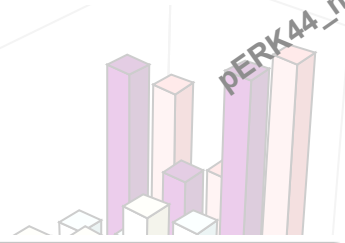
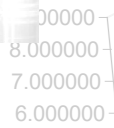
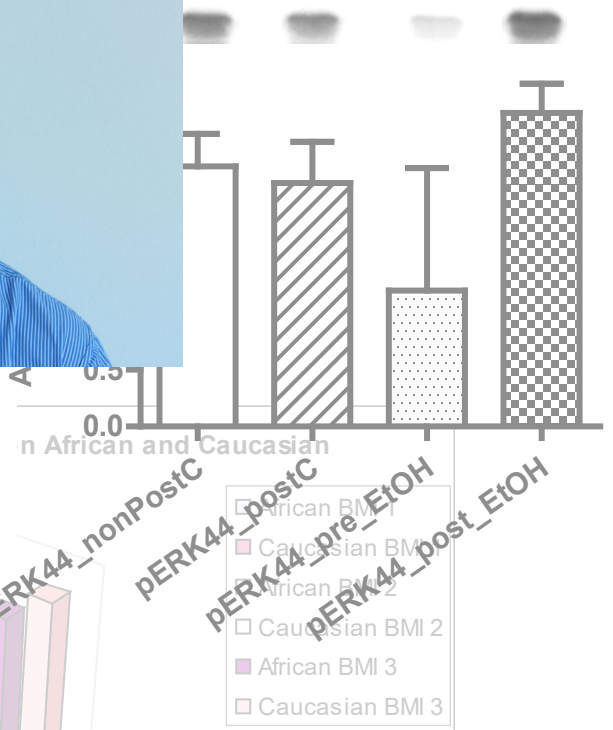
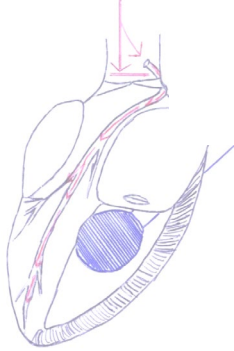


Derick van Vuuren

Curriculum Vitae



Caucasian BMI 3



T02S01
Muscle Physiology
by
Dr van Vuuren

T02S01 Muscle Physiology by Dr van Vuuren.mp4

T02S02
Muscle Physiology
by
Dr van Vuuren

T02S02 Muscle Physiology by Dr van Vuuren.mp4

Derick van Vuuren

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(021) 938 9390

E-mail address: dvvuuren@sun.ac.za

Current positions:

- Senior lecturer within the Division of Medical Physiology, Faculty of Medicine and Health Sciences.
- Resident Head for eNkanyini, within the Centre for Student Communities.

Personal details

- Date of birth : 21 September 1983
- Nationality : South African
- Mother tongue : Afrikaans
- Other language : English
- Driver's licence : 08 (B)
- Marital status : Married

Education

Undergraduate training

- Matriculated in 2001 at the Hoër Volksskool, Potchefstroom, with the following subjects:
 - Afrikaans (HG*, with distinction)
 - English (HG, with distinction)
 - Mathematics (HG)
 - Science (HG)
 - Computer Science (HG, with distinction)
 - Biology (HG, with distinction).
- Obtained a *Baccalareus Scientiae* degree in 2004, with majors in Physiology and Biochemistry (this degree was obtained *Cum Laude*).

* HG: Higher Grade

Graduate training

- Completed a course in laboratory animal handling at the North-West University (2005).
- In 2005 I also completed a B.Sc. Honours in Physiology (*Cum Laude*); with a cardiovascular focus.
- In March 2008 I received a Master (M.Sc.) of Medical Physiology degree, which I completed *Cum Laude* at the end of 2007 at the department of Biomedical Sciences, Faculty of Health Sciences, Stellenbosch University.
- In April 2014 I received a PhD degree in the Division of Medical Physiology. The title of my thesis was “**The role and importance of Protein Phosphatase 2A (PP2A) in myocardial ischaemic / reperfusion injury**”.

Employment history

- I worked as a practical demonstrator at the School for Physiology, Nutrition and Consumer Sciences (North-West University) in my third, as well as honours year (2004 – 2005).
- In 2010 I was appointed as a Junior Lecturer within the Division of Medical Physiology (Stellenbosch University).
- At the end of 2014 I was promoted to Lecturer within the Division of Medical Physiology.
- From the beginning of 2017 I was appointed as Residence Head for Huis Kerkenberg, a residence on Tygerberg Campus.
- In 2019 I was promoted to Senior Lecturer within the Division of Medical Physiology.
- I have recently (Nov/Dec 2020) been seconded to be the MBChB Program Coordinator within the Faculty of Medicine and Health Sciences, Stellenbosch University.

Achievements

- Served on the student council of the Hoër Volksskool, Potchefstroom (2001).
- Matriculated with distinctions in the following subjects: Afrikaans, English, Computer Science and Biology.
- The following achievements were obtained on undergraduate level:
 - Second best academic achievement in Physiology I (2002).
 - Best academic achievement in Physiology II (2003).
 - Best achievement in Biochemistry, level 2 (2003).

- Second best academic achievement in the Faculty of Health Sciences in the second year (2003).
 - Best academic achievement in Physiology III (2004).
 - Best achievement in the final study year for the degree B.Sc. in the Faculty Health Sciences (2005).
- On graduate level the following accolades were obtained:
 - In my honours year I was the best academic achiever in Physiology (2005).
 - At the 2007 Academic Yearday of the Faculty of Health Sciences, Stellenbosch University, I received the prize for best oral presentation in the basic science category.
 - I was awarded the 3rd prize in the 2007 Cyril Wyndham Competition for young researchers, at the 35th Annual Conference of the Physiology Society of Southern Africa (PSSA).
 - In 2011 and 2014 I was awarded the Rector's award for general performance.

Research experience

- Worked as a research assistant at the School for Chemistry and Biochemistry (North-West University) during the June – July holiday, 2003.
- I have an extensive record of applying for funding – both in terms of bursaries during my postgraduate studies, as well as research grants. In 2014 I attended a workshop on applying for research funding hosted by the Division of Research Development in order to up-skill myself in this regard. The following are significant funds which I either assisted in applying for (while I was a PhD student), or applied for as Primary Investigator:

Year applied	Source of funding
2009	Medical Research Council of South Africa: Self-Initiated Research.
2009	National Research Foundation of South Africa: Institutional Research Development Programme.
2014	National Research Foundation: KIC Scientific Events Grants/Travel Grants.
2016	National Research Foundation: Taiwan / South African Research Cooperation Programme

- In 2009 I acquired the help of a research assistant to help me with my PhD work. This gave me the opportunity to gain some experience in project, and research team management.
- Since 2014 I have interacted with and collaborated to different degrees with researchers at several institutions: the Division of Medical Pathology here in Tygerberg Hospital, Physiological Sciences on Stellenbosch Campus, North West University, University of Cape Town and Academia Sinica in Taipei.

Research outputs

According to Google Scholar my current h-index is 5.

Publications in peer-reviewed scientific journals:

1. Schutte AE, Van Vuuren D, Van Rooyen JM, Huisman HW, Schutte R, Malan L, Malan NT. Inflammation, obesity and cardiovascular function in African and Caucasian women from South Africa: the POWIRS study. *J Human Hypertension* 2006; 20(11):850-859.
2. Van Vuuren D, Genis A, Genade S, Lochner A. Postconditioning the isolated working rat heart. *Cardiovasc Drugs Ther.* 2008; 22:391-397.
3. Van Vuuren D, Lochner A. Ischaemic postconditioning: from bench to bedside... *Cardiovasc J Africa.* 2008 Nov/Dec; 19(6):311-320.
4. Fan WJ, Van Vuuren D, Genade S, Lochner A. Kinases and phosphatases in ischaemic preconditioning: a re-evaluation. *Basic Res Cardiol.* 2010; 105:495–511.
5. Van Vuuren D, Marais E, Genade S, Lochner A. The differential effects of FTY720 on functional recovery and infarct size following myocardial ischaemia/reperfusion. *Cardiovasc J Africa.* 2016; 27(6):375-386.
6. Westcott C, Genis A, Mthethwa M, Graham R, Van Vuuren D, Huisamen B, Strijdom H. Fenofibrate protects endothelial cells against the harmful effects of TNF-alpha. *SA Heart.* 2017; 14(1):22-34.
7. Patten VA, Chabaesele I, Sishi B, Van Vuuren D. Cardiomyocyte differentiation: Experience and observations from 2 laboratories. *SA Heart.* 2017; 14(2):96-107.

Published conference proceedings:

Van Vuuren D, Westcott C, Lochner A. Protein phosphatase 2A is not involved in myocardial ischaemia/reperfusion injury... or is it? *Journal of the South African Heart Association.* 2009; 6(4):298.

Peer-reviewed published conference proceedings:

1. Van Vuuren D, Westcott C, Lochner A. Protein phosphatase 2A (PP2A) in myocardial ischaemia/reperfusion injury. *Journal of Molecular and Cellular Cardiology*. 2010; 48:S163.
2. Van Vuuren PA, Van Vuuren D. Automatic infarct planimetry by means of swarm-based clustering. Published in the Proceedings of the 2014 PRASA, RobMech and AfLaT International Joint Symposium. 2014; 43-48.

Oral presentations at international workshops:

1. Van Vuuren D, Westcott C, Lochner A. Protein phosphatase 2A (PPA2): a dark horse in cardiac ischaemia/ reperfusion. Oral presentation at the 1st Joint UK-SA Cardiovascular Research Workshop, held in London, United Kingdom, 6 December 2010.
2. Van Vuuren D, Genade S, Lochner A. Chasing the ghost: Application of pharmacological tools to investigate Protein Phosphatase 2A in myocardial ischaemia / reperfusion injury. Oral presentation at the 2nd Joint UK-SA Cardiovascular Research Workshop, hosted by the University of Cape Town, 16-17 August 2012.

Invited plenary presentation:

Van Vuuren D. Protein Phosphatase 2A: The black sheep in cardioprotection. Invited "Young Researcher" oral presentation at the Annual SA Heart Congress, held in Durban, South Africa, 16-19 October 2014.

Contributions at local scientific meetings:

1. Van Vuuren D, Genade S, Moolman JA, Lochner A. Characterizing postconditioning in the isolated rat heart: comparing retrograde perfusion and the working heart. Poster at the 34th Meeting of the Physiology Society of Southern Africa held at the University of KwaZulu-Natal, Durban, South Africa, 26-29 September 2006.
2. Van Vuuren D, Genade S, Moolman JA, Lochner A. Postconditioning in the isolated rat heart: characterization and implementation. Oral presentation at the 35th Meeting of the Physiology Society of Southern Africa hosted by the University of the Witwatersrand, Johannesburg, South Africa, 9-12 September 2007.
3. Van Vuuren D, Genade S, Lochner A, Moolman JA. Cardiac postconditioning: The role of the signal transduction kinases. Oral presentation at the 2007 Annual Academic Yearday of the Faculty of Health Sciences, Stellenbosch University.
4. Van Vuuren D, Lochner A, Moolman JA. Postconditioning the isolated rat heart: characterization and implementation. Oral presentation at the MRC Research Day organised by the MRC in Cape Town, South Africa, 18 October 2007.

5. Van Vuuren D, Genade S, Lochner A. Cardiac postconditioning: the role of the signal transduction kinases. Oral presentation at the 9th Annual AstraZeneca Research Day held at the University of Cape Town, Cape Town, South Africa, 14 February 2008.
6. Van Vuuren D, Westcott C, Lochner A. Protein phosphatase 2A in myocardial ischaemia/reperfusion injury. Poster presentation at the 37th Annual Congress of the Physiology Society of Southern Africa, hosted by the Division of Medical Physiology, Stellenbosch University, South Africa, 7-9 September 2009.
7. Van Wyk N, Van Vuuren D, Lochner A. The effect of PP1 and PP2A inhibition on insulin-mediated cardioprotection during ischaemia/reperfusion. Oral presentation at the 38th Annual Conference of the Physiology Society of Southern Africa, held in East London, South Africa, 27-29 September 2010.
8. Westcott C, Van Vuuren D, Lochner A. Protein phosphatase 2A (PP2A) inhibition and its effect on myocardial ischaemia/reperfusion injury. Poster presentation at the 38th Annual Conference of the Physiology Society of Southern Africa, held in East London, South Africa, 27-29 September 2010.
9. Van Vuuren D, Westcott C, Lochner A. Protein Phosphatase 2A in cardiac ischaemia/reperfusion: a negative regulator of survival. Oral presentation at the 39th Conference of the Physiological Society of Southern Africa, hosted by the University of the Western Cape, 28-31 August 2011.
10. Burger L, Van Vuuren D, Lochner A. FTY720: To activate or not to activate – that is the question? Oral presentation at the 39th Conference of the Physiological Society of Southern Africa, hosted by the University of the Western Cape, 28-31 August 2011.
11. Rowe-Setz G, Van Vuuren D. Protein Phosphatase 2A (PP2A) and its importance in myocardial ischaemia/reperfusion injury. Oral presentation at the 40th Conference of the Physiological Society of Southern Africa, hosted by the University of Stellenbosch, 11-13 September 2012.
12. Smith T, Van Vuuren D, Westcott C, Strijdom H. The effect of combined fenofibrate and simvastatin treatment on myocardial ischaemia/reperfusion injury. Poster presentation at the 58th Annual Academic Day of the Faculty of Medicine and Health Sciences, Stellenbosch University, 13 August 2014.
13. Patten VA, Van Vuuren D. Characterization of H9c2 cells: Their sensitivity to simulated ischaemia and their capacity for differentiation. Annual Department of Biomedical Sciences Research Day, held in the Faculty of Medicine and Health Sciences, Stellenbosch University, on the 25th of November 2015.

14. Maumela L, Lopes J, Van Vuuren D. The effect of ischaemia on the protein phosphatases: Comparing heart and cancer cells. Oral presentation at the 45th Conference of the Physiological Society of Southern Africa, hosted by the University of Pretoria, 27-31 August 2017.
15. Patten VA, Van Vuuren D, Engelbrecht A-M. The effect of hypoxia on Protein Phosphatase 2A (PP2A) in an immortalised breast cancer cell line. Poster presentation at the 45th Conference of the Physiological Society of Southern Africa, hosted by the University of Pretoria, 27-31 August 2017.
16. White C, Van Vuuren D. Relooking at sodium orthovanadate: an inhibitor of the serine/threonine phosphatase, PP2A. Oral presentation at the 47th Conference of the Physiological Society of Southern Africa, hosted by Walter Sisulu University, 18-21 August 2019.
17. White C, Maumela L, Melvin J, Van Vuuren D. Protein Phosphatase 2A and protein dephosphorylation in the response of the heart to ischaemia/reperfusion. Oral presentation at the annual SA Heart congress held in Sandton between 31 October and 3 November 2019.

Postgraduate supervision experience

I have served as primary supervisor to several students who have already graduated:

Student Name	Degree	Year degree obtained
N van Wyk	Honours	2010
L Burger	Honours	2011
G Rowe-Setz	Honours	2012
SW Labuschagne	Honours	2013
T Smith	Honours	2014
V Patten	Honours	2015
L Maumela	Honours	2016
V Patten	MSc	2018
D de Agrela	Honours	2018
J Melvin	Honours	2019
V Patten	MSc	2018
L Maumela	MSc	2020
C White	PhD	2020

I am also currently co-supervising several students:

Student Name	Degree	Anticipated year that degree will be obtained
S Matyesini	MSc	2021
NF Sangweni	PhD	2021
K Howard	PhD	2023

Teaching experience

- I worked as a demonstrator at the School for Physiology, Nutrition and Consumer Sciences (North-West University) in my third, as well as honours year (2004 – 2005).
- In 2010 I was appointed as a permanent junior lecturer at the Division of Medical Physiology, Faculty of Health Sciences, Stellenbosch University. My lecture load includes the following topics: cell physiology, muscle physiology, metabolism, endocrinology and muscle actions. I have lectured different components of these topics to Dentistry I, MB,ChB I, II and III, as well as Dietetics I and II, as well as Physiotherapy and Occupational Therapy II.
- Since 2010 I have also been involved in the training of B.Sc. honours students in our division. Up to date I have been the primary supervisor for 9 honours students.
- In November 2014 I was appointed as a lecturer in the Division of Medical Physiology. Currently I am involved in lecturing physiology to Dietetics I and Occupational Therapy I, as well as MB,ChB II and III.
- Since 2015 I have also been involved as Internal Supervisor for the electives of several MB,ChB IV and V students.
- I have served a term of 5 years as an external examiner for three modules (Human Biology 1006, 1007 and 1011) in the first year of MB,ChB at the University of Cape Town.
- I have experimented with and applied approached to teaching reliant on the use of Blended Teaching technologies. In 2016 I presented my experiences at the Scholarship of Teaching and Learning Conference of Stellenbosch University:
 - Van Vuuren D. Flipping the classroom: Initial reflections on Physiology in MB,ChB II. (*Oral*)
 - Van Vuuren D. It's all about communication: Using SUNLearn to enhance structure and communication. (*Poster*)
- In 2019 I was promoted to senior lecturer within the Division of Medical Physiology and currently lecture to Dietetics I and Occupational Therapy I, as well as MB,ChB II.

Training and personal development

- As part of my training as a teacher I attended a short course on assessment in higher education in 2011 (part of the Quality Teaching in Higher Education Programme).
- At the beginning of 2013 I completed the Predac introduction to teaching and learning at Stellenbosch University.
- I have also attended numerous other shorter courses on various topics, such as interactive and effective undergraduate teaching (2011) and metacognition in undergraduate teaching (2013).
- In August 2014 I completed a course on Blended Learning. I have experimented with and applied this approach extensively in my teaching.
- Last year (2017) I participated in the Faculty of Medicine and Health Sciences' Leadership Development Programme.
- Earlier this year (2020) I completed a short course on project management (Principles and Practices of Project Management) which was presented by the Stellenbosch University Business School.

Administration and management in teaching

- Since the end of 2013 I have become a member of the MB,ChB Program Committee. In this capacity I have participated in several initiatives addressing the management of modules in the MB,ChB program, as well as investigating the student experience on the Tygerberg campus.
- From 2017 until 2019 I served on the MB,ChB Assessment Quality Improvement subcommittee of the Program Committee.
- Since 2015 I have also shared the responsibility with a colleague, Prof H Strijdom, of serving as phase chair for the theory phase in the MB,ChB Program. Currently I am the chair for Year 2 in the MB,ChB Program.
- For the past five years I have managed the training exposure of the honours students in to the research activities of the Cardiovascular Research Group in our division.
- I am currently the chairperson of three undergraduate modules: The Digestive System 271 (MB,ChB II), Physiological Biochemistry (Dietetics I) and Fundamentals of Physiology 178 (Occupational Therapy I).
- The latter module (Fundamentals of Physiology 178) is a recent addition to the teaching load of our division. In 2016/2017 I setup and designed this module which was presented in 2017 for the first time.

- I am currently part of the Program Committee for the renewed MB,ChB Program. My participation in this process is as lead (chairperson) of a multi-disciplinary module called “Health and Wellness” which will be presented to the students in the first semester of the second year.
- In 2018 and 2019 I served as a staff member on the Readmission Application Committee of the Faculty of Medicine and Health Sciences.

Involvement in the scientific community

- Between 2016 and 2019 I was a member of the Executive Committee of the South African Society for Cardiovascular Research (SASCAR), which is a special interest group of the South African Heart Association (SA Heart).
- Between 2016 and 2020 I was involved in the SA Heart Journal, which is the official journal of the SA Heart, as the manager of the online version of the journal.
- In April 2018 I served on an MB,ChB Accreditation Panel of the Health Professions Council of South Africa which visited the medical school at Walter Sisulu University.
- In June 2019 I served on an MB,ChB Accreditation Panel of the Health Professions Council of South Africa which accredited the medical program at the University of the Witwatersrand.
- I have served as a peer-reviewer for the Cardiovascular Journal of Africa, as well as Food and Toxicology.
- I have experience in assessing both PhD and MSc theses. I have served as examiner for two PhD’s, as well as four MSc’s and 1 MPhil.
- I have made contributions to the popular media in several written and radio pieces.

Interests and extramural activities

Hiking and road running.

Referees

- **Acting-head of the Division of Medical Physiology:**
Prof. H Strijdom
E-mail : jgstr@sun.ac.za
- **Vice-dean of teaching and learning in the Faculty of Medicine and Health Sciences:**
Prof. J Blits
E-mail : juliablitz@sun.ac.za

- **Colleague within the Division of Medical Physiology:**
Dr E Marais
E-mail : et4@sun.ac.za