



**H3Africa**  
Human Heredity and Health in Africa



# **Human Heredity and Health in Africa**

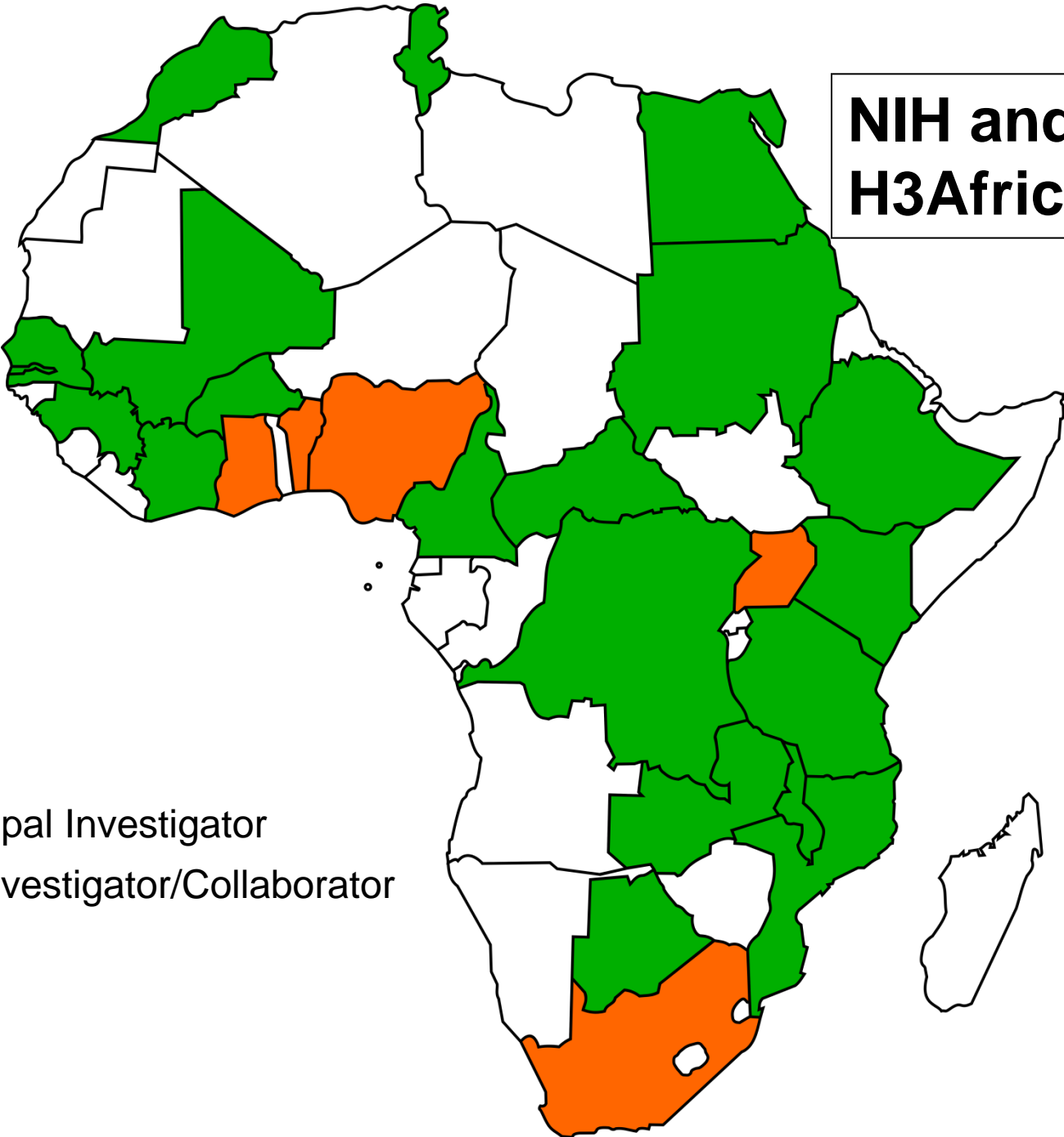
## **Inaugural Consortium Meeting Addis Ababa**

**October 8-10 2012**

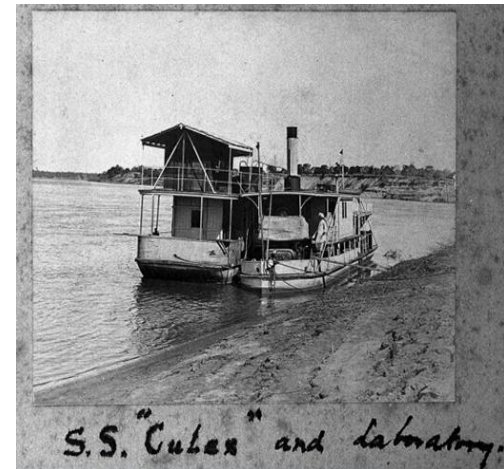
**Pat Goodwin**

# NIH and WT H3Africa grants

- Principal Investigator
- Co-Investigator/Collaborator



# Sir Henry Wellcome 1853 - 1936



***“Research Fund .. for the advancement of research ... which may conduce to the improvements of the physical conditions of mankind ... and in particular for ... medicinal agents and methods for prevention and cure of disorders ... in tropical and other regions.”***

# The Wellcome Trust

- an independent research-funding charity funded from private endowment managed for long-term stability and growth
- total spend approx £600M per annum (2011)
- a long history of support for research in Africa
- a significant international player in genetics and genomics research

**The Wellcome Building  
183 Euston Road  
Wellcome Collection**



**The Gibbs Building  
215 Euston Road  
Trust Office**



# The Wellcome Trust

Strategic  
Plan

2010-20

Extraordinary Opportunities

wellcome<sup>trust</sup>

Our **vision** is to achieve extraordinary improvements in human and animal health

Our **mission** is to support the brightest minds in biomedical research and the medical humanities

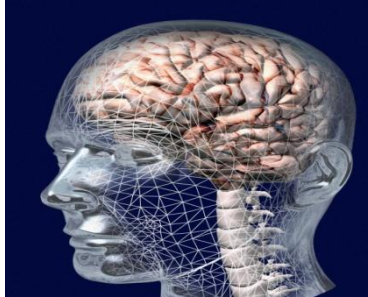
wellcome<sup>trust</sup>

# Five major challenges...

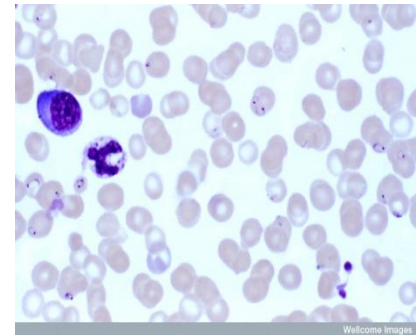
**Maximising the health benefits of genetics and genomics**



**Understanding the brain**



**Combating infectious diseases**



**Investigating development, ageing & chronic disease**



**Connecting environment, nutrition and health**

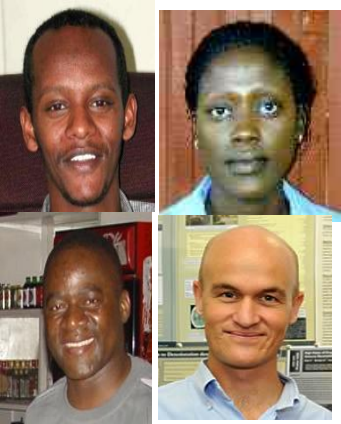


# Support for research in Africa

- First research grant (1938) to Henry Foy to work on malaria
- Fellowships in Public Health and Tropical Medicine
- Research and Capacity Building Programmes



# Fellowship schemes for developing country researchers



Principal Research Fellowship

Senior Research Fellowships (0/1)

Intermediate Fellowship (11/ 13 )

Training Fellowship (19/23)

MSc/PhD training (35/80)

Benin, Cameroon, Gambia, Ghana, Kenya, Malawi, Nigeria, Tanzania, South Africa, Sudan, Zimbabwe

PhD

3 yrs Post-doc

5 yrs Post-doc

10 yrs Post-doc

( ) - Number of awards 2006 to date for African scientists/total number of awards



# Support for research in Africa

## Major Programmes

**Pan-African  
Programmes**

*Indepth*

*African  
Institutions  
Initiative*



***KEMRI-Wellcome Trust  
Programme***

***Malawi-Liverpool-  
Wellcome Trust Clinical  
Programme***

***The Africa Centre for  
Health and Population  
Studies***

***Birth to Twenty (Wits)***

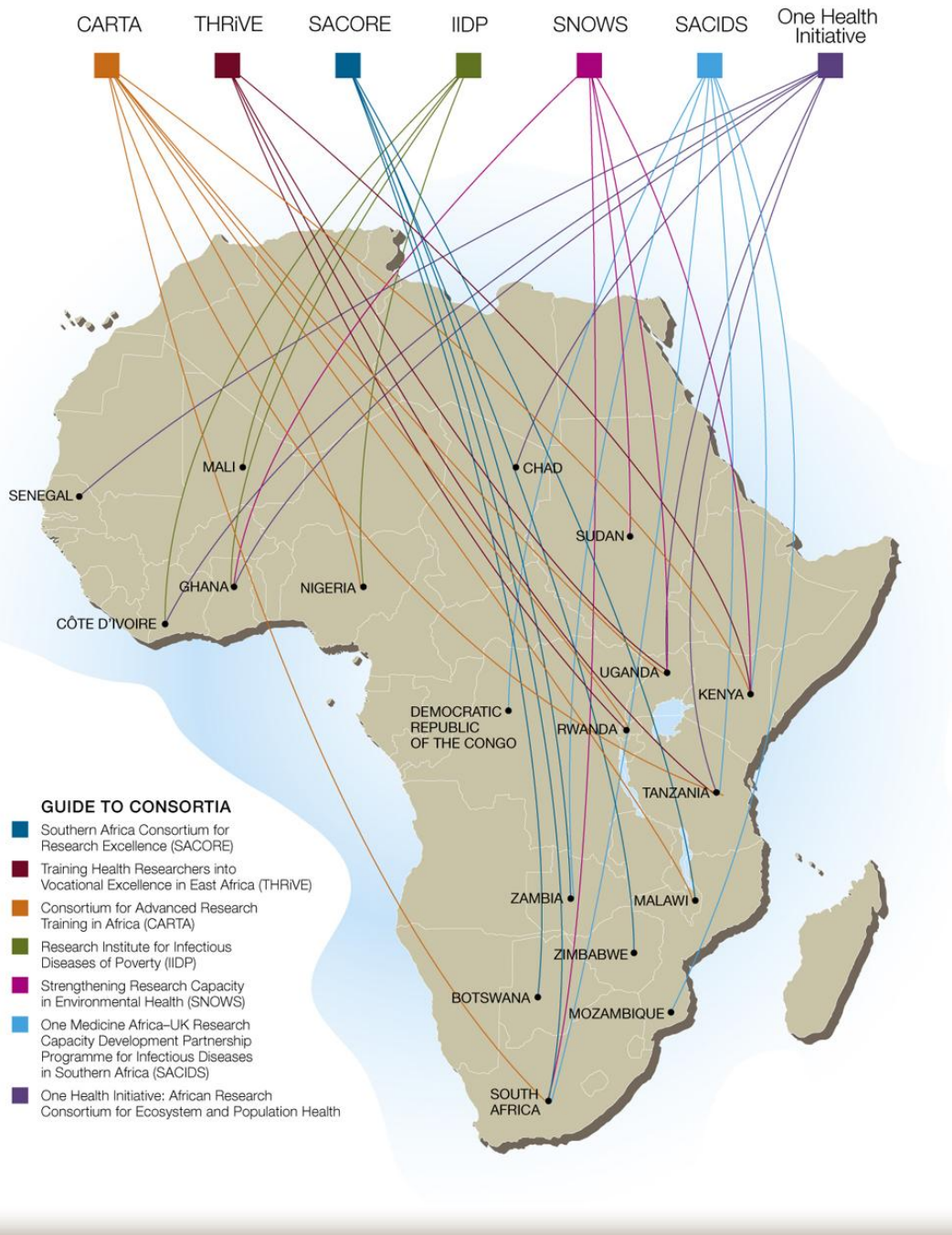
# African Institutions Initiative

**Aim: to build a critical mass of research capacity in Africa by supporting networks and strengthening infrastructure**

- £28m in total

- 7 awards to consortia involving 70 institutions, 51 from Africa

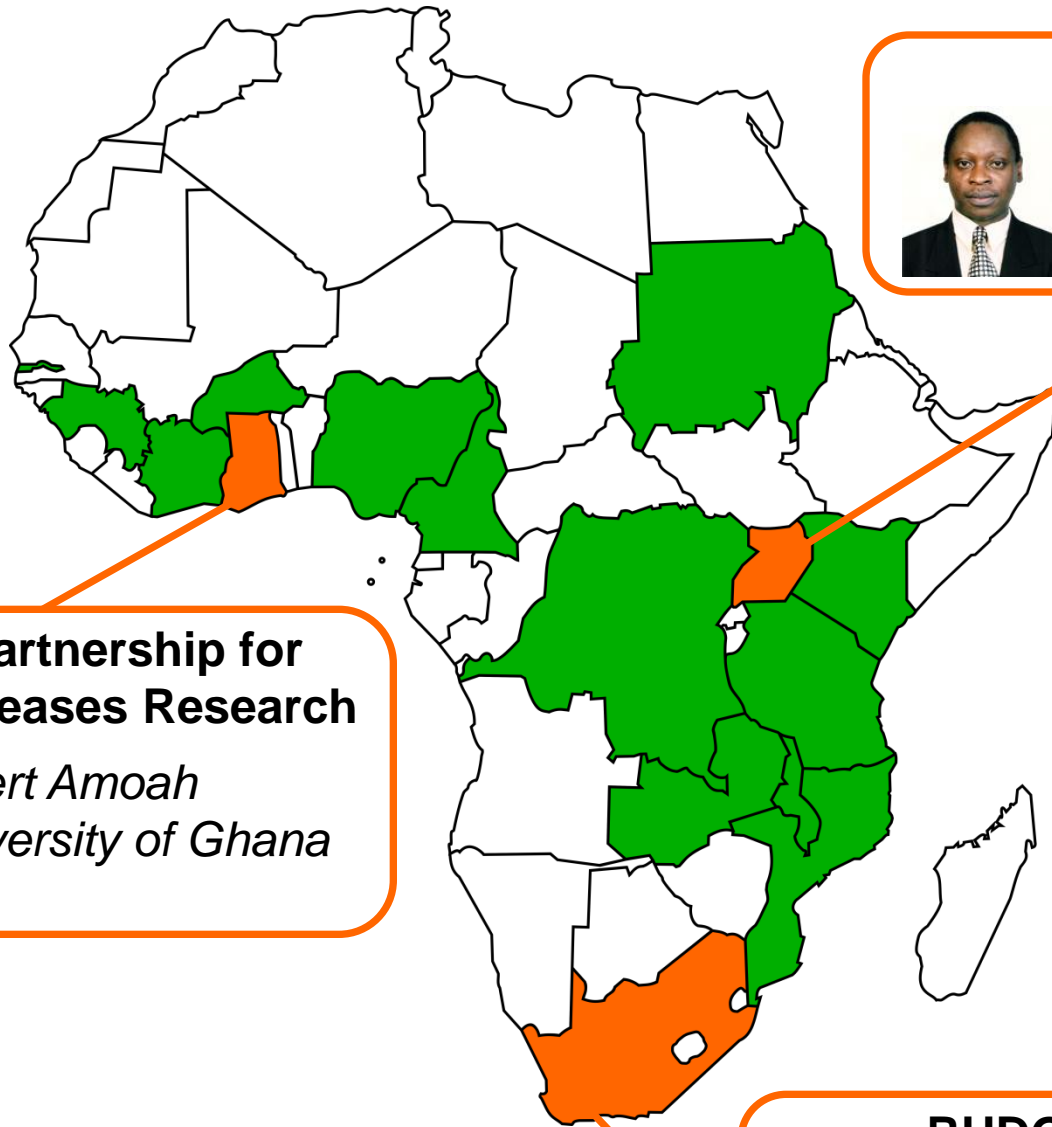
- 5 year period starting August 2009 (renewable)



# Support for research in genetics/genomics



- **Human Genome Project**
- **International HapMap Project**
- **Wellcome Trust Case Control Consortium**
- **1000 Genomes Project**
- **ENCODE**



### TrypanoGEN

*Enock Matovu  
Makerere University*

### African Partnership for Chronic Diseases Research





*Albert Amoah  
University of Ghana*



### RHDGen Network

*Bongani Mayosi  
University of Cape Town*

-  Principal Investigator
-  Co-Investigator/Collaborator

# Wellcome Trust H3Africa Research Networks

**Albert Amoah (University of Ghana)**

**Burden, spectrum and aetiology of type 2 diabetes in  
sub-Saharan Africa**

***Cameroon, Ghana, Malawi, Nigeria, South Africa, Tanzania,  
Uganda***



**Enock Matovu (Makerere University, Uganda)**

**TrypanoGen: an integrated approach to the identification  
of genetic determinants of susceptibility to trypanosomiasis  
*(Burkina Faso, Cameroon, DRC, Malawi, Tanzania, Uganda)***





**Bongani Mayosi (University of Cape Town, South Africa)**

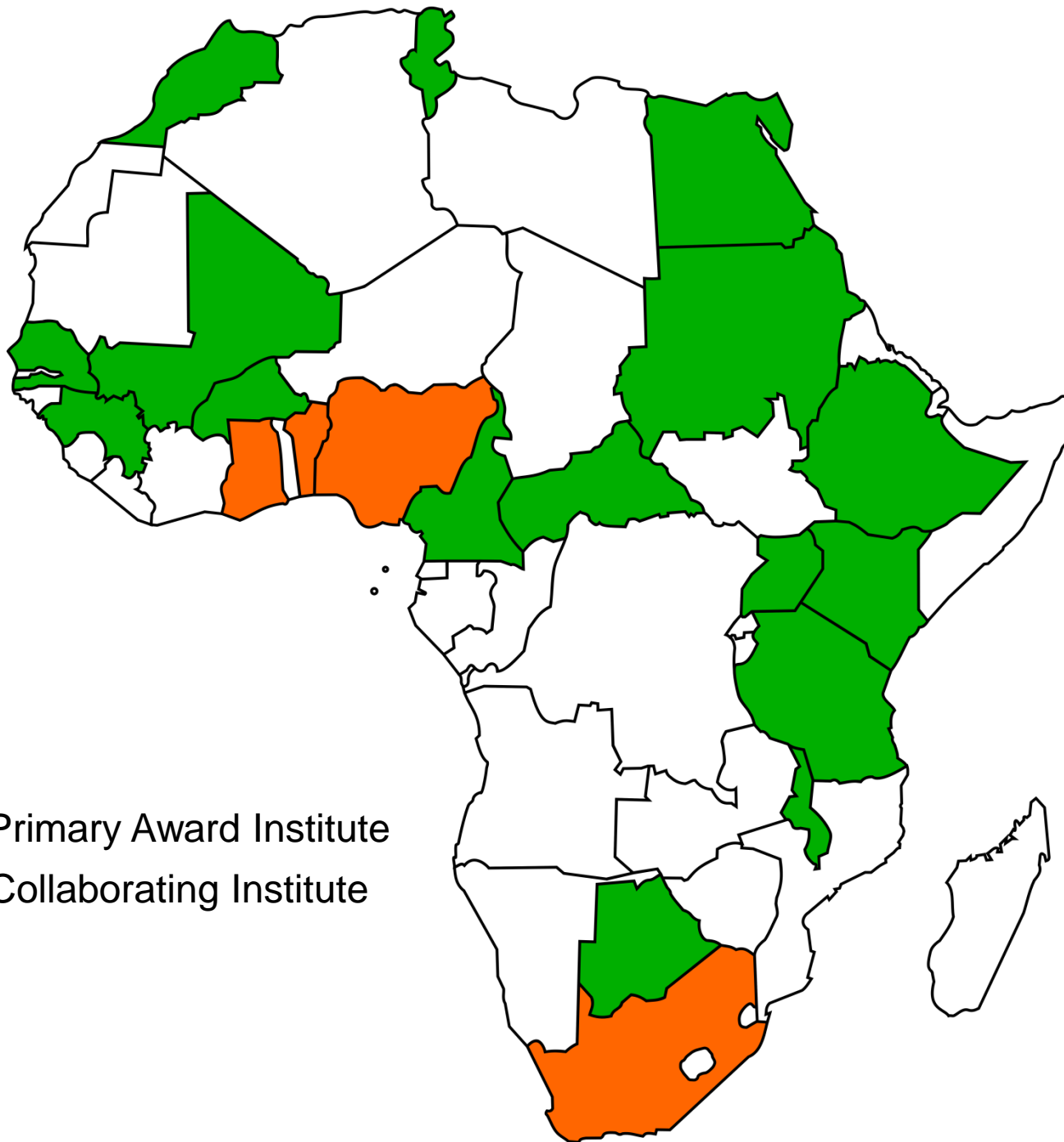
**Genetics of rheumatic heart disease and the molecular  
epidemiology of Streptococcus pyogenes pharyngitis  
(the RHDGen Network).**

***(Kenya, Mozambique, Nigeria, South Africa, Sudan,  
Uganda, Zambia)***

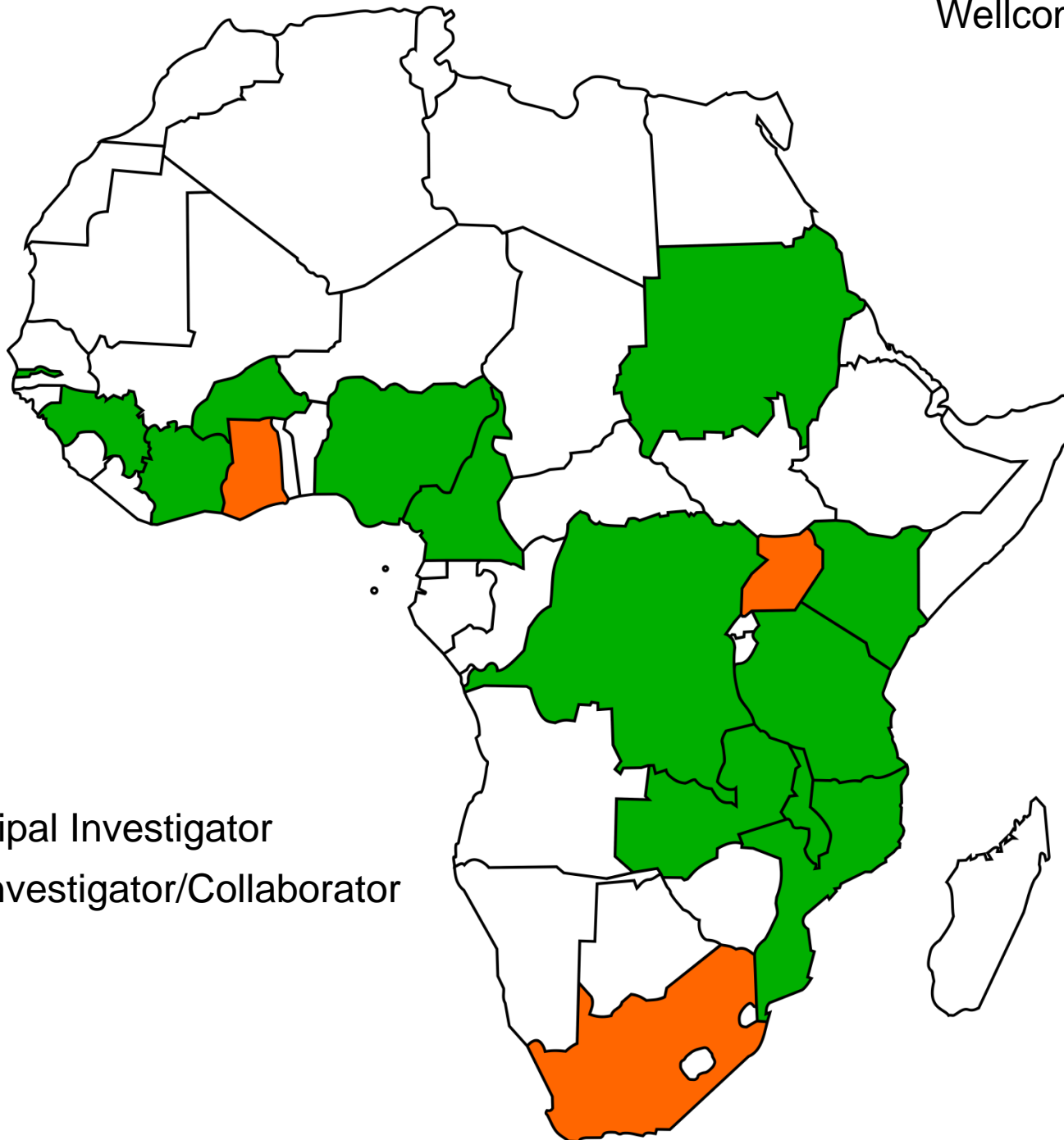




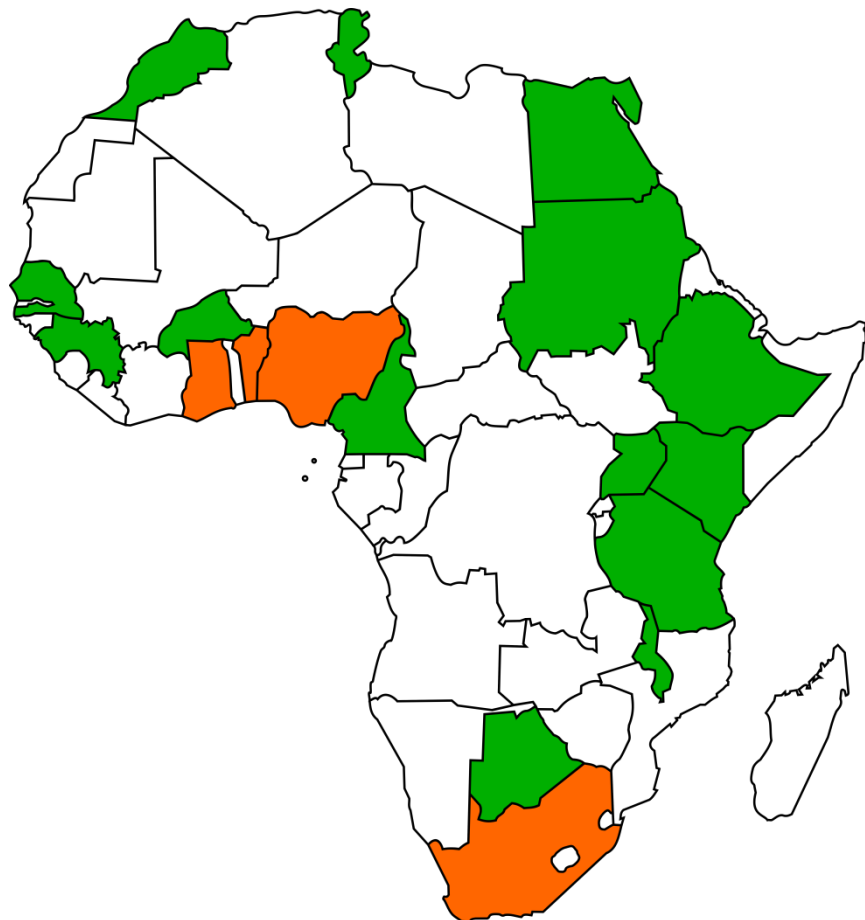
-  NIH Primary Award Institute
-  NIH Collaborating Institute



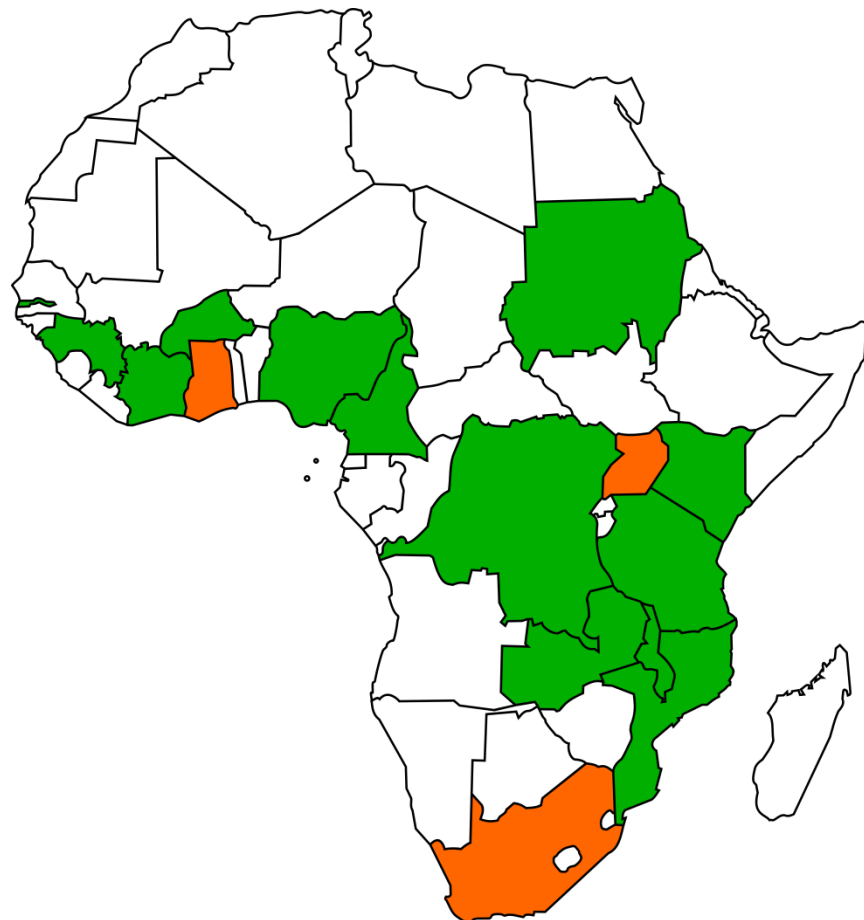
- Principal Investigator
- Co-Investigator/Collaborator





NIH awards



Wellcome Trust awards



-  Principal Investigator
-  Co-Investigator/Collaborator

# National Institutes of Health - H3Africa Research Network



Alash'le Abimiku  
Institute of Human Virology Nigeria, Nigeria  
*IHVN H3Africa Biorepository (I-HAB)*



Dwomoa Adu and Akinlolu Ojo  
University of Ghana Medical School &  
University of Michigan, Ghana & USA  
*H3Africa Kidney Disease Research Network*



Dissou Affolabi  
National Hospital for Tuberculosis and Pulmonary Diseases, Benin  
*Contribution of genetic variation to pharmacokinetic variability and toxicity in patients undergoing multi-drug tuberculosis treatment in Sub-Saharan Africa: RAFAgene project*



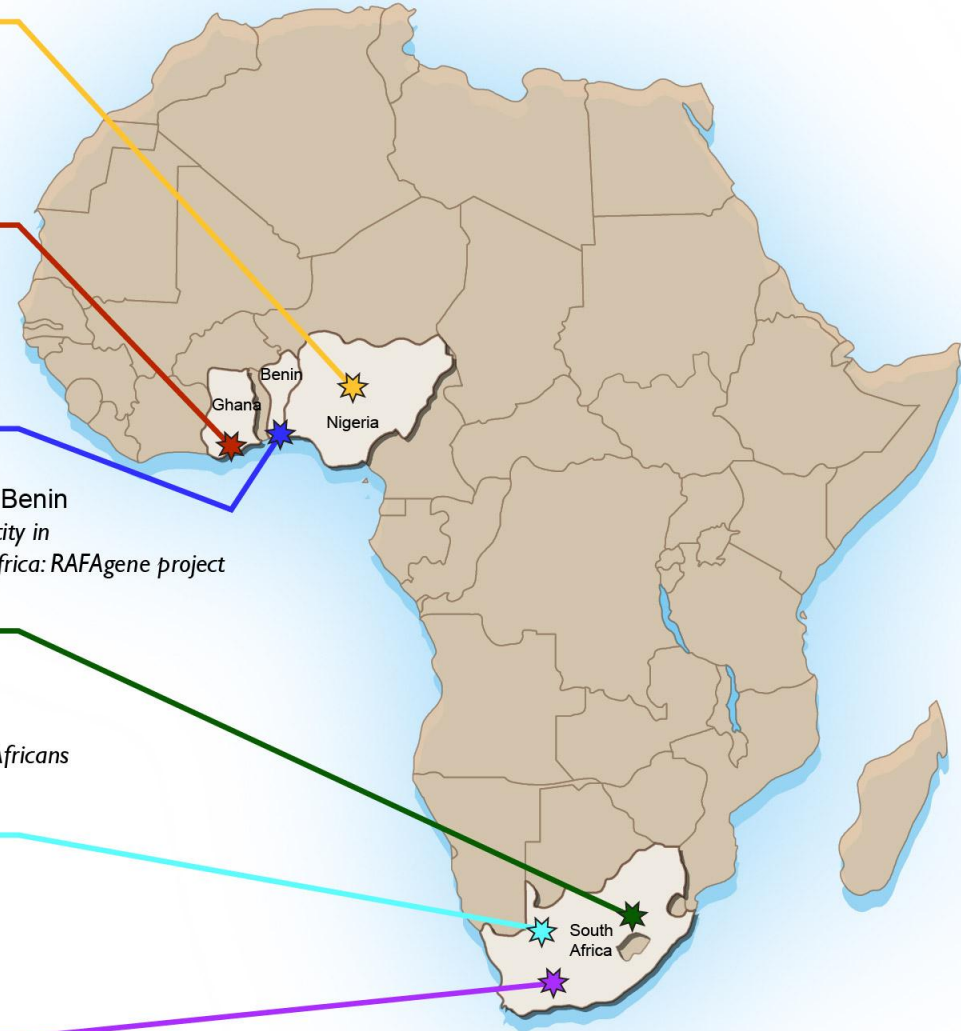
Michele Ramsay  
University of the Witwatersrand & NHLS, South Africa  
*Genomic and environmental risk factors for cardiometabolic disease in Africans*



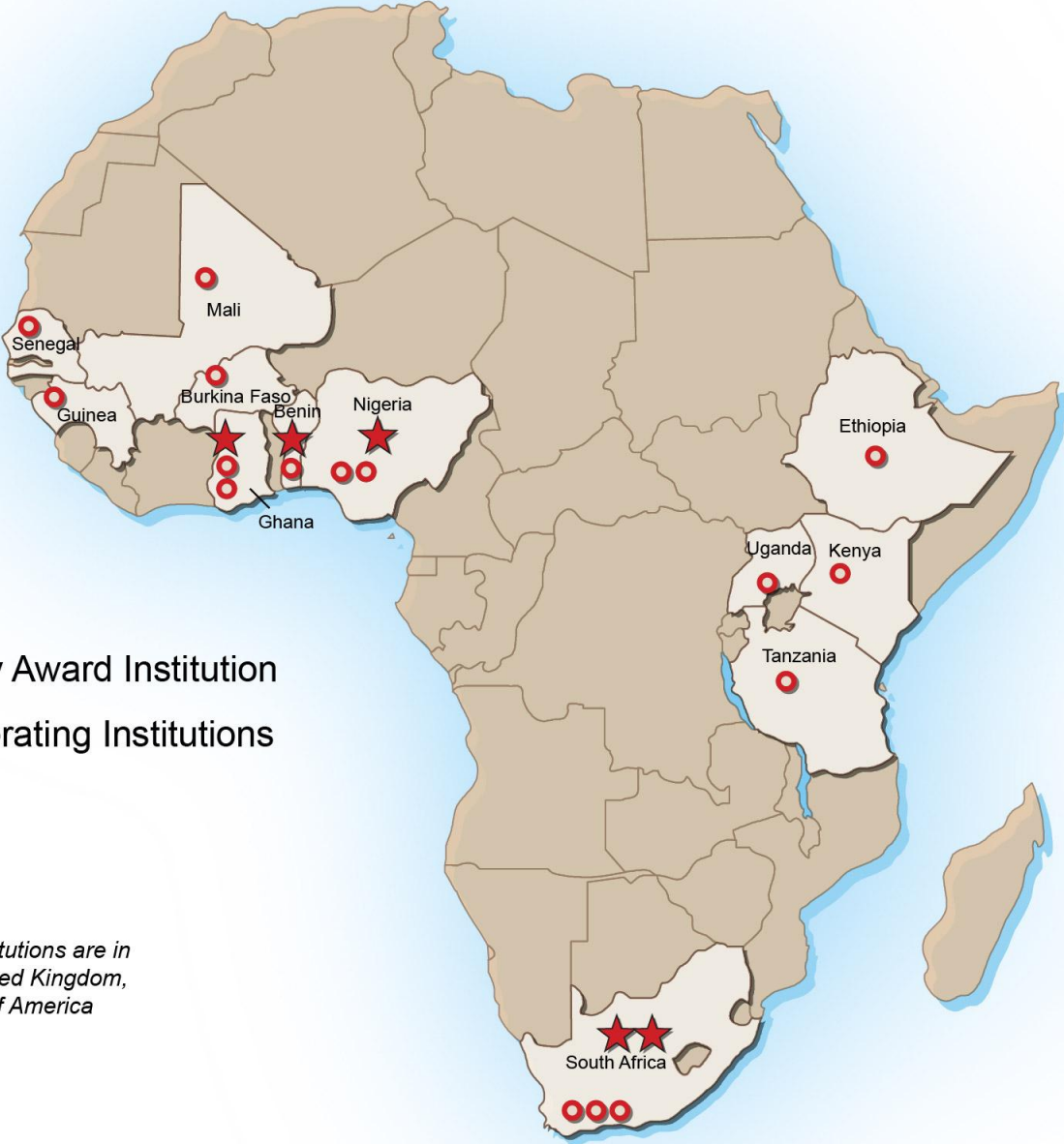
Akin Abayomi  
Stellenbosch University, South Africa  
*Development of stem cell, blood & DNA  
bio repositories to facilitate studies on Health, Disease  
& Pharmacogenomics of African Populations*



Nicola Mulder  
University of Cape Town, South Africa  
*H3ABioNet: a sustainable African Bioinformatics Network for H3Africa*



# National Institutes of Health - H3Africa Research Projects



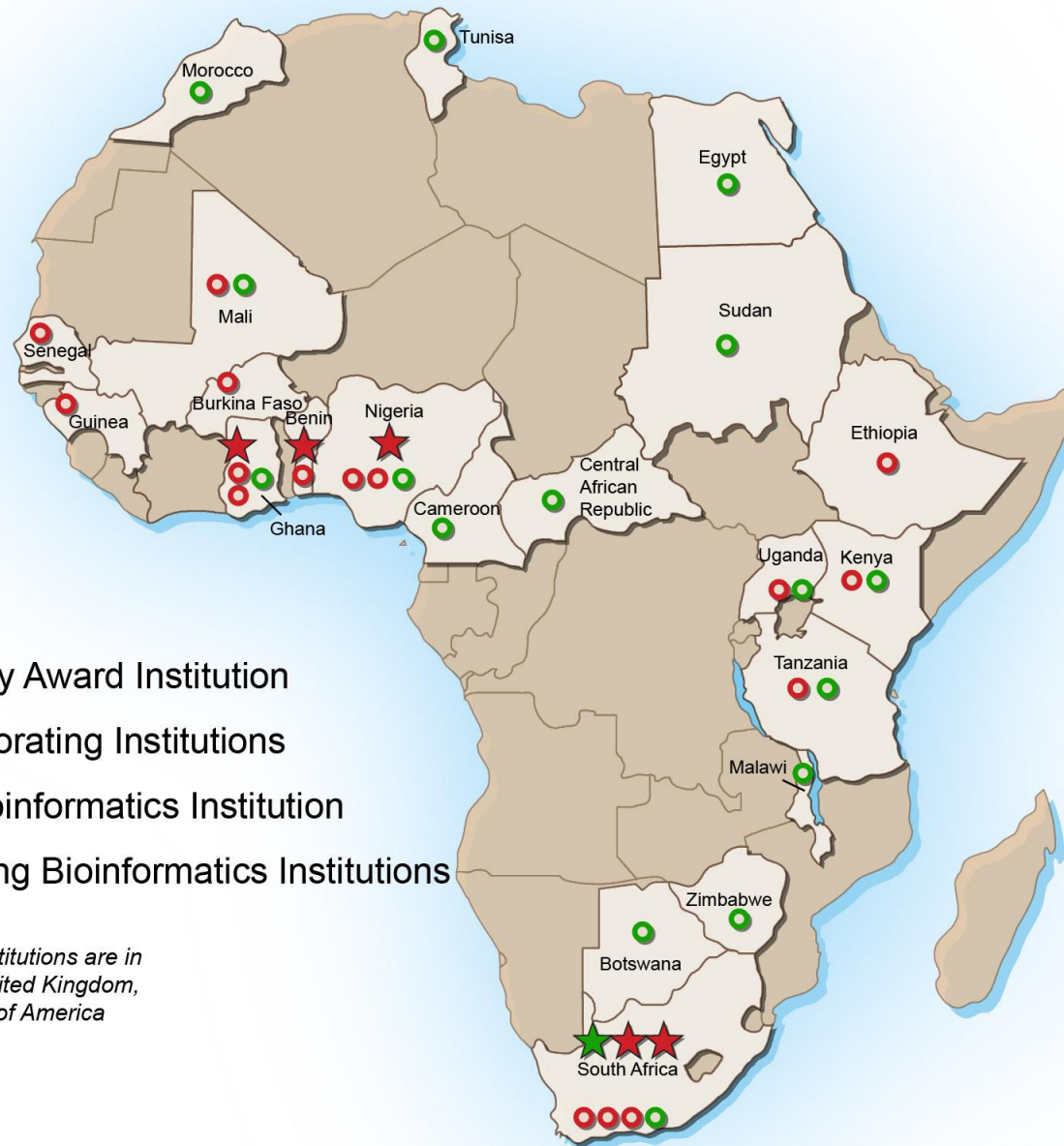
★ NIH Primary Award Institution

○ NIH Collaborating Institutions

*Other collaborating institutions are in Canada, Israel, the United Kingdom, and the United States of America*



# National Institutes of Health - H3Africa Research Network



- ★ NIH Primary Award Institution
- NIH Collaborating Institutions
- ★ Primary Bioinformatics Institution
- Collaborating Bioinformatics Institutions

*Other collaborating institutions are in Canada, Israel, the United Kingdom, and the United States of America*

# National Institutes of Health - Wellcome Trust H3Africa Research Network



- ★ NIH Primary Award Institution
- NIH Collaborating Institutions
- ★ WT Primary Award Institution
- WT Collaborating Institutions

*Other collaborating institutions are in Belgium, Canada, France, Israel, the United Kingdom, and the United States of America*