

BIOGRAPHICAL SKETCH

NAME: Yumna Moosa, MBChB PhD

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POSITION TITLE: Clinical Research Fellow

EDUCATION/TRAINING:

INSTITUTION AND LOCATION	DEGREE	MM/YY	FIELD OF STUDY
University of KwaZulu Natal, Durban	PhD	5/2025	Medicine (Microbiology and Bioinformatics)
University of KwaZulu Natal, Durban	MMedSci	03/2019	Virology (Bioinformatics)
Rahima Moosa Mother and Child Hospital, Johannesburg	N/A	12/2016	Medical Internship
University of South Africa, Johannesburg	N/A	12/2015	Pure Mathematics
University of Cape Town, Cape Town	MBChB	12/2012	Medicine and Surgery
University of Cape Town, Cape Town	N/A	12/2006	Social Sciences (Psychology & Mathematics)

A. Personal Statement

I am a clinician scientist with expertise in quantitative methods, bioinformatics, and infectious disease research. My background in pure mathematics, microbiology, and computational modeling equips me to analyse complex biomedical challenges, particularly in tuberculosis prevention. At the same time, my clinical experience and leadership in nonprofit organizations have deepened my understanding of health as a function of social determinants, nutrition, and community resilience. This interdisciplinary perspective drives my interest in evaluating how both biomedical and structural interventions - such as vaccines and nutritional support - can be optimized for public health impact. Through this fellowship, I aim to apply rigorous epidemiological modeling to inform evidence-based TB prevention strategies in South Africa, ensuring that interventions are not only scientifically sound but also contextually relevant and equitable.

B. Positions and Honors

Positions and Employment

- **2019-2025** – PhD Student and Clinical Research Fellow, Africa Health Research Institute
- **2018-2019** – MSc Student and Research Fellow, KZN Research and Innovation Sequencing Platform
- **2017** – Community Service Medical Officer, Bethesda Hospital
- **2015-2016** – Research Fellow, Centre for the AIDS Programme of Research in South Africa
- **2013-2014** – Medical Intern, Rahima Moosa Mother & Child Hospital

Other Experience and Professional Memberships

- **2023-2024** – Focus Group Member, Starseed Community School
- **2008-2016** – Care Clown and Board Member, The Upliftment Programme

- **2006-2012** – Volunteer Mathematics Tutor, Project Leader, Education Sector President, and Board Member, Students' Health and Welfare Centres Organisation (SHAWCO)

Honours

- **2024** – Fellow, VALIDATE ECR Career Development Network
- **2020-2023** – Fellow, Sub-Saharan African Network for TB/HIV Research Excellence
- **2017** – Tekano Fellow, Atlantic Fellows for Health Equity South Africa

C. Contribution to Science

1. Tuberculosis and multimorbidity epidemiology in rural South Africa

- Cuadros DF, et al. "Geospatial assessment of the convergence of communicable and non-communicable diseases in South Africa." *J Multimorb Comorb.* (2023).
- Singh U, et al. "The met and unmet health needs for HIV, hypertension, and diabetes in rural KwaZulu-Natal, South Africa: analysis of a cross-sectional multimorbidity survey." *Lancet Glob Health* (2023).
- Castle AC, et al. "Association between prior tuberculosis disease and dysglycaemia within an HIV-endemic, rural South Africa population." *PLoS One* (2023).
- Fehr J, et al. "Computer-aided interpretation of chest radiography reveals the spectrum of tuberculosis in rural South Africa." *npj Digital Medicine* (2021).
- Moosa Y, Kwon D, De Oliveira T, Wong E. "Determinants of Vaginal Microbiota Composition." *Frontiers in Cellular and Infection Microbiology* (2020).

2. Viral bioinformatics tool development

- James SE, et al. "Current Affairs of Microbial Genome-Wide Association Studies: Approaches, Bottlenecks and Analytical Pitfalls." *Frontiers in Microbiology* (2020).
- Vilsker M, Moosa Y, et al. "Genome Detective: An Automated System for Virus Identification from High-throughput Sequencing Data." *Bioinformatics* (2019).

D. Additional Information: Research Support

Completed Research Support

- **2023** – Connect Africa Scholarship
- **2020-2023** – Sub-Saharan African Network for TB/HIV Research Excellence (Scientific Fellowship Support Award and Laboratory Consumables Award)
- **2020-2023** – South African Medical Research Council (Clinician Scientist PhD Fellowship)
- **2018** – KwaZulu Natal Research and Innovation Sequencing Platform (Masters Programme Research Fellowship)
- **2015-2016** – Centre for the AIDS Programme of Research in South Africa and Wellcome Trust Africa Centre for Health and Population Studies (Research Fellowship)