

Prof. Faadiel Essop – 6-Page Curriculum Vitae

1. PERSONAL INFORMATION

Professional Address: Department of Physiological Sciences, Stellenbosch University,
Room 2009 Mike De Vries Building, Merriman Avenue,
Stellenbosch 7600, South Africa

Telephone: 27-21-808 4507

Fax: 27-21-808 3145

E-mail: mfessop@sun.ac.za

2. EDUCATION

1985: **BSc (Med) (Hons)**, *Dept Medical Biochemistry, UCT*

1992: **PhD**, *Dept Chemical Pathology, UCT – Biochemical Taxonomy by DNA Analysis (Supervised by Prof. Eric Harley)*

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, 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 - :** 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

6. RESEARCH

NRF rating: B2. I am presently leading a research team consisting of 1x postdoc, 5x MSc and 4x Hons 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: 2, 281 (ResearchGate). H-index: 25-27 (excluding self-citations). Grants awarded: MRC, NRF, NIH.

6.1. Invited Speaker:

14x international (4x plenary; 10x invited), 9x national (1x keynote; 5x plenary; 3x invited), 6x regional (2x plenary; 3x keynote; 1x invited) congresses; also 11x departmental talks (6x 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 95 peer-reviewed publications, listing publications for the last three years:

1. Teer E and Essop MF. HIV and cardiovascular disease: role of immunometabolic perturbations. *Physiology*; 2018 Jan 1;33(1):74-82. doi: 10.1152/physiol.00028.2017 (IF 7.2; 2019).
2. Mofo-Mato EP, Guewo-Fokeng M, Essop MF and Owira PMO. Genetic polymorphisms of organic cation transporter 1 (OCT1) and responses to metformin therapy in individuals with type 2 diabetes: A systematic review. *Medicine*; 2018 97 (27): p e11349. doi: 10.1097/MD.00000000000011349. (IF 1.6; 2019).

3. Mofo-Mato EP, Guewo-Fokeng M, Essop MF and Owira PMO. Genetic polymorphisms of organic cation transporters 1 (OCT1) and responses to metformin therapy in individuals with type 2 diabetes mellitus: a systematic review protocol. *Systematic Reviews* 2018; 7: 105 <https://doi.org/10.1186/s13643-018-0773-y> (IF 2.5; 2019).
4. Deshpande GP, Patterton HG and Essop MF. The human transketolase-like proteins TKTL1 and TKTL2 are bona fide transketolases. *BMC Structural Biology* 2019; 19:2. (IF 1.3; 2018).
5. Teer E, Joseph D, Driescher N, Nell T, Dominick L, Midgley N, Deshpande G, Page M, Pretorius E, Woudberg N, Lecour S, Glashoff R and Essop MF. HIV and cardiovascular diseases risk: exploring the interplay between T cell activation, coagulation, monocyte subsets and lipid subclass alterations. *American Journal of Physiology Heart Circ* 2019; 316: H1146-H1157 (IF 3.9; 2018).
6. Driescher N, Joseph DE, Human VR, Ojuka E, Cour M, Hadebe N, Bester D, Marnewick JL, Lecour S, Lochner A and Essop MF. The impact of sugar-sweetened beverage intake on rat cardiac function. *Heliyon* 2019; Mar 19;5(3):e01357. doi: 10.1016/j.heliyon.2019.e01357. (IF 1.7; 2019).
7. Mofo-Mato EP, Essop MF and Owira PMO. Effects of naringenin on renal expression of organic cation transporter 1 and 2 proteins and metformin disposition in diabetic rats. *Journal of Functional Foods* 2019; 59: 1-7. (IF 3.3; 2019).
8. Berner K, Strijdom H, Essop MF, Webster I, Morris L and Louw Q. Fall history and associated factors among adults living with HIV-1 in the Cape Winelands, South Africa: a cross-sectional investigation. *Open Forum Infectious Diseases* 2019; 6(10): ofz401, <https://doi.org/10.1093/ofid/ofz401> (IF 3.7; 2019).
9. 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).
10. Dlodla 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).
11. 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).
12. 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).
13. 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 phenylpropenoic 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).
14. 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).
15. Saeidi A, Haghghi MM, Kollahdouzi 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).
16. 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).
17. 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).
18. 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).

19. 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>.
20. Berner, K, Gouelle A, Strijdom H, Essop MF, Espach Y and Louw Q. Biochemical analysis of gait impairments contributing to early functional decline in adults living with HIV-1 infection. *Open Forum Infectious Diseases* (IF 3.2) – *in press*.

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, 25x MSc, 1x MPhil (n=42); also 7 post-doctoral fellows.
Acted as examiner for 42x MSc/MMed (n=7 internal) & 23 PhD theses (n=1 international; n=3 internal) (n=65).

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: Teaching Advancement at University (TAU) Fellowship

This project will focus on the notion that scientists often view their discipline as “neutral” and therefore devoid of any socio-political and historical contexts. This ‘scientific elitism’ can therefore seemingly absolve scientists from such contexts, e.g. past injustices committed during apartheid and also contemporary, pressing issues such as equity redress, decolonization and inclusivity. I believe that such an approach represents a threat to the long-term existence of the Science, Technology, Engineering, and Mathematics (STEM) disciplines, as it is essential to exhibit a willingness to critically engage with one’s past in order to ensure the social legitimacy of such departments, faculties and institutions.

7.3. Grants awarded:

- 2016:** \$7, 500 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:** \$7, 500 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 other countries that will allow for staff (teaching) and student exchanges (research) between Stellenbosch and La Reunion universities (951 631€).
- 2020:** Stellenbosch University FIRLT grant for study: *Enhancing collaborative learning and critical skills in undergraduate Physiology classes* (R19, 400).
- 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* (R50, 000).

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.

7.5. Meetings (talks):

1. Adendorff H and Essop MF. *Learning problem solving: analyzing innovative in-class methods with the use of legitimation code theory*. First conference of Biomedical and Natural Sciences and Therapeutics (CoBNeST). 7-10 October 2018, Spier-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). 29-30 October 2019. Somerset West, South Africa.

7.6. Publications:

1. Dorsemans AC, Essop MF and Bourdon E. No stress – better results? *Advances in Physiology Education* 2018; 42: 720-722. **(IF 2.8; 2018)**.
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 2.8)**.
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 2.8)**.

8. RECOGNITION FROM PEERS

- 1985:** Duncan Baxter & Marcus Rubin scholarships
- 1992-3:** FRD Postdoctoral Scholarship
- 1997:** CJ Adams Memorial Trust Travelling Fellowship
British Council Chevening Fellowship (Helen Suzman Leadership Award)
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

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.