

H3ABioNet

**Pan African Bioinformatics
Network for H3Africa**



H3ABioNet Project Goal

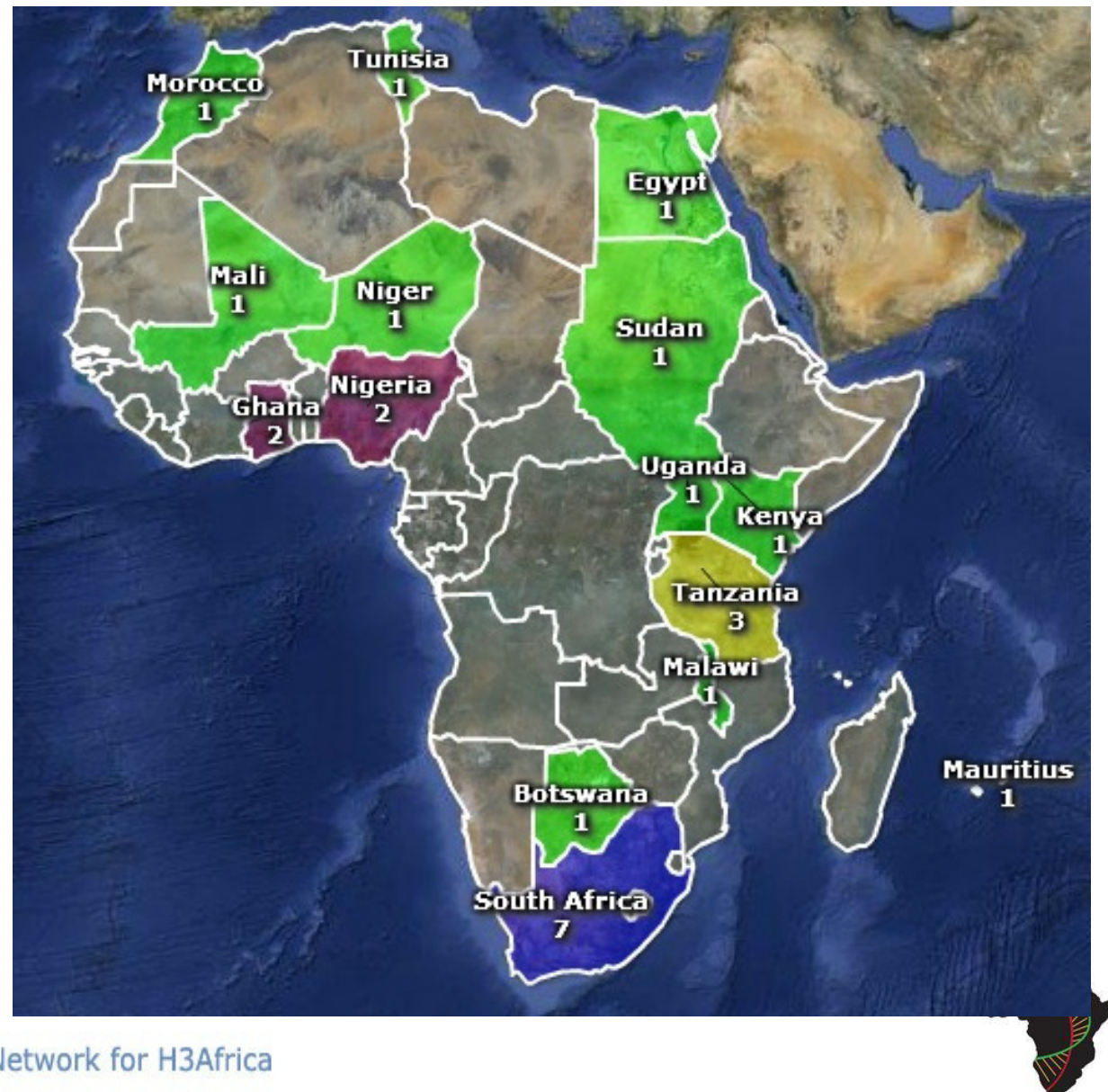
- To build H3ABioNet, a sustainable African Bioinformatics Network, to provide bioinformatics infrastructure and support for the H3Africa consortium.



Partner institutions

Administrative hub at UCT

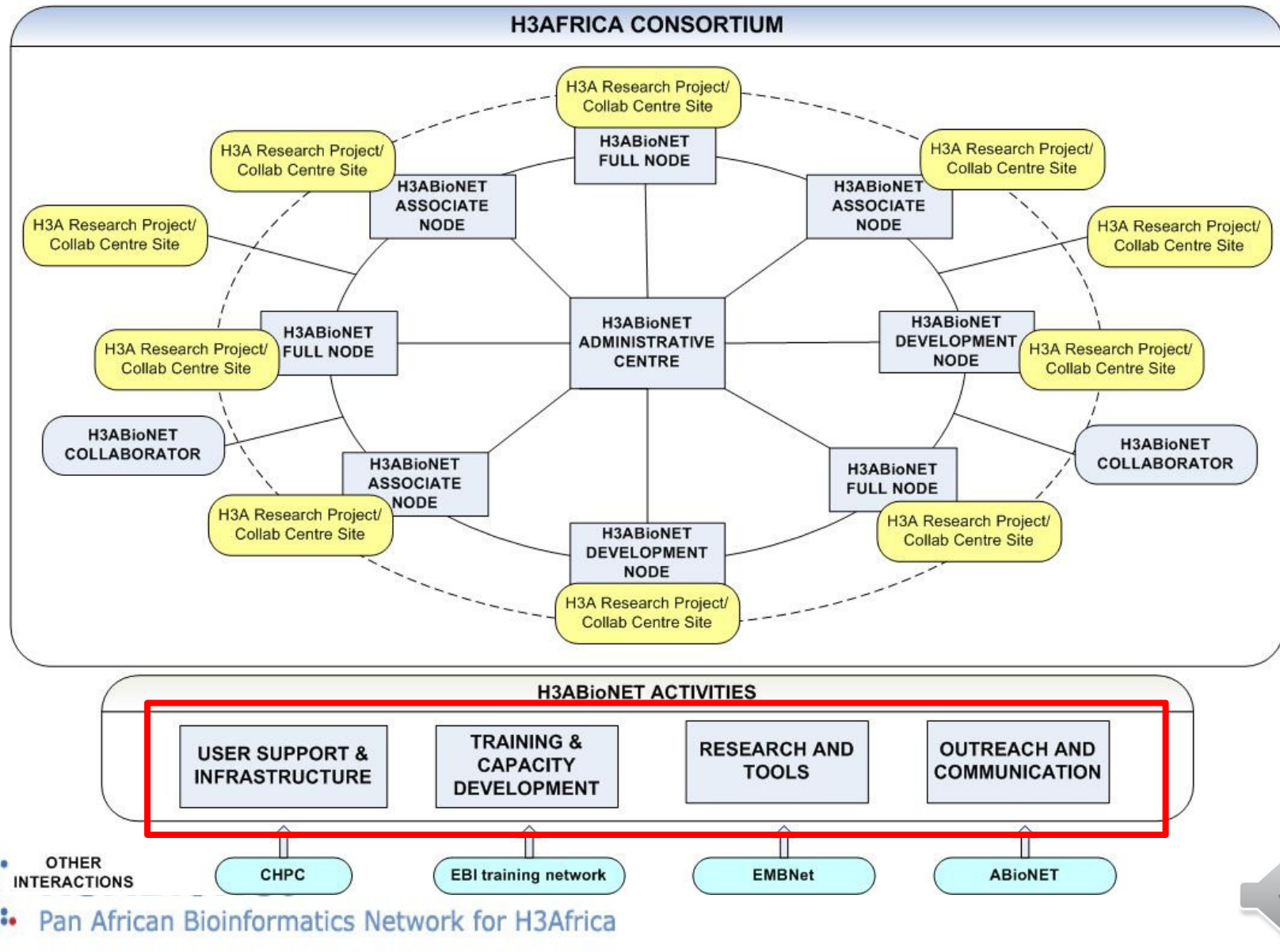
34 partner institutions, 32
in 15 African countries, 2 in
USA



H3ABioNet

Pan African Bioinformatics Network for H3Africa

Network structure



Infrastructure development

- Node server purchases:
 - Developed specifications of types of machines for different types of Bioinformatics workflows
 - 34 nodes were surveyed to determine existing infrastructure and expected needs
 - Negotiated up to 45% discount
 - One on one skype follow-up calls with nodes who requested assistance
- Investigating access to HPC, Cloud
- Internet connectivity measurement
- Website, surveys and mailing list setup



Node Assessment

- Accreditation exercise
- SOPs developed
- High-throughput whole genome or exome sequencing data, primarily Illumina HiSeq 2000
 - Goal: identify common, rare and private sequence variants, with emphasis on SNPs and short indels
- Data from chip-based genotyping platforms
 - Goals: correctly call genotypes from raw hybridization data, and analyze association of genotypes with disease states in admixed populations
- Adding new data/analysis types

User support

- EGA data submission
- Data integration research project:
 - Providing access to public data
 - Storage, movement & management of data
- Galaxy pipelines
- Standard operating procedures and guidelines for data analysis
- Helpdesk setup

H3ABioNet help desk



H3ABioNet

Pan African Bioinformatics Network for H3Africa



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Help desk - dashboard

Helpdesk

 [Submit new issue](#)

 [View submitted issues](#)

 View Issue #

 [Edit your contact information](#)

Latest News

- [Second Meeting of the H3Africa Consortium, Accra Ghana](#)




National Human Genome Research Institute



<http://www.h3abionet.org/helpdesk>

H3ABioNet help desk



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Latest News

- [Second Meeting of the H3Africa Consortium, Accra Ghana](#)

Help desk - dashboard

Helpdesk

New Ticket

Contact Information

User Name:

nicky.mulder

E-Mail:

nicola.mulder@uct.ac.za

Department:

Affolabi - RAFAgene

Location:

Phone:

Classification

Category:

Select Category

Status:

Priority:

Assigned To:

Time Spent:

(minutes)

TicketInformation

Title:

Description

B I U

Notes

Enter Additional Notes

B I U

Solution

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Help desk - dashboard

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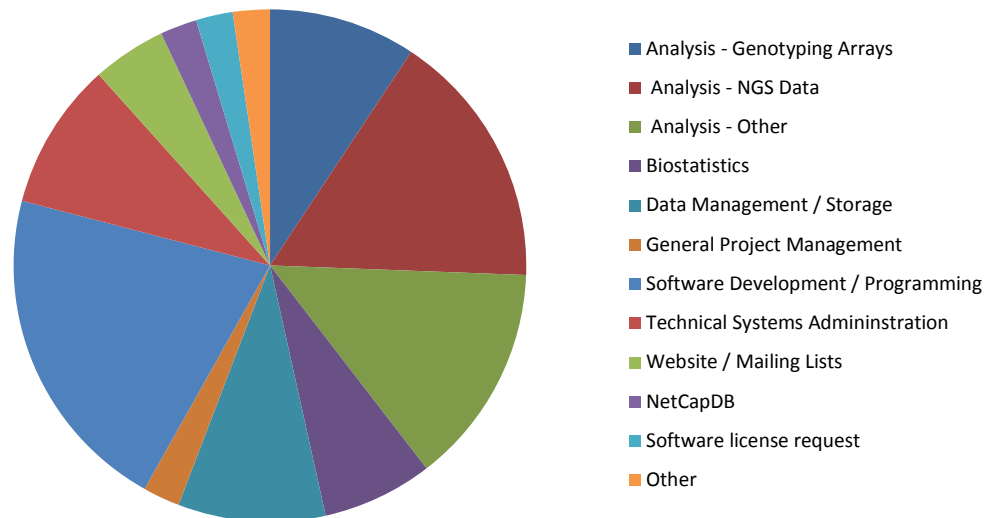
Home

[illegible]

Help desk continued

- Help desk system has been tested
- Created documentation & technical specs
- Created pool of 20 people to answer queries

Personnel Contributing to H3ABioNet Helpdesk Categories



Research and tool development

- Data management and storage
 - Data integration platforms
- Data analysis tools
 - Genome, exome and genotyping analysis
 - Admixture mapping and post-GWAS network
 - Data visualization
 - Recombination analysis
 - Structural analysis of SNPs
- Joint research projects

H3ABioNet training plan

- Short specialised courses
- Research driven workshops
- Regional workshops
- Career development workshops
- Internships, KTP
- Train the trainer program
- Mentorship
- Postgrad degree curriculum development
- Facility for live-streaming to other classrooms

Training activities

- Organized training courses:
 - Technical course (Linux, Cloud, data security, HPC)
 - Train-the-trainer course (Biostats, GWAS, NGS)
 - eBiokit course (NGS)
- Courses live streamed to 2 class rooms
- Set up online application system
- Set up online evaluation system
- Set up training course website
- Developed training course planning document

What we can do for you!

- Data storage: see data sharing policy – some funding now available for this
- Training:
 - Short specialized courses –propose them
 - Research-based workshops
 - Internships
 - IT support for courses

What we can do for you!

- Data analysis:
 - Guidance on planning data analysis and management
 - SOPs and guidelines
 - One-on-one help with analysis
 - Follow-up support for downstream analysis
 - Making data accessible for query and analysis
 - Access to computer hardware

Contacting us



The screenshot shows the H3ABioNet website. The header includes the logo, the text "H3ABioNet Pan African Bioinformatics Network for H3Africa", and a navigation bar with links: Home, About, Consortium, Training & Education, User Support, Research & Tools, Links, Contacts, and Log in. The "Consortium" and "Training & Education" links are highlighted with red boxes. Below the navigation bar, there is a "User Support" section with a background image of a stethoscope. To the right, there is a search bar and an "Events" section listing the "Second Meeting of the H3Africa Consortium, Accra Ghana". Below the events, there is a "Helpdesk" link highlighted with a red box. The footer contains the H3ABioNet logo and text, and a small map of Africa with a DNA helix.

www.h3abionet.org

H3ABioNet
Pan African Bioinformatics Network for H3Africa

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User Support

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Events
Second Meeting of the H3Africa Consortium, Accra Ghana

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H3ABioNet is the Pan African Bioinformatics network for [H3Africa](#) (Human Heredity and Health in Africa). H3ABioNet consists of partners from over 30 institutions in many African countries and abroad. For a complete list of partners see [Consortium Members](#).

H3ABioNet has four main components

- [User support](#) and computational infrastructure development
- [Training](#) and capacity development
- Research and tool development
- Outreach and communication.

<http://www.h3abionet.org>

info@h3abionet.org

Goals


- Short/medium term:
 - Store H3Africa raw data and enable submission to EGA
 - Train in theory and techniques
 - Apply techniques to data, with skills transfer
- Long term:
 - Provide African repository of data (internal use)
 - Build network of bioinformaticians and data analysts
 - Train bioinformatics academics and support staff
 - embed in research groups

What you can do for us

- Send us the name and contact details of your data manager or bioinformaticians
- Send us your requirements –data and training
- Subscribe to our mailing list to keep up to date with our activities

Monthly Bulletin


BioNet Montly Newsletter Issue 1 ; May 2013



Welcome

- Welcome
- Education and Training
- Infrastructure
- Research and Tool Development
- User Support
- Node Assessment
- Node Feature
- Announcements
- Important Dates


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Welcome

Welcome to the inaugural H3ABioNet bulletin! These monthly bulletins are designed to announce all our partner activities, where we slowly get the network after an initial meeting held in place. The meeting helped representatives since then in groups, and new working groups making good.

The education Masters program training need in May, June collaboration infrastructure pipelines and data storage



Education and Training


The Education and Training Work H3ABioNet kick-off meeting in Cape Town engaged in capacity development bioinformatics education of African genetic, environmental and social issues in Africa and to assure the continent. To fulfil its mandate, pages 7 – 8 for more details is set for all H3ABioNet Node members:

The E&T WG is currently involved from NIH Financial Grant Manager Administration (3rd – 14th June, Pre Bioinformatics for Trainers (8th – 2nd June) are plans to live stream the entire ICPE to 2 classrooms; one in West and one in North Africa at the live streaming will be made possible Development Agency (NABDA) which has been successfully installed programme in Bioinformatics and their students. Hence, in the 130 individuals ranging from financial and bioinformaticians as part of H to better equip them for the challenge.

In the long term, the E&T WG opportunities: one for successful internship within a leading Bioinformatics H3ABioNet and the second by Bioinformatics internship partner

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Announcements

We have had successful outcomes for some nodes related to their involvement in H3ABioNet. The Egyptian node, through their association with H3ABioNet has established a new center of bioinformatics in Egypt and the hired team. The

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Important Dates

- H3Africa Consortium Meeting : 16th – 18th May, 2013, Accra, Ghana.
- African Society for Human Genetics Conference : 19th – 21st May, 2013, Accra, Ghana.
- NIH Grants Management Workshop : 27th – 28th May, 2013, Cape Town, South Africa.
- NIH annual report due 1st June
- Technical Systems Administration Workshop : 3rd – 14th June, Pretoria, South Africa.


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Node Feature CPGR

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Node Name : Center for Proteomic and Genomic Research (CPGR)
Node Status : Full
Node Manager : Dr. Judith Kumuthini
Location : Cape Town, South Africa
Website : www.cpgr.org.za

The CPGR is based on an initiative by the South African Department of Science and Technology (DST), and funded by the Technology Innovation Agency (TIA), to boost biotech innovation and to grow an internationally competitive bio-economy in South Africa. The organization was created in 2006 with a vision of establishing a modern, world-class facility that serves the needs of the scientific community in South Africa by providing state-of-the-art services, technical expertise and collaborative research capabilities in the high throughput genomics and proteomics arena.

The organization employs a project management approach that has been devised to tackle the complexities of genomic, proteomic and bioinformatics projects in a unique manner. We take a holistic, interdisciplinary stance that is aimed at integrating a diverse range of disciplines (e.g. statistics, bioinformatics, sample logistics, and data-generation) into an effective array of competencies. Following this approach, we strive to enhance quality, turnaround and cost-effectiveness of genomic and proteomic projects. In addition, we take a long-term perspective to planning the early stages of the research & development life cycle, thereby enhancing our ability to support translational outcomes in the projects we support.

To create effective solutions in complex biological projects, the CPGR has established more than 50 validated genomic, proteomic and bio-informatic workflows. These include array-based RNA expression profiling, DNA genotyping and drug metabolism on the Affymetrix GeneChip platform, mass spectrometry based protein ID and biomarker discovery, and multiplex antibody capture assays on protein arrays. Computational workflows for

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H3ABioNet

Pan African Bioinformatics Network for H3Africa

Table summarising each H3ABioNet Working Group's member Country represented.

Name	Institution	Country
Adekunle Farook	National Biotechnology Development Agency	Nigeria
Ahmed Mansour Mohamed	Zagazig University	Egypt
Mansour Alzohairy	Ecole de Sciences Appliquées de Tanger	Morocco
Ahmed Maoussa	Institut Pasteur de Tunis	Tunisia
Alia Benkhalifa	International Centre of Insect Physiology and Ecology	Kenya
Anne Fischer	National Biotechnology Development Agency	Nigeria
Atinake Hassan	University of Cape Town	South Africa
Ayton Meijnes	Center for Proteomic and Genomic Research	South Africa
Benjamin Kumbwenda	South African National Bioinformatics Institute	South Africa
Dawe, Adam	National Biotechnology Development Agency	Nigeria
Deborah Fasesan	Ugandan Viral Research Institute	Uganda
Deogratius Ssemwanga	South African National Bioinformatics Institute	South Africa
Jean-Baka Domelevo Entellner	Malawi Liverpool Wellcome Trust clinical research programme	Malawi
Dean Everett	Covenant University	Nigeria
Ezekiel Adebisi	Future University of Sudan	Sudan
Faisal M. Fadlilmola	University of Dar es Salaam	Tanzania
Flora Elias Mlyango	University of Pretoria	South Africa
Fourie Joubert	University of Cape Town	South Africa
Gerrit Botha	Noguchi Memorial Institute for Medical Research	Ghana
James Brandful	Ugandan Viral Research Institute	Uganda
John Ssemwanga	Ugandan Viral Research Institute	Uganda
Jonathan Kayondo	University of Illinois	USA
Victor Jongeneel	Center for Proteomic and Genomic Research	South Africa
Judit Kumuthini	Muhimbili University of Health and Allied Sciences	Tanzania
Julie Makani	College of Medicine - University of Malawi	Malawi
Chisomo Msefula	Future University of Sudan	Sudan
Mudawabli Sand		

Acknowledgements

Name	Institution	Country
Simani Gaseitsiwe	Botswana Harvard AIDS Institute Partnership	Botswana
Ahmed Mansour Alzohairy	Zagazig University	Egypt
James Brandful	NMIMR	Ghana
Ellis Owusu-Dabo	KNUST	Ghana
Daniel Masiga	ICIPE	Kenya
Dean Everett	Malawi-Liverpool Wellcome Trust Clinical research Programme	Malawi
Seydou Doumbia	University of Bamako	Mali
Yasmina Jaufeerally Fakim	SANBio	Mauritius
Hassan Ghazal	University Mohammed First	Morocco
Azedine Ibrahimi	Faculte de Medecine et de Pharmacie de Rabat	Morocco
Ahmed Moussa	Abdelamlek Essaadi University, Tangier	Morocco
Fouzia Radouani	Pasteur Institute Casablanca	Morocco
Fouad Seghrouchni	Institut National d'Hygiène, Rabat	Morocco
Fatima Gaboun	National Institute of Agronomic Research, Rabat	Morocco
Khalid Sadki	Mohammed V University, Rabat	Morocco
Alami Raouf	Centre National de Transfusion Sanguine, Rabat	Morocco
Odile Ouwe Missi	CERMES	Niger
Ezekiel Adebisi	Covenant University Bioinformatics Research	Nigeria
Oyekanmi Nash	NADBA	Nigeria
Nicky Mulder	University of Cape Town	South Africa
Judit Kumuthini	CPGR	South Africa
Nicki Tiffin	SANBI, University of the Western Cape	South Africa
Ozlem Tastan Bishop	Rhodes University	South Africa
Scott Hazelhurst	Wits University	South Africa
Fourie Joubert	University of Pretoria	South Africa
Hugh Patterton	University of the Free State	South Africa
Faisal Fadlemola	Future University	Sudan
Sylvester Lyantagaye	University of Dar es Salaam (UDSM)	Tanzania
Nzovu Ulenga	MDH	Tanzania
Julie Makani	MUHAS	Tanzania
Alia Benkahla	Institute Pasteur of Tunis	Tunisia
Jonathan Kayondo	UVRI	Uganda
Victor Jongeneel	NCSA	USA
Win Hide	Harvard School of Public Health	USA

Funding: NIH Common Fund, NGHRI



H3Africa website

- Moved content from previous H3Africa.org site
- Still under construction
- Public pages for public info, finalised policy docs, project pages, etc.
- Internal pages for working groups, discussion forum, internal documents

New site: www.h3africa.org



H3Africa

Human Heredity & Health in Africa



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Welcome

The Human Heredity and Health in Africa (H3Africa) Initiative aims to facilitate a contemporary research approach to the study of genomics and environmental determinants of common diseases with the goal of improving the health of African populations. To accomplish this, the H3Africa Initiative aims to contribute to the development of the necessary expertise among African scientists, and to establish networks of African investigators.

News

Third H3Africa Consortium Meeting

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wellcome trust





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Projects

NIH-H3Africa

Collaborative Centers

- [H3Africa Kidney Disease Research Network](#)
- [Genomic and Environmental Risk Factors for Cardiometabolic Diseases \(AWI-Gen\)](#)
- [African Collaborative Center for Microbiome and Genomics Research \(ACCME\)](#)
- [Stroke Investigative Research and Educational Network \(SIREN\)](#)

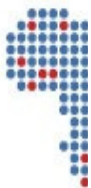
Research Projects

- [The Genomics of Schizophrenia in the South African Xhosa People](#)
- [Contribution of genetic variation to pharmacokinetic variability and toxicity in patients undergoing multi-drug tuberculosis treatment in Sub-Saharan Africa \(RAFAgene\)](#)
- [Systems Biology for Molecular Analysis of Tuberculosis in Ethiopia](#)
- [Clinical and Genetic Studies of Hereditary Neurological Disorders in Mali](#)
- [The Nasopharyngeal Microbiome and Respiratory Disease in African Children](#)
- [Host and Microbial Genetic Determinants of Febrile Illness in West Africa](#)
- [Reprogramming of the Trypanosoma brucei Epigenome during Human Infection: Opportunities for New Therapies](#)

Ethical, Legal and Social Implications (ELSI) Project

News

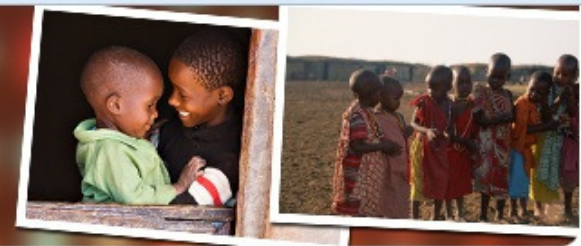
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African Collaborative Center for Microbiome and Genomics Research (ACCME)



Principal Investigator: Clement Adebamowo

Institute: Institute of Human Virology, Nigeria

Lay Description: The African Collaborative Center for Microbiome and Genomics Research (ACCME) leverages advanced research methods, technologies and international partnerships to engage African scientists and institutions led by the Institute of Human Virology, Nigeria (IHVN) and the Center for Infectious Diseases Research, Zambia (CIDRZ) to build capacity, conduct training and implement integrative epidemiology research initially focused on the associations between high risk HPV infection, vaginal microenvironment, HPV genomics, germline and somatic mutations in the etiology of cervical cancer.

This program serves as a paradigm for Translational Research in Biomarker Discovery that addresses high impact public health challenges that affects women's health in Africa and the rest of the world. The technology and capacity developed through this initiative will be extended to other diseases in future.

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☐ Public forum

Board Categories

Main Forum

This is the main forum section. It serves as a container for categories for your topics.



Welcome Mat

We encourage new members to introduce themselves here. Get to know one another and share your interests.

1
Topics

0
Replies

Last Post: Welcome to Kunena!
by [gerrit.botha](#)
2 weeks 2 days ago



Suggestion Box

Have some feedback and input to share? Don't be shy and drop us a note. We want to hear from you and strive to make our site better and more user friendly for our guests and members a like.

0
Topics

0
Replies

No Posts

Who Is Online



Total users online: 0 Members and 94 Guests Online

Legend: [Site Administrator](#), [Global Moderator](#), [Moderator](#), [Banned](#), [User](#), [Guest](#)

Kunena Forum Statistics

Total Users: 8 | Latest Member: [michelle.skelton](#)

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