



SSACAB

SUB-SAHARAN AFRICA CONSORTIUM
FOR ADVANCED BIOSTATISTICS TRAINING



**SCIENCE FOR
AFRICA**
FOUNDATION

**CALL FOR PhD FELLOWSHIPS IN BIOSTATISTICS FOR THE 2024 ACADEMIC
YEAR**

**DELTAS AFRICA SUB-SAHARAN AFRICAN CONSORTIUM FOR ADVANCED
BIOSTATISTICS (SSACAB) II PROGRAMME
APPLICATION DEADLINE: AUGUST 31, 2023**

DESCRIPTION:

The Sub-Saharan African Consortium for Advanced Biostatistics (SSACAB) is a consortium of six African and two northern partner institutions, and nine collaborating institutions with the University of the Witwatersrand, Johannesburg as the Lead Institution. SSACAB II has received funding through the Developing Excellence in Leadership, Training, and Science in Africa (DELTAS Africa) program. DELTAS Africa is an initiative of the Science for Africa Foundation (SFA) with funding support of Wellcome and the United Kingdom's Foreign, Commonwealth & Development Office (FCDO). The funding aims to develop and improve biostatistical skills among researchers in order to create biostatistical research nodes of excellence and a network to nurture researchers with advanced skills and expertise.

The consortium is currently inviting applications for full-time and fully-funded PhD scholarships for PhD degrees in Biostatistics at SACCAB II participating training institutions. This PhD degree program focuses on quantitative research in health-related fields and concentrates on seven biostatistics thematic areas as outlined below.

ELIGIBILITY:

The PhD scholarships are open to candidates with a strong background in Statistics, Mathematics, Demography, and other quantitative fields at Masters' level. Former DELTAS Africa SSACAB I fellows who have recently been awarded or have completed an MSc in Biostatistics degree are also encouraged to apply.

The scholarship is open to nationals of low and middle-income countries in the Sub-Saharan African Region who are resident in the region as per World Bank definition: [http://data.worldbank.org/about/country-and-lending-groups#Sub Saharan Africa](http://data.worldbank.org/about/country-and-lending-groups#Sub_Saharan_Africa)

Applicants should normally be under 40 years of age and must meet the admission requirements for the PhD degree at each respective university before applying for the fellowship.

THE PhD SCHOLARSHIP PACKAGE:

The scheme will provide full scholarships for 18 PhD Fellows in the 2024 academic year. The scholarship package includes:

- ✓ Tuition fees and basic medical and accident insurance
- ✓ Monthly stipend to cover accommodation and living expenses
- ✓ Reasonable support for the PhD research project and supervision
- ✓ Travel costs to and from the academic training institution and the host research institution

ADDITIONAL PhD SCHOLARSHIP INFORMATION:

PhD applications must focus on one of SSACAB II's seven key research questions that can be used to address some of the health challenges in Sub-Saharan Africa:

1. How can data science, machine learning, deep learning or artificial intelligence (AI) algorithms be used to enhance personalised treatment for patients with communicable and non-communicable diseases in Africa?
2. How will the spatial and temporal occurrence and patterns of critical diseases in Africa respond to predicted climate and environmental changes, and how will this impact public health and development outcomes?
3. Can we identify the relationship between personal characteristics, environmental changes and diseases through causal modelling and structural equation modelling?
4. How can we use observational data to assess interventions where clinical trials are unethical or to evaluate ongoing public health interventions?
5. What methods can be used to account for missing data in health research?
6. How can we use bioinformatics to enable laboratories to analyse their own omics data?
7. What biostatistics methods can be used for data triangulation and synthesis of evidence?

SUMMARY DESCRIPTION OF PARTNER'S ROLE ON THE SEVEN QUESTIONS:

Partner	Role
Wits University Utrecht Wits Global Change Institute (GCI)	Wits will lead two themes, [expertise in machine learning and planetary health]. Research Question 1 (RQ1):- How can machine learning and artificial intelligence (AI) algorithms be used to enhance population-based prevention of, and personalised treatment for, communicable and non-communicable diseases in Africa with Utrecht and RQ2 with GCI:- How will the spatial and temporal methods be used to support an understanding and response of the impact of climate variability and change on human health and development in Africa respectively?

University of Abomey- Calavi	The University of Abomey-Calavi will lead research on [causal modelling, expertise in eco-epidemiology and structural equations modelling]. RQ3:- Can we identify the relationship between personal characteristics, environmental changes and diseases through causal modelling and structural equational modelling?
University of Kwa-Zulu Natal	UKZN will lead the research theme on missing data [expertise in modelling of complex high dimensional correlated data in surveys and follow-up longitudinal studies including missing data]. RQ5:- What methods can be used to account for missing data in health research?
Moi University	Moi University will lead the theme on [analysing observational data when RCT are not feasible] RQ4:- How can we use observational data to assess interventions where clinical trials are unethical or to evaluate ongoing public health interventions?
KEMRI Wellcome Trust Research Programme	KWTRP will lead the theme on bioinformatics [RQ6]:- How can we use bioinformatics to enable laboratories and research institutions in Africa to analyse their own -omics data?
University of Pretoria and South African Medical Research Council (SAMRC)	UP and SAMRC will lead the data triangulation and evidence synthesis theme [RQ7]:- What biostatistics methods can be used for data triangulation and synthesis of evidence?
London School of Hygiene and Tropical Medicine University Medical Center Utrecht	The two Northern Partners, LSHTM and Utrecht will support all the research themes with senior statistical advice and co-supervision of fellows.

- ❖ Potential PhD scholarship applicants should identify a supervisor from the institution or academic training institution they are interested in. The PhD application should provide the academic training institution with the following:
 - ❖ Comprehensive curriculum vitae, including relevant research and work experience
 - ❖ Letter of motivation explaining the desire to pursue a PhD in biostatistics
 - ❖ Certified copies of academic transcripts and degree certificates
 - ❖ Concept note, not exceeding 5 pages, outlining the proposed area of research
 - ❖ Sample of written academic work, of which the applicant is the primary author (e.g., Master's research report or journal article)
 - ❖ Letter from the proposed research institution supervisor indicating a willingness to supervise
 - ❖ Evidence of acceptance or application to study Biostatistics at a partner or collaborating institution
 - ❖ Two confidential referee reports to be sent directly to the training institution

PhD scholarships will be awarded to candidates who are likely to strengthen the DELTAS Africa SSACAB II institutions as either academic staff members or affiliates of research institutions within the consortium. Awarded fellows will be monitored as part of the new DELTAS Africa SSACAB II alumni to increase their visibility and monitor the impact of the program.

FULL LIST OF PARTNERS AND COLLABORATING INSTITUTIONS IN THE SSACAB II TRAINING PROGRAMME:

LEAD INSTITUTION

Name of Institution	Country	Institutional Lead	Email
University of the Witwatersrand	South Africa	Tobias Chirwa	Tobias.Chirwa@wits.ac.za

PARTNER INSTITUTIONS

Institution	Country	Institutional Lead	Email
University Medical Center Utrecht	Netherlands	Daniel Oberski	D.L.Oberski@umcutrecht.nl
University of Abomey-Calavi	Benin	Romain Glele Kakai	glele.romain@gmail.com
Kenya Wellcome Trust Research Programme (KWTRP).	Kenya	Samson Kinyanjui	skmuchina@kemri-wellcome.org
The University of Pretoria and South Africa Medical Research Council (SAMRC)	South Africa	Samuel Manda	samuel.manda@up.ac.za
University of KwaZulu-Natal	South Africa	Henry Mwambi	mwambih@ukzn.ac.za
MOI University	Kenya	Ann Mwangi	annwsum@gmail.com
London School of Hygiene and Tropical Medicine	United Kingdom	Jim Todd	Jim.Todd@LSHTM.ac.uk

COLLABORATING INSTITUTIONS

Training Institution	Country	Training Lead	Email
University of Zambia	Zambia	Patrick Musonda	pmuzho@hotmail.com
University of Nairobi	Kenya	Patrick Weke	pweke@uonbi.ac.ke
Makerere University	Uganda	Nazarius Tumwesigye	naz@musph.ac.ug
University of Malawi	Malawi	Jupiter Simbeye	jimbeye@unima.ac.mw
University of Namibia	Namibia	Lawrence Kazembe	lKazembe@unam.na
Kilimanjaro Christian Medical University College	Tanzania	Michael Mahande	jmahande@gmail.com
Stellenbosch University	South Africa	Taryn Young	tyoung@sun.ac.za
University of Gondar	Ethiopia	Tadesse Awoke Ayele	tadesse.awoke@uog.edu.et
MRC Unit, The Gambia	The Gambia	Nuredin Mohammed	Nuredin.Mohammed@lshtm.ac.uk
Kwame Nkrumah University of Science and Technology	Ghana	Emmanuel Kweku Nakua	manyorogh@yahoo.com

APPLICATION FOR THE DELTAS AFRICA SSACAB PhD SCHOLARSHIP

Second step: the application for the DELTAS Africa SSACAB scholarship should be made separately and in writing, as outlined in the PhD scholarship section above. Scholarship applications should be sent to: Dr. Pascalia Munyewende: pascalia.munyewende@wits.ac.za and copied to Prof. Eustasius Musenge: eustasius.musenge@wits.ac.za