

**CURRICULUM VITAE
OF
DR. GERALD JEROME MAARMAN**

CARMA: CENTRE FOR CARDIO-METABOLIC RESEARCH IN AFRICA
STELLENBOSCH UNIVERSITY
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WORK & EDUCATION/QUALIFICATIONS

LECTURER: Medical Physiology

NRF RATED RESEARCH: NRF Y-2 Rated researcher

Principal Investigator – Biomedical Sciences, University of Stellenbosch (currently)

Research Manager - Desmond Tutu TB Centre (DTTC), University of Stellenbosch

Postdoctoral research fellow - University of Cape Town, South Africa (2014-2016)

Ph.D. (Medicine) – University of Cape Town, South Africa (2011-2014)

MSc. (Medical Physiology) – University of Stellenbosch, South Africa (2008-2010)

BSc. Hons. (Medical Physiology) – University of Stellenbosch, South Africa (2008)

BSc. (Functional Human Biology) - University of Stellenbosch, South Africa (2004-2007)

Matric – National Certificate (Grade 12) – South Africa (2002)

SUPERVISION OF POSTGRADUATE STUDENTS

2018-currently

- SUPERVISOR
- MSc.
- Miss. Pamela Sithelo
- Registration: January 2018
- Anticipated graduation date: December 2019

2015

- CO-SUPERVISOR
- Hons.BSc.Med.Sci.
- Miss. Brittany Andrew
- Registration: January 2015
- Graduated: December 2015

2015

- CO-SUPERVISOR
- Hons.BSc.Med.Sci.
- Miss. Prisca Osiki
- Registration: January 2015
- Graduated: December 2015

2016-2018

- CO-SUPERVISOR
- Ph.D.
- Miss. Siddiqah George
- Registration: January 2015
- Anticipated graduation date: March 2019

RESEARCH INTEREST

Underlying mechanisms of pulmonary arterial hypertension and heart failure in the context of infectious diseases (TB and HIV)

PUBLISHED PAPERS

1. **MAARMAN G**, Natural antioxidants as potential therapy, and a promising role for melatonin against pulmonary hypertension, **BOOK CHAPTER**, Springer, Y.-X. Wang, Editor. 2017, DOI: 10.1007/978-3-319-63245-2
2. **MAARMAN G**, **EDITORIAL** to: "Discovery of a Murine Model of Clinical Pulmonary Arterial Hypertension: Mission Impossible?" by Dai and Zhao, *Trends in Cardiovascular Medicine*, 2017. **27**(4): p. 237-238
3. **MAARMAN G**, Schulz R, Sliwa K, Schermuly R, Lecour S, Novel putative pharmacologic therapies to protect the right ventricle in pulmonary hypertension: A review of current literature, *British Journal of Pharmacology*, 2017. **174**(7): p. 497-511.
4. **MAARMAN G**, Blackhurst D, Blauwet L, Thienemann F, Butrous G, Davies N, Sliwa K, Lecour S, Melatonin as a preventive and curative therapy against pulmonary hypertension, *Journal of Pineal Research*, 2015. **59**(3): p. 343-353.
5. **MAARMAN G**, Mendham A, Madlala H, Ojuka E, Reviewing the excessive consumption of fructose-containing dietary sugars: An emerging threat for Africa? *Journal of African Association of Physiological Sciences*, J. Afr. Ass. Physiol, 2016. **4**(2): p. 71-80.
6. **MAARMAN G**, Andrew B, Blackhurst D and Ojuka E, Melatonin protects against uric acid-induced mitochondrial dysfunction, oxidative stress and triglyceride accumulation in C₂C₁₂ myotubes, *Journal of Applied Physiology*, 2017. **122**(4): p. 1003-1010.
7. MADLALA H, **MAARMAN G**, Ojuka E, Fructose-induced production of reactive oxygen species in skeletal muscle: Possible roles of uric acid and transforming growth factor, *Nutrition Reviews*, 2016. **74**(4): p. 259-266.
8. Ojuka E, Bezuidenhout N, George S, **MAARMAN G**, Madlala HP, Mendham A and Osiki P, Measurement of beta oxidation capacity of biological samples by respirometry: A review of principles and substrates, *Am J of Physiol Endocrinol Metab*, 2016. **310**(9): p. E715-E723.
9. Webster I, Salie E, Marais E, **MAARMAN G**, Huisamen B and Lochner A, Myocardial susceptibility to ischaemia/reperfusion in obesity: a re-evaluation of the effects of age, *BMC Physiology*, 2017. **17**(1): p. 3.
10. **MAARMAN G**, Mendham AE, Lamont K and George C, A review of the causal role of fructose-containing sugars in myocardial susceptibility to ischemia/reperfusion injury: Interrogation of current evidence from in vivo and in vitro studies, *Nutrition Research*, 2017. **42**: p. 11-19.
11. **MAARMAN G** and Lamont-Mbawuli K, A review of challenges in South African education and possible ways to improve educational outcome as suggested by decades of research, *Africa Education Review*, <http://dx.doi.org/10.1080/18146627.2017.1321962>, 2017
12. Kriel JA, Müller-Nedebock K, **MAARMAN G**, Ojuka E and Loos B, Coordinated autophagy modulation overcomes glioblastoma chemoresistance through disruption of mitochondrial bioenergetics, *Nature Scientific Reports*, 10348 (2018), July 2018
13. Kelly-Laubscher R.F, King J.C, Hacking D, Somers S, Pedretti S, **MAARMAN G** and Lecour S, Preconditioning with sphingosine-1-phosphate requires activation of signal transducer and activator of transcription-3, *Cardiovascular Journal of Africa*; 2014; **25** (3):118-123
14. **MAARMAN G**, Lecour S, Butrous G, Thienemann F and Sliwa K, A comprehensive review: the evolution of animal models in pulmonary hypertension research; are we there yet? *Pulmonary Circulation*, Vol. 3, No. 4, pp. 739-756, December 2013
15. **MAARMAN G**, Marais E, Lochner A, Du Toit EF, Effect of Chronic CPT-1 Inhibition on Myocardial Ischemia-Reperfusion Injury (I/R) in a Model of Diet-Induced Obesity, *Cardiovascular Drugs and Therapy*; 3:205-216, 2012
16. **MAARMAN G**, and Reiter RJ, Melatonin therapy for blunt trauma and strenuous exercise: A mechanism involving cytokines, NFκB, Akt, MAFBX and MURF-1, *Journal of Sports Sciences*, 10.1080/02640414.2018.1424491, 2018
17. MADLALA H, **MAARMAN G**, Ojuka E, Fructose impairs mitochondrial respiration and substrate utilization in hepatocytes via the enzyme, glutamate oxaloacetate transaminase, *Integrative Food, Nutrition and Metabolism* 5, DOI: 10.15761/IFNM.1000228, December 2018
18. Nduhirabandi F and **MAARMAN G**, The role of melatonin in heart failure: A promising strategy? *Molecules*, 23(7). pii: E1819. doi: 10.3390/molecules23071819, July 2018
19. Allwood B and **MAARMAN G**, Kyriakakis C, Doubell A, Post-tuberculosis lung disease and long-term complications in South Africa: A link with pulmonary hypertension and a premise for clinical

investigation, Letter to Editor, South African Medical Journal, vol.108 n.7, doi.org/10.7196/samj.2018.v108i7.13359, August 2018

20. Sloot R, **MAARMAN G**, Osman M, Marx F, Variation in HIV prevalence and the population-level effects of antiretroviral treatment for reducing tuberculosis incidence in South Africa, Letter to the Editor, *South African Medical Journal*, 108(8):606. DOI:10.7196/SAMJ.2018.v108i8.13394, July 2018
21. **MAARMAN G**, Pulmonary arterial hypertension and the potential roles of metallothioneins: A focused review, *Life Sciences*, 1;214:77-83. doi: 10.1016/j.lfs.2018.10.039, December 2018
22. **MAARMAN G**, Cardioprotection conferred by rooibos (*Aspalathus linearis*): A mini review to highlight a potential mechanism of action, *South African Journal of Science*, 115 (7/), <https://doi.org/10.17159/sajs.2019/4653>, August 2019
23. **MAARMAN G**, Ischemia-reperfusion injury and the roles of excess fructose: The effects on the heart and other organs, **BOOK CHAPTER**, *Elsevier*, August 2019
24. **MAARMAN G**, The right ventricle in pulmonary hypertension: roles of mitochondrial reactive oxygen species and mitochondria-targeted antioxidants, **BOOK CHAPTER**, *Springer*, August 2019
25. **MAARMAN G**, Making a case for metallothioneins conferring cardioprotection in pulmonary hypertension, *Medical Hypotheses*, January 2020

ACCEPTED FOR PUBLICATION

1. Estelle Piwowar-Manning, Jessica Fogel Denni Lennon, Philip Sullivan, Yaw Agyei, Deborah Donnell, Ethan Wilson, Peter Bock, Sian Floyd, Anneen van Deventer, Barry Kosloff, Ayana Moore or Sam Griffith, Alexis Katsis, and **MAARMAN G**, Gert van Zyl, Nomtha Mandla, Rosa Sloot, Helen Ayles, Richard Hayes, Sarah Fidler, Impact of ART exposure on HIV rapid test sensitivity, and delineation of other contributing factors: Findings from the HPTN 071 (PopART) population cohort, *JAIDS*, Accepted, August 2020.

UNDER PEER REVIEW

2. Lamont K, Klipstein-Grobusch K, Ojii D, Pretorius S, **MAARMAN G**, van Niekerk R, Stewart S, Sliwa K, Reliable Equitable Accessible Convenient Health Utilising SMS (REACH US): Dissemination of health information among pregnant women in Soweto, South Africa, *Telemedicine & eHealth*, under peer review, August 2019.
3. **MAARMAN G**, J Shaw, B Allwood, Pulmonary Hypertension in majority countries, *Current Opinion in Pulmonary Medicine*, January 2020
4. **MAARMAN G** and Lecour S, Time to explore the therapeutic potential of Rooibos (*Aspalathus linearis*) against experimental pulmonary arterial hypertension? *Nutrition*, January 2020
5. **MAARMAN G** and Lecour S, Melatonin against pulmonary arterial hypertension: is it ready for testing in the patients? *Journal Pineal Research*, January 2020

IN PREPARATION

1. **MAARMAN G**, Sithelo P, Blignaut M, Windvogel S, Huisamen B, Marais E, Strijdom H, Rooibos (*Aspalathus linearis*) induced cardioprotection is underpinned by cardiac mitochondrial pathways: what is missing and what is the way forward? January 2020
2. **MAARMAN G**, The role of the microbiome in pulmonary hypertension: Is melatonin a role player? January 2020
3. Sithelo P, Lopes J, Strijdom H, Marais E and **MAARMAN G**, Rooibos induced cardioprotection in a H9C2 model of angiotension-II induced hypertrophy and apoptosis mediated via mitochondrial pathways, December 2020