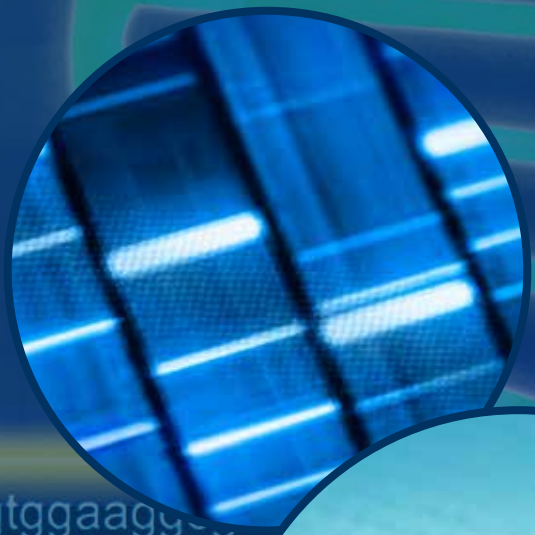
H3Africa

Human Heredity and Health in Africa



About H3Africa

The Human Heredity and Health in Africa (H3Africa) is a major genomics research programme supporting population based studies that use genetic, clinical and epidemiological tools to better understand how the interplay between human genes and the environment influence disease susceptibility, pathogenesis and prevention with the goal of improving the health of African populations.

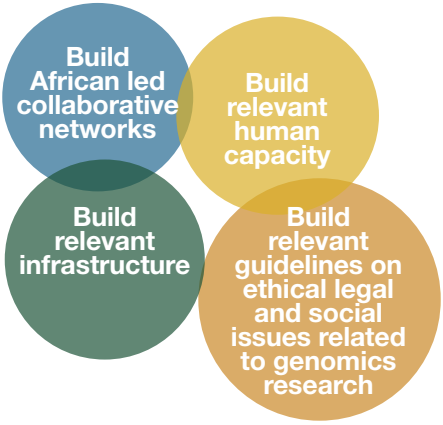
The genomic research programme was initiated in 2010 by the US National Institutes of Health (NIH), Wellcome, and African Society of Human Genetics (AfSHG).

Why Genomics Research is Important for Africa

Mapping the genetic diversity of Africans will:

- Increase the understanding of why some diseases are more prevalent and devastating on the African continent than in the rest of the world
- Promote the study and understanding of societal implications of genomics research leading to development of favourable community focused guidelines
- Promote tailored public health interventions for African populations for maximum impact
- Reduce the continent's disease burden, which is the highest in the world and minimise healthcare costs through preventive medicine.

H3Africa Goals



The African Academy of Sciences' Role

Overall, nearly $170 million has been invested in 48 projects in 34 African countries by the H3Africa partners. The African Academy of Sciences (AAS) through its funding and agenda setting platform, the Alliance for Accelerating Excellence in Science in Africa (AESA), joined the H3Africa programme in 2016 to manage Wellcome's H3Africa phase II portfolio. Close to $10M has been invested towards understanding the genetic and environmental factors influencing sleeping sickness, bilharzia, hearing impairment, malaria and tuberculosis.

The AAS's H3Africa Projects

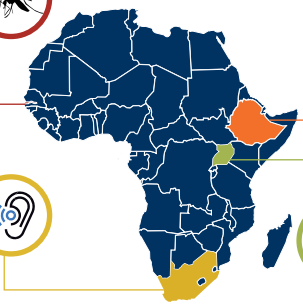
Programme	Scientific Focus
TrypanoGEN+: The Genetic Determinants of Two Neglected Tropical Diseases	To genetically identify populations that are carriers of sleeping sickness and bilharzia for effective intervention through national control programmes
Hearing Impairment Genetics Studies in Africa (HI-GENES Africa)	To identify novel non-syndromatic hearing impairment (NSHI) genes and to better understand the genetic aetiology of NSHI in African populations.
Pan-African Malaria Genetic Epidemiology Network (PAMGEN)	To study how genetic changes in humans and malaria parasites impact on the disease in individuals and communities in different ecological environments.
TB Genetics Network in Africa (TBGENAfrica)	An integrated approach to unravelling susceptibility to tuberculosis in Africa

Resources for H3Africa grantees

In addition, the H3Africa consortium provides resources that grantees can use to build their capacity, including:

- H3Bionet: a pan African bioinformatics network to support H3Africa research projects by developing partnerships, a core bioinformatics infrastructure to aid research in genomic medicine and facilitating secure, high-fidelity storage and management of data generated within the H3Africa, among other objectives.

- H3Africa Biorepositories: in three regions of the continent: Uganda, South Africa and Nigeria. These are centralised locations for storing biological material from different studies, such as DNA.



Malaria
GAMBIA
Medican Research Council

Co-Applicants
GHANA, MADAGASCAR, MALI,CAMEROON & KENYA

Hearing Impairment
SOUTH AFRICA
University of Cape Town

Co-Applicants
CAMEROON, GHANA & MALI

Tuberculosis
ETHIOPIA
Armauer Hansen Research Institute

Co-Applicants
SUDAN, ERITREA & CAMEROON

Trypanosomiasis & Schistomiasis
UGANDA
Makerere University

Co-Applicants
DRC, MALAWI, IVORY COAST, BURKINA FASO, SOUTH AFRICA & CAMEROON

How you can get involved

Visit The AAS website or email our communication department to receive our updates or to partner with us.

The African Academy of Sciences
No. 8 Miotoni Lane, Karen, P.O. Box 24916 – 00502
Nairobi, Kenya communication@aasciences.ac.ke

aasciences | www.aasciences.ac.ke

Or visit h3africa.org

The African Academy of Sciences

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