SSACAB

SUB-SAHARAN AFRICA CONSORTIUM
FOR ADVANCED BIOSTATISTICS TRAINING

Welcome to the Sub-Saharan Africa Consortium for Advanced Biostatistics (SSACAB) II 2nd Newsletter

January - April 2025

SCIENCE FOR AFRICA FOUNDATION

wellcome

UKaid
from the British people

In total, so far, SSACAB 2 has recruited 49 fellows! This a significant milestone.

University of Abomey-Calavi (SSACAB) has eight fellows consisting of: 3 MSc fellows; 2 PhD fellows and one post-doctoral fellow; 1 MSc fellow at a collaborating institution (ISTM Kinshasa) and 1 PhD fellow also at a collaborating institution (ISTM Kinshasa)

University of Pretoria (SSACAB) has seven fellows: two MSc fellows enrolled at UP, one MSc fellow at a collaborating institution (University of Malawi), two PhD fellows enrolled at UP, one PhD fellow enrolled at a collaborating institution (University of Malawi), and one post-doctoral fellow to start at UP..

Moi University (SSACAB) 6 fellows consisting of: 2 MSc fellows; 3 PhD fellows and 1 post-doctoral fellow

University of KwaZulu-Natal (SSACAB) has 6 fellows consisting of: 2 MSc fellows at UKZN; 2 MSc fellows at a collaborating institution (KCMUCo); 1 PhD fellow at UKZN and 1 PhD fellow at a collaborating institution (KCMUCo)

KEMRI Wellcome Trust Research Programme (SSACAB) has 7 fellows consisting of: 3 MSc fellows; 3 PhD fellow and 1 post-doctoral fellow

University of Witwatersrand (SSACAB) 15 fellows consisting of 3 MSc fellows at Wits; 3 MSc fellows at a collaborating institution (University of Namibia); 4 MSc fellows at a collaborating institution Makerere University; 3 PhD fellows at Wits and 2 post-doctoral fellows at Wits

Conferences and Thematic areas training

Missing data course: 23-27 June 2025

SSACAB in collaboration with the London School of Hygiene & Tropical Medicine and the University of Kwazulu Natal will be offering a hybrid short course on missing data methods. This course will be facilitated over a five-day period, from 23 to 27 June 2025, and will be hosted by the University of the Witwatersrand in Johannesburg through a hybrid format combining both online and face-to-face sessions. Missing data frequently occurs in both observational and experimental research. The course aims to assist attendees to adopt a principled approach to handling missing data, in which the first step is a careful consideration of suitable assumptions regarding the missing data for a given study. Based on this, appropriate statistical methods can be identified that are valid under the chosen assumptions.

Analysis of Electronic Health Record Data course: 22-25 July 2025

SSACAB in collaboration with the London School of Hygiene & Tropical Medicine and the Electronic Health Records Research group will be offering a short course on Analysis of Electronic Health Record Data from 22-25 July 2025. The course will be hosted by Moi University, Kenya. This course will provide the participants with an opportunity to apply critical framework to observational studies, helping them address common biases such as immortal time bias and confounding. The course includes practical sessions that will be conducted in R, and participants are expected to have a working knowledge of R prior to attending the course.

Big data course and Machine Learning course: 13 to 24 October 2025

SSACAB in collaboration with the Biostatistics Department at Utrecht University will be offering two short courses on Machine Learning and Big Data from 13 to 24 October 2025. The course will be hosted by Witwatersrand University, Johannesburg, The courses are designed to provide in-depth insights into the application of machine learning techniques in medical research using large datasets. Through these courses the participants will gain an overview of the techniques and ideas behind machine learning and learn how these might help research in the health sciences. Also providing an opportunity for the participants to work with machine learning models on real data using the programming language Python and the machine learning library scikit-learn. The courses further provide the participants with the necessary knowledge and skills to understand and apply machine learning in epidemiological studies. Leading to a comprehensive understanding of the fundamental concepts and techniques of machine learning through hands-on practical exercises and real-world case studies.

IBS/SUSAN SSACAB Involvement

We are pleased to announce that the SSACAB Consortium will be sponsoring some of the sessions at the Conference of the Sub-Saharan Network (SUSAN) of the International Biometrics Society (IBS). The Conference will cover a wide range of classical and Bayesian statistical theory and methods and data science, their applications in life sciences (health and agriculture). This conference will be run from the 2nd to 10th of September 2025. Some of our fellows have submitted abstracts to be presented at the conference and the Consortium has been given slots to lead on a keynote to discuss the **Contemporary Research Methods and Applications in Biostatistics and Data Science within the SACCAB Consortium** and this will be given by one of our Senior Primary Investigators. The team will also contribute towards talks led our fellows and researchers within SSACAB. This will be done to showcase our contribution in the generation of cutting-edge research in biostatistics and data science in Africa.

The **SSACAB Institutional Lead meeting** was held in Johannesburg on the 6th and 7th of February 2025. Over the course of the two-day meeting, participants engaged in comprehensive discussions on key aspects of the grant, including progress on activities and outputs, budget projections, public engagement initiatives, standardized approaches to supporting Consortium fellows, and strategies for securing supplementary funding to ensure the Consortium's long-term sustainability. The executive team reached consensus on timelines, roles, and responsibilities for ongoing and upcoming grant activities. The strong commitment demonstrated by all attendees toward strengthening biostatistics capacity in the region was both evident and encouraging.

Introducing SSACAB fellows

The SSACAB team would like to introduce Sarah Ogutu, a GSK-SSACAB beneficiary and current PhD fellow under the SSACAB II program at the University of KwaZulu-Natal, South Africa. She brings a wealth of academic and practical experience, currently serving as a Statistics Ad Hoc Lecturer at the same university where she has taught and continues to teach undergraduate courses in statistical methods and introductory statistics. Sarah holds an MSc in Statistics from the same university and was among the top-performing graduates with cum laude in her cohort. She has also previously served as the President of the International Students' Association at her campus, showcasing her leadership and dedication to student engagement. Sarah recently joined the Fred Hutchinson Cancer Center as a Biostatistics Research Scholar, where she collaborated with the Statistical Center for HIV/AIDS Research and Prevention and participated in several advanced biostatistics workshops. Her passion for health data analytics is evident in her research, which focuses on machine and deep learning approaches in survival analysis, particularly in HIV incidence prediction using cytokine biomarkers. With rich experience spanning academia, public health, and grassroots education, from Kenya's largest referral hospital to tutoring students in underserved communities, Sarah is driven by a mission to harness data for impact. Her vibrant energy, dedication to mentorship, and commitment to improving health outcomes make her an inspiring force in the SSACAB community.

Science policy engagement

One of the key focus areas for SSACAB is to ensure that scientific knowledge is effectively incorporated to inform policymaking, enabling environmental policy to act as a catalyst for transformative change. While scientific knowledge is critical, on its own, it is insufficient to influence policy decisions on a large scale. We acknowledge the work and activities that the SSACAB team has taken part in policy and decision making in the scientific evidence development.

Professor Samuel Manda

We would like to congratulate one of our SSACAB Primary Investigators (PI) Prof Samuel Manda on his new role as a PI and lead of the United Nations Global Volunteer Index project at the University of Pretoria. The Department of Statistics of the University of Pretoria and United Nations Volunteers partnership seeks to develop and validate a first-ever Global Volunteer Index by a UN agency. The initial phase of this project focuses on developing a framework and methodology for calculating the Global Volunteer Index (GVI). This index will be featured in the upcoming edition of the State of the World's Volunteerism Report, scheduled for release in December 2025. You can find further information on this link: https://lnkd.in/dH6DyK4w.

We are pleased to announce that we had SSACAB representation at the discussions for the development of the Africa Lancet Report on Maternal, Newborn, and Child Health in Dakar, Senegal. The meeting brought together a Senior Editor from The Lancet Global Health and a distinguished group of senior experts from across the continent. In attendance were several stakeholders including World Health Organisation (WHO), UNICEF, UNFPA and different policy makers including the Government of Senegal (Minister of Health).

Representing SSACAB were the following attendees: Professor Kandala, SSACAB I alumni fellow Sophia Kagoya, current SSACAB PhD fellow Elysee Thiama Kabongo from Calavi, Benin including Proffessor Latifat Ibisomi (Head of Epidemiology and Biostatistics Department at the Witwatersrand University in South Africa) all included in the above picture. The report will provide a comprehensive analysis of progress in Reproductive, Maternal, Newborn, Child, and Adolescent Health and Nutrition (RMNCAH&N) in relation to the Sustainable Development Goals (SDGs), set for achievement by 2030. It will examine key trends in survival, nutritional status, health systems, policies, financing, and inequalities, with particular focus on low- and middle-income countries, where the burden of maternal and child mortality remains highest. Importantly, the report will also underscore the widening disparities in sub-Saharan Africa, where persistent systemic challenges continue to impede progress and deepen inequities.

We are also pleased to announce that 3 of the SSACAB fellows, Idephonse NIZEYIMANA, Edson Mwebesa and Midokpè Merveille Scholastique Essetcheou SSACAB II fellows, were awarded a science policy engagement grant by the Science for Africa Foundation (SFA Foundation), for the Individual Policy Exchange Programme (iPEP). This grant covered travel and accommodation costs for a two-week policy exchange at the Uganda National Institute of Public Health (UNIPH) in February/ March 2025.

The iPEP grant aims to facilitate collaboration between researchers and policymakers through two weeks of in-person engagement within Africa. The program aims to create 140 policy exchange opportunities across Africa, translating research into policy and fostering dialogue between the science and policy sectors.
Congratulations are in order and looking forward to hearing of the impact the exchange programme will bring to their careers and science policy engagement

Public engagement with science

Lilian Mutengu

As part of our ongoing efforts to capacitate our fellows to continuously engage the public in their research, we run monthly online training for our Masters, PhD and Post Doc fellows on different skills of how to engage their communities.

On one of the meetings that was held on the 13th of February 2025, we were privileged to have Lillian N. Mutengu, Senior Programme Manager at Science for Africa Foundation, as our guest speaker. Lillian's presentation focused on the crucial role of community engagement in biostatistics and public health, particularly in Sub-Saharan Africa. She emphasized how the use of data can guide public health policies and practices for the betterment of local communities. She also highlighted the importance of engaging with communities in the science and research space, noting how it helps build strong connections and fosters collaborative efforts. Lillian shared notable successes from the PES field, showcasing achievements of high-profile scientists and researchers, and underscored the need for clear, simple communication when working with the community. Additionally, she presented valuable community and public engagement ideas specifically tailored to SSACAB and offered her support to address PES challenges and assist with any necessary guidance or help moving forward.

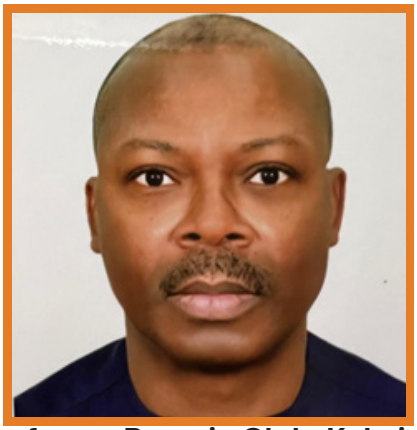
Pinky Manana

Another PES meeting was held on the 24th of April 2025, we had the privilege of hosting Pinky Manana, an Epidemiologist, Public Health Specialist, and Researcher from the University of the Witwatersrand, as a guest speaker. Her insightful presentation emphasized on the critical importance of meaningful relationships and collaborations in the process of community engagement within research. She highlighted the importance of building trust and fostering partnerships that are grounded in mutual respect and shared goals. Pinky explored various approaches and levels of engagement, providing a nuanced explanation of how these can be applied effectively in different contexts. She also outlined key elements of engagement planning, offering a detailed breakdown of strategies to ensure that community involvement is both relevant and impactful. A particularly compelling point in her talk was the need to understand the community involved in the research, which allows researchers to use culturally relevant forms of art and communication when appropriate. This creative approach can enhance effective participation of communities during research studies. She also addressed challenges, recommendations, and lessons learned from her past engagement experiences, offering valuable insights to inform future community engagements.

In the pipeline, we are planning more Public Engagement with Science (PES) activities, like Community & Public Engagement (CPE) capacity-building workshops, biostatisticians featuring on science podcasts, biostatistics introduction school workshops, and online biostatistical festivals offering exciting opportunities for the public to learn more about science. Exciting times ahead!

Achievements

We are proud to congratulate one of SSACAB's Principal Investigators, Prof. Romain Glèlè Kakaï, on his election as a Fellow of the African Academy of Sciences (FAAS), a prestigious honour recognizing scientific excellence, leadership, and impact across the continent. His election follows a rigorous selection process after his nomination in mid-2024 and reflects his outstanding contributions to research, mentorship, and scientific leadership, including numerous publications and the successful supervision of 20 PhD students. Prof. Glèlè Kakaï expressed his heartfelt gratitude to his nominators, supporters, collaborators, students, and funders. He looks forward to contributing to the Academy's mission and supporting the next generation of African scientists. Congratualtions are in order for the SSACAB community.



Professor Romain Glele Kakai

Publications

Adéoti, O.M., Diop, A. and **Glèlè Kakaï, R.**, 2025. Bayesian inference and impact of parameter prior specification in flexible multilevel nonlinear models in the context of infectious disease modeling. Mathematical Biosciences and Engineering, 22(4), pp.897-919.

Anteneh, L.M., Hounkonnou, M.N. and **Glèlè Kakaï, R.**, 2025. A stochastic continuous-time Markov chain approach for modeling the dynamics of cholera transmission: Exploring the probability of disease persistence or extinction. Mathematics, 13, p.1018.