

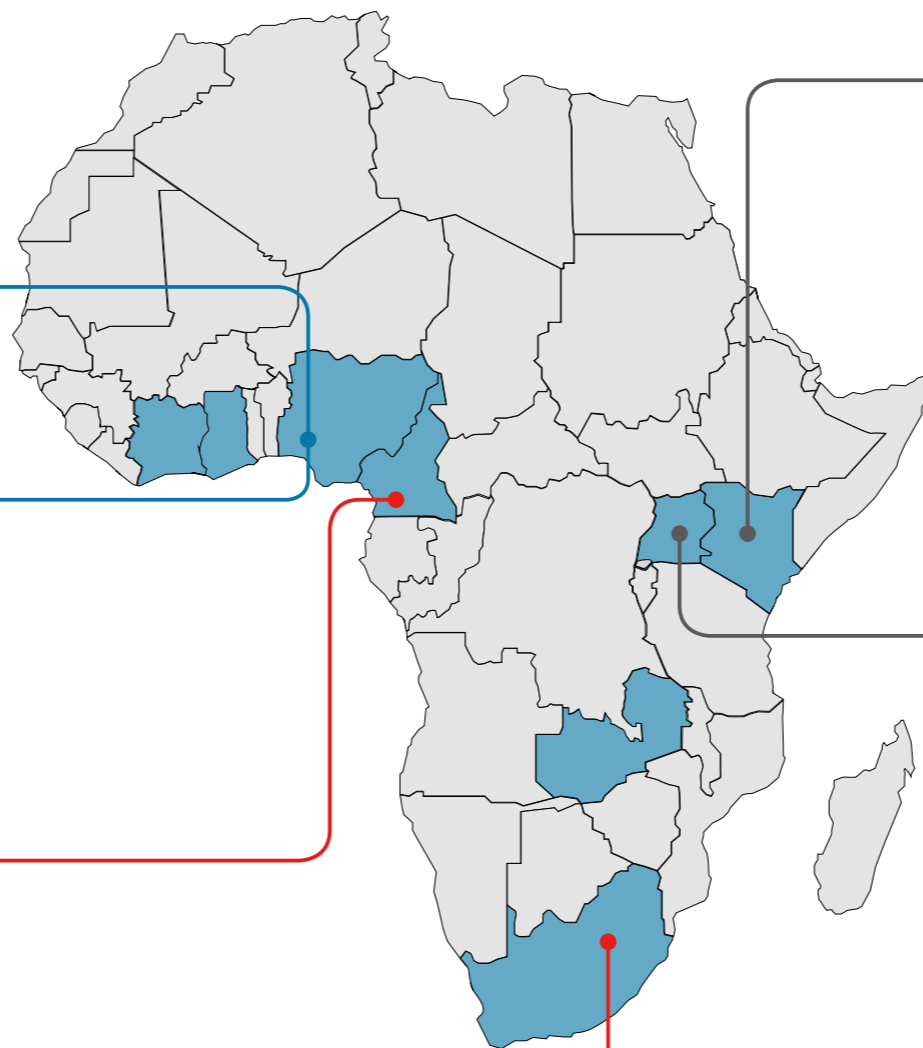
RESEARCH HUBS



Cameroon
Cote d'Ivoire
Ghana
Kenya

Nigeria
Rwanda
South Africa
Uganda

*Project has partner institution(s) in the United States of America



CAMRA* | Grant Number: 5U54TW012056-03

Combating AntiMicrobial Resistance in Africa Using Data Science

Data Types: Demographic, Clinical/Phenotype Climate/Genomic

Platform: eLwazi, NCBI

Capacity Building: Training on Bacterial Sequencing & Bioinformatics

Focus Areas: Antimicrobial Resistance in Invasive Bacteria

Redeemer's University

Nigeria



Contact PI: Christian Happi

INFORM Africa* | Grant Number: 5U54TW012041-03

Role of Data Streams In Informing Infection Dynamics in Africa

Data Types: Demographic, Surveillance, Clinical/Phenotype, Environmental, Climate, Genomic, Image

Platform: Dropbox

Capacity Building: Research Ethics, Research/Bioinformatics Methods, Science Communication

Focus Areas: HIV, COVID-19, Population-Scale Data Streams

Institute of Human Virology - Nigeria



Contact PI: Alash'le Abimiku

D-SINE* | Grant Number: 5U54TW012087-03

Harnessing Data Science to Promote Equity in Injury and Surgery for Africa

Data Types: Demographic, Surveillance, Clinical/Phenotype, Genomic, Context of Injury

Platform: HPC

Capacity Building:

Focus Areas: Injury, Trauma, Surgery, Health Equity

University of Buea - Cameroon



Contact PI: Mefire Chichom

MADIVA* | Grant Number: 5U54TW012077-03

MADIVA (Multimorbidity in Africa: Digital innovation, visualisation and application)

Data Types: Demographic, Surveillance, Clinical/Phenotype, Genomic

Platform: WITS Cluster

Capacity Building: Scientific Writing, Grant Proposal Writing, Research Governance, Qualitative Data Analysis, Community and Stakeholder Engagement, Ethical and Regulatory Issues

Focus Areas: Multimorbidity, Polygenic Risk Scores

WITS Health Consortium (PTY), LTD
South Africa



Contact PI: Scott Hazelhurst

UZIMA-DS* | Grant Number: 5U54TW012089-03

Utilizing health Information for Meaningful impact in East Africa through Data Science

Data Types: Demographic, Surveillance, Clinical/Phenotype, Environmental, Geospatial

Platform: Azure

Capacity Building: Azure Training, Data Journalism, Scientific Writing, Research Management Foundations

Focus Areas: Maternal/Newborn/Child Mental Health

Aga Khan University - Kenya



Contact PI: Amina Abubakar

MUDSReH* | Grant Number: 5U54TW012043-03

MUST Data Science Research Hub

Data Types: Demographic, Surveillance, Clinical, Environmental, Image, Geospatial

Platform: Google Cloud Platform

Capacity Building: Implementation Science, Responsible Conduct of Research, Scientific Manuscript Writing, Grant Writing

Focus Areas: DCPA, Breast Cancer

Mbarara University of Science and Technology
Uganda



Contact PI: Fred Kagawa

HE2AT* | Grant Number: 5U54TW012083-03

Developing data science solutions to mitigate the health impacts of climate change in Africa: the HE2AT Center

Data Types: Demographic, Surveillance, Clinical/Phenotype, Environmental, Climate, Geospatial

Platform: UCT HPC

Capacity Building: Data Management, Meta-data Principles, Climate/Health Data Analysis, Data Visualisation, Data Sharing

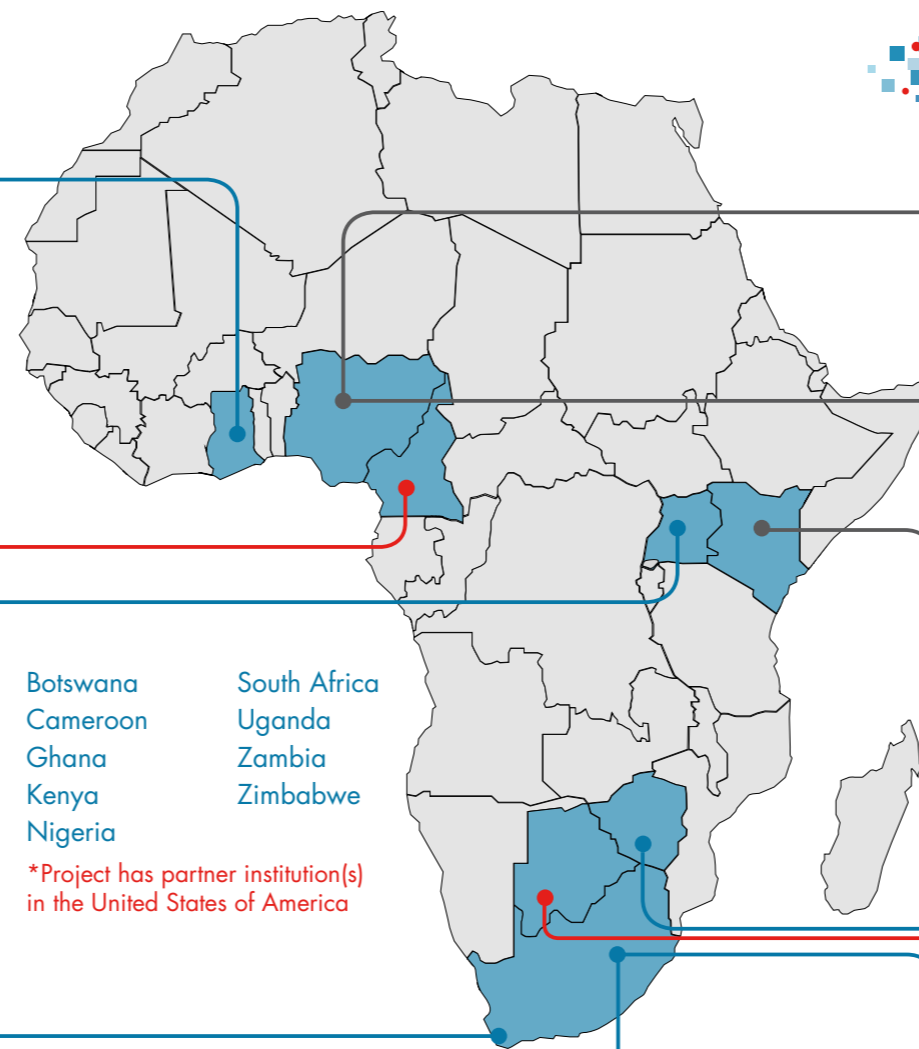
Focus Areas: Climate Change

WITS Health Consortium (PTY), LTD -
South Africa



Contact PI: Matthew Chersich

RESEARCH PROJECTS



Botswana
Cameroon
Ghana
Kenya
Nigeria
South Africa
Uganda
Zambia
Zimbabwe

*Project has partner institution(s)
in the United States of America

DICE* | Grant Number: 1U01ES036147-01

Leveraging Data Science Applications to Improve Children's Environmental Health in Sub-Saharan Africa

Focus Areas: Children's Health, PM2.5 Exposure

Capacity Building: Health Data Science Capacity

University of Cape Coast – Ghana

Contact PI: Adedza Amegah



GCAP*

Genome-wide characterization of complex variants and their phenotypic effects in African populations

Grant Number: 1U01HG013442-01

Focus Areas: Genetic Variants

Covenant University - Nigeria

Contact PI: Jelili Oyelade



CHD AI* | Grant Number: 1U01HL172179-01

Artificial Intelligence assisted echocardiography to facilitate optimal image extraction for congenital heart defects diagnosis in Sub-Saharan Africa

Focus Areas: Congenital Heart Defects, Echocardiography

Capacity Building: Echocardiography Scans

Health Research Foundation - Cameroon

Contact PI: Aminkeng Leke



GDRS - Ghana* | Grant Number: 7U01TW012531-02

Geo-enabled detect and respond system for antimalarial resistance in Ghana: GDRS - Ghana

Focus Areas: Molecular Surveillance, Malaria
Institute of Human Virology - Nigeria

Contact PI: Alash'le Abimiku



DS-I Malaria* | Grant Number: 1U01EB035483-01

Automated Mobile Microscopy for Malaria Diagnosis and surveillance in Uganda

Focus Areas: Malaria, Microscopy

Makerere University College of Health Sciences – Uganda

Contact PI: Rose Nakasi



CHEAQI-MNCH* | Grant Number: 1U01ES036146-01

Characterizing Effects of Air Quality In Maternal, Newborn and Child Health: The CHEAQI-MNCH Research Project

Focus Areas: Air Pollution, Maternal & Neonatal Health
Centre/Sexual HLTH/HIV Aid Res/Zimbabwe Zimbabwe

Contact PI: Tatenda Makanga



BCX-Africa* | Grant Number: 1U01HL172180-01

BCX-Africa: Utilizing data science to evaluate the applicability of blood cell traits polygenic risk scores for disease prediction in Africa

Focus Areas: Blood Cell Traits, Disease Prediction

Capacity Building: Scientific Training

Uganda Virus Research Institute – Uganda

Contact PI: Segun Fatumo



DDD-Africa* | Grant Number: 1U01HD114537-01

Advancing discovery for developmental disorders - expanded analysis of the DDD-Africa resource

Focus Areas: Development Disorders

Capacity Building: Genomic Efforts for Global Health
WITS Health Consortium (PTY), LTD – South Africa

Contact PI: Zané Lombard



DSpace* | Grant Number: 1U01HD114479-01

DSpace: Utilizing Data Science to Predict and Improve Health Outcomes in Pediatric HIV

Focus Areas: HIV, Tuberculosis

Capacity Building: Electronic Health Records, Multi-Omics Data
University of Botswana – Botswana

Contact PI: Gaone Retshabile



DS-IAFRICA-TB* | Grant Number: 1U01TW012534-01

Tuberculosis in households with infectious cases in Kampala city: Harnessing health data science for new insights on TB transmission and treatment response

Focus Areas: Tuberculosis

Capacity Building: Machine Learning Algorithms

Makerere University College of Health Sciences – Uganda

Contact PI: David Kateete



ILERA* | Grant Number: 1U01HL172182-01

Integrated models for Early Risk-prediction in Africa (ILERA) study

Focus Areas: Cardio Metabolic Disease, Risk Prediction Models

Capacity Building: Public Health Intervention

WITS Health Consortium (PTY), LTD – South Africa

Contact PI: Ananyo Choudhury



Leveraging artificial intelligence/machine learning-based technology to overcome specialized training and technology barriers for the diagnosis and prognostication of colorectal cancer in Africa | Grant Number: 1U01CA287852-01

Focus Areas: Colorectal Cancer

Capacity Building: Diagnostic Tools, Health Infrastructure, Open Source Software

Aga Khan University – Kenya

Contact PI: Mansoor Saleh



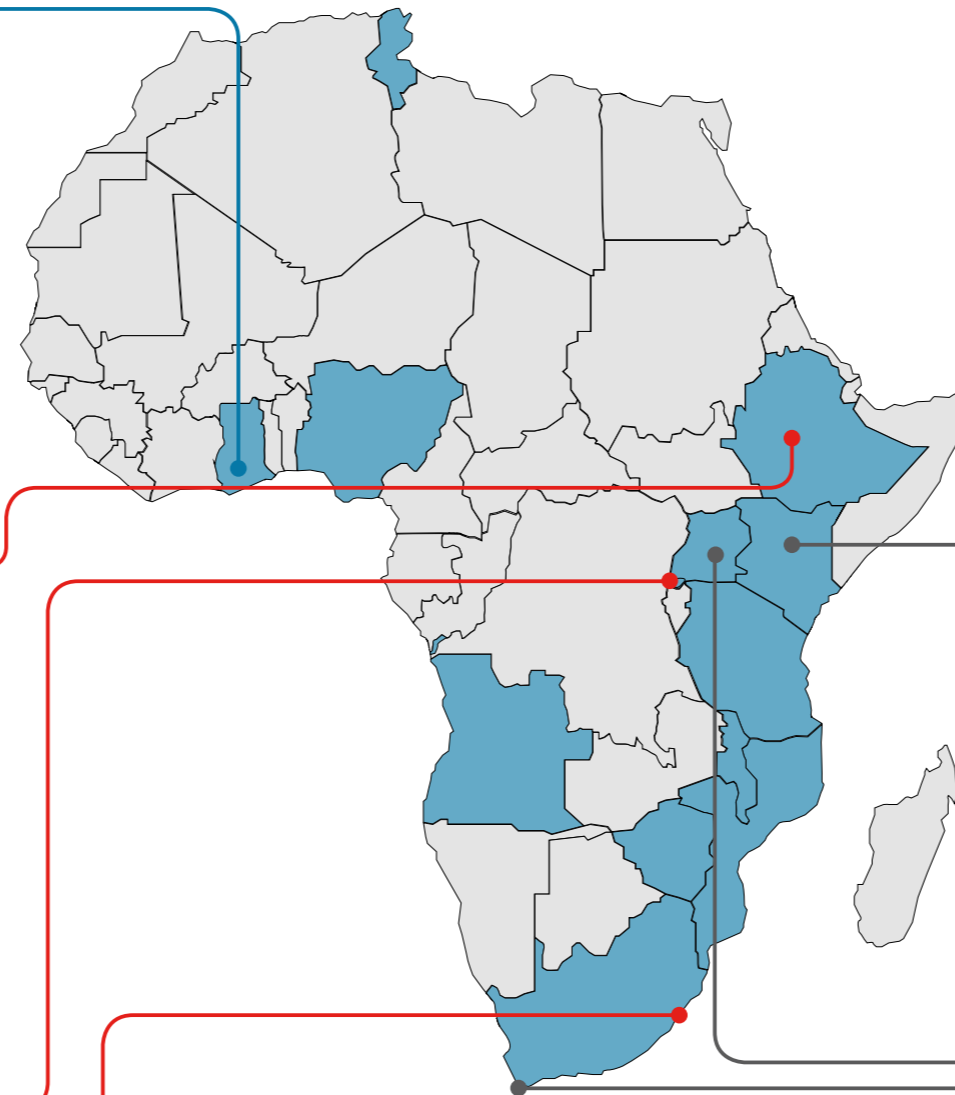
RESEARCH TRAINING HUBS



Angola
Ethiopia
Ghana
Kenya
Malawi
Mozambique
Nigeria

Rwanda
South Africa
Tanzania
Tunisia
Uganda
Zimbabwe

*Project has partner institution(s) in the United States of America



DS-CHANGE* | Grant Number: 5U2RTW012129-03

Data Science for Child Health Now in Ghana

Degree Programmes: Master's/Doctorate
Biomedical Data Science and public health

Short Term Training: Informatics,
Biostatistics/Mathematics, Epidemiology, Computer Science

Mode: Face-to-face

**Kwame Nkrumah University
of Science and Technology**
Ghana

Contact PI: Christy McKinney



APHREA-DST* | Grant Number: 5U2RTW012123-03

Advancing Public Health Research in Eastern Africa through
Data Science Training

Degree Programmes: Master's in Public Health
Data Science

Short Term Training: Public Health Data Science

Mode: Face-to-face/online/hybrid

**Addis Ababa University/
Nairobi University** - Ethiopia

Contact PI: Kiros Berhane



DST-HIRWA*

Grant Number: 5U2RTW012122-03

Research Training in Data Science for Health in Rwanda

Degree Programmes: Master's & Doctorate

Short Term Training: Synthetic Data

Mode: Face-to-face/online/hybrid

University of Rwanda - Rwanda

Contact PI: Victor Davila-Roman



WASHA Takwimu*

Grant Number: 5U2RTW012140-03

Research Training on Harnessing Data Science for Global
Health Priorities in Africa

Degree Programmes: Master's in Health Data Science

Short Term Training: Health systems and food security,
climate change and planetary health, grant-writing

Mode: Face-to-face/online/hybrid

University of KwaZulu-Natal - South Africa

Contact PI: Wafaie Fawzi



DSSD* | Grant Number: 5U2RTW012121-03

NYU-Moi Data Science for Social Determinants
Training Program

Degree Programmes:

Master's and Doctorate Data Science tracks

Short Term Training:

Mode: Face-to-face/online/hybrid

Moi University - Kenya

Contact PI: Rumi Chunara



MakDARTA*

Grant Number: 5U2RTW012116-03

Makerere University Data Science Research Training to
Strengthen Evidence-Based Health Innovation,
Intervention and Policy

Degree Programmes: Master's and Doctorate

Short Term Training: Ethics in Big Data

Mode: Face-to-face/online/hybrid

Makerere University - Uganda

Contact PI: David Kateete



COBIP*

Grant Number: 5U2RTW012131-03

Computational Omics and Biomedical Informatics Program

Degree Programmes: Master's and Doctorate in
Computational Health Informatics

Short Term Training: Online graduate courses in
Biomedical Informatics at OHSU

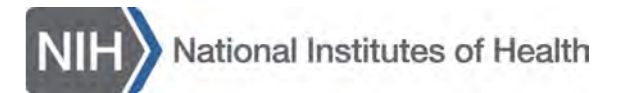
Mode: Face-to-face/online

University of Cape Town - South Africa

Contact PI: Hocine Bendou



RESEARCH EDUCATION PROJECTS



Ghana
Kenya
Mali

Nigeria
Rwanda

*Project has partner institution(s) in the United States of America

DATICAN* | Grant Number: 1UE5EB035490-01

Data Science and Medical Image Analysis Training for Improved Health Care Delivery in Nigeria

Capacity Building: Hackathons, Image Processing, Current Research in Data Science

Focus Areas: Medical Imaging, Data Science

Lagos State University Teaching Hospital – Nigeria

Contact PI: Benjamin Aribisala



GRASP* | Grant Number: 1UE5HL172183-01

Growing Data-science Research in Africa to Stimulate Progress

Capacity Building: Data Science

Focus Areas: Brain Health

College of Medicine, University of Ibadan
Nigeria

Contact PI: Mayowa Owolabi



West Africa Center of Excellence for Data Science Research Education* | Grant Number: 1UE5TW012526-01

Capacity Building: Processing Large & Complex Datasets, Datathon Training

Focus Areas: Data Science Training

University of Sciences,
Tech & Tech of Bamako – Mali

Contact PI: Seydou Doumbia



SYNAPSE* | Grant Number: 1UE5HL172181-01

SYNthetic Healthcare DATA Platform for Data Science Training

Capacity Building: Synthetic Healthcare Data, MDClone

Focus Areas: Synthetic Data

National University of Rwanda – Rwanda

Contact PI: David Tumusiime



ENEZA* | Grant Number: 1UE5TW012539-01

Eneza Data Science: Enhancing Data Science Capability and Tools for Health in East Africa

Capacity Building: Open Science Skills & Tools

Focus Areas: Clinical Practice, Health Research & Policy
International Centre of Insect Physiology
Kenya

Contact PI: Daniel Masiga



DS-ZOOFOOD* | Grant Number: 1UE5TW012566-01

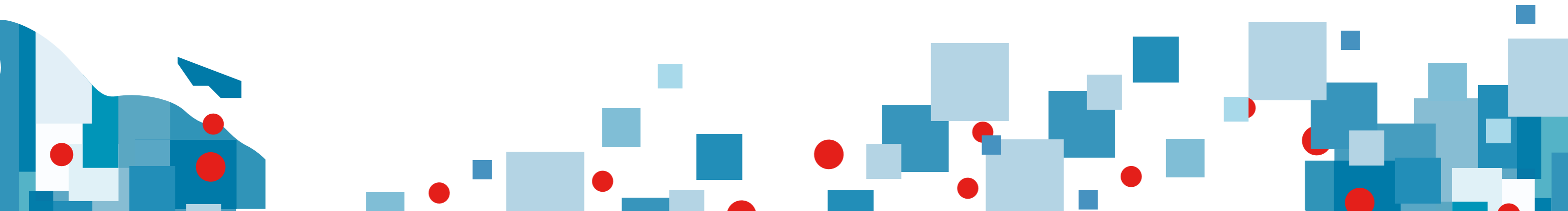
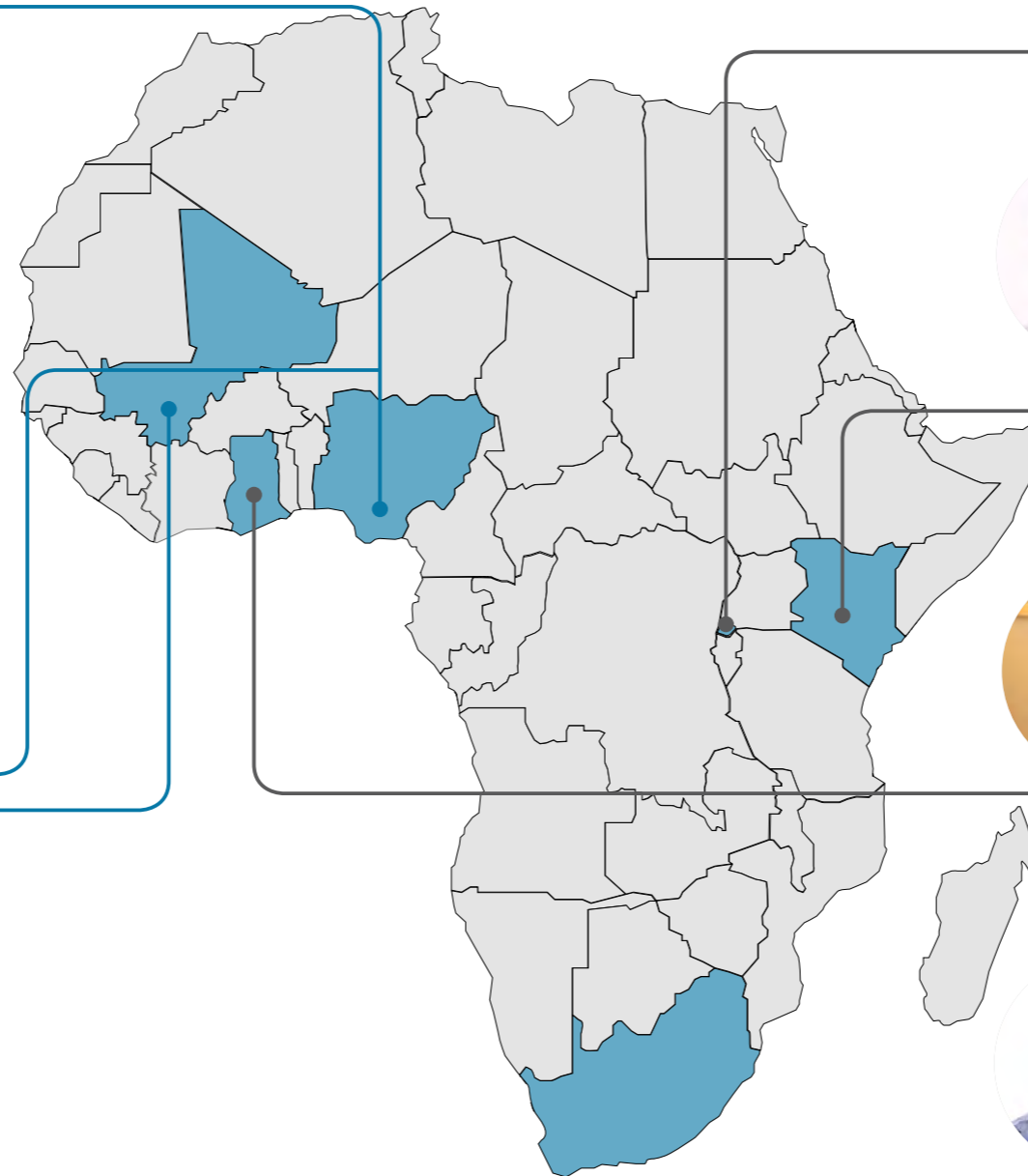
Application of Data Science to Build Research Capacity in Zoonoses and Food-Borne Infections in West Africa

Capacity Building: Bioinformatics, Phylodynamics, Disease Modelling

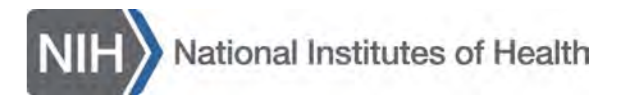
Focus Areas: Zooness, Food-Borne Infections

College of Health Sciences,
University of Ghana – Ghana

Contact PI: Eric Sampane-Donkor



ETHICAL, LEGAL & SOCIAL IMPLICATIONS PROJECTS



Cameroon
Ghana
Nigeria

South Africa
Tanzania
Uganda

*Project has partner institution(s) in the United States of America

BridgELSI* | Grant Number: 5U01MH127693-03

Bridging Gaps in the ELSI of Data Science Health Research in Nigeria

Aims: BridgELSI will evaluate current legal instruments, guidelines and frameworks, their implementation, and use these to develop new and innovative governance frameworks to support data science health research in Nigeria.

Center for Bioethics and Research
Nigeria

Contact PI: Temidayo Ogundiran



REDSSA*

Grant Number: 5U01MH127704-03

Research for Ethical Data Science in Southern Africa

Aims: REDSSA has the overall aims of producing new knowledge in regard to the ethical, legal and social implications (ELSI) of conducting data science research, to develop evidencebased, context specific guidance for the conduct and governance of data science initiatives such as DS-I Africa, and to strengthen the culture of responsible data science in Southern Africa

Stellenbosch University
South Africa

Contact PI: Keymanthri Moodley



DS-I Africa - Law*

Grant Number: 5U01MH127690-03

Aims: DS-I Africa Law has a broad jurisdictional scope, involving 12 African nations. Five themes are investigated:

1. modes of informed consent
2. the nature and content of individual and community rights in genomic data
3. the use of persons' geospatial data for public health surveillance
4. cross-border sharing of data
5. the use of data as basis for AI.

University of KwaZulu-Natal
South Africa

Contact PI: Donrich Thaldar



PUBGEM-Africa*

Grant Number: 5U01MH127692-03

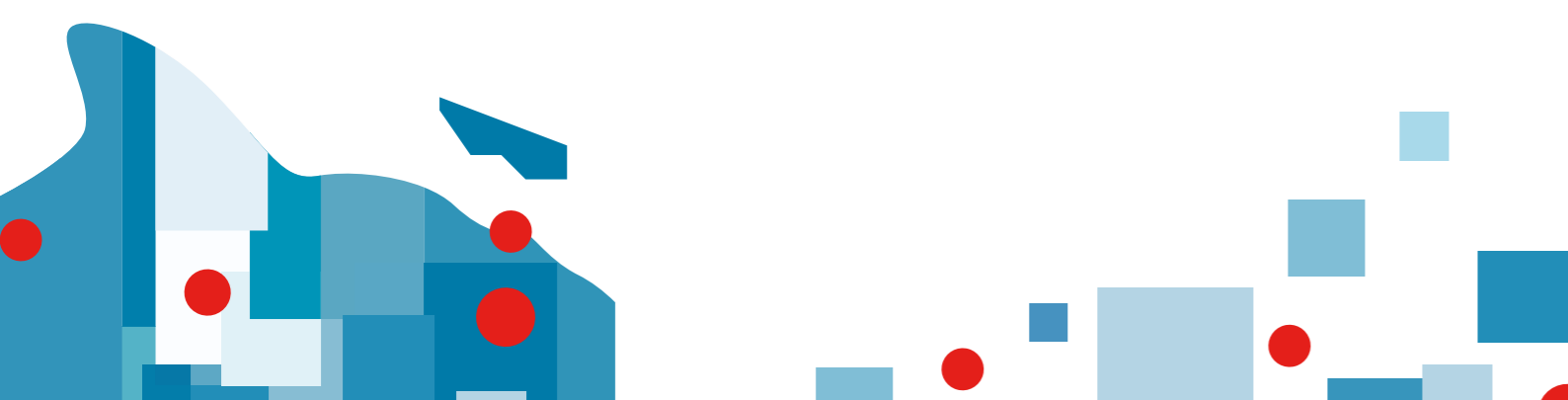
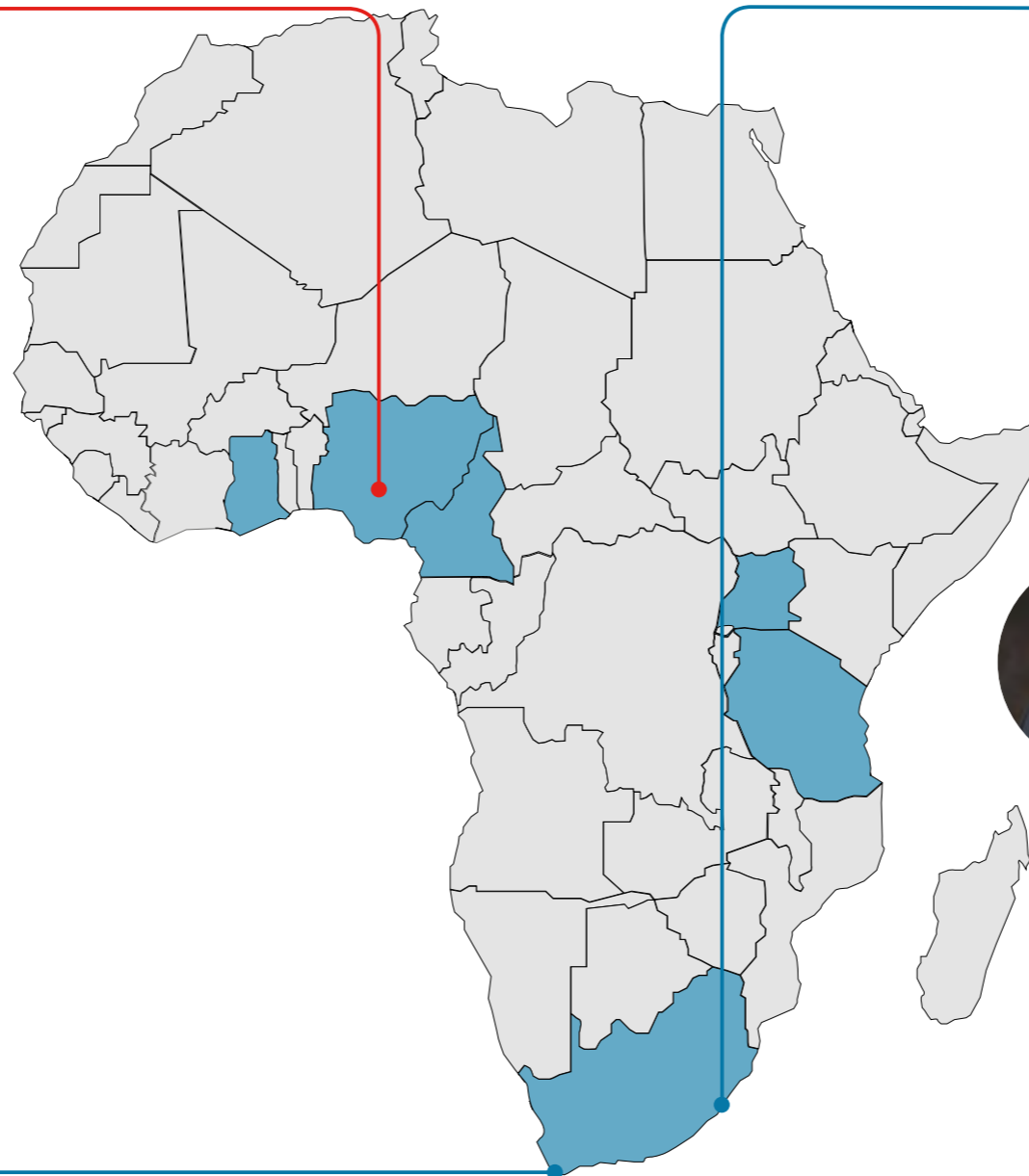
Public Understanding of Big data in Genomics Medicine in Africa

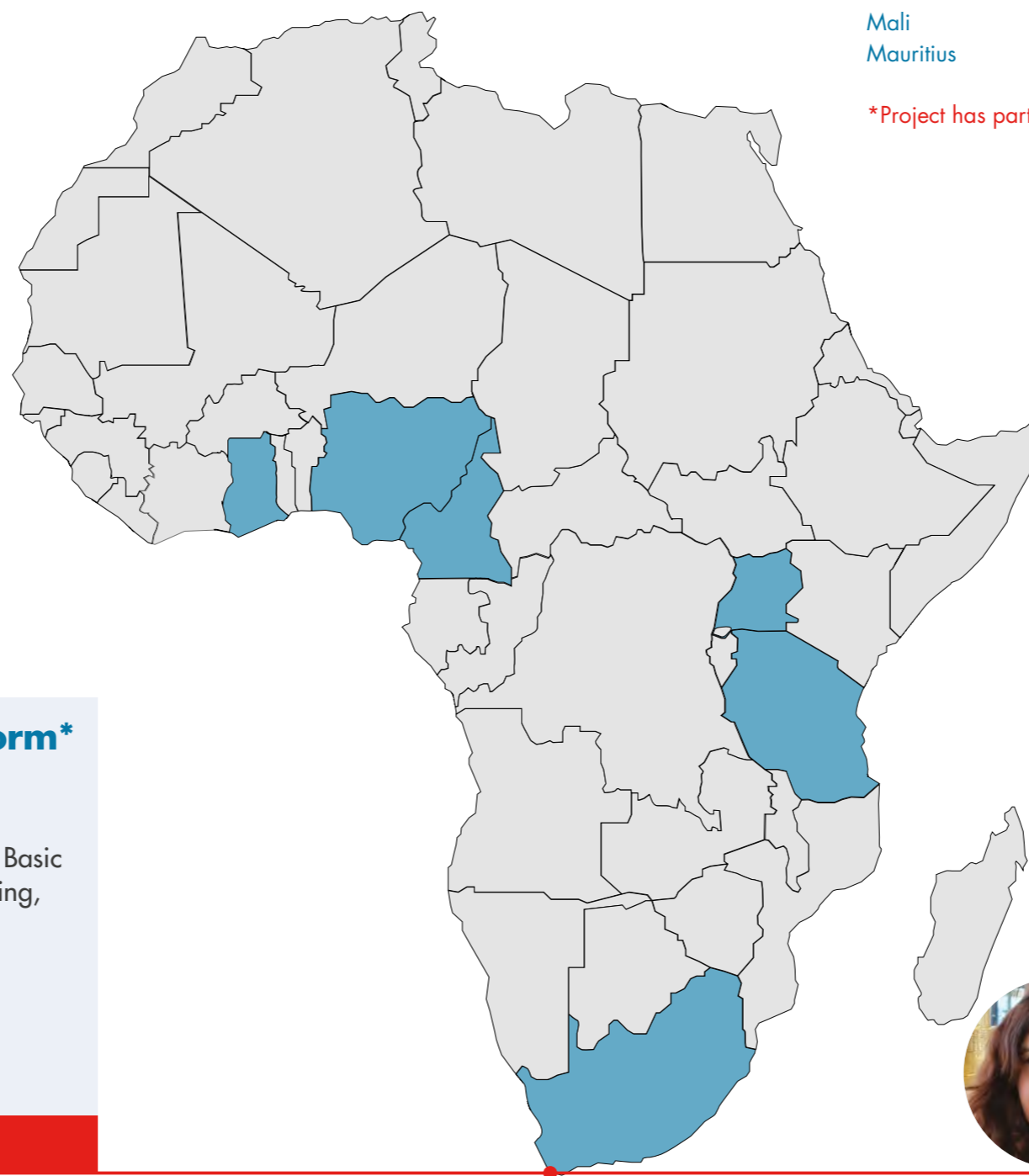
Aims:

- 1) to investigate models of public engagement and preparedness for big data use in health; 2) to explore the roles and responsibilities of different stakeholder groups (data providers, data producers, data users, funders, and research ethics committees) regarding intellectual property, patents, and commercial use of genomics big data in health;
- 3) to investigate public perceptions of big data in health and attitude towards governance of data; 4) to develop data governance frameworks for big data-driven innovation and health in Africa.

University of Cape Town
South Africa

Contact PI: Ambroise Wonkam





Mali
Mauritius

South Africa
Uganda

Sudan

*Project has partner institution(s) in the United States of America

eLwazi Open Data Science Platform*

Grant Number: 5U2CEB032224-03

Short Term Training: eLwazi Tools & Resources, Basic Bioinformatics, Data Science Skills, Cloud Computing, Developing Data Science Curriculum

Infrastructure: Terra, Gen3, Dockstores

University of Cape Town

South Africa



Contact PI: Nicola Mulder

DS-I Africa Coordinating Center*

Grant Number: 5U2CEB032224-03

Working Groups: Training & Education, Data Management, Data Governance, Partnerships & Outreach

Number of Projects: 38

Members: 300+

University of Cape Town

South Africa



Contact PI: Michelle Skelton