023	EUR 17,280.00
15.	NIH R21 Grant; Award Number: 1R21TW012185-01	Co-investigator	2022-2023	USD 302,336.00

16.	NIH / Fogarty International Centre R21 Grant; Grant Award Number: 1R21TW012358-01	Principal Investigator	2023-2024	USD 298,750.00
17.	NRF Support for Rated Researchers Grant; Award Number: SRUG2204234500	Principal Investigator	2023-2025	R 1,828,000.00
18.	NRF Equipment-related Travel and Training Grant (2024): ERT230728139176	Principal Investigator	2024	R 100,000.00
19.	Faculty of Medicine and Health Sciences High Level Research Assistant award	Host	2010-2012	R 100,000.00 p.a.
20.	Faculty of Medicine and Health Sciences Research Assistant award	Host	2014-2018	R 100,000.00 p.a.
21.	Faculty of Medicine and Health Sciences post-doctoral fellowship award	Host	2016-2018	R 180,000.00 p.a.
22.	Faculty of Medicine and Health Sciences post-doctoral fellowship award	Host	2019-2021	R 200,000.00 p.a.

PROFESSIONAL AND SCIENTIFIC SOCIETY MEMBERSHIP:

- Member: South African Heart Association
- Member: South African Society for Cardiovascular Research
- Member: Physiology Society of Southern Africa
- Member: European Society of Cardiology – Working Group on Cellular Biology of the Heart
- Member: European Society of Cardiology – Working Group on Atherosclerosis and Vascular Biology