H3Africa
Human Heredity & Health in Africa
Newsletter Issue 5
October 2017

Open Science in Research

Trust Odia

Open science is a movement to make scientific research, data, tools and resources accessible, visible and usable to anyone who is interested in using them. This was perfectly captured in a publication by McKiernan and colleagues (see https://elifesciences.org/articles/16800) as they said: "open research practices bring significant benefits to researchers as opposed to more traditional closed practices". Open Science can be implemented in various approaches, one particular approach which has been effective among students is the use of study groups. A study group is a community of peers committed to learning and teaching each other. These groups tend to be fun, informal gatherings which allow participants to share skills, experiences, and ideas around open science, open source code, and communities of research, like Mozilla Science Lab. Open science study groups are a growing initiative in the African continent and some examples of these groups can be found in: Morocco https://github.com/jamailismail/studyGroup) , Nigeria (https://trustodia.github.io/studyGroup/), Sudan (http://zo0z.github.io/studyGroup/) and Tunisia (http://amelgh.github.io/IPT_Tunisia/).

The aforementioned groups specifically highlight H3ABioNet Nodes. To-date the study group at Covenant University in Nigeria has conducted bioinformatics workshops for post-graduate students and Faculty members in biological sciences.

Research projects can be facilitated through open science activities like Mozilla's Global Sprint. A Global Sprint is a two-day collaborative event where scientists, researchers, educators, coders, librarians, artists, engineers and other professionals in the public meet (either personally or on an online platform) to work on open science and open data projects in their communities. This kind of meeting is often structured to be fast-paced and fun. Collaboratively, individuals build projects that creatively transform the open web! *(continues on page 2)*

In this issue:

Trust Odia hosted a Global Sprint on the 1st to the 2nd June, 2017 at Covenant University, Ota, Nigeria (more information about this event can be found at: https://ti.to/Mozilla/global-sprint-ota-nigeria). Individuals who participated in the event contributed to several of the current projects (see https://github.com/mozilla/global-sprint/issues).

The first day of the workshop started off with an introduction to Github, then on the second day we moved to discussing Github setup and lastly we did an introduction to Mozilla Science Lab. Refreshments were provided to the participants during the workshop sessions. One of the highlights of this event, was the support we received from eLife Science and more details on what this support enabled can be found at: https://elifesciences.org/inside-elife/fbf4f42e/innovation-supporting-online-collaboration-at-the-mozilla-global-sprint-2017. We are thankful for the funding received as it allowed us to make this workshop a successful event.

The African Genomic Medicine Training Initiative - Piloting Training Across the Continent

The African Genomic Medicine Training Initiative Planning Team

The African Genomic Medicine Training (AGMT) Initiative was officially launched in May 2016 in Dakar, Senegal, stemming from discussions held within the H3Africa Education and Coordinated Training Working Group and H3ABioNet. This group was borne out of the need to facilitate the translation of the accumulating research in African genomics into the healthcare system through training of healthcare professionals. During the inaugural meeting, a strategic plan highlighting the development of a Genomic Medicine Curriculum and flagship training for healthcare workers was drafted. The group decided to merge the Kern's framework and competency-based approach to design the curriculum and the evaluations. After discussions, nurses were chosen as the first group of healthcare professionals for training. The course's target group was mainly nurses working within the genetics and genomics field in clinical care and the research field, however general nurses who are at the forefront of health promotion work were also targeted.

The course content focused on changing knowledge, attitudes, perceptions and practices in four key areas:

a) Promoting patient care informed by genetic and genomics information (sensitive to individual and cultural preferences and norms)
b) Basic genetic counselling to patients and families
c) Conducting genomics research that is ethical and appropriate to their context
d) Increasing awareness around stigma and discrimination

A distance learning and online based approach was implemented (see Figure 1 on page 3).

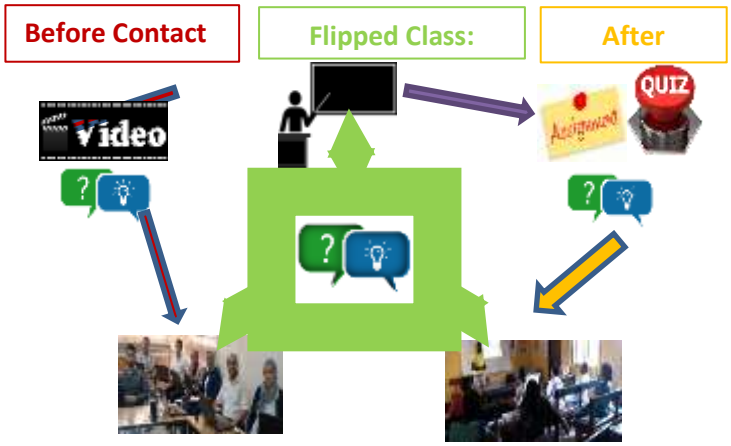

Figure 1: *Distance and online based training. In red are activities which occurred before the contact session*

Blended approach in the implementation of the online - distance based learning

Implementation of the training is centred on contact sessions, which happened every Wednesday from May to August 2017. Before contact sessions, participants were given problems and cases in the form of simple questions and short stories to facilitate reflections and discussions. During contact sessions, participants met facilitators at local universities or institutes. During these face-to-face sessions, participants watched pre-recorded videos that were pre-downloaded by the facilitators and did class exercises together. An important component of the contact sessions was the use of mConf, a web-conferencing system, enabling the classes to interact virtually with the trainers. Class exercises were submitted via the Vula platform, a Sakai-based learning management system. After the contact sessions, the discussions continued via Vula and learners were expected to complete a quiz. At the end of the training sessions, the participants worked collaboratively on a small project.

2017 - Introduction to Genomic Medicine for Nurses Training

A total of 19 classrooms from 11 countries registered for the pilot training (see Figure 2). This would not have been possible without the dedication of the AGMT members, advisory board, trainers, facilitators, and class participants. We are currently evaluating the course outcomes, and the results will be distributed once all stakeholders have been consulted. It is anticipated that the results will be used to adapt the training model and content and to expand the model to other healthcare professionals.

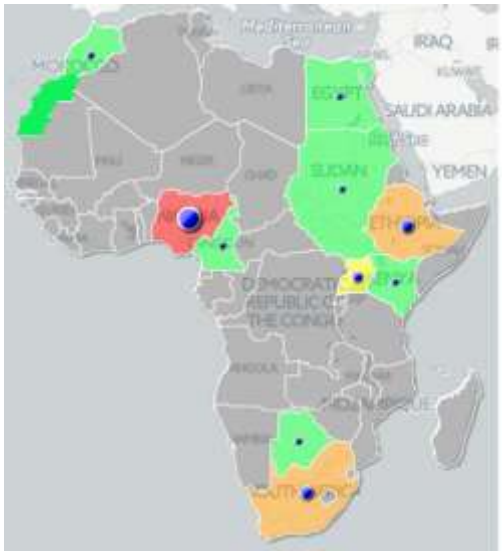

Figure 2: *The distribution of classrooms at the start of the course. Most of the classrooms were based in Nigeria.*

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Homology modelling and molecular docking workshop, University of Fort Hare 10-12 July 2017

Magambo Phillip Kimuda & Thommas Musyoka

The Research Unit in Bioinformatics (RUBi), Rhodes University in collaboration with Nelson Mandela Metropolitan University, University of Fort Hare, University of Limpopo, and University of Venda recently held a successful workshop on Homology modelling and Molecular docking at the University of Fort Hare. The workshop took place on the 10th July to the 13th July 2017, and was funded by the National Research Foundation, Collaborative Postgraduate Training Program. The workshop was conducted by Vuyani Moses, Thommas Musyoka, Bilal Nizami and Prof Özlem Tastan Bishop from RUBi as well as Prof Gaemme Bradley from the University of Fort Hare.

Participants at the RUBi Forthare University Workshop

The main objective of this three day workshop was to introduce participants to the various *in silico* techniques for structure drug design. A number of participants with diverse backgrounds from various universities across the country participated in the training program.

On the first day, participants were given detailed exposure to the theoretical and practical essentials of protein modelling using PRIMO, a tool designed by Rhodes University Bioinformatics Unit (RUBi).

The second and third day were dedicated to introduction of molecular docking approaches, theory, software and 'hands-on' practical sessions. With the use of examples, participants were guided through the major steps involved in molecular docking. This involved setting up the systems, docking and analysis of the results. The training ended with an open 'Q&A' session dedicated to getting valuable feedback from the participants.

RUBi
Research Unit in Bioinformatics

Recollections from the 10th H3Africa meeting

Savannah Mwesingwa & Lerato Majara

The Human Heredity and Health in Africa (H3Africa) initiative is a partnership between the African Society of Human Genetics, the National Institutes of Health, the Welcome Trust, and the Alliance for Accelerating Excellence in Africa (AESA). The overarching goal is to enhance genomic and

epidemiological research on the African continent. H3Africa holds bi-annual consortia meetings at various African countries (notably, the 6th meeting was held in Washington, DC), to give the various stakeholders, funders, principal investigators (PIs) and students that are supported by H3Africa projects, a platform to provide feedback to the group on updates related to the various projects.

From the 12th to 15th May 2017, the 10th meeting of the H3Africa consortium was held in the beautiful capital of Botswana, Gaborone, at the Grand Palm hotel and the University of Botswana.

Gaborone International Convention Centre at the Grand Palm was the venue for the 10th H3Africa consortium meeting

The meeting was spread out over four days of intellectual engagements and was attended by representatives from the NIH, Wellcome Trust, PIs for the various projects under H3Africa and a group of H3Africa fellows. Most of the fellows attended this meeting through the generous travel grants awarded by the NIH and Wellcome Trust.

On the first night of arrival at the hotel, all fellows met for a dinner where we briefly introduced ourselves and engaged with one another on our different research projects. On the first day of meetings, which was the 12th of May, there were satellite sessions covering various topics such as grant applications, pharmacogenomics, genome analysis, and publications & writing sessions. Later in the afternoon, we were taken to tour the Botswana innovation hub, a multi-million-dollar project that aims to assist the government of Botswana to fulfil its goal of diversifying its economy from diamond extraction, towards a knowledge-based economy, through creation of an incubator for new start-ups and other companies.

The second day of the meeting, the 13th of May, we had the Working Group discussions followed by Poster Sessions presented by the fellows who were present at the conference.

H3Africa fellows hanging up posters at the conference center

Later that evening, a formal dinner was held where the guest of honor was the Honorable Minister, Dr. Alfred Madigele, Ministry of Tertiary Education, Research, Science and Technology who emphasized Botswana's shifting priorities to research and innovation; as was said more than once during the meeting, "Diamonds are not forever". Dr. Madigele's talk was relevant and moving particularly because of his immense knowledge and expertise in medicine and research.

The third day, the 14th May, was a presentation day for Principal Investigators and fellows. The various project presentations covered a wide range of topics; from Biorepositories to genomics of diseases such as schizophrenia, respiratory disease, rheumatic heart disease, kidney disease, type 2 diabetes as well as stroke and cardiometabolic disease. Later in the evening, the group went for out for an optional excursion – a game drive at the Mokolodi Nature Reserve, which is only 10 km south of Gaborone. Although it was late in the evening, we caught brief glimpses of Impala and few other wildlife. This was followed by a bush Braai (a southern African barbeque held in the game park, with lanterns and campfires fires, under the beautiful backdrop of the wilderness), where a variety of game meat and sausage was cooked on open fires. Notably, we also witnessed beautiful traditional dances that we watched while having the bush braai and snacking on the Mopane worm, a delicacy in Southern Africa that would make the unfamiliar cringe.

Traditional dance at the bush braai.

On the fourth and final day, the 15th of May, sessions shifted from the Grand Palm hotel to the impressive University of Botswana Conference Center, where presentations on various H3Africa projects were made by both Principal Investigators and Fellows in addition to a poster session made by H3Africa fellows. This session was opened by the University of Botswana Deputy Vice Chancellor Academic Affairs, Prof Martin Mokgwathi. The guest of honor was from the Ministry of Tertiary Education, Research, Science and Technology who emphasized, once more, that Botswana is prioritizing scientific innovation as the future, instead of relying on mineral wealth alone, and the H3Africa initiative fit very well into this vision. This session was concluded by presenting awards to fellows with the best poster presentations. This was a great opportunity to showcase the remarkable work being done by Africans on the continent, it also created a unique 'tag-team' relationship between the PIs and fellows who presented.

Moreover, fellows got an opportunity to hone their presentation skills in front of a diverse audience whilst receiving invaluable expert feedback on various aspects of their projects from the audience.

Unfortunately, some fellows and consortium members could not make it to the meeting due complications in obtaining visas, nevertheless, this meeting not only gave us the opportunity to hear about the brilliant work of the various H3Africa projects, it also gave us a glimpse into Botswana's rich cultural diversity. We are grateful to organizers for including stimulating social activities (such as visiting the Science Innovation hub) as they allowed for rich engagements among the fellows.

This meeting certainly had something for everyone. Study coordinators had an opportunity to share experiences that could improve practices in research, fellows had the space to share their research interests and explore opportunity for future collaborations, and PIs did their best to steer the ship that takes us to the promised land of improved health in African populations.

Overall, this meeting was a pleasant experience for fellows as it allowed us the opportunity to meet new fellows (who had recently joined projects in the consortia) and allowed us to strengthen old bonds with other fellows we had met in previous meetings. We are looking forward to the next meeting and, on behalf of all H3Africa fellows, we would like to thank the organizers (Dr. Michelle Skelton, Dr. Nembaware, and the fellows from Botswana) for organizing yet another well-executed meeting.

H3ABioNet PI interview

Wisdom A. Akurugu

Dr Jonathan Kayondo at the Uganda Virus Research Institute (UVRI) H3ABioNet node was interviewed by Wisdom A. Akurugu, a bioinformatician at the Noguchi Memorial Institute for Medical Research (NMIMR) H3ABioNet node. This interview first appeared in the H3ABioNet newsletter issue 22 as part of H3ABioNet's 'meet the PI' series' (http://h3abionet.org/component/attachments/download/529).

Wisdom: Tell us a bit about yourself.

Dr Kayondo: I am a senior research officer at the Uganda Virus Research Institute (UVRI), and I have a molecular genetics background. I have a B.Sc. degree in Chemistry and Biochemistry, from Makerere University in Uganda, and a PhD in Vector biology and Parasitology from the University of Notre Dame in the USA. I did my postdoctoral in molecular virology here at UVRI. I am interested in conducting scientific investigations on disease vectors and pathogens to contribute to knowledge, policy and practice. At the same time, I also have an interest in building capacity for future sustainability, and I lead a lab of 11 people at the UVRI.

Wisdom: Can you tell me more about the UVRI that you are working with?

Dr Kayondo: The UVRI is one of the leading health research institutions in Uganda, and I can also say regionally in East Africa. It started in 1936 primarily as a yellow fever research centre, but over the years, it has grown to add on other disease challenges beyond just yellow fever viruses. So currently UVRI's mandate involves investigations of communicable diseases, but now also increasingly non-communicable diseases, to help generate information that will initiate or improve on existing control and prevention strategies for the government. The institute has a vibrant research community with a particular focus on HIV. UVRI is also active in other viral infections (such as measles, human papilloma virus and emerging diseases like avian flu, Ebola), and there is also medical entomology. We also look at the effects of HIV co-infections with other diseases, like worms, on vaccine response, disease incidence, and pathogenesis. One can say that the institute hosts various regional and national laboratories like for HIV and influenza, among others. We participate in regional networks, and we have numerous international collaborations. Among these, we have long standing collaborations with the US CDC, WHO, the UK Medical Research Centre and others making UVRI a big research institution with a lot of activities and of partners involved.

Wisdom: Dr Kayondo, you have worked in Bioinformatics for some years now. How did you get into Bioinformatics?

Dr Kayondo: Well, for me it was actually out of necessity. When I was doing my graduate research, I needed it to support that research regarding better determination of the biological significance of my data because newer approaches using whole genome were coming up. I also needed the expertise to organize and manage the huge data that was coming out of it and also acquire practical tools to mine emerging sequence data (a lot of reference genomes were being churned out at that time) for new information. I realized Bioinformatics was something I needed to learn and become more familiar with. At that time Bioinformatics was not distinctively developed/specialized as it is now. It was a course in a multi-disciplinary program that I was taking, but I have over the years consolidated it as I have worked, through attending workshops and trainings that have come along. Beyond that, I have also looked for opportunities and networking activities that involve bioinformatics.

Wisdom: You have been involved in a number of research projects at your institute, across Africa and the world. Can you tell me what your research interests are?

Dr Kayondo: My background is genetics, so it is all things related to genetics. Specifically, I am interested in better understanding of disease vectors and pathogens and behind that is the interest to develop novel methods or tools for vector and pathogen detection and eventually control as well as the underlying basic research that goes with getting there. So towards that, I have carried out malaria vector research examining genomic and population structure. I have looked at molecular-based species

diagnostics and also host seeking behaviour in the main malaria vector in Uganda. I have also studied HIV drug resistance and its evolution. I am helping out surveillance programs with molecular and bioinformatics based pathogen detection approaches, because the routine methods that are used (through serology) have limitations. Sometimes you get cases during outbreak attacks with classic haemorrhagic fever symptoms, but then you run the usual ELISA's or serology pathogen-specific tests and don't get a positive result/diagnosis, in spite of the fact that the patient was sick. Then you ask what is going on? Bioinformatic approaches are now enabling researchers to use, for example, metagenomics to try and answer these types of broad questions. So all these things interest me. I am also involved in different capacity building networks at UVRI, and one is H3ABioNet where we are building bioinformatics infrastructure and expertise here.

Wisdom: I can say everybody has some aspects of their work that they enjoy most. What do you enjoy most about your job?

Dr Kayondo: I will say fundamentally I enjoy basic research because you never know where the quest will take you. It seems to create or lead to new angles as if the questions are never quite completely answered, for as you answer one then you see a different intriguing perspective, and then you follow that up as well. That is very interesting for me. It is my joy, and my job gives me the opportunity to do that. That motivates me to wake up every morning. My job enables me to work with people from different academic and cultural backgrounds to solve a shared problem, which is exciting. Lastly, there is also the aspect of working with students and mentoring others, which are very satisfying.

Wisdom: Is there any aspect that you enjoy the least?

Dr Kayondo: (laughing) Oh yes definitely! Because my work is basic research, it is almost like we are working at the frontiers. I hate troubleshooting experiments which sometimes can take months without making any headway, and that is very frustrating. Also in the environment where we operate, procurement is another challenge; a lot of supplies and equipment are manufactured elsewhere and sometimes getting them is a very protracted process and months can be wasted. I also don't like that.

Wisdom: I understand you have a research group that you are working with. How has your association with the H3ABioNet consortium impacted your research group?

Dr Kayondo: It has been a good fit for us, and impact has been very positive. When the H3ABioNet call was made for the very first time, I was looking out for groups to partner with and looked forward to this opportunity. A key focus of H3ABioNet was to develop and strengthen bioinformatics at partner institutions. Our strength, I will currently rate it as developing. We still have a ways to go, but we knew we needed it and we knew where to get started. For us, the benefits have been quite tangible in terms of the upgrades in the

computing infrastructure and environment that we have had. We have secured and installed a high-end analysis server and software, courtesy of H3ABioNet. We have also received technical support from the consortium at different times during networking. Some of our members have attended consortium courses for basic bioinformatics training. We have added on new competencies on the site that we can now run, and there have been prospects of increased collaboration as a result of our membership in the network. The acquired infrastructure and networking has enabled attraction of more projects and leverage of additional funding. So it has been fruitful.

Wisdom: How long have you been working with your research group?

Dr. Kayondo: I have led my group since 2012 after my postdoctoral studies but before then I was active in research, but I was part of another group.

Wisdom: I have realized from this interaction that you are an accomplished fellow in terms of research with an established research group that does work in bioinformatics. What advice will you give to young persons who would want to take bioinformatics as a career?

Dr Kayondo: I will say that at the moment, we are witnessing technological advances that are driving genome sequencing to be relatively affordable and widely applicable to different medical scientific questions. Bioinformatics, which is still a developing field in Africa, is very crucial towards optimizing the benefits from these ongoing genetic revolutions. In my view, I see nothing likely to make bioinformatics obsolete in the next 15 to 20 years. So I can say it can be a rewarding career choice. In Africa, we say that bioinformatics is more in the academic research arena, but there is nothing to stop it from spreading to other sectors, such as home-grown biotech if that industry picks up. I will say it will be a valuable choice or career direction to consider.

Final words...

Dr Kayondo: My parting words would be that H3ABioNet is a first of its kind in Africa. I think before that there was nothing like this which enabled the African agenda to be the one driving the development of things. So this is really good, and it looked appealing for us to be part of it right at its inception. It is a valued collaboration here at UVRI that has helped us build capacity and strengthen south-south linkages because that is also an area where there are a lot of gaps. I think before H3ABioNet, we had not really worked closely with, for example, West African institutions in any meaningful way. So this is a good opportunity. Now we are pooling resources, expertise and experiences together. This is very good, and I think this mode ofcollaborative capacity building has really worked well for us. Dr. Jonathan Kayondo: Senior Research Officer (SRO) at the Uganda Virus Research Institute (UVRI)

'A year of note for the Centre

for Proteomic and Genomic Research (CPGR) node, South Africa, of H3Africa'

Dr Judit Kumuthini

Keynote Talks: 2017 has been a year of note for the Centre for Proteomic and Genomic Research (CPGR) node, South Africa, of H3Africa. Dr Judit Kumuthini has delivered three invited international keynote presentations during the course of the year, in Morocco, Denmark and the USA, highlighting both H3Africa's and H3ABioNet's vision on the global stage.

During the "Rare and Undiagnosed Diseases: Discovery and Models of Precision Therapy (C2)" Keystone Symposia, held in Boston (USA) in March 2017, Dr Kumuthini delivered a talk entitled: "*The H3Africa and the H3ABioNet Infrastructure for Genomic Revolution in Africa*". The talk was prompted by the lack of research investigating rare diseases, currently being conducted in the African context, and how this translates into lack of medical practice, provision and resource to address these diseases within the continent. Subsequently, Dr Kumuthini discussed how H3Africa can contribute to addressing and alleviating these issues within the African context. The presentation highlighted H3Africa's goals and node structure, paying special attention to the consortium's policies and benefits. She further discussed H3Africa's successes regarding growth, capacity and publications as well as the consortium's commitment to providing dedicated infrastructure and education in terms of bioinformatics across Africa. Similarly, Dr Kumuthini also discussed these topics at the "RareX 2016" conference in cooperation with the International Conference on Rare Diseases and Orphan Drugs (ICORD), held in Cape Town, South Africa.

Dr Kumuthini has also discussed the importance of 'omics' data standardization in the age of big data generation and, particularly, in the context of pharmacogenomics studies. To this end, she presented a talk entitled: "*Minimum Information required for a DMET Experiment reporting*" at the "Implementing Pharmacogenomics in Modern Health Care" in Copenhagen, Denmark (May 2017). She also delivered a presentation at the "SMC'2017: Data Engineering In Bioinformatics, Image and Data Analysis" in Morocco (March 2017), entitled: "Omics Data Standardization". Both presentations introduced the concepts of data standardization, highlighting its importance and benefit. Additionally, she introduced the Minimum Information required for a DMET Experiment (MIDE) reporting guideline which

was designed by the CPGR node members, and has been submitted to Minimum Information for Biological and Biomedical Investigators (MIBBI). The reporting guideline acts as a crucial stepping stone in standardizing and reporting pharmacogenomics and microarray experiments. The node is confident in the potential of standardizing research and data reporting will aid the future of personalised medicine and will be expanding on this work by designing more reporting standards in the future across a wider variety of health disciplines.

For more information regarding any of the aforementioned, feel free to contact Dr Judit Kumuthini at judit.kumuthini@cpgr.org.za

Research Ethics Training Opportunities

Barbara Sina

The Fogarty International Center at NIH has supported education grants to build international research ethics expertise and capacity in low and middle income country institutions since the year 2000. For those in H3Africa interested in additional training in ethics related to genetics and genomics research, the Fogarty International Center supports several research ethics training programs at African institutions. Many offer masters level training, workshops and short courses, sometimes available through distance learning technology. You can find descriptions of these programs through the links on this webpage https://www.fic.nih.gov/Grants/Search/Pages/search-grants.aspx?program=bioet70 with contact information for the program directors to find out how to apply to participate. The included programs are:

- Entrenching Training and Capacity in Research Ethics in Nigeria (ENTRENCH) program at the University of Ibadan (PIs: Clement Adebemowo & Temidayo Ogundiran)
- CBEC-KEMRI Bioethics Training Initiative at the Kenya Medical Research Institute (PI: Elizabeth Bukusi)
- South African Research Ethics Training Initiative (SARETI) at the University of Kwa-Zulu Natal (PI: Doug Wassenaar)
- International Health Research Ethics Training Program at Makerere University (PI: Nelson Sewankambo)
- Dartmouth/MUHAS Research Ethics Training and Program Development for Tanzania at Muhimbili University (PIs: Steven Ringer & Muhsin Muhammed Aboud)
- Vu-Mozambique Collaborative Research Ethics Education Program at Universidade Eduardo Mondlane (PIs: Troy Moon & Elizabeth Heitman)
- Development Initiative for Ethical Review and Oversight of Health Research involving Human Subjects in Rwanda (PIs: Bernard Friedland & Nir Eyal)

In addition, new doctoral and postdoctoral training programs focusing on conducting research on ethical issues began recently:

- Advancing Research Ethics Training in Southern Africa (ARESA) Leadership

Program at Stellenbosch University (PIs: Keymanthri Moodley & Stuart Rennie)
- Fogarty African Bioethics Consortium Post-Doctoral Fellowship Program at the University of Botswana, University of Zambia, Makerere University and Johns Hopkins University (PIs: Nancy Kass, Nelson Sewankambo & Adnan Hyder)

The Department of Bioethics at the NIH Clinical Center offers two-year post-doctoral and post-baccalaureate fellowships (see https://www.bioethics.nih.gov/education/index.shtml) and an annual fall course in Ethical and Regulatory Aspects of Clinical Research. While the 2017 course is almost complete, the course materials and videocast lectures are available online. Please see https://www.bioethics.nih.gov/courses/ethical-regulatory-aspects.shtml for more information.

Training Corner by the ECTWG

In this edition of the H3Africa Newsletter, the training corner is highlighting some achievements by the H3Africa Trainees. Congratulations!

Tafadzwa Machipisa (RHDGen)

Tafadzwa Machipisa started her PhD in Medicine at UCT, in a collaborative project that involves one year of training in bioinformatics and statistical genetics techniques used to analyse big genetic data sets such as GWAS (genome wide association studies), admixture mapping and WES (whole exome sequencing) at McMaster University in Canada.

Vuyani Moses (RUBi)

Vuyani Moses recently completed his PhD in bioinformatics at the Research Unit in Bioinformatics (RUBi), Rhodes University, South Africa. Further cause for celebration, he was offered a full-time lecturer position in the Department of Biochemistry and Microbiology, Rhodes University for 2017.

Ross Caroline (RUBi)

Caroline Ross is a PhD student in bioinformatics at the Research Unit in Bioinformatics (RUBi), Rhodes University, South Africa. In her recent publication on viral capsids in FEBS one of her images was selected as the cover for the issue (Volume 591, Issue 12 http://febs.onlinelibrary.wiley.com/hub/issue/10.1002/feb2.2017.591.issue-12/). This is a great honour for a young scientist.

David Nana Adjei and Amel Ghouila (H3ABioNet)

David and Amel recently completed a 6 months internship program at the prestigious Harvard

University in the United States of America. This was made possible through the H3ABioNet-Harvard Bioinformatics Internship Program.

Jean-Baka Domelevo Entfellner (H3ABioNet) who was a part of the H3ABioNet – South African Bioinformatics Network node got offered a position at ICIPE, Kenya.

Esin Nkereuwem (RHDGen) started his MSc in Public Health for Development at the London School of Hygiene and Tropical Medicine, facilitated by the Chevening Scholarship in September 2017 and has relocated from Nigeria. Esin was an H3Africa Fellows Club Chair in 2016.

Amy Geard (University of Cape Town), recently completed her MSc at the University College of London under a Commonwealth Scholarship. She has just been offered a research position at the same college.

(Please send us your achievements or awards for inclusion in this section!)

The sweetest and most inoffensive path of life leads through the avenues of science and learning; and whoever can either remove any obstruction in this way, or open up any new prospect, ought, so far, to be esteemed a benefactor to mankind.—

David Hume

Recent Publications from the Consortium: 2017

Candidate gene polymorphisms study between human African trypanosomiasis clinical phenotypes in Guinea. Kaboré et al. PMID: 28827791

Introducing the TrypanoGEN biobank: A valuable resource for the elimination of human African trypanosomiasis. Ilboudo et al. PMID: 28570558

APOL1 renal risk variants have contrasting resistance and susceptibility associations with African trypanosomiasis. Cooper et al. PMID: 28537557

H3Africa: An Africa exemplar? Exploring its framework on protecting human research participants. Nnamuchi. PMID: 28470782

A New Age for African-Driven Genomics. Research: Human Heredity and Health in Africa (H3Africa). Peprah et al. PMID: 28867289.

Geography of Genetics and Genomics Research Funding in Africa. Coles et al. 2017 PMID: 2886728

H3Africa ACCME Research Group. Persistent Low-Risk and High-Risk Human. Papillomavirus Infections of the Uterine Cervix in HIV-Negative and HIV-Positive Women. Adebamowo et al. PMID: 28785554

Assessing computational genomics skills: Our experience in the H3ABioNet African bioinformatics network. Jongeneel et al. PMID: 28570565