

Chapter in book:

"Endothelial Dysfunction: Risk Factors, Role in Cardiovascular Diseases and Therapeutic Approaches. Title of chapter: Attenuation of eNOS-NO biosynthesis, up-regulation of antioxidant proteins and differential protein regulation in TNF-alpha-treated cardiac endothelial cells: Early signs of endothelial dysfunction (2014)". ISSN/ISBN Number: 978-1-63321-203-9. First author

Peer Reviewed Publications:

Baseline predictors of vascular and endothelial outcomes at 18-month follow-up in people living with HIV: Results from the EndoAfrica study. Strijdom, H, Goswami, N. De Boever, P, Webster, I, Genis, A, Everson, F. *Atherosclerosis*. 2023; 379: S154. 91st European Atherosclerosis Society Congress, Mannheim, Germany, 21-24 May 2023.

Recombinant Endostatin as a Potential Radiosensitizer in the Treatment of Non-Small Cell Lung Cancer. C Cunningham, J Bolcaen, A Bisio, A Genis, H Strijdom, C Vandevoorde. *Pharmaceuticals* 16 (2022), 219

Long-chain free fatty acids inhibit ischaemic preconditioning of the isolated rat heart. A Lochner, S Genade, A Genis, E Marais, R Salie. *Molecular and Cellular Biochemistry* 473 (1), 111-132 (2020).

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. Everson, F., Genis, A., Ogundipe, T., De Boever, P., Goswami, N., Lochner, A., Blackhurst, D. and Strijdom, H. *PloS one*, 13(12), p.e0208537 (2018).

Vascular endothelial dysfunction in the wake of HIV and ART. Marincowitz, C., Genis, A., Goswami, N., De Boever, P., Nawrot, T.S. and Strijdom, H. *The FEBS Journal* (2018).

Endothelial dysfunction in aortic and cardiac microvascular endothelial cells: The heterogeneous response to the pro-inflammatory cytokine, tumor necrosis factor-alpha (TNF- α). M Mthethwa, A Genis, C Westcott, H Strijdom. *Atherosclerosis* 275, e125 (2018).

Investigating endothelial dysfunction as a pathophysiological consequence of HIV- infection and anti-retroviral treatment. A Genis, TP Ogundipe, C Marincowitz, H Strijdom. *Cardiovascular Research* 114, S43-S43 (2018).

A histomorphometric study on the effects of antiretroviral therapy (ART) combined with a high-calorie diet (HCD) on aortic perivascular adipose tissue (PVAT). S. Nel, H. Strijdom, A. Genis, F. Everson, R. Van Wijk and S.H. Kotzé. *Acta Histochemica*; Volume 119, Issue 5, June 2017, Pages 555-562 (2017).

Investigating the cardiovascular effects of antiretroviral drugs in a lean and high fat/sucrose diet rat model of obesity. Genis, A; Everson, FP; Ogundipe, T; Grandjean, T; De Boever, P; Goswami, N and Strijdom, H. *Cardiovascular Research*; Volume: 111, Pages: S74-S75, Supplement: 1 (2016).

Cardiometabolic and vascular effects of treatment with a fixed-dose combination anti- retroviral drug containing nucleoside and non-nucleoside reverse transcriptase inhibitors (NRTI's and NNRTI's) in adult rats. Strijdom, H; Goswami, N; De Boever, P; Westcott, C; Ogundipe, T; Everson, F and Genis, A. *Atherosclerosis*; Volume: 252, Pages: E166- E166 (2016).

Obesity and insulin resistance are not associated with endothelial dysfunction in rat aortas. H Strijdom, D Loubser, A Genis, C Westcott, M Mthethwa, S Smit. *Cardiovascular Research* 103 (2014).

Short term fenofibrate treatment increases nitric oxide production in cardiac endothelial cells through a nitric oxide synthase-independent mechanism. C Westcott, A Genis, M Mthethwa, H Strijdom. *Cardiovascular Research* 103 (2014).

DPP-4 inhibition is cardioprotective and restores pancreatic function in obese, insulin resistant rats. Huisamen, B; Genis, A; Marais, E and Strijdom, H. *Cardiovascular Research*. Volume: 103, Supplement 1 (2014).

Endothelial dysfunction: the early predictor of atherosclerosis. Mudau M, Genis A, Lochner A, Strijdom H. *Cardiovasc J Afr*: 23(4):222-31 (2012).

Pre-treatment with a DPP-4 inhibitor is infarct sparing in hearts from obese, pre-diabetic rats. Huisamen B, Genis A, Marais E, Lochner AC. *Cardiovasc Drugs Ther*; Feb;25(1):13-20 (2011).

Dexamethasone-induced cardioprotection: a role for the phosphatase MKP-1? Fan WJ, Genade S, Genis A, Huisamen B, Lochner A. *Life Sci*: 5;84(23-24):838-46 (2009).

Melatonin receptor-mediated protection against myocardial ischaemia/reperfusion injury: role of its anti-adrenergic actions. Genade S, Genis A, Ytrehus K, Huisamen B, Lochner A. *Journal of Pineal Research*. 45: 449–458 (2008).

Postconditioning the isolated working rat heart. Van Vuuren D, Genis A, Genade S, Lochner A. *Cardiovasc Drugs Ther*; 22: 391(2008).

A role for the RISK pathway and K-ATP channels in pre- and post-conditioning induced by levosimendan in the isolated guinea pig heart. Du Toit EF, Genis A, Opie LH, Pollesello P, Lochner A. *Br J Pharmacol.*: 154:41-50 (2008).

Insulin paradoxically protects the rat heart during low-flow ischaemia via cAMP, but not PI3K, while blunting pathological signals from the β -AR and PKA. J Lopes, A Genis, A Lochner, B Huisamen. *Cardiovascular Journal of Africa* 11 (con 1) (2008).

Levosimendan, a new antifailure inodilator, has cardioprotective properties mediated by mitochondrial K-ATP channels. EF Du Toit, A Genis, P Pollesello. *J Mol Cell Cardiol* (2007).

Pharmacological pre-and post-conditioning: A role for levosimendan in the isolated guinea pig heart. EF du Toit, A Genis, S Genade, LH Opie, P Pollesello, A Lochner. *Journal of Molecular and Cellular Cardiology* 42, S176-S176 (2007).

Conferences:

International Conferences

Refereed:

Frontiers in Cardiovascular Biology, Amsterdam, Netherlands (2024). The effects of HIV-1-proteins and antiretroviral therapy on aortic endothelial cells (AECs). A mechanistic in vitro approach. *Cardiovascular Research*, Volume 120, Issue suppl_1, 1 May 2024, <https://doi.org/10.1093/cvr/cvae088.214>.

Frontiers in Cardiovascular Biology, Vienna, Austria (2018). Investigating endothelial dysfunction as a pathophysiological consequence of HIV-infection and anti-retroviral treatment. Cardiovascular Research, Volume 114, Issue suppl_1, 1 April 2018, Pages S43, <https://doi.org/10.1093/cvr/cvy060.124>.

Frontiers in Cardiovascular Biology, Florence, Italy (2016). "Investigating the cardiovascular effects of antiretroviral drugs in a lean and high fat/sucrose diet rat model of obesity". Cardiovascular Research, Volume: 111, Supplement: 1 (S74-S75), Abstract: 418.

79th European Atherosclerosis Society Congress, Gothenburg, Sweden (2011). "Effects of low-dose TNF- α administration on oxidative/nitrosative stress: the Akt/eNOS/NO pathway and viability in cardiac endothelial cells". Atherosclerosis Supplements 2011; 12(1): 68.

20th World Congress of the ISHR 2010. Kyoto, Japan (2010). "Protein phosphatase 2A (PP2A) in myocardial ischaemia/reperfusion injury". JMCC, supplements, S163, P-3-28-2, S163.

20th World Congress of the ISHR 2010. Kyoto, Japan (2010). "Tumor necrosis factor (TNF)- α induces endothelial dysfunction (ED) in cultured cardiac microvascular Endothelial Cells (CMECs), by downregulation of the PKB/Akt-eNOS signaling pathway". JMCC, supplements, S94, P-2-21-3.

[?]