



“THRIVING” at London School of Hygiene and Tropical Medicine

By Robert Kaaya, THRiVE PhD Fellow

THRiVE is all about building capacity and creating critical mass of African health research leaders undertaking world class research in Africa. This is made possible through collaboration and exchange of scientific knowledge with Northern partners (Cambridge and London School of Hygiene and Tropical Medicine). Through that collaborative platform, I managed to visit LSHTM in January this year, where I had the opportunity to meet Prof. Chris Drakeley (my LSHTM collaborator) and other renowned malaria researchers at the school. The aim of my visit was to discuss my project with the team and have the chance to visit Malaria Research Laboratory. I must admit

everything went way above my expectation. The LSHTM team was very supportive and willing to assist in any way possible.

I spent most of my time in Dr. Colin Sutherland's unit, whose laboratory is among the WHO commissioned facilities responsible for quality confirmations of pfrp2 deleted parasite cases. The laboratories check the samples for pfrp2 deletions before publishing the results. While at Dr. Sutherland's lab, I had the privilege of working with Dr. Khalid Beshir who is the focal person working on pfrp2 project at the school. Dr. Beshir was very helpful, we discussed the Laboratory aspect of my project and observed some of the techniques that he performed in the lab.

I also had time to meet and discuss my project methodology with Dr. Lynn (molecular and immunology expert) at Prof. Drakeley's Laboratory. Dr. Beshir introduced me to the team at Malaria Reference Laboratory (MRL). Dr Debbie (molecular expert at MRL) was happy to share with me some of the PCR techniques for malaria parasite identification. It also gave me positive controls for my molecular techniques back in Tanzania.

Regardless of the cold weather that I'm not used to, my visit to LSHTM was memorable and eye-opener. My gratitude goes to THRiVE administrators; Harriet (Secretariat), Amina (KCMUCo) and Eleanor (LSHTM) for their support and smooth logistics management.



Figure 1: Behind (from left to Right) ...Prof. David Mabey, Dr. Khalid Beshir and Dr. Ruby Mcharo. Front (left to Right) Dr. Suzanne flateau, Mary Moshu, Robert Kaaya and Eleanor Martins



Figure 2: Prof. Chris Drakeley and Robert Kaaya

IN THIS ISSUE

THRiVE continues to benefit from other Networks	Pg.2
A Snapshot on UVRI's Genomics and Bioinformatics	Pg.3
Bioinformatics & Next Generation Sequencing Techniques	Pg.5
Enhancing Supervision in Research and Research Training	Pg.7
What it is like to be a THRiVE Graduate Intern:	Pg.7
Keys to Detecting a Grant in Trouble; SRA 2017 11	Pg.11



Dear Reader,

Welcome to the last quarterly issue of 2017 THRIVE News which gives a snapshot of some developments in this quarter. It has been a great pleasure working with our Career Development and Post-doctoral fellows, PhD and Masters trainees, interns, partners, research networks and funders to advance science and research capacity building. The beginning of 2018 gives us opportunity to reflect on how far we have come and chart out a path that will enable us to successfully complete our grant managed by AAS/AESA. We have leveraged this grant, received additional in-kind and financial support so that we can achieve much more than what we would otherwise have realized. We need to think carefully about the midway upcoming evaluation of all DELTAS initiatives planned for 2018. It is necessary to understand the focus and target areas of the evaluation and how it will be carried out.

An important development expected in 2018 is the launch of the AAS open publishing platform intended to facilitate early, easier and less biased dissemination of research results. Whereas THRIVE is open to this approach there is still limited understanding of the benefits and challenges that may arise from publishing on this platform. These are early days, and a degree of skepticism from some researchers is not unexpected. There will be a lot of learning for individual researchers, research institutes and universities. Ongoing sensitization and education will be necessary if the initiative is to succeed.

A continuing challenge for THRIVE is how best to implement public engagement (PE) in research done by its faculty, fellows and trainees in a context of very limited resources and overcoming a perception that PE may be a distraction from their core research efforts. Learning from other initiatives is a must.

THRIVE continues to benefit from other Networks

By Harriet Nambooze

It is imperative that we communicate well what we do in order to make science more impactful and also ensure sustainability of the programs that we run. Of paramount importance is having an arm's reach network which can easily amplify your messages. This was the idea behind the formation of the Africa and Asia Communications Forum which held its inaugural meeting on 30th November and 1st December 2017 in London. Attended by over 25 delegates, the forum provided practical ideas on science writing and reporting, writing for the web, getting impact from social media as well as easy and effective engagement of publics. The need to monitor and evaluate our external and internal communications as well as involvement of everyone in the programme were some of the other issues stressed at the forum. Indeed the networks formed have been further cemented; we have a very active WhatsApp group which we use to seek out for help regarding communications matters as well as share best practices. Also our twitter connections have enabled us to amplify each other's work.

In most cases a funder's site visit to a grantee is viewed with mixed reactions by the grantees who think that this is an external audit that is likely to spell doom to the program. However, in THRIVE we look at such visits as opportunities for doing better what we may not be doing so well. In 2017, we hosted our funders to a site visit on 7th and 8th December at the THRIVE Secretariat. Comprising of the DELTAS Program Manager, Dr. Alphonsus Neba, Monitoring and Evaluation Officer Mr. Paul Musya, Grants Officer Ms. Susan Gichoga and

Finance Manager Ms. Isabel Imbuye, the team comprehensively and articulately reviewed the entire spectrum of activities conducted in the year. They were quick to point us to areas where we could improve as well as where we were doing well; insights were given on how to better manage human resources, change of institutional leads, monitoring and evaluation of our processes as well as real time supervision of fellows. We have already drawn up a road map of how to improve moving forward. We definitely look forward to another site visit in 2018.

The 2017 Society of Research Administrators International annual international (SRAI) conference was in a rather cold Vancouver in Canada from 14-18 October 2017. With several new comers to the meeting, I got the opportunity to fulfil my duties of an SRAI ambassador by providing them with tips on how to gain the most out of the conference and what to look out for in terms of session selection and networking opportunities. On the professional side, the conference was an opportunity to get insights on how to design training programmes for research administrators. This comes in the wake of limited training opportunities for research administrators in the region where majority of those engaged in the different roles are from divergent backgrounds. A must do for those designing training programs in research administration is to first carry out a needs assessment to determine where the gaps as a way of ensuring that you provide training that is responsive to the needs of the trainees. From this session, I got insights on how to assess training needs, develop content and also evaluate training outcomes.

A Snapshot on UVRI's Genomics and Bioinformatics capacity for viral pathogen detection

David Twesigomwe and Jonathan Kayondo

The Uganda Virus Research Institute (UVRI) hosts a national and regional reference laboratory for various viral diseases, with facilities to test and detect highly pathogenic microbes including hemorrhagic fever viruses, HIV and influenza viruses. Current mainstream viral diagnostic methods including molecular and serology-based applications such as, the polymerase chain reaction (PCR) and enzyme-linked immune sorbent assays (ELISA) for pathogen and host antibody immune response detection respectively, have worked well but with limitations when dealing with viral agents possessing similar antigenic epitopes or when a novel virus is the source of infection. As a result, Metagenomic Next Generation Sequencing (MNGS) has been considered as an additional tool to detect viral pathogens in samples where routine diagnostic methods have failed, and also in revealing relationships between cases from outbreak investigations.

Next generation sequencing (NGS) of complete or partial genomes is increasingly being incorporated into laboratory diagnosis at UVRI especially during epidemic outbreak investigations for enhanced pathogen detections. NGS captures a broader

spectrum of potential pathogens in clinical, surveillance and outbreak investigations. Together with a variety of bioinformatics tools and resources, information about the transmission patterns, drug resistance mutations and detection of novel variants can be obtained. To this end, physical infrastructure for deep sequencing, and expertise for high-throughput sequencing (HTS) analysis is respectively being installed and developed at UVRI.

Genome Sequencing Infrastructure:

Physical infrastructure is in place to support this work. A regional genome center with capacity for deep sequencing, Centralized core molecular biology laboratories for nucleic acid extractions and processing, Bioinformatics application servers for small to intermediate computation jobs and

a Medical informatics hub for high performance computations have been established at UVRI. These are located at the National Influenza Center (NIC), the UVRI Core molecular and Bioinformatics laboratories and MRC/UVRI Uganda Medical Informatics Centre (UMIC) respectively. The UVRI Genome Centre is equipped with an illumina MiSeq Sequencing platform, whereas the UVRI Core Laboratories are well equipped for efficient RNA extraction (various protocols), synthesis of cDNA and NGS library construction. In addition, there is still capacity at UVRI to generate Sanger sequence data from legacy capillary array sequencing platforms.

Twesigomwe, David, an Intern of Bioinformatics, performing a gel electrophoresis run after

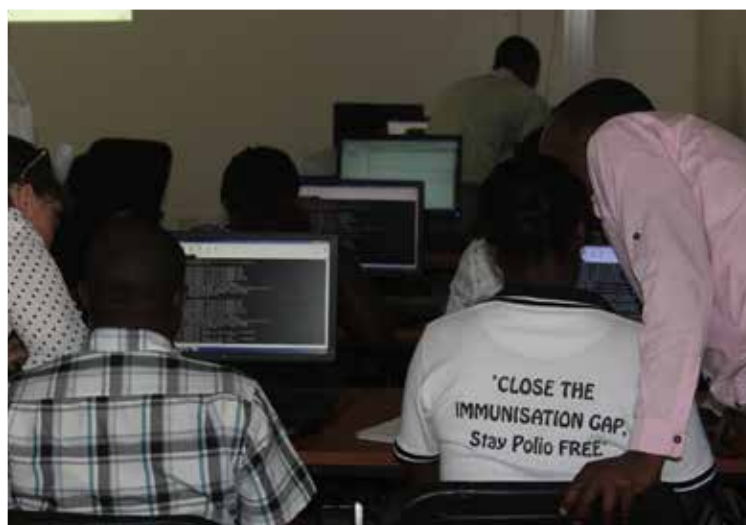
RNA extraction and cDNA synthesis in Core Laboratories Co-established with previous THRIVE support

Genome Analysis Computation Infrastructure:

Bioinformatics analysis is well-facilitated. There is substantial computational capacity on-site in form of well-maintained analysis and data storage servers used for data storage and specialized bioinformatics applications. Small to medium-sized analysis job platforms, accessed from the Centralized Bioinformatics core, are installed with pipelines and work-flow tools for data QC, Sequence Alignment, Assembly, Genome Mapping and Phylogenetics. For high performance computing, there is the UMIC- a high-throughput medical bioinformatics data centre. The UMIC, is able to offer access to high-capacity servers and analytical software packages that are able to store and analyze high-volume complex datasets of approximately 100 billion HIV genomes, 700,000 MTB genomes or more than 5000 human genomes at any one time. This data centre facility can enable the integration, curation and analysis of large-scale population health resources, including those encompassing genomics, complex phenotypes and clinical data sets.



A Snapshot on UVRI's Genomics and Bioinformatics capacity



The data centre's technical capacity includes:

- Computing power of 64X HP blade servers, with 2048 cores and 16TB RAM
- Virtualization capacity of 4X HP servers, with 20 cores and 256GB RAM each
- Storage capacity of up to 256TB usable disk space
- Back up capacity of 348TB
- Networking capacity of 10GbE switches and MX104 routers as well as regional connectivity of up to 1Gbps

A rack with UVRI Servers for small to intermediate-sized computation applications

Technical Expertise:

This genomic and bioinformatics capacity is serviced by a host of dedicated personnel with expertise in NGS data analysis and interpretation, computational system administration and maintenance, and laboratory technologists among others. These personnel are products of formal academic degree training programs, overseas or lo-

cal internship programs for acquisition of specific skill-sets, and workshops or short courses at UVRI or our partner institutions.

A recent Next Generation Sequencing metagenomics training for bioinformatics users at UVRI

Partnerships:

UVRI has relied on various partnerships with world-class research institutions and capacity building /and or training consortia to de-

velop this capacity. These collaborations have over the years, among others, helped with acquisition of sequencing and computational hardware, technical support, and training opportunities to improve expertise of our personnel. Our partners include, the MRC-Glasgow Center for Virus Research, Wellcome Sanger Institute, The Los Alamos National laboratory, The US Centers for Disease Control and Prevention (CDC), H3ABioNet, the training programs MUII, and THRiVE among others.

Bioinformatics & Next Generation Sequencing Techniques Short Course at Makerere University College of Health Sciences

By Gerald Mboowa

As a THRiVE-2 PhD fellow at Makerere University, my goal is to become a research leader while utilizing Bioinformatics in understanding the role of genomics in disease and health of African populations. To achieve this long-term ambition, I patterned with the Africa Center

of Excellence in Materials, Product Development & Nanotechnology (MAPRONANO ACE) and organized the first Bioinformatics & Next Generation Sequencing Techniques Short Course at Makerere University College of Health Sciences. Over a two-week period of application process, we received 186 applicants

from all over Africa with qualifications ranging from Bachelor's, Master's to PhD degrees of different research backgrounds. These included researchers and students from Uganda, Rwanda, Malawi, Ethiopia, Kenya, Zambia, and Tanzania. We selected 56 participants to attend the course with more than half from Uganda.

Bioinformatics & Next Generation Sequencing Techniques Short Course at Makerere University College of Health Sciences



Some of the participants during the training

MAPRONANO ACE is a World Bank-funded project between the College of Engineering, Design, Art and Technology and the College of Health Sciences at Makerere University. We shall hold these workshops through 2021. Makerere University has finally leaped into the Genomics era with PhD and Master of Science in Bioinformatics and Genomics graduate programs starting next academic year. These two programs will be hosted by the College of Health Sciences, an effort to which already THRiVE is contributing through training the required human resource. Currently, East Africa and specifically Uganda has no such programs, therefore lagging behind the international research efforts that are revealing the contribution of genomics in health and disease in human populations; these short courses are crucial in stimulating researchers and students in this region to embrace

Bioinformatics and Genomics. Topics that were covered included; Introduction to UNIX/LINUX basics, Genomics & Next-Generation Sequencing (NGS) technologies, NGS Bioinformatics Workflows, Assembly, Sequence Alignment, Quality Control & Variant calling tools, and Clinical Applications of Bioinformatics & Genomics among others. Theoretic classes were covered in the first week while the second week covered practical (Wet-lab hands-on based Next-Generation Sequencing techniques) and finally wrapped up the workshop with hands-on analysis of the genomic data generated from the practical session.

Participants experienced the thrill of seeing computers being used to understand the roles of genetics in human health and disease. It was important to explain Genomics with comparisons to familiar examples from the everyday life to participants. For example,

genes are book chapters and amino acids are words. All together, genes tell a life story. Transcription and translation are reading a book from start to end and understanding it. A genome is a collection of books telling someone's life. From this, then we explained what Bioinformatics is; It is the only way to analyze the whole story! To read all the books one by one would be extremely time consuming. Therefore, the use of a computer is required. Computational biologists or Bioinformaticians use computers to help understand the story of our lives in the shortest time possible.

During this workshop, many researchers indicated that they were glad to participate in these courses since less than five African universities offer them. They also mentioned that many of their ongoing projects involve aspects of DNA sequencing and Bioinformatics hence needed the

training. Others who could afford costs to attend these courses indicated that they have had to apply for these courses in the UK and United States. This makes Bioinformatics and Genomics one of the priority areas that African universities and health sectors have to adopt in order to cope with the current trends in healthcare improvements since DNA sequencing has set the stage for modern medicine. One of the main bottlenecks that prevents implementation of genomics in healthcare is the problem related to lack of expertise in analysis, and interpretation of large amounts of heterogeneous data generated from DNA sequencing. Starting price of whole genome sequencing in research laboratories worldwide in 2017 was about \$500, it is the analysis expertise that is currently lacking among researchers and physicians in the low-income settings.

My experience with the THRiVE 2 SPSS Data Analysis Training Organized at Gulu University

Robert Opiro - PhD student Gulu University

The data analysis training started on 27th-November 2017. We were a cohort of 25 participants selected from different Faculties and departments of Gulu University. The THRiVE 2 Co-PI, Gulu University, Prof Elizabeth A. Opiyo gave brief introductory remarks highlighting THRiVE's objectives, how it is being implemented at Gulu University and purpose for the training which was to get researchers proficient in using the SPSS package for data analysis. I must say this is one of the most useful trainings I have ever attended. First of all, the materials and content therein were very relevant as I will be using SPSS to for data analysis and those of my students. But the facilitator gave detailed explanation describing the principles behind each analysis, where to apply the analysis and to which kind of data. It was like we were attending a biostatistics course from scratch. This was

really magnificent for me!

The participatory hands-on nature of the workshop also made it unique from the other workshops I have ever attended. From Day One, each participant was on the computer, except the facilitator himself who appeared to have an imaginary keyboard up his sleeve. It was impressive the way he took us through everything without ever glancing at a computer screen or any piece of paper... much respect to him!

I should re-emphasize also that the knowledge, skills and experience gained shall not only be useful to our researches but will be transferrable to colleagues and students. Perhaps the time was slightly too little to cover as much as we would have wanted. Personally, I can't wait for the second part of the training (the advanced SPSS

training) and it cannot come soon enough!

Something for consideration by the facilitator; he should strongly think of developing a paid training programme in data analysis which he organizes from time to time irrespective of whether it's sponsored or not. I am sure there are many like me who would be very interested in the same, especially our graduate students and researchers from the various Faculties and Institute in the University and those outside.

Finally, great appreciation to the sponsor (THRiVE-2 Project) for selecting me to attend the training, and for providing very nice refreshments and conditions for our attendance of the workshop. I also thank all THRiVE-2 staff at Gulu University for taking researchers' development at the top of their agenda.

What it is like to be a THRiVE Graduate Intern at the National Institute for Medical Research

The National Institute for Medical Research (NIMR) in Mwanza provides an avenue for young researchers to grow and develop their careers. In 2017, the institute has provided an opportunity to three young graduates to develop their professional skills – as THRiVE 2 graduate interns. In the following section, each one narrates their experience so far:

Lucy Bernard - Biomedical Science graduate

Being part of THRiVE-2 in the past five months has been very beneficial. I have been able to work with NIMR as a laboratory

scientist under the mentorship of Dr. Manjurano - an expert on Infectious Diseases.

I mainly work with the Indoor Residual Spraying (IRS) project as part of the laboratory team. I can now confidently perform molecular activities including identification of anopheline through Polymerase Chain Reaction and determining their infectivity rate through Enzyme-linked Immuno-sorbent assay (ELISA). The roles extended to include blood meal analysis and checking for kdr through real time PCR. I also assisted in the maintenance of the Entomology

molecular biology laboratory.

Being part of the IRS project also involves analysis of data resulting from the laboratory experiments to determine the effect of the intervention. I serve as a secretary in the IRS weekly meetings, which brings together the laboratory, insectary and field staff to discuss their respective duties. I coordinate the meetings and take down minutes.

In the duration of the internship, I have also participated in a variety of trainings. In May, 2017 I took part in a malacology course with a focus on human Schistosomiasis.

Enhancing Supervision in Research and Research Training

By Dickson Muyomba

THRiVE, being a research capacity building program, greatly emphasizes the supervision and mentorship of trainees and fellows throughout their research activities. With a vast pool of resources in terms of supervisors and mentors, both locally and abroad, THRiVE is striving to build a strong supervision framework to support research training in the East African Region. It is critical that such a framework not only focuses on research but also addresses issues like building capacity, results dissemina-

tion, networking, collaboration and career advancement.

Although I am not an expert in the supervision field, my participation in some of the supervision activities has allowed me to gain insight into the development of ICT-based tools that can support supervision and mentorship, hence enriching the THRiVE supervision framework. Although most academic and research institutions in East Africa are focusing on the research and placing minimal effort into other components like training young supervisors, developing online

supervision/mentorship tools and helping researchers build networks during their research activities, THRiVE has picked-up on them in order to build a comprehensive supervision framework. In the recently concluded supervisor training workshops at *icipe* Kenya, a demonstration of our online supervision platform was made to a group of supervisors with the aim of getting feedback for improvement. This tool is one of THRiVE's innovations towards improving the supervision environment alongside training supervisors and supporting researchers.



Participants working during the supervision workshops

Intern: A glimpse from the interns at the Research, Mwanza, Tanzania.

In September 2017, I was able to attend the VectorBase workshop held in Nairobi where I was introduced at length to Bioinformatics. Moreover, I was able to participate in a regional laboratory training that aimed to standardize laboratory processes in approximately 11 IRS-participating countries.

Throughout this period I have most benefited from interaction with the diverse community of researchers and scientists in different disciplines. I was able to decide that I would like to pursue further studies in Epidemiology with disease modeling as a focus for my further education.



Lucy busy working in the Laboratory at NIMR Mwanza

What it is like to be a THRIVE Graduate Intern:

Anna Samson -Sociology graduate

THRIVE-2 internship program introduced me to the world of research. It has also provided me with the

social skills and confidence to work independently and think critically about the challenges one could face throughout the research process – and how to address them.

During my internship at NIMR, I have assisted with data collection in the Cash Transfer Evaluation Study in Shinyanga region. By participating in this study I have advanced my knowledge of qualitative data collection methods including the Qualitative Interview Method, Behavioral Economy Method and Ethno Lab. I also developed teamwork skills and how to interact with the community members and participants during fieldwork.

I have also had an opportunity to learn how to conduct qualitative data analysis and prepare a manuscript for publication. As a result, I have prepared a paper for publication, titled 'Alcohol Use among Young Women in Northern Tanzania: Implications for Sexual and Reproductive Health Interventions'.

I have also attended two in-house research training workshops on research ethics and photo-voice methodology. I have also participated in the Social Science Journal Club which has helped me to get guidance on how to read and assess published research from different parts of the world.

So far I am grateful

for the mentorship that Dr. Gerry Mshana has provided throughout my time at NIMR Mwanza. I am now very eager to pursue a Master's degree in public health as the next step in my research career.

Wende Clarence Safari - Biostatistics graduate

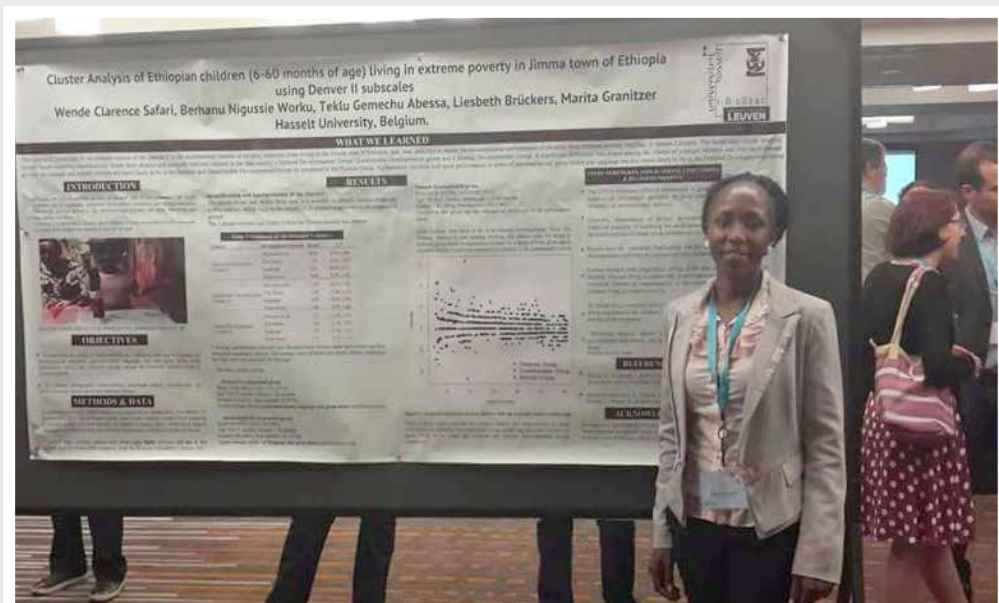
Throughout the internship, I have learnt many things about doing intuitive and practical statistical models which are contributing to solving real life health problems. I have been working with the TAZAMA project, where my daily activities involve, analyzing and writing scientific reports for the Magu Health and Demographic Sentinel Surveillance (HDSS) and other scientists' raw data. Through these assignments I have been able to sharpen my skills in a professional working environment.

This year I have attended and given presentations at two international conferences: International Conference for Child Indicators (ISCI), June 28 -30 in Montreal, Canada; and the International Biometric Society (IBS) Sub-African

Network (SUSAN), August 22 – 25 in Lilongwe Malawi.

I have also completed writing up a paper titled *Contraceptives Use among Women of Reproductive Age in Northwest Tanzania* which I plan to submit to the Journal of Studies in Family Planning. Currently, I am drafting a second paper on the *Prevalences and Incidences of HIV, in Northwest, Tanzania*.

I am very appreciative to Prof. Jim Todd, my mentor at NIMR, who has given me valuable counsel and put me in contact with experts in the field like Kathy Baisley, a senior statistician at Africa Health Research Institute (AHRI) in South Africa and Basia Zaba at London School of Hygiene and Tropical Medicine, in UK, who gave me extensive guidance regarding many practical issues. I also would like to express my gratitude to Mr. Mark Urassa and James Beard who provided timely feedback on the papers and helped to organize the presentations I made at the ISCI and IBS-SUSAN conferences.



Wende standing by her poster at the IBS conference in Lilongwe, Malawi

Mentor-Mentee Relations: Maximising Opportunities

By Corinna Alberg

Greetings from Cambridge. I write this fresh from a visit to Uganda where I enjoyed meeting with the Cambridge-linked Uganda based THRiVE-2 fellows and hearing from them on how their research is developing. The research areas are very diverse as well as very interesting and we look forward to welcoming the fellows to Cambridge and the opportunities that the visit should entail. Back in snowy Cambridge, I met with the THRiVE-2 mentors and the importance of planning ahead was clear from that meeting. With the mentor, fellows can identify particular opportunities that would enhance the visit – for example a conference involving researchers in the field. Such meetings tend to be held periodically and are an opportunity to try to weave into the fellow's visit. Attending such meetings will require registering in advance and provides the opportunity for submitting a poster or an oral presentation - an excellent networking opportunity but one requiring advance planning. This links into my second theme, communicating regularly with the mentor. From the meeting, it was evident that mentors are very willing to help but can only do so if they know what the fellow wants to achieve from their visit and so can discuss how best to attain those goals. Advance planning will enable fellows to make the most of the opportunities. Setting up regular correspondence - Skype

meetings or other regular communication will benefit fellows.

Other beneficiaries from their time in Cambridge and ongoing communication with their mentors are THRiVE-1 alumni Ronald Kiguba, Roman Ntare and Amos Mwaka who have been awarded Cambridge-Africa ALBORADA funding to develop ongoing research with their mentors. The ALBORADA award is open to postdoctoral researchers who can apply jointly with Cambridge academics to obtain funding for collaborative research. The award opens for applications in April with the closing date in June. Please keep an eye on the Cambridge Africa website <https://www.cambridge-africa.cam.ac.uk> where we publicise the award when it opens, and other research, conferences and funding opportunities that could be relevant to fellows and alumni of the programmes we partner with. THRiVE-2 fellow, Joel Bargul along with his Cambridge mentor Professor Mark Carrington, were also successful this year in their joint ALBORADA application so this is an opportunity for postdoctoral fellows as well as PhD fellows who go on to undertake postdoctoral research in the future.

We are looking forward to the visit to Cambridge of the first of the THRiVE-2 fellows. Dr

Imelda Namagembe will be arriving in three weeks' time (and all the snow will be gone by then!).

On a broader note there have been a wide range of Africa-related events taking place in Cambridge since my last newsletter article. These have included among others, a research showcase for postdoctoral researchers from Makerere and the University of Legon, Ghana who are part of the CAPREx programme. This is an opportunity for the fellows to present their research. Another Cambridge-Africa initiative, the Wellcome Trust-Cambridge Centre for Global Health Research held an event on parasitic and neglected diseases. This event also attracted a capacity audience and included speakers from the Sanger Institute, and the University of Cambridge, as well as Fellows from other DELTAs programmes (WACCBIB and MUII-plus). Attached is a photo of MUII-plus PhD fellow, Stephen Tukwasibwe, presenting his research at this event. Where possible we will provide opportunities for THRiVE fellows to present their research and so widen their international networks.

THRiVE pump priming grant fosters collaboration between NIMR and Cambridge

By Dr. Safari Kinunghi,
National Institute for
Medical Research

In December 2012, the National Institute for Medical Research (NIMR), Mwanza Centre in collaboration with the Makerere University College of Health Sciences and the University of Cambridge received a pump priming grant amounting to GBP 10,000 to implement a joint research project. The study was titled "Epidemiological survey of schistosomiasis and soil transmitted helminth infections in Mara region, on the eastern shores of the Lake Victoria, Tanzania: An exploratory study". The overall PI was Safari Kinunghi from NIMR Mwanza. The overall goals of the grant were to:

- Foster collaboration between THRiVE institutions and staff
- Encourage production and submission of joint research proposals for funding
- Encourage sharing of specialised research infrastructure and expertise within the THRiVE network.

The project was implemented between September 2013 and June 2014 and produced interesting and useful findings (see Safari Kinunghi et al 2017. *BMC Res Notes*, 10:583 and Humphrey Mazigo et al 2017. *Korean J Parasitol*, 55, No. 5: 533-540). Further, the project brought together three THRiVE institutions which built long-term research collaboration resulting into

THRiVE pump priming grant fosters

joint grant applications aimed at attracting funding for larger scale research projects. Since receiving this grant, many joint research proposals have been developed. One such research proposal titled “Transmission-dependent variation in schistosoma haematobium anti-fecundity immunity” developed jointly by the National Institute for Medical Research (NIMR), Mwanza Centre, Tanzania and the University of Cambridge, UK attracted funding by the Royal Society Africa Award in August 2014 amounting to GBP 175,450. In addition to generating new knowledge for schistosomiasis control, the grant had a capacity building component which supported one PhD student at NIMR-Mwanza centre and supported three short-term training courses in field and laboratory methods in schistosomiasis research. The project also contributed to acquisition of new laboratory equipment for NIMR Mwanza centre.

The pump-priming grant awarded to NIMR Mwanza centre in collaboration with Makerere University College of Health Sciences, and the University of Cambridge achieved its objectives of fostering research collaboration among three THRiVE institutes and encouraged production and submission of a joint proposal which attracted large scale funding. The grant also contributed to research capacity building in the respective THRiVE institutions. We anticipate that the established research collaboration network will continue to develop and implement new collaborative research projects in the future.

Life as a THRiVE Post-doctoral fellow

By Emmy Okello, Makerere University College of Health Sciences

Life as a THRiVE postdoctoral fellow has been an exciting period of academic productivity, personal, and professional growth. I have been challenged to extend and improve my teaching and mentoring, academic publications and presentations, societal participation and leadership, and grant support.

One of my major contributions as a THRiVE post-doctoral fellow is ensuring that junior trainees gain foundational clinical and research skills. Currently, I supervise two Makerere University College of Health Sciences (MakCHS) PhD students and four Masters of Medicine students. Additionally, I continue to serve as an invited thesis reviewer for the University of Cape Town, providing an additional opportunity for mentoring across the continent. As a NURTURE grant faculty, I lead the non-communicable disease sub group, providing peer mentorship for colleagues pursuing projects in cardiovascular medicine. This year marked an important milestone: the formation of the MakCHS/ Uganda Heart Institute Cardiovascular Research Study Group, which continues to grow.

Continued academic productivity and growth in both depth and breadth of cardiovascular research experience is a second goal that I brought to the THRiVE fellowship. Since I became a THRiVE Postdoctoral fellow in December, 2017, I have authored 10 peer-reviewed publications, 2 of which resulted directly from

my THRiVE objectives. I have also gained substantial oral presentation experience, delivering both oral abstracts and invited key note presentations at eight national and international conferences. Most notably, I presented “Access to interventional heart valve treatment for patients in LMICs” at the World Congress of Paediatric cardiology and Cardiac Surgery in Barcelona (July 2017) and “Rheumatic heart disease control in Uganda” at The Pan African Society of Cardiology conference in Khartoum (October, 2017).

I have strived as a THRiVE post-doctoral fellow to build skills and provide both local and international leadership within my field of cardiovascular medicine. I was recently promoted to Division Head of Cardiology within the Ugandan Heart Institute (UHI), now supervising the largest division within UHI. I currently serve as the General Secretary of the Uganda Heart Association. Under my leadership, we have reactivated our professional society to foster development and practice of cardiovascular medicine in Uganda and become a member of the World Heart Federation, providing a strong national platform for young professionals pursuing cardiovascular medicine. Finally, I was recently elected on the governing council of the Pan African Society of Cardiology as Vice Secretary for Eastern Africa.

Finally, my last goal as a THRiVE fellow was to expand my grant portfolio to facilitate ground-breaking research to address cardiovascular disparity in LMICs.

My THRIVE research and collaborations provided the preliminary data and infrastructure for a prestigious American Heart Association Strategically Focused Research Network Grant. I serve as the co-principal investigator for the clinical research project in this network, which builds on my THRIVE research aiming to better understand acute rheumatic fever in low-resourced settings. Additionally, I serve as a co-investigator on the population health project in this network, which seeks to develop a costed action plan for rheumatic heart disease investment in low-resourced settings. Additionally, this year I worked with an international team (including THRIVE mentors) to develop, submit, and successfully receive funding from the Thrasher Research Fund to conduct a clinical trial in Northern Uganda, which will definitively determine the role of secondary prophylaxis in echo-detected rheumatic heart disease. This grant includes many global RHD experts allowing for continued academic growth, mentoring and professional development.

Special thanks to my mentor and research collaborator, Dr. Andrea Beaton of the Children's Medical Center, Washington DC, my London School of Hygiene and Tropical medicine mentor, Dr. Tom Parks, my Uganda-based mentors including Professor James Tumwine and Professor Moses Kanya, and my colleagues, staff and management of the Uganda Heart Institute.

Keys to Detecting a Grant in Trouble; SRA 2017

By Shem Wakaindha, MakCHS Grants and Contracts Manager

This year's Society for Research Administrators conference 2017 (SRA) was held in Vancouver, Canada. The conference featured a wide range of topics and sessions from research administrators all over the world sharing experiences and updates from the various funding agencies as well as networking between peers.

What fascinated me the most, was a presentation by representatives from the University of West Indies, Jamaica on "*keys to detecting a grant in trouble*". This presentation was an opportunity to refresh my mind on some basic issues that are key to detecting a grant in trouble considering my line of work. These issues included;

When the Principal Investigator wins a grant but is not ultimately suitable to implement the work plan. This might lead to recruitment of consultants whose technical expertise may be inadequate, the PI might be limited in assessing their capacity to perform on the grant, leading to conflicting views, delays in approvals of consultants by the donor and high turnover of Project Management staff.

When the Grants management office or its equivalent detects issues ranging from insufficient budget allocations for costs, consistently low burn rates, lack of adherence to institutional internal controls, with potential disallowed expenses.

When the Audit Report indicates issues such as total actual expenditures exceeding the budget, or inaccurate classification of expenditure whose corrected classification exposes over-expenditure on specific budget lines. Incorrect classification could also qualify the audit report. Other issues in this regard could stem from the Grants management /finance office not

being informed about direct payments by the donors.

The other source of detection noted is when a donor raises a concern that reveals an issue such as programmatic and financial reports not being uploaded into donor's online platforms on time, insufficient supporting documents being submitted to the donor to support allowed expenditures.

It was also noted that other matters could stem from Intellectual Property (IP) clauses in an agreement that are not precise or equipment reliability / failure that can impact the integrity of research samples, as well as, budgetary implications and established timelines.

Some of the key solutions to the above detectable grant trouble indicators include; at the proposal stage the PI should identify viable candidates, and inform the candidates of the opportunity, or be informed of resources such as, databases and considerations of the project structure which could include a project management team, based on the type of grant.

Submission of timely revised budgets to address additional costs, or realignment of budget lines, constant dialogue with the Implementing Office, and use of graphical reports of funds spent to better indicate project status, and regular preparation and review of financial reports. Expenditures should also be tracked in an accurate and timely manner, create and maintain an audit findings database, introduce PI sign-off on budget schedules that authenticate the budget classification to be accurate.

Furthermore, the terms of the grant agreement must be very specific with regards to Intellectual Property, data sharing and data management for ownership of results and establishment of a robust maintenance schedule to monitor equipment functionality and provision of a contingency line in the budget where applicable.

2017 Awards and Honors

The year 2017 was one of rewards and returns for the investments THRiVE has made over the years. Below is a list of awards and honors that were bestowed upon THRiVE staff, fellows and partners in the year.

Names	Position	Award
Dr. Reginald Kavishe	Supervisor	Associate Professorship, Kilimanjaro Christian Medical University College
Dr. Daniel Masiga	Co-applicant	Principal Investigator of a new grant, Eastern Africa Network for Bioinformatics Training - (EANBIT)
Dr. Achilles Katamba	THRiVE-2 Staff	Co-investigator for a new grant comprehensive Snapshot of Tuberculosis Transmission in an Urban Ugandan Community
David Dunne, Pauline Essah, Corinna Albert and the Cambridge Team	Partner institution	University of Cambridge Professional Services Recognition Scheme Award 2017
Dr. David Kateete	Supervisor	Principal Investigator of a new grant, Nurturing genomics and bioinformatics research capacity in Africa (BReCA)
Dr. David Meya	Postdoctoral fellow	<ul style="list-style-type: none"> International Academician Award from the University of Minnesota GPS Alliance Associate Professor, Makerere University
Dr. Angelina Kakooza	Postdoctoral Fellow	Elected Chair of the Commission of African Affairs of the International League against Epilepsy
Dr. Moses Galukande	Postdoctoral Fellow	Appointed mentor, MasterCard Foundation Scholars Program, Makerere University
Dr. Stella Kepha	Postdoctoral Fellow	<ul style="list-style-type: none"> Visiting scientist status at the KEMRI-WT, Kilifi campus Membership, Neglected Tropical Diseases Unit, Kenya Invited to the Soil Transmitted Helminths technical working group of the Neglected Tropical Diseases Unit, Kenya
Prof. Nelson K. Sewankambo	Director	<ul style="list-style-type: none"> Received recognition award for his diligent service as a Board member for Consortium of Universities of Global Health (CUGH) 2014-2017 and was co-chair of the 2017 CUGH conference, held in Washington, D.C 6-9 April 2017. Investigator, Global Health Research Group on developing psychosocial interventions for mental health care

2017 THRiVE Publications

1. A Nsangi, **D Semakula**, A D Oxman, A Austvoll-Dahlgren, M Oxman, S Rosenbaum, A Morelli, C Glenton, S Lewin, M Kaseje, I Chalmers, A Fretheim, Y Ding, NK Sewankambo, Effects of the Informed Health Choices primary school intervention on the ability of children in Uganda to assess the reliability of claims about treatment effects: a cluster-randomised controlled trial. *The Lancet*, Volume 390, Issue 10092, p374 - 388, 22017. DOI: [http://dx.doi.org/10.1016/S0140-6736\(17\)31226-6](http://dx.doi.org/10.1016/S0140-6736(17)31226-6).
2. **D Semakula**, A Nsangi, A D Oxman, M Oxman, A Austvoll-Dahlgren, S Rosenbaum, A Morelli, C Glenton, S Lewin, M Kaseje, I Chalmers, P A Fretheim, D T Kristoffersen, NK Sewankambo. Effects of the Informed Health Choices podcast on the ability of parents of primary school children in Uganda to assess claims about treatment effects: a randomised controlled trial. *The Lancet*, Volume 390, Issue 10092, p389-398, 22 July 2017 DOI: [http://dx.doi.org/10.1016/S0140-6736\(17\)31225-4](http://dx.doi.org/10.1016/S0140-6736(17)31225-4)
3. D Nakanjako, D Akena, DK Kaye, J Tumwine, **E Okello**, A Nakimuli, A Kambugu, H McCullough, H Mayanja-Kizza, MR Kanya, NK Sewankambo. A need to accelerate health research productivity in an African University: the case of Makerere University College of Health Sciences. *Health Res Policy Syst.* 2017 Apr 21;15(1):33. doi: 10.1186/s12961-017-0196-6.
4. CT Longenecker, SR Morris, TO Aliku, A Beaton, MA Costa,

- MR Kanya, C Kityo, P Lwabi, G Mirembe, D Nampijja, J Rwebembera, C Sable, RA Salata, A Scheel, DI Simon, I Ssinabulya, **E Okello**. Rheumatic Heart Disease Treatment Cascade in Uganda. *Circ Cardiovasc Qual Outcomes*. 2017;10: e004037. DOI: 10.1161/CIRCOUTCOMES.117.004037
5. **A Kakooza-Mwesige**, D Ndyomugenyi, G Pariyo, SS Peterson, PM Waiswa, E Galiwango, E Chengo, R Odhiambo, D Ssewanyana, C Bottomley, AK Ngugi, C RJC Newton, and a on behalf of the SEEDS Writing Group Epilepsia. Adverse perinatal events, treatment gap, and positive family history linked to the high burden of active convulsive epilepsy in Uganda: A population-based study *Open, **(*)*:1–11, 2017 doi: 10.1002/epi4.12048
 6. **Musubire A, Meya DB**, Bohjanen PR, Katabira E, Barasukana P, Boulware DR, Meyer AC. Systematic review of non-traumatic spinal cord injuries in Sub-Saharan Africa and a proposed diagnostic algorithm for resource-limited settings. *Front Neurol*. 2017 Dec 8; 8:618. doi: 10.3389/fneur.2017.00618. eCollection 2017.
 7. Kajumbula H, Ayako WF, Mbabazi O, Najjuka C, Izale C, Akampurira A, Aisu S, Lamorde M, Walwema R, Bahr NC, **Meya DB**, Boulware DR, Manabe YC on behalf of the Ugandan AMR Technical Working Group. Antimicrobial Resistance in Uganda. *Emerg Infect Dis*. 2018;24(1):174-175. <https://dx.doi.org/10.3201/eid2401.171112>
 8. Kwizera R, Akampurira A, Kandole TK, Nielsen K, Kambu A, **Meya DB**, Boulware DR, Rhein J and on behalf of the ASTRO-CM Study Team. Evaluation of Trypan Blue stain in a Haemocytometer for rapid detection of Cerebrospinal fluid sterility in HIV patients with Cryptococcal Meningitis. *BMC Microbiology* (2017) 17:182 DOI 10.1186/s12866-017-1093-4.
 9. Bahr NC, Nuwagira E, Evans EE, Creswell FV, Bystrom PV, yamukama A, Brindge S, Bangdiwala AS, **Meya DB**, Denkinger CM, Muzoora C, Boulware DR Diagnostic accuracy of Xpert MTB/Rif Ultra for TB Meningitis in HIV-infected adults: a prospective cohort study. *Lancet Inf Dis* 2017 DOI: [http://dx.doi.org/10.1016/S1473-3099\(17\)30474-7](http://dx.doi.org/10.1016/S1473-3099(17)30474-7)
 10. **Kwizera R**, Akampurira A, Williams D, Boulware DR, Meya DB, on behalf of the ASTRO-CM Study Team (2017) Acridine orange fluorescent microscopy is more sensitive than India ink light microscopy in the rapid detection of cryptococcosis among CrAg positive HIV patients. *PLoS ONE* 12(7): e0182108. <https://doi.org/10.1371/journal.pone.0182108>
 11. Lofgren S, Hullsiek KH, Morawski BM, Nabeta HW, Kiggundu R, Taseera K, Musubire A, Schutz C, Abassi M, Bahr NC, Tugume L, Muzoora C, Williams DA, Rolfes MA, Velamakanni SS, Rajasingham R, Meintjes G, Rhein J, **Meya DB**, Boulware DR; COAT and ASTRO-CM Trial Teams. Differences in Immunologic Factors Among Patients Presenting with Altered Mental Status During Cryptococcal Meningitis. *J Infect Dis*. 2017 Mar 1;215(5):693-697. doi: 10.1093/infdis/jix033.
 12. Rajasingham R, **Meya D**, and Boulware D. Are fluconazole or sertraline dose adjustments necessary with concomitant rifampin? *HIV Med* 2017 doi: 10.1111/hiv.12543
 13. **Meya D**, Okurut S, Zziwa G, Cose S, Bohjanen P, Mayanja-Kizza H, Joloba M, Boulware DR, Manabe CY, Wahl S, Janoff E. Monocyte Phenotype and IFN- γ -inducible Cytokine Responses are Associated with Cryptococcal Immune Reconstitution Inflammatory Syndrome. *J. Fungi* 2017, 3(2), 28; doi:10.3390/jof3020028.
 14. Montgomery MP, **Nakasujja N**, Morawski BM, Rajasingham R, Rhein J, Nalintya E, Williams DA, Hullsiek KH, Kiragga A, Rolfes MA, Carlson RD, Bahr NC, Birkenkamp KE, Manabe YC, Bohjanen PR, Kaplan JE, Kambu A, Meya DB, Boulware DR. Neurocognitive function in HIV-infected persons with asymptomatic cryptococcal antigenemia: a comparison of three prospective cohorts. *BMC Neurology* 2017 Jun 12;17(1):110. doi: 10.1186/s12883-017-0878-2.
 15. Flynn AG, **Meya DB**, Hullsiek KH, Rhein J, Williams DA, Musubire A, Morawski BM, Kabanda T, Sadiq A, Ndyatunga L, Roediger M, Rajasingham R, Bohjanen PR, Muzoora C, Boulware DR. Evolving failures in the delivery of HIV care: Lessons from a Ugandan meningitis cohort 2006-2016. *Open Forum Infectious Diseases* 2017
 16. Abassi M, Morawski BM, Nakigozi G, Nakasujja N, Kong X, **Meya DB**, Robertson K, Gray R, Wawer MJ, Ned Sacktor, Boulware DR. Cerebrospinal Fluid Biomarkers and HIV Associated Neurocognitive Disorders in HIV-Infected Individuals in Rakai, Uganda. *J Neuro Virol* 2017 Jun;23(3):369-375. doi: 10.1007/s13365-016-0505-9
 17. Diamantino A, Beaton A, Aliku T, Oliveira K, Oliveira C, Xavier L, Perlman L, **Okello E**, Nascimento B, Ribeiro ARP, Nunes MCP, Sable C. Focused single-view hand-held echocardiography protocol for the detection of rheumatic heart disease. *Cardiol Young*. 2017 Sep 11:1-10.
 18. Stehouwer N, **Okello E**, Gupta V, Bailey AL, Josephson R, Madan Mohan SK, Osman MN, Longenecker CT. Development and Validation of a Teaching Module for Echocardiographic Scoring of Rheumatic Mitral Stenosis. *Glob Heart*. 2017 Aug 31. pii: S2211-8160(17)30050-9. doi: 10.1016/j.ghert.2017.05.004. [Epub ahead of print]
 19. Scheel A, Beaton A, **Okello E**, Longenecker CT, Otim IO, Lwabi P, Sable C, Webel AR, Aliku T.

- The impact of a peer support group for children with rheumatic heart disease in Uganda. *Patient Educ Couns*. 2017 Jul 11. pii: S0738-3991(17)30419-6. doi: 10.1016/j.pec.2017.07.006.
20. Nayiga I, **Okello E**, Lwabi P, Ndeezi G. Prevalence of group A streptococcus pharyngeal carriage and clinical manifestations in school children aged 5-15 yrs in Wakiso District, Uganda. *BMC Infect Dis*. 2017 Apr 5;17(1):248. doi: 10.1186/s12879-017-2353-5.
 21. Okello E, Longenecker CT, Beaton A, Kanya MR, Lwabi P. Rheumatic heart disease in Uganda: predictors of morbidity and mortality one year after presentation. *BMC Cardiovasc Disord*. 2017 Jan 7;17(1):20. doi: 10.1186/s12872-016-0451-8.
 22. Mlotshwa, B. C., Mwesigwa, S., **Mboowa, G.**, Williams, L., Retshabile, G., Kekitiinwa, A., ... & Mardon, G. The collaborative African genomics network training program: a trainee perspective on training the next generation of African scientists. *Genet Med*. 2017 Jul; 19(7): 826–833.
 23. Smith ER, Vissoci RJ, Hernandez Rocha AT, Tran MT, Anthony T, Fuller, Elissa K, Butler, Luciano de Andrade, Makumbi F , Luboga S, Muhumuza C , Namanya BD , Chipman JG, **Galukande M**, Haglund MM. Geospatial analysis of unmet pediatric surgical need in Uganda. *J Pediatr Surg* , June 2017 <http://dx.doi.org/10.1016/j.jpedsurg.2017.03.045>
 24. **Galukande M**, Nakaggwa F, Busisa E, Bbaale Sekavuga D, Nagaddya T, Coutinho A. Long term post PrePex male circumcision outcomes in an urban population in Uganda: a cohort study. *BMC Research Notes* Oct 2017; 10:522 <https://doi.org/10.1186/s13104-017-2845-9>
 25. Mbiine R, Alenyo R, Kobusingye O, Kuteesa J, Nakanwagi C, HM Lekuya , Kituuka O, **Galukande M**. Intra-abdominal hypertension in severe burns: prevalence, incidence and mortality in a sub-Saharan African hospital. *Int J Burn Trauma* Oct 2017;7(6):80-87 PMC5665839
 26. **Kwizera R**, Parkes-Ratanshi R, Page ID, Sekaggya-Wiltshire C, Musaazi J, Fehr J, Castelnovo B, Kambugu A, Denning DW: Elevated Aspergillus-specific antibody levels among HIV infected Ugandans with pulmonary tuberculosis. *BMC Pulmonary Medicine* 2017, 17(1):149.
 27. **Kinung'hi, S. M., Mazigo, H. D., Dunne, D. W., Kepha, S., Kaatano, G., Kishamawe, C., Nuwaha, F.** (2017). Coinfection of intestinal schistosomiasis and malaria and association with haemoglobin levels and nutritional status in school children in Mara region, Northwestern Tanzania: a cross-sectional exploratory study. *BMC Research Notes*. 2017, 10, 583. <http://doi.org/10.1186/s13104-017-2904-2>
 28. **Mazigo, H. D., Nuwaha, F., Dunne, D. W., Kaatano, G. M., Angelo, T., Kepha, S., & Kinung'hi, S. M.** (2017). Schistosoma mansoni Infection and Its Related Morbidity among Adults Living in Selected Villages of Mara Region, North-Western Tanzania: A Cross-Sectional Exploratory Study. *The Korean Journal of Parasitology*, 55(5), 533–540. <http://doi.org/10.3347/kjp.2017.55.5.533>
 29. **Mazigo, H. D., Kepha, S., Kaatano, G. M., & Kinung'hi, S. M.** (2017). Co-infection of Schistosoma mansoni/hepatitis C virus and their associated factors among adult individuals living in fishing villages, north-western Tanzania. *BMC Infectious Diseases*, 17, 668. <http://doi.org/10.1186/s12879-017-2780-3>
 30. **Kepha S, Mwandawiro CS, Anderson RM, Pullan RL, Nuwaha F, Cano J, Njenga SM, Odiere MR, Allen E, Brooker SJ, Nikolay B.** Impact of single annual treatment and four-monthly treatment for hookworm and Ascaris lumbricoides, and factors associated with residual infection among Kenyan school children. *Infect Dis Poverty*. 2017 Feb 9;6(1):30. doi: 10.1186/s40249-017-0244-z. PMID: 28179024
 31. Hanson, C, Pembe, AB, Alwy, F., **Atuhairwe, S**, Leshabari, S, Morris, J, Kaharuza, F & Marrone. Evaluating the effect of the Helping Mothers Survive Bleeding after Birth (HMS BAB) training in Tanzania and Uganda: study protocol for a randomised controlled trial., *G Trials* 18 1 11
 32. Kruszka P, Porras AR, Addissie YA, Moresco A, Medrano S, Mok GTK, Leung GKC, Tekendo-Ngongang C, Uwineza A, Thong MK, Muthukumarasamy P, Honey E, Ekure EN, Sokunbi OJ, Kalu N, Jones KL, Kaplan JD, Abdul-Rahman OA, Vincent LM, Love A, Belhassan K, Ouldim K, El Bouchikhi I, Shukla A, Girisha KM, Patil SJ, Sirisena ND, Dissanayake VHW, Paththinige CS, Mishra R, Klein-Zigelboim E, Gallardo Jugo BE, Chávez Pastor M, Abarca-Barriga HH, Skinner SA, Prijoles EJ, Badoe E, Gill AD, Shotelersuk V, Smpokou P, Kisling MS, Ferreira CR, Mutesa L, Megarbane A, Kline AD, Kimball A, **Okello E**, Lwabi P, Aliku T, Tenywa E, Boonchooduang N, Tanpaiboon P, Richieri-Costa A, Wonkam A, Chung BHY, Stevenson RE, Summar M, Mandal K, Phadke SR, Obregon MG, Linguraru MG, Muenke M. Noonan syndrome in diverse populations. *Am J Med Genet A*. 2017 Sep;173(9):2323-2334. doi: 10.1002/ajmg.a.38362. Epub 2017 Jul 27.
 33. Ibinda F, Odermatt P, Kariuki SM, **Kakooza-Mwesige A**, Wagner RG, Owusu-Agyei S, Masanja H, Ngugi AK, Mbuba CK, Doku VCK, Neville BG, Sander JW, Newton CRJC; SEEDS writing group. Magnitude and factors associated with nonadherence to antiepileptic drug treatment in Africa: A cross-sectional multisite study. *Epilepsia Open*. 2017 Mar 30;2(2):226-235. doi: 10.1002/epi4.12052. eCollection 2017 Jun. PMID: 29588951
 34. **Kakooza-Mwesige A.** Unravelling the mysterious onchocerciasis-

- nodding syndrome link: new developments and future challenges. *Ann Transl Med*. 2017 Dec;5(24):486. doi: 10.21037/atm.2017.09.36. PMID: 29299448
35. **Kakooza-Mwesige A**, Andrews C, Peterson S, Wabwire Mangu F, Eliasson AC, Forssberg H. Prevalence of cerebral palsy in Uganda: a population-based study. *Lancet Glob Health*. 2017 Dec;5(12): e1275-e1282. doi: 10.1016/S2214-109X (17)30374-1. Epub 2017 Nov 5. PMID: 29102350
36. Novak I, Morgan C, Adde L, Blackman J, Boyd RN, Brunstrom-Hernandez J, Cioni G, Damiano D, Darrah J, Eliasson AC, de Vries LS, Einspieler C, Fahey M, Fehlings D, Ferriero DM, Fetters L, Fiori S, Forssberg H, Gordon AM, Greaves S, Guzzetta A, Hadders-Algra M, Harbourne R, **Kakooza-Mwesige A**, Karlsson P, Krumlinde-Sundholm L, Latal B, Loughran-Fowlds A, Maitre N, McIntyre S, Noritz G, Pennington L, Romeo DM, Shepherd R, Spittle AJ, Thornton M, Valentine J, Walker K, White R, Badawi N. Early, Accurate Diagnosis and Early Intervention in Cerebral Palsy: Advances in Diagnosis and Treatment. *JAMA Pediatr*. 2017 Sep 1;171(9):897-907. doi: 10.1001/jamapediatrics.2017.1689. Review. PMID: 28715518
37. Carrizosa Moog J, **Kakooza-Mwesige A**, Tan CT. Epilepsy in the tropics: Emerging etiologies. *Seizure*. 2017 Jan; 44:108-112. doi: 10.1016/j.seizure.2016.11.032. Epub 2016 Dec 6. Review. PMID: 27986419
38. Muema JM, **Bargul JL**, Njeru SN, Onyango JO, Imbahale SS. Prospects for malaria control through manipulation of mosquito larval habitats and olfactory-mediated behavioural responses using plant-derived compounds. *Parasit Vectors*. 2017 Apr 17;10(1):184. doi: 10.1186/s13071-017-2122-8. Review. PMID: 28412962
39. Muema JM, Nyanjom SG, Mutunga JM, Njeru SN, **Bargul JL**. Green tea proanthocyanidins cause impairment of hormone-regulated larval development and reproductive fitness via repression of juvenile hormone acid methyltransferase, insulin-like peptide and cytochrome P450 genes in *Anopheles gambiae sensu stricto*. *PLoS One*. 2017 Mar 16;12(3): e0173564. doi: 10.1371/journal.pone.0173564. eCollection 2017. PMID: 28301607
40. Oxborough RM, N'Guessan R, **Kitau J**, Tungu PK, Malone D, Masha FW, Rowland MW. A new class of insecticide for malaria vector control: evaluation of mosquito nets treated singly with indoxacarb (oxadiazine) or with a pyrethroid mixture against *Anopheles gambiae* and *Culex quinquefasciatus*. *Malar J*. 2015 Sep 17;14:353. doi: 10.1186/s12936-015-0890-1. PMID: 26377930
41. Thomas A, **Mazigo HD**, Manjurano A, Morona D, Kweka EJ. Evaluation of active ingredients and larvicidal activity of clove and cinnamon essential oils against *Anopheles gambiae* (sensu lato). *Parasit Vectors*. 2017 Sep 6;10(1):411. doi: 10.1186/s13071-017-2355-6. PMID: 28874207
42. **Mazigo HD**, Rumisha SF, Chiduo MG, Bwana VM, Mboera LEG. Malaria among rice farming communities in Kilangali village, Kilosa district, Central Tanzania: prevalence, intensity and associated factors. *Infect Dis Poverty*. 2017 Jul 5;6(1):101. doi: 10.1186/s40249-017-0315-1. PMID: 28676077
43. Rujeni N, Morona D, Ruberanziza E, **Mazigo HD**. Schistosomiasis and soil-transmitted helminthiasis in Rwanda: an update on their epidemiology and control. *Infect Dis Poverty*. 2017 Mar 1;6(1):8. doi: 10.1186/s40249-016-0212-z. Review. PMID: 28245883
44. **Amone-P'Olak K**, Boitumelo V, Mberengwa DS. Cognitive emotion regulation strategies and mental health problems in war-affected youth in Northern Uganda: findings from the WAYS study. *J Ment Health*. 2017 Oct 11:1-7. doi:10.1080/09638237.2017.1385745. PMID: 29017360
45. **Amone-P'Olak K**, Eklit A, Dokkedahl SB. PTSD, Mental Illness, and Care Among Survivors of Sexual Violence in Northern Uganda: Findings From the WAYS Study. *Psychol Trauma*. 2017 Jul 31. doi: 10.1037/tra0000295. PMID: 28758765
46. **Kiguba R**, Karamagi C, Bird SM. Antibiotic-associated suspected adverse drug reactions among hospitalized patients in Uganda: a prospective cohort study. *Pharmacol Res Perspect*. 2017 Feb 17;5(2): e00298. doi: 10.1002/prp2.298. eCollection 2017 Apr. PMID: 28357124
47. **Kiguba R**, Karamagi C, Bird SM. Incidence, risk factors and risk prediction of hospital-acquired suspected adverse drug reactions: a prospective cohort of Ugandan inpatients. *BMJ Open*. 2017 Jan 20;7(1): e010568. doi: 10.1136/bmjopen-2015-010568. PMID: 8110281
48. **Muro F**, Meta J, Renju J, Mushi A, Mbakilwa H, Olomi R, Reyburn H, Hildenwall H. "It is good to take her early to the doctor" - mothers' understanding of childhood pneumonia symptoms and health care seeking in Kilimanjaro region, Tanzania. *BMC Int Health Hum Rights*. 2017 Sep 22;17(1):27. doi: 10.1186/s12914-017-0135-1. PMID: 28938895
49. Hildenwall H, **Muro F**, Jansson J, Mtove G, Reyburn H, Amos B. Point-of-care assessment of C-reactive protein and white blood cell count to identify bacterial aetiologies in malaria-negative paediatric fevers in Tanzania. *Trop Med Int Health*. 2017 Mar;22(3):286-293. doi: 10.1111/tmi.12823. Epub 2016 Dec 28. PMID: 27935664
50. **Muro F**, Masha N, Hildenwall H, Mtei F, Harrison N, Schellenberg D, Olomi R, Reyburn H, Todd

- J. Variability of respiratory rate measurements in children suspected with non-severe pneumonia in north-east Tanzania. *Trop Med Int Health*. 2017 Feb;22(2):139-147. doi: 10.1111/tmi.12814. Epub 2016 Dec 12. PMID: 27862739
51. **Bwogi J**, Jere KC, Karamagi C, Byarugaba DK, Namuwulya P, Baliraine FN, Desselberger U, Iturriza-Gomara M. Whole genome analysis of selected human and animal rotaviruses identified in Uganda from 2012 to 2014 reveals complex genome reassortment events between human, bovine, caprine and porcine strains. *PLoS One*. 2017 Jun 22;12(6): e0178855. doi: 10.1371/journal.pone.0178855. eCollection 2017. PMID: 28640820
 52. Filteau S, **PrayGod G**, Woodd SL, Friis H, Heimbürger DC, Koethe JR, Kelly P, Kasonka L, Rehman AM. Nutritional status is the major factor affecting grip strength of African HIV patients before and during antiretroviral treatment. *Trop Med Int Health*. 2017 Oct;22(10):1302-1313. doi: 10.1111/tmi.12929. Epub 2017 Aug 14. PMID: 28712113
 53. **PrayGod G**, Changalucha J, Kapiga S, Todd J, Filteau S, Peck R. Elevated blood pressure and correlates in a cohort of HIV-infected adults who started antiretroviral therapy when undernourished. *J Clin Hypertens (Greenwich)*. 2017 Aug;19(8):803-806. doi: 10.1111/jch.13031. Epub 2017 May 26. PMID: 28548437
 54. Rehman AM, Woodd SL, Heimbürger DC, Koethe JR, Friis H, **PrayGod G**, Kasonka L, Kelly P, Filteau S. Changes in serum phosphate and potassium and their effects on mortality in malnourished African HIV-infected adults starting antiretroviral therapy and given vitamins and minerals in lipid-based nutritional supplements: secondary analysis from the Nutritional Support for African Adults Starting Antiretroviral Therapy (NUSTART) trial. *Br J Nutr*. 2017 Mar;117(6):814-821. doi: 10.1017/S0007114517000721. Epub 2017 Apr 10. PMID: 28393746
 55. **PrayGod G**, Changalucha J, Kapiga S, Peck R, Todd J, Filteau S. Dysglycemia associations with adipose tissue among HIV-infected patients after 2 years of antiretroviral therapy in Mwanza: a follow-up cross-sectional study. *BMC Infect Dis*. 2017 Jan 30;17(1):103. doi: 10.1186/s12879-017-2209-z. PMID: 28137307
 56. Wayengera M, Mwebaza I, Welishe J, Nakimuli C, **Kateete DP**, Wampande E, Kirimunda S, Bayigga L, Musubika C, Babirye P, Asimwe B, Joloba ML. Sero-diagnosis of Active Mycobacterium tuberculosis Disease among HIV Co-infected Persons using Thymidylate Kinase based Antigen and Antibody Capture Enzyme Immuno-Assays. *Mycobact Dis*. 2017 Jun;7(2). pii: 241. doi: 10.4172/2161-1068.1000241. Epub 2017 May 31. PMID: 28856068
 57. Wayengera M, Mwebaza I, Welishe J, Bayiyana A, **Kateete DP**, Wampande E, Kirimunda S, Kigozi E, Katabazi F, Musubika C, Kyobe S, Babirye P, Asimwe B, Joloba ML. Immuno-diagnosis of Mycobacterium tuberculosis in sputum, and reduction of timelines for its positive cultures to within 3 h by pathogen-specific thymidylate kinase expression assays. *BMC Res Notes*. 2017 Aug 8;10(1):368. doi: 10.1186/s13104-017-2649-y. PMID: 28789704
 58. **Kateete DP**, Nakanjako R, Okee M, Joloba ML, Najjuka CF. Genotypic diversity among multidrug resistant *Pseudomonas aeruginosa* and *Acinetobacter* species at Mulago Hospital in Kampala, Uganda. *BMC Res Notes*. 2017 Jul 14;10(1):284. doi: 10.1186/s13104-017-2612-y. PMID: 28705201
 59. Ssengooba W, Lukoye D, Meehan CJ, **Kateete DP**, Joloba ML, de Jong BC, Cobelens FG, van Leth F. Tuberculosis resistance-conferring mutations with fitness cost among HIV-positive individuals in Uganda. *Int J Tuberc Lung Dis*. 2017 May 1;21(5):531-536. doi: 10.5588/ijtld.16.0544. PMID: 28399968
 60. Okuni JB, **Kateete DP**, Okee M, Nanteza A, Joloba M, Ojok L. Application of antibodies to recombinant heat shock protein 70 in immunohistochemical diagnosis of mycobacterium avium subspecies paratuberculosis in tissues of naturally infected cattle. *Ir Vet J*. 2017 Mar 24;70:10. doi: 10.1186/s13620-017-0088-7. eCollection 2017. PMID: 28344769
 61. Ditai J, Frye LJ, Durocher J, Byrne ME, **Ononge S**, Winikoff B, Weeks AD. Achieving community-based postpartum follow up in eastern Uganda: the field experience from the MamaMiso Study on antenatal distribution of misoprostol. *BMC Res Notes*. 2017 Oct 26;10(1):516. doi: 10.1186/s13104-017-2849-5. PMID: 29073923
 62. Kiwanuka TS, **Ononge S**, Kiondo P, **Namusoke F**. Adherence to iron supplements among women receiving antenatal care at Mulago National Referral Hospital, Uganda-cross-sectional study. *BMC Res Notes*. 2017 Oct 25;10(1):510. doi: 10.1186/s13104-017-2834-z. PMID: 29070052
 63. Obbarius A, van Maasackers L, Baer L, Clark DM, Crocker AG, de Beurs E, Emmelkamp PMG, Furukawa TA, Hedman-Lagerlöf E, Kangas M, Langford L, Lesage A, **Mwesigire DM**, Nolte S, Patel V, Pilkonis PA, Pincus HA, Reis RA, Rojas G, Sherbourne C, Smithson D, Stowell C, Woolaway-Bickel K, Rose M. Standardization of health outcomes assessment for depression and anxiety: recommendations from the ICHOM Depression and Anxiety Working Group. *Qual Life Res*. 2017 Dec;26(12):3211-3225. doi: 10.1007/s11136-017-1659-5. Epub 2017 Aug 7. PMID: 28786017