

Prof Hans Strijdom

Research Record and Outputs

Peer-reviewed journal articles:

1. **Strijdom JG**, Marais BJ, Koeslag JH. Ascorbic acid causes spuriously low blood glucose measurements. *SAMJ* 1993; 83: 64 – 65.
2. Marais E, Genade S, **Strijdom J**, Moolman J, Lochner A. Activation of p38 MAPK induced by a multi-cycle ischaemia preconditioning protocol associated with attenuated p38 MAPK activity during sustained ischaemia and reperfusion. *J Mol Cell Cardiol* 2001; 33: 769 – 778.
3. Marais E, Genade S, **Strijdom H**, Moolman J, Lochner A. P38 MAPK activation triggers pharmacologically-induced beta-adrenergic preconditioning, but not ischaemic preconditioning. *J Mol Cell Cardiol* 2001; 33: 2157 – 2177.
4. **Strijdom H**, Genade S, Lochner A. Nitric oxide synthase (NOS) does not contribute to simulated ischaemic preconditioning in an isolated rat cardiomyocyte model. *Cardiovasc Drugs Ther* 2004; 18(2): 99 – 112.
5. **Strijdom H**, Muller C, Lochner A. Direct intracellular nitric oxide detection in isolated adult cardiomyocytes: flow cytometric analysis using the fluorescent probe, diaminofluorescein. *J Mol Cell Cardiol* 2004; 37(4): 897 – 902.
6. **Strijdom H**, Jacobs S, Hattingh S, Page C, Lochner A. Nitric Oxide production is higher in rat cardiac microvascular endothelial cells than ventricular cardiomyocytes in baseline and hypoxic conditions: A comparative study. *FASEB J.* 2006; 20(2): 314-316.
7. Lampiao F, **Strijdom H**, Du Plessis S. Direct nitric oxide measurement in human spermatozoa: flow cytometric analysis using the fluorescent probe, diaminofluorescein. *International Journal of Andrology* 2006; 29(5): 564 - 567.
8. Esterhuysen J, Van Rooyen J, **Strijdom H**, Bester D, Du Toit E. Proposed mechanism for red palm oil induced cardioprotection in a hyperlipidaemic perfused rat heart model. *Prostaglandins Leukot Essent Fatty Acids* 2006; 75(6):375-84.
9. Lampiao F, **Strijdom H**, Du Plessis SS. Reactive oxygen species measurement in human spermatozoa by flow cytometry using the fluorescent probe, 2',7'-dichlorofluorescein-diacetate (DCFH-DA). *Medical Technology SA* 2006; 20(2): 7-8.
10. Du Toit EF, Smith W, Muller C, **Strijdom H**, Stouthammer B, Woodiwiss AJ, Norton GR, Lochner A. Myocardial susceptibility to ischemic-reperfusion injury in a prediabetic model of dietary-induced obesity. *Am J Physiol Heart Circ Physiol.* 2008 May; 294(5): H2336-43.
11. **Strijdom H**, Friedrich SO, Hattingh S, Chamane N, Lochner A. Hypoxia-induced regulation of nitric oxide synthase in cardiac endothelial cells and myocytes and the role of the PI3-K/PKB pathway. *Mol Cell Biochem* 2009; 321: 23-35.

12. **Strijdom H**, Chamane N, Lochner A. Nitric oxide in the cardiovascular system: A simple molecule with complex actions (Review). *Cardiovasc J Africa* 2009; 20(5): 303 – 310.
13. **Strijdom H**, Lochner A. Cardiac Endothelium: More than just a barrier (Review). *SA Heart* 2009; 6: 174 – 185.
14. Lampiao F, **Strijdom H**, Du Plessis SS. Effects of sperm processing techniques involving centrifugation on nitric oxide, reactive oxygen species generation and sperm function. *The Open Andrology Journal* 2010; 2: 1-5.
15. Veliotos DG, Norton GR, Correia RJ, **Strijdom H**, Badenhorst D, Brooksbank R, Woodiwiss AJ. Impact of Aldosterone Receptor Blockade on the Deleterious Cardiac Effects of Adrenergic Activation in Hypertensive Rats. *J Cardiovasc Pharmacol* 2010; 56: 203-211.
16. Huisamen B, Pêrel SJC, Friedrich SO, **Strijdom H**, Lochner A. AngII receptor antagonism improves nitric oxide production, eNOS and PKB expression in hearts from a rat model of insulin resistance. *Mol Cell Biochem* 2010; 349: 21-31.
17. Mudau M, Genis A, Lochner A, **Strijdom H**. Endothelial Dysfunction – the early predictor of atherosclerosis. *Cardiovasc J Africa* 2012; 23(4): 222-231.
18. **Strijdom H**. Endothelial Dysfunction: are we ready to heed the vasculature's early-warning signal? (Editorial). *Cardiovasc J Africa* 2012; 23(4): 184-185.
19. Kelly-Laubscher R, Burger G, Davies N, Engelbrecht AM, Sliwa K, **Strijdom H**, Hausenloy D, Lecour S. 2nd South Africa – United Kingdom cardiovascular workshop: Highlighting cardiovascular research in South Africa. *Cardiovasc J Africa* 2012; 23(10): 572-573.
20. Chellan N, Joubert E, **Strijdom H**, Roux C, Louw J, Muller CJF. Aqueous extract of unfermented Honeybush (*Cyclopia maculata*) attenuates STZ-induced diabetes and β -cell cytotoxicity. *Planta Medica* 2014; 80: 622-629.
21. Nduhirabandi, F, Huisamen B, **Strijdom H**, Blackhurst D, Lochner A. Short-term melatonin consumption protects the heart of obese rats independent of body weight change and visceral adiposity. *Journal of Pineal Research* 2014; 57(3): 317-332.
22. Espach Y, Lochner A, **Strijdom H**, Huisamen B. ATM protein kinase signaling, type 2 diabetes and cardiovascular disease. *Cardiovascular Drugs and Therapy* 2015; 29(1): 51-58.
23. **Strijdom H**, De Boever P, Nawrot TS, Goswami N. HIV/AIDS: emerging threat to cardiovascular health in sub-Saharan Africa. *S Afr Med J* 2016; 106(6): 537.
24. Truter D, **Strijdom H**, Everson F, Kotzé SH. Mucin secreting cells in the stomach and colon are altered by combination antiretroviral treatment in an obese rat model. *Acta Histochem.* 2017; 119(2): 122-128.

25. Westcott C, Genis A, Mthethwa M, Graham R, Van Vuuren D, Huisamen B, **Strijdom H**. Fenofibrate protects against the harmful effects of TNF-alpha. SA Heart. 2017; 14: 22-34.
26. **Strijdom H**, De Boever P, Walzl G, Essop MF, Nawrot TS, Webster I, Westcott C, Mashele N, Everson F, Malherbe ST, Stanley K, Kessler HH, Stelzl E, Goswami N. 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 Infect Dis. 2017;17(1):41. doi:10.1186/s12879-016-2158-y.
27. Nduhirabandi F, Huisamen B, **Strijdom H**, Lochner A. Role of melatonin in glucose uptake by cardiomyocytes from insulin resistant wistar rats. Cardiovasc J Africa. 2017; 28: 1-9.
28. Nel S, **Strijdom H**, Genis A, Everson F, Van Wijk R, Kotzé SH. A histomorphometric study on the effects of antiretroviral therapy (ART) combined with a high-calorie diet (HCD) on aortic perivascular adipose tissue (PVAT). Acta Histochem. 2017; 119(5): 555-562.
29. Oyeyipo IP, Skosana BT, Everson FP, **Strijdom H** and Du Plessis SS. Highly active antiretroviral therapy alters sperm parameters and testicular antioxidant status in diet-induced obese male Wistar rats. Toxicol Res. 2017; 34(1): 1-8.
30. Thomas M, Davis T, Loos B, Sishi B, Huisamen B, **Strijdom H**, Engelbrecht AM. Autophagy is essential for the maintenance of amino acids and ATP levels during acute amino acid starvation in MDAMB231 cells. Cell Biochem Funct. 2018; 36: 65-79.
31. Truter D, Chellan N, **Strijdom H**, Webster I, Rawstorne J, Kotzé SH. Histomorphological changes in the pancreas, liver and kidney in male Wistar rats on antiretroviral therapy and melatonin treatment. Acta Histochem. 2018; 120(4): 347-355.
32. Everson FP, Genis A, Ogundipe TR, De Boever P, Goswami N, Lochner A, Blackhurst D, **Strijdom H**. Treatment with a fixed dose combination antiretroviral therapy drug containing tenofovir, emtricitabine and efavirenz is associated with cardioprotection in high calorie diet-induced obese rats. PLoS ONE. 2018; 13(12): e0208537. <https://doi.org/10.1371/journal.pone.0208537>
33. 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.
34. 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

35. 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
36. 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.
37. 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.
38. 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.
39. 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.
40. 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.
41. 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.
42. 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.
43. Marincowitz 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
44. 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.

45. 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.
46. 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.
47. 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.
48. 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.
49. 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.
50. 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.
51. 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.
52. 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.
53. 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.

54. Shaw JA, Meiring M, Snyders C, Everson F, Sigwadhi LN, Ngah V, Tromp G, Allwood B, Koegelenberg CFN, Irusen 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

55. 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

56. 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.**

57. Myburgh-Jacobsz CE, Botha-Le Roux S, Kotliar K, Wentzelm A, Jacobs A, De Boever P, Goswami N, **Strijdom H**, Smith W. Retinal vessel functional responses in South Africans living with and without HIV: The EndoAfrica-NWU study. Submitted to: *Microcirculation*, August 2023. **Under Review.**