

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 (Hons), Dept Med Biochem, University of Cape Town (UCT)
1992: PhD, Dept Chemical Pathology, UCT
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. ACADEMIC LEADERSHIP ROLES

1998- 2000: Ministerial appointment as member of the board of the South African MRC
2003–2007: Financial/Administrative Director, Hatter Institute for Cardiology Research, Dept of Medicine, UCT Faculty of Health Sciences
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*
2012-16: Elected as council member of the African Association of Physiological Sciences
2013-: Appointed as an academic editor of *PLOS ONE* journal
2013-19: Appointed member of the South African National Committee for the International Union of Physiological Sciences (IUPS)
2013-21: Appointed to editorial boards of the *Journal of African Association of Physiological Sciences* (until 2021) & *International Journal of Clinical & Experimental Physiology*
2013-19: Elected President of the Physiological Society of Southern Africa (re-elected 2016)
2014: Chairperson and organizer of symposium (cardiometabolic diseases) 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
2014-18: 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
2015-23: 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
- 2017-21:** 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* (until 2021) 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-:** Member of steering committee of the Division of Medical Physiology, Faculty of Medicine and Health Sciences, Stellenbosch University
- 2021-25:** Elected as President of the African Association of Physiological Sciences
- 2022 –:** Appointed as Associate Editor of *Frontiers in Cardiovascular Medicine*
- 2022–2024:** Appointed as Section Editor of *PLoS ONE Cardiovascular Science and Medicine*
- 2022:** Appointed to the grant review panel of the Research Council of Norway
- 2024-2025:** Appointed as mentor - Future Professors Program (Dept. Higher Education of South Africa)
- 2022-25:** Elected as council member of the International Union of Physiological Sciences (IUPS) (4-year term)
- 2024-:** Appointed as Associate Editor of *Comprehensive Physiology*

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 1 postdoctoral fellow, 2x PhD and 3x 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, 329 (ResearchGate); 4, 239 (Google Scholar). H-index: 34 or 37 (ResearchGate, Google Scholar). Grants awarded: MRC, NRF, NIH.

6.1. Invited Speaker:

17x international (5x plenary; 12x invited), 13x national (3x keynote; 5x plenary; 5x invited), 7x regional (3x plenary; 3x keynote; 1x invited) congresses; also 12x faculty/departmental talks (7x national & 5x international).

6.2. Publications:

I have published 105 peer-reviewed publications, listing publications for the last few years:

1. 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 5.5; 2023).**
2. Saeidi A, Haghighi 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 8.0; 2023).**
3. 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*; 2021 <https://doi.org/10.1007/s12250-021-00386-8> **(IF 5.5; 2023).**
4. 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 3.8; 2023);** 2021 8(9): <https://doi.org/10.1093/ofid/ofab425>.

5. 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>. (IF 3.8; 2023)
6. 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>. (IF 5.1; 2023)
7. Cairns M, Joseph DE, and Essop MF. The dual role of the hexosamine biosynthetic pathway in cardiac physiology and pathophysiology. *Front Endocrinol* 2022, 13: 984342. doi: 10.3389/fendo.2022.984342. (IF 3.9; 2023)
8. 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. (IF 4.1; 2023)
9. 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. (IF 2.2; 2023).
10. Michaels TM, Essop MF, and Joseph DE. Potential effects of hyperglycemia on SARS-CoV-2 entry mechanisms in pancreatic beta-cells. *Viruses*, 2024; 16(8):1243. <https://doi.org/10.3390/v16081243>. (IF 3.8; 2023).
11. Cairns M, Odendaal C, O'Brien C, Marais E, Oestlund I, Storbeck K-H, Sishi B, Joseph D, Smith C, and Essop MF. The effects of chronic stress on rat heart function following regional ischemia: a sex-dependent investigation. *American Journal of Physiology – Heart and Circulatory Physiology*, 2024; 327(4):H880-H895. (IF 4.1; 2023).
12. Teer E, Mukonowenzou NC, and Essop MF. The role of sustained Type I interferon secretion in chronic HIV pathogenicity: implications for viral persistence, immune activation, and immunometabolism. *Viruses* 2025; 17(2):139. <https://doi.org/10.3390/v17020139>. (IF 3.8; 2023).
13. Cairns, M, Marais E, Joseph, D and Essop MF. The role of chronic stress in the pathogenesis of ischemic heart disease in women. *Comprehensive Physiology*, 2025; 15(1):e70000. doi: 10.1002/cph4.70000. (IF 4.2; 2023).
14. Cairns M, Andrews J, Odendaal C, O'Brien C, Marais E, Maarman G, Sishi B, Joseph D, Fanie Rautenbach, Jeannine L. Marnewick and Essop MF. A sex-dependent investigation into post-reperfusion cardiac mitochondrial function and redox balance in chronically stressed rats. *Physiological Reports*, 2025; 13(5):e70185. doi: 10.14814/phy2.70185. (IF 2.2; 2023).
15. Kanuri B, Maremanda KP, Chattopadhyay D, Essop MF, Lee MKS, Murphy AJ, Nagareddy PR. Redefining macrophage heterogeneity in atherosclerosis: a focus on possible therapeutic implications. *Comprehensive Physiology*, 2025; 15(2):e70008. doi: 10.1002/cph4.70008.

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 17x PhDs, 35x MSc, 1x MPhil (n=53); also 8 post-doctoral fellows.

Acted as examiner for 45x MSc/MMed (n=9 internal) & 28 PhD theses (n=1 international; n=7 internal) (n=73).

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 therefore established within the Division of Medical Physiology at Stellenbosch University.

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 (n=11; last few years listed):

1. *Science in the post-truth world: some reflections*. BA (Hons) (Journalism) students talk. 16 May 2022, Stellenbosch, South Africa.
2. *Curriculum renewal at Stellenbosch University: reflections on the launch of a new Features of Science BSc (Hons) (Medical Physiology) module*. Department of Biomedical Sciences monthly seminar series. 24 June 2022, Cape Town, South Africa.
3. *Introducing broader humanities and arts concepts into the biomedical science curriculum*. Stellenbosch University's Quarterly Learning and Teaching Enhancement Seminar. 8 September 2022, Stellenbosch, South Africa.
4. Invited speaker for keynote panel discussion of SoTL conference with theme: *Academic Renewal: Towards transformative teaching-learning-assessment in service of society*. 16th Annual Scholarship of Teaching and Learning Conference (Stellenbosch University). 30 October – 1 November 2023.
5. *Aesop's fable of the blind men, close encounters of the third kind and shifting the Titanic...* Invited speaker at the TAU 5 meeting, Gqeberha, South Africa. 12 July 2024.

7.5. Meetings (talks; n=9 – last few years listed):

1. 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.

2. 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.

3. 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.

4. Gerber B, Blaauw R, Essop MF, Correia J, Mosheshe L, Baatjes K, Herman N and Bosman JP. Building a SoEL group in the FMHS: why, how, what's next? 17th Annual Scholarship of Teaching and Learning Conference (Stellenbosch University). 5-6 November 2024.

7.6. Publications:

1. Dorsemans AC, Essop MF and Bourdon E. No stress – better results? *Advances in Physiology Education* 2018; 42: 720-722. **(IF 2.4; 2021).**

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 2.4; 2021).**

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 2.4; 2021).**

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. Epub 2021 Oct 28. PMID: 34709947. **(IF 2.4; 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 breakfast behavior in undergraduate students at the University of La Reunion? *Advances in Physiology Education* 2023; 47(1): 93-96.

8. Essop MF and Bourdon E. Enhancing the understanding of abstract neurophysiology concepts by first-year students at the University of La Réunion. *Advances in Physiology Education*, 2024; 48(3): 655-660. doi: 10.1152/advan.00098.2024.

9. Essop MF. Physiology in Africa: reflections on the past to imagine future possibilities. *Physiological Reports*. 2024 Sep;12(17):e70046. doi: 10.14814/phy2.70046. PMID: 39252182.

10. Essop MF. Transforming physiology teaching and learning to empower students to navigate their way in an era of doubt – a unique case study. In: *Truth unveiled: navigating science and society in an era of doubt* (Academic Press); 2024

11. Alagbonsi AI, Essop MF, El-Wazir Y, Nyakudya T, Fastone G, Mojiminiyi F, Saeed A, Stienen GJM, Balandya E, Raji Y, Bintou Sarr F, Samb A, Ebrahim A, Pohl U, Silverthorn DU. PhysioCAFUN: A competency-based curriculum development guideline to strengthen physiology education in Africa. *Adv Physiol Educ*. 2024 Nov 14. doi: 10.1152/advan.00160.2024.

12. Essop MF. (Bio)medicine meets Art: A physiologist's reflections on inter-disciplinary liaisons, curriculum renewal and pursuing social justice. *Critical Studies in Teaching and Learning* 2025; (13), Special Issue 1. DOI: 10.14426/cristal.v13iS1.2705.

Books:

1. Essop MF. Editor of the International Union of Physiological Sciences (IUPS) prestigious book series (Elsevier). *Truth unveiled: navigating science and society in an era of doubt* (9 chapters) – IUPS volume published January 2025 (Academic Press).

8. HONORS

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)
2005: Fulbright Senior Research Scholarship: sabbatical visit to University of Texas-Houston Medical School, USA
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 research paper award at the 11th Annual Scholarship of Teaching and Learning Conference (Stellenbosch University)
2018: Elected Fellow of the American Physiological Sciences
2021: Physiology Society of Southern Africa (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
2024: TAU Fellows Award (one national award per year [if merited]) for transformative teaching

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.