

Faadiel Essop – 6-Page Curriculum Vitae

1. PERSONAL INFORMATION

Professional Address: Division of Medical Physiology, Faculty of Medicine and Health Sciences, Room 3027, BMRI, Tygerberg 7505, South Africa

2. EDUCATION

1985: **BSc (Med) (Hons)**, Dept Medical Biochemistry, UCT
1992: **PhD**, Dept Chemical Pathology, UCT – Biochemical Taxonomy by DNA Analysis
1995: **BA (Hons) (Arabic)**, University of the Western Cape (UWC)

3. PRESENT POSITIONS

Professor, Division of Medical Physiology, BMRI, Faculty of Medicine & Health Sciences, Stellenbosch University

Director, Centre for Cardio-Metabolic Research in Africa (CARMA), Faculty of Medicine and Health Sciences, Stellenbosch University

4. OTHER POSITIONS

Visiting Professor, University of La Reunion (France)

I was appointed to this position during January 2014 and 2020-2022 (not taken up due to Covid-19 pandemic), and it involves teaching postgraduate students (on site), supervising joint students, and also working on conjoint research projects.

5. LEADERSHIP & SERVICE

1998- 2000: Ministerial appointment as member of the board of the South African MRC
1998: Member of the South African MRC Audit and Finance Committee
2006-07: Secretary of the South African Heart Association (Cape Branch)
2009 – 15: Chairperson of Department of Physiological Sciences (Stellenbosch University)
2011-13: Elected as member of International Committee of the American Physiological Society
2011 -: Appointed to editorial board of the *American Journal of Physiology Heart & Circulatory Physiology*
2012 -: Appointed to editorial board of *Advanced Biomedical Research*
2012 -: Elected as council member of the African Association of Physiological Sciences (AAPS)
2012-13: Stellenbosch University's Faculty Research Committee member
2013 -: Appointed as an academic editor of *PLoS ONE* journal
2013 -: Appointed to editorial boards of the *Journal of African Association of Physiological Sciences & International Journal of Clinical & Experimental Physiology*
2013 -: Elected President of the Physiological Society of Southern Africa (re-elected 2016)
2014: Chairperson and organizer of symposium: "Diabetes-related contractile dysfunction of the heart: clinical implications, underlying molecular mechanisms, and exercise-related cardio-protection" held at the Experimental Biology 2014 meeting (San Diego CA, April 2014)
2014: Appointed as chair of international panel to perform in-depth, external review of the Hypertension in Africa Research Team (HART) at the North-West University
2014 - 16: Elected council member of the South African Society of Cardiovascular Research

- 2015:** Member of external panel reviewing the Department of Medical Biosciences at the University of the Western Cape
- 2015:** Member of external panel reviewing the Department of Biochemistry, Microbiology & Physiology at the Nelson Mandela Metropolitan University
- 2016 - :** Appointed as chairperson of the Research Advisory Committee of the Heart and Stroke Foundation of South Africa
- 2016 - :** Appointed as member of Stellenbosch University's Employment Equity Advisory Committee (as representative of Faculty of Science)
- 2016 - 21:** Elected as Vice-president of the African Association of Physiological Sciences
- 2017 - :** Elected as member of the Board of the General Assembly of the International Union of Physiological Sciences (4-year term)
- 2018: -:** Appointed to editorial boards of *Physiology* and *Physiological Reports*.
- 2018: -:** Chairperson of quinquennial review panel for Wits University's School of Physiology
- 2020 -:** Appointed to editorial board of *Current Research in Physiology*
- 2021 -:** Appointed as chairperson of the SA National Committee of the IUPS
- 2021 -:** Elected as President of the African Association of Physiological Sciences
- 2022 -:** Appointed as Associate Editor of *Frontiers in Cardiovascular Medicine*
- 2022 -:** Appointed as Section Editor of *PLoS ONE Cardiovascular Science and Medicine*

6. RESEARCH

NRF rating: B2. I am registered as a SACNASP Professional Natural Scientist (Biological Science - #158115) and am presently leading a research team consisting of 2x PhD and 1x MSc students. We are pursuing studies investigating mechanisms underlying stress-mediated cardiovascular diseases onset. We are also exploring the onset of cardio-metabolic dysfunction in HIV-positive individuals. Citations: 3, 013 (ResearchGate); 3, 808 (Google Scholar). H-index: 29-35 (Scopus, ResearchGate, Google Scholar). Grants awarded: MRC, NRF, NIH.

6.1. Invited Speaker:

16x international (4x plenary; 12x invited), 11x national (3x keynote; 5x plenary; 3x invited), 7x regional (3x plenary; 3x keynote; 1x invited) congresses; also 12x faculty/departmental talks (7x national & 5x international).

6.2. Service:

Reviewer for the South African NRF & MRC grant agencies. Reviewed for Nature, Circulation, American Journal of Physiology, Cardiovascular Journal of Africa, FEBS Journal, Journal of the American College of Cardiology, American Journal of Respiratory & Critical Care Medicine, Antioxidants and Redox Signaling, Acta Physiologica, British Journal of Pharmacology, Cardiology

6.3. Publications:

I have published 99 peer-reviewed publications, listing publications for the last three years:

1. Zouhal H, Salhi A, Saeidi A, Huige L, Essop MF, Laher I, Rhibi F, Shalamzari SA and Ben Abderrahman A. Exercise training and fasting: current insights. *Open Access Journal of Sports Medicine* 2020; 11: 1-28. (no IF yet).
2. Dluola PV, Johnson R, Mazibuko-Mbeje SE, Muller CJF, Louw J, Joubert E, Orlando P, Silvestri S, Chellan N, Nkambule BB, Essop MF and Tiano L. Fermented rooibos extract attenuates hyperglycemia-induced myocardial oxidative damage by improving mitochondrial energetics and intracellular antioxidant capacity. *South African Journal of Botany* 2020; 131: 143-150. (IF 1.8; 2019).
3. Dominick L, Midgley N, Swart L-M, Sprake D, Deshpande G, Laher I, Joseph D, Teer E and Essop MF. HIV-related cardiovascular diseases: the search for a unifying hypothesis. *American Journal of Physiology Heart Circ* 2020; 318: H731-H746. (IF 3.9; 2019).

4. Mofo-Mato EP, Essop MF and Owira PMO. Citrus fruit-derived flavonoid naringenin and the expression of hepatic organic cation transporter 1 protein in diabetic rats treated with metformin. *Basic and Clinical Pharmacology and Toxicology* 2020;10.1111/bcpt.13407. doi:10.1111/bcpt.134072020. (IF 2.7; 2019).
5. Dlodla PV, Muller CJF, Louw J, Joubert E, Mazibuko-Mbeje SE, Tiano L, Silvestri S, Orlando P, Marcheggiani F, Cirilli I, Chellan N, Ghoor S, Nkambule BB, Essop MF, Huisamen B, and Johnson R. The combination effect of aspalathin and phenylpropanoic acid glucoside from rooibos against hyperglycemia induced cardiac damage: an *in vitro* study. *Nutrients* 2020; 12(4): 1151. <https://doi.org/10.3390/nu12041151>. (IF 4.5; 2019).
6. Essop MF and Opie LH. The acute coronary syndrome revisited: effects and therapeutic modulation of excess metabolic fuel supply. *Cardiovascular Journal of Africa* 2020; 31: 132-134. (IF 1.4; 2018).
7. Saeidi A, Haghghi MM, Kolahdouzi S, Daraei A, Abderrahmane AB, Hackney AC, Essop MF, Laher I and Zouhal H. The effect on physical activity on adipokines in individuals with obesity: a narrative review. *Obesity Reviews* 2021; Jan;22(1):e13090. doi: 10.1111/obr.13090. (IF 7.3; 2019).
8. Benade J, Sher L, De Klerk S, Deshpande G, Bester D, Marnewick JL, Sieck G, Laher I, Essop MF. The impact of sugar-sweetened beverage consumption on the liver: a proteomics-based analysis. *Antioxidants* 2020; 9(7), 569; <https://doi.org/10.3390/antiox9070569>. (IF 4.5; 2019).
9. Sher L, Geddie H, Olivier L, Cairns M, Truter N, Beselaar L and Essop MF. Chronic stress and endothelial dysfunction: mechanisms, experimental challenges and way ahead. *American Journal of Physiology Heart Circ* 2020; 319(2): H488-H506. (IF 3.9; 2019).
10. Teer E, Joseph DE, Glashoff RH and Essop MF. Monocyte/macrophage-mediated innate immunity in HIV-1 infection: from early response to late dysregulation and links to cardiovascular diseases onset. *Virologica Sinica*; 2021. <https://doi.org/10.1007/s12250-020-00332-0>. (IF 3.2; 2019).
11. Teer E, Joseph DE, Dominick L, Glashoff RH and Essop MF. Expansion of FOXP3 and GARP in CD4+CD25- negative cells in immune compromised HIV-infected individuals with virological failure. *Virologica Sinica* (IF 3.2); 2021. <https://doi.org/10.1007/s12250-021-00386-8>.
12. Berner, K, Gouelle A, Strijdom H, Essop MF, Webster I, and Louw Q. Mobility deviations in adults with human immunodeficiency virus: a cross-sectional assessment using gait analysis, functional performance, and self-report. *Open Forum Infectious Diseases* (IF 3.2); 2021 8(9): <https://doi.org/10.1093/ofid/ofab425>.
13. Teer, E.; Mukonowenzou, N.C.; Essop, M.F. The Role of Immunometabolism in HIV-1 Pathogenicity: Links to Immune Cell Responses. *Viruses* 2022, 14, 1813. <https://doi.org/10.3390/v14081813>.
14. Teer E, Dominick L, Mukonowenzou N, and Essop MF. HIV-related myocardial fibrosis: inflammatory hypothesis and crucial role of immune cells dysregulation. *Cells* 2022, 11, 2825. <https://doi.org/10.3390/cells11182825>.
15. Cairns M, Joseph DE, and Essop MF. The dual role of the hexosamine biosynthetic pathway in cardiac physiology and pathophysiology. The dual role of the hexosamine biosynthetic pathway in cardiac physiology and pathophysiology. *Front Endocrinol* 2022, 13: 984342. doi: 10.3389/fendo.2022.984342.
16. Truter N, Malan L, and Essop MF. Glial cell activity in cardiovascular diseases and risk of acute myocardial infarction. *Am J Physiol Heart Circ* 2023, 324(4):H373-H390.
17. Geddie H, Cairns M, Smith L, van Wyk M, Beselaar L, Truter N, Rautenbach F, Marnewick J, Joseph D, and Essop MF. The impact of chronic stress on intracellular redox balance: a systems level analysis. *Physiological Reports* 2023, Apr;11(7):e15640. doi: 10.14814/phy2.15640. PMID: 37020327; PMCID: PMC10076515.

6.3. Meetings:

During the last ten years, >100 abstracts were presented at national and international meetings. I have also acted as plenary speaker at several national and international meetings.

7. TEACHING & LEARNING

7.1. Supervision of Postgraduate Candidates & Examiner

Successfully supervised 16x PhDs, 35x MSc, 1x MPhil (n=52); also 7 post-doctoral fellows.
Acted as examiner for 42x MSc/MMed (n=7 internal) & 25 PhD theses (n=1 international; n=6 internal) (n=67).

7.2. Professional development

2019: Completed one-year part-time Stellenbosch University short course on the Scholarship of Educational Leadership (SOEL) (NQF Level 8)
2021-2022: Completed Teaching Advancement at University (TAU) Fellowship

This project focused on the notion that scientists often view their discipline as “neutral” and therefore devoid of any socio-political and historical contexts. A new BSc (Hons) 3-week module was established within the Division of Medical Physiology at Stellenbosch University that now focuses on such broader aspects.

7.3. Grants awarded:

2016: American Physiological Society International Opportunity grant for symposium: *Cardio-Metabolic Diseases in Africa: Prevalence, Mechanisms and Treatments*. 7th International Congresses of the African Association of Physiological Sciences & 36th Physiological Society of Nigeria. 5-8 September 2016, Lagos, Nigeria.
2017 & 19: Carnegie African Diaspora Fellowship grant to cover expenses of visiting professor from the University of British Columbia to assist with curriculum development and teaching of under- and postgraduate students at Stellenbosch University.
2018: American Physiological Society International Opportunity grant for the 4th African Association of Physiological Sciences Educational Workshop. 2-4 December 2018. Kigali, Rwanda.
2019-2022: Erasmus Plus Mobility grant with 6 countries that allows for staff (teaching) and student exchanges (research) between Stellenbosch and La Reunion universities.
2020: Stellenbosch University FIRLT grant for study: *Enhancing collaborative learning and critical skills in undergraduate Physiology classes*.
2020: Stellenbosch University UCDG program renewal grant for study: *Re-evaluating the current assessment framework and practices for BSc (Hons) (Physiological Sciences): towards establishing an innovative system of assessment*.

7.4. Invited Speaker:

1. Essop MF. *Reflections on the role and instruction of Physiology and Anatomy within the contemporary health and life sciences curriculum*. Keynote speaker at the Human Anatomy & Physiology for Emergency Care (HAPEC) conference. 1 July 2015. Bellville, South Africa.
2. Essop MF. *Some personal reflections on my quest to empower students to become critical thinkers and life-long learners*. Faculty of Science’s teaching and learning workshop. 4 September 2018, Stellenbosch, South Africa.
3. Essop MF. *Enhancing Physiology teaching and learning within the African context: the Stellenbosch experience*. Plenary speaker at the 4th African Association of Physiological Sciences educational workshop. 2-4 December 2018. Kigali, Rwanda.
4. Essop MF. *Autonomy pathways to compare active teaching methods in undergraduate Physiology classes*. Stellenbosch University’s quarterly Learning and Teaching Enhancement Seminar. 9 May 2019, Stellenbosch, South Africa.

5. *Physiology teaching and learning during the Covid pandemic: lessons to take forward or more of the same?* Invited speaker at joint PSSA-AAPS teaching and learning workshop. 12 September 2021, Johannesburg (virtual), South Africa.

6. *Introduction of a new Features of Science module into the Hons 2022 course: synopsis and early reflections.* Division of Medical Physiology's weekly seminar series. 13 May 2022, Cape Town, South Africa.

7. *Science in the post-truth world: some reflections.* BA (Hons) (Journalism) students talk. 16 May 2022, Stellenbosch, South Africa.

7.5. Meetings (talks):

1. Adendorff H and Essop MF. *Learning problem solving: analyzing innovative in-class methods with the use of legitimization code theory.* First conference of Biomedical and Natural Sciences and Therapeutics (CoBNeST). 7-10 October 2018, Stellenbosch, South Africa.

2. Essop MF *Unique ways to enhance critical thinking in Physiology undergraduate classes.* 11th Annual Scholarship of Teaching and Learning Conference (Stellenbosch University). 30-31 October 2018. Somerset West, South Africa.

3. Essop MF and Adendorff H. *Autonomy pathways to compare active teaching methods in undergraduate physiology classes.* Third International Legitimation Code Theory Conference. 1-5 July 2019. Johannesburg, South Africa.

4. Essop MF. *Physiology classes: cooperative learning enhances critical thinking, integration and understanding.* 12th Annual Scholarship of Teaching and Learning Conference (Stellenbosch University). 28-30 October 2019. Somerset West, South Africa.

5. Essop MF. *Establishing a BSc (Hons) (Medical Physiology) module focusing on a humanities-rooted science context and approach.* The 5th South Africa – Japan University (SAJU) Forum. 28-29 July 2022, online conference.

6. Essop MF. *Transforming the Biomedical Sciences postgraduate curriculum: establishment of a unique BSc (Hons) module focusing on a humanities-rooted science context and approach.* 15th Annual Scholarship of Teaching and Learning Conference (Stellenbosch University). 24-26 October 2022, online conference.

7. Essop MF. *Curriculum renewal: towards the establishment of an enlightened Biomedical Sciences education discourse.* 16th Annual Scholarship of Teaching and Learning Conference (Stellenbosch University). 30 October – 1 November 2023.

7.6. Publications:

1. Dorsemans AC, Essop MF and Bourdon E. No stress – better results? *Advances in Physiology Education* 2018; 42: 720-722. **(IF 2.3; 2019).**

2. Essop MF and Beselaar L. Student response to a cooperative learning element within a large Physiology class setting: lessons learned. *Advances in Physiology Education* 2020; 44(3): 269-275. **(IF 2.3).**

3. Essop MF. Implementation of an authentic learning exercise in a postgraduate Physiology classroom setting. *Advances in Physiology Education* 2020; 44(3): 496-500. **(IF 2.3).**

4. Essop MF and Adendorff H. Invited chapter: Understanding active teaching methods in undergraduate science classes using Autonomy. In: Blackie, Adendorff & Mouton (eds). *Tools to enhance Science Education – Exploring the knowledge practices* (Series: *Legitimation Code Theory: Knowledge-Building in Research and Practice*) (Routledge Publications); 2022.

5. Essop MF and Beselaar L. The implementation of active learning practices in a South African Physiology class: a follow-up study. *Advances in Physiology Education* 2022; 46(1):1-10; doi: 10.1152/advan.00074.2021.

6. Essop MF. Reflections on transformation in a science context and future implications. In: Costandius & Fataar (eds). *Hacking towards transformation: Visual Redress at Stellenbosch University* (African Sun Media). 2021; 141-167. <https://doi.org/10.52779/9781991201096/06>.

7. Dorsemans AC, Essop MF and Bourdon E. Can the introduction of an authentic learning exercise lead to the modulation of dietary behavioural patterns in undergraduate students at the University of La Reunion? *Advances in Physiology Education* 2023, 47(1): 93-96.

8. RECOGNITION FROM PEERS

1997: CJ Adams Memorial Trust Travelling Fellowship; Helen Suzman Chevening Fellowship; Harry Crossley Foundation Award

1998: Boehringer Mannheim Young Researcher Award for 1998 (administered by the SA Assoc of Clinical Biochemists for best publication during 1997)

2004: Young investigators award (Physiology, Pharmacology and Pathology) for conjoint work with Dr Taegtmeyer - 53rd annual Scientific Sessions of the American College of Cardiology, March 7-10, New Orleans, USA

2005: Fulbright Senior Research Scholarship: sabbatical visit to University of Texas-Houston Medical School, USA (with Professor Heinrich Taegtmeyer)

2005: Ernest Oppenheimer Memorial Trust award for sabbatical visit to USA

2010: Rector's Award (Stellenbosch University) for Excellent Research

2011 - 14: Rector's Performance Awards (Stellenbosch University) – awarded to top 20% of staff (based on performance criteria)

2013: Elected Fellow of the Cardiovascular Section, American Physiological Sciences

2014: Vice Rector (Research & Innovation) Award for one of most productive researchers at Stellenbosch University (for year 2013)

2018: Stellenbosch University Media Excellence Award (Thought Leader)

2018: Stellenbosch University Teaching Excellence Award

2018: Best practice-based paper award at the 11th Annual Scholarship of Teaching and Learning Conference (Stellenbosch University)

2018: Elected Fellow of the American Physiological Sciences

2021: PSSA Lifetime Career Achievement Award

2022: Stellenbosch University Teaching Excellence Award (Leaderly Teaching Scholar)

2023: Elected as Fellow of the Royal Society of South Africa

9. OPINION ARTICLES

1. Essop Faadiel. Diabetes a result of a sweet lifestyle. *The Mercury*, 14 November 2014.

2. Essop Faadiel. Urgent need to address devastating burden diabetes places on societies. *The Cape Times*, November 2014.

3. Essop Faadiel. Putting lifestyle changes in place crucial to curb diabetes. *The Cape Times*, 7 April 2016.

4. Essop Faadiel. SA sugar tax debate rages. *The New Age*, 14 November 2016.

5. Essop Faadiel. Here's how stress can cause diabetes. *News24*, 14 November 2017.

6. Essop Faadiel. The important role of family support for diabetes self-management. *News24*, 14 November 2018.

7. Essop Faadiel. Four easy ways to keep diabetes at bay. *News24*, 14 November 2019.

8. Essop Faadiel. Building CARMA: matters of the heart and its diseases. *Mail & Guardian*, 17 April 2020.

9. Essop Faadiel. The Covid-19 'infodemic' and why conspiracy theories are extremely dangerous. *News24*, 23 April 2020.

10. Essop, Faadiel. Covid-19 and diabetes: why such a lethal combination? *News24*, 13 November 2020.

11. Essop, Faadiel. In a post-truth world, science is under threat – we need an inoculation against fake news. *Daily Maverick*, 5 May 2021.