



Editorial

Dear Reader,

The week of September 21-25, 2020 was a global Fungal Disease Awareness Week but perhaps this fact wasn't realized by some readers. THRiVE recognizes the importance of fungal diseases and two of our fellows have made it their lifelong commitment to carry on life saving research. They are recognized nationally and internationally for their research on fungal diseases. In this issue of THRiVE News Dr. David Meya reflects on his important work on cryptococcal meningitis, a major killer of patients living with HIV. All through his doctoral and post-doctoral training David Meya committed his research career to understanding this disease, transform its management, improve patient survival and quality of life. His work has had national, regional and global impact through policy change in patient management. During the awareness week Dr Meya was recognized as one of the global top leading researchers on fungal diseases.

Richard Kwizera, a THRiVE doctoral fellow summarizes in this issue of THRiVE News the importance of fungal diseases which affect more than a billion people worldwide and 1.5 million deaths annually. Some of the fungal infections can be described as Neglected Tropical Diseases. Mr Kwizera is a member of the International Society of Human and Animal Mycology (ISHAM) [Continue to page 2](#)

David Meya named world expert in Cryptococcosis



Assoc. Prof. David Meya named world expert in Cryptococcosis

» Assoc. Prof. Meya's recognition is based on his contribution of 61 academic papers on Cryptococcosis that he has authored since 2010.

By Racheal Ninsiima, communications officer, THRiVE

Assoc. Prof David Meya, a THRiVE post-doctoral fellow, has been recognized as a world expert in Cryptococcosis by Expertscape, a website that identifies and objectively ranks medical expertise. The announcement was made during fungal week, commemorated between September 21-25 2020. Assoc. Prof. Meya was placed in the top 0.1% of scholars writing about Cryptococcosis over the past 10 years by Expertscape's PubMed-based algorithms, a level they label as "World Expert." Expertscape uses the National Institute of Health's PubMed database to identify those individuals and institutions that are conducting research, publishing papers, and conducting clinical trials around different medical conditions.

Assoc. Prof. Meya's recognition

is based on his contribution of 61 academic papers on Cryptococcosis that he has authored since 2010.

"Kudos to you! Reaching this level of expertise is a tremendous achievement, and we are proud to share your professional accomplishments with the world," reads information to Prof. Meya from Expertscape.

Throughout his career, Assoc. Prof Meya has distinguished himself by his dual commitment to translational research and health education. His PhD study set out to understand why people who had recovered from meningitis and started on ARVs were having reoccurrences. Additionally, Assoc. Prof. Meya has led epidemiological and translational research studies as well as randomized clinical trials in prevention and treatment of Cryptococcus meningitis.

[We congratulate Assoc. Prof. David Meya upon this achievement!](#)

MUST READ

Beating challenges to start a Clinical Trial in COVID Times- We Did It!

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Translational research: linking basic science to bedside medicine

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Learning to love virtual mentorship sessions in the coronavirus era

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Pan Africa Mycology Working Group (PAMWG). The ISHAM PAMWG aims to provide a platform for all the leaders in the field on mycology from different African countries in order to initiate epidemiological studies, regional guidelines, and educational programs to increase the capacity/ expertise of African specialists in the early detection and treatment of fungal infections. Additionally, it is committed to advocacy activities to guide policy makers to provide the necessary support for the care of patients with fungal infections in Africa. His work has helped to build laboratory capacity for mycology in

Uganda. Richard Kwizera's rise professionally to become a Manager of the Translational Laboratory at Makerere University a few weeks before the Fungal Disease awareness week was of great symbolic significance. Laboratory research on testing and treatment for fungal diseases may reach an all-time high and improve care for fungal infections.

With our fellows continuing to excel THRiVE is very well positioned to contribute to enhancing capacity for fungal infections research and care.

More research about fungal infections required

By Richard Kwizera (THRIVE-2 PhD fellow)

Fungal infections are more often than not neglected by social and political communities. Fungal diseases, antifungal drug resistance and the development of new antifungal drugs gets little media coverage. However, they affect more than a billion people, resulting in approximately 12 million life-threatening infections and more than 1.5 million deaths annually. While many fungal diseases are neglected by public health authorities and poorly addressed, some fit the WHO definition of Neglected Tropical Diseases (NTDs). Among fungal diseases, mycetoma was recently adopted as an NTD by the WHO in 2013 and chromoblastomycosis in 2017 with 'other

deep mycoses'. This is a great step forward from the perspective of improving the outcomes of patients with these serious diseases.

As highlighted in the WHO Global Report on Antimicrobial Resistance Surveillance, which devotes fewer than 10% of its pages to fungi, resources allocated for monitoring and reducing antifungal drug resistance are limited. Indeed, the WHO has no funded programmes specifically targeting fungal diseases. Fewer than 10 countries have national surveillance programs for fungal infections, and fewer than 20 have fungal reference diagnostic laboratories. Many of the diagnostic tests that do exist are not available in developing countries, and well-established antifungal drugs such as amphotericin B and flucytosine that would

cure disease do not reach people that need them, a large fraction of which are in sub-Saharan Africa.

In order to popularise and uplift research in this area, organisations have to lobby to include more antifungal drugs on the WHO Essential Medicines List. There is need to improve the availability/affordability of diagnostics, train clinicians in fungal disease diagnosis and treatment, and ensure that antifungals are available globally. Funding is also urgently needed to advance our understanding of fungal pathogenesis and drug resistance, develop new diagnostics and antifungal strategies, and improve monitoring of infection and antifungal resistance, as this will ultimately inform new strategies to tackle fungal infections.

Are livestock around wildlife in Kenya potential reservoirs of zoonotic diseases?

By Brenda Odhiambo Kisia THRIVE-2 MSc Fellow, icipe



Ms Brenda Odhiambo screening blood samples from cattle for bacterial and protozoal pathogens in the lab.

We live in an era where there is a high frequency of emerging and re-emerging infectious diseases. For the first time, we are witnessing an ongoing pandemic caused by a pathogen of zoonotic origin. COVID-19, caused by the Coronavirus SARS-Cov-2, is thought to have originated in bats and was amplified by an intermediate host with which humans came into contact at a wet market in Wuhan, China. Within months, COVID-19 caused nearly one million deaths and it remains a constant reminder of the risks posed by known and unknown zoonotic pathogens. Approximately two-thirds of emerging infectious disease affecting humans originate from wild and domestic animals. Thus, the risk of contact with disease-causing pathogens is higher in areas where wildlife interacts with livestock and humans,

such as wildlife conservation areas. Our study aimed to investigate livestock as the potential bridge for zoonotic diseases at the wildlife-livestock interface at the interface of the Ruma National Park in Kenya.

My supervisors, Drs Michael Okal and Shewit Kalayou, and I implemented a cross-sectional study with stratified one-stage cluster sampling for vector-borne disease pathogens in cattle. We sampled the blood of 680 zebu animals in 95 herds from six geospatial clusters within five kilometres of the Ruma National Park. The samples were screened for bacterial and protozoal pathogens by high-resolution melting analysis of PCR products. Together with our collaborators, we completed all analyses in the Martin Lüscher- Emerging infectious disease (ML-EID) Laboratory at the International Centre of insect physiology and Ecology. The lab offers an excellent facility for such studies and has been the focus of molecular biology studies advised by Drs Jandouwe Villiger and Dan Masiga.

Key findings

We detected several pathogens in the animals with more than 80% of all tested animals infected with *Trypanosoma*, *Anaplasma* or *Theileria* species. More than 50% of the animals bore a complex combination of pathogens with about 30% infected with diverse *Trypanosoma* species, including the zoonotic *Trypanosoma brucei* subspecies (7.5% prevalence). The area around Ruma National Park was a

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primary focus of human sleeping sickness in the 1960s. However, none of these tested positive for human-infective *trypanosome* species. Tick-borne pathogens found included *Anaplasma platys*, a pathogen known to infect humans and dogs but without well-described pathogenesis. For the first time, we showed that *Anaplasma bovis* affects cattle in the wildlife interface. Most, importantly, we found a new pathogen species (*Anaplasma sp. Lambwe 1*). We are currently implementing further studies to describe the infections and describe their relevance to human and animal health.

Over the last three years, since January 2017, we have collected over ten thousand samples of *H. camelina* off camels and camel blood in a cross-sectional study design. These samples were immediately preserved for transportation to Nairobi-based International Centre of Insect Physiology and Ecology (*icipe*) Molecular Biology laboratories for analysis. Trypanosomes and other pathogens are routinely studied through PCR-based assays and gene sequencing. We conducted experimental disease transmission studies through feeding assays by *H. camelina* on clean mice and rabbits.

Impact of the study

This study provides insight into the complexity of diseases pathogens in the interface with wildlife. The results could guide the development of livestock disease management strategies at the local and national level in addition to minimising the risks for zoonotic diseases. Importantly, it highlights the need for proactive surveillance of diseases, especially in the human-wildlife-livestock interface. Details of this study will be shortly available in peer-reviewed-journals.



Ms Brenda Odhiambo setting a trap for monitoring disease vectors in households at Ruma National Park Interface

Beating challenges to start a Clinical Trial in COVID Times– We Did It!

By Tara Mtuy (LSHTM, supporting KCMUCo)

When COVID-19 hit in Tanzania, a cloud of doom came over the Eye Health Programme, a collaborative research program between Kilimanjaro Christian Medical University College (KCMUCo) and London School of Hygiene and Tropical Hygiene (LSHTM), which I work on. We were already one year late to start a randomized controlled trial looking at chlorhexidine as an alternative treatment to the standard of care, natamycin, for fungal keratitis. Natamycin is not affordable for most patients living in areas with higher prevalence of fungal corneal infections and chlorhexidine could be an affordable and effective alternative. This multi-centre trial is being conducted at KCMUCo in Tanzania, Mbarara University of Science and Technology in Uganda and Sagarmatha Coundhary Eye Hospital in Nepal.

In March, we obtained approval from Tanzania Medicines and Medical Devices Authority (TMDA), our last regulatory approval needed to



Weekly Zoom meetings held with colleagues in Tanzania, London, Uganda and Nepal

start the trial and then COVID-19 hit Tanzania. However, due to the COVID-19 pandemic, the government of Tanzania paused all research in the country in April. We still had to import the Natamycin from India but the company was busy exporting Personal Protective Equipment (PPE) and essential medicines of which Natamycin was not considered. Although there was no lock-down in Tanzania, many

made the choice to isolate and our group didn't want to ask people to move around outside their home. So we struggled to obtain the required original TMDA import permit to come from Dar es Salaam.

In addition, we had clinical supplies at LSHTM that needed to be shipped to Tanzania but the school was closed and shipments were not easy to arrange especially with initially no flights

to Tanzania. Eventually life in Tanzania opened up albeit more slowly than in UK and India. We eventually managed to get the

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shipments needed. But with our administrator in London unable to travel to Tanzania, who could do the important task of randomizing the study drugs? By early August all our approvals, equipment, supplies and medicines were at KCMUCo ready to start the trial. Our next hurdle was - will patients turn up to the hospital? - a very real challenge during COVID. But as one of the major causes of corneal

infection is agricultural activities, August was harvest season and patients were coming to KCMUCo. With PPE, dividers put on our slit lamps and additional protective measures required of patients, we successfully started the trial on 1 September 2020 when we enrolled our first patients.

Translational research: linking basic science to bedside medicine

Richard Kwizera (THRIVE-2 PhD fellow)

Advances in human health require the efficient and rapid translation of scientific discoveries into effective clinical treatments. This process in turn depends on observational data gathered from patients, communities and public-health research that can be used to guide basic scientific investigation. Translational research is a term often used interchangeably with translational medicine or translational science or bench-to-bedside. It is an effort to build on basic scientific research to create new therapies, medical procedures or medical diagnostics. Basic biomedical research is focused on studying disease processes commonly using cell cultures or animal models. The adjective "translational" refers to the transition of these basic scientific findings in a laboratory setting into potential treatments for various diseases. Translational research ideally applies findings from basic science to enhance human health and well-being. Since it is a new research discipline, translational research incorporates aspects of both basic science and clinical research, requiring skills and resources that are not readily available in a basic laboratory or clinical setting. The concept of translational research was conceived due to the elongated time often taken to bring discovered medical ideas into practical terms in a health system. It is for these reasons that translational research is more effective in dedicated university science

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departments or isolated, dedicated research centres.

Numerous barriers to translational science have emerged among the national

academic research centres, including; basic structural and cultural impediments to innovation and collaboration, shortages of trained investigators, and inadequate funding. The barriers to translational research are more pressing in Sub-Saharan Africa, hence an urgent need to build local capacity in these areas. To address these serious and systemic problems, in 2006, the National Institutes of Health created the Clinical and Translational Science Awards (CTSA) program, which aims to catalyse the transformation of biomedical research at national level, speeding the discovery and development of therapies, fostering collaboration, engaging communities, and training succeeding generations of clinical and translational researchers.

Makerere University College of Health Sciences has a Translational Research Laboratory under the Infectious Diseases Institute, that has been running since June 2009. It is managed by Richard Kwizera, a THRIVE-2 PhD fellow. The laboratory supports clinical research and trainees mostly from Makerere University (i.e.,

post-docs, PhD fellows, MSc students and undergraduates). The services offered by the laboratory include biorepository, point of care testing, clinical diagnostics and research in microbiology, immunology, molecular biology, pharmacokinetics and pharmacogenomics. In 2014, the Laboratory acquired a larger space, which was provided with additional scientific equipment allowing a wider range of assays to be conducted in the Laboratory, from routine diagnostics to highly complex assays. The lab has a team of experienced technologists competent enough to carry out sample processing and biorepository under the mentorship of the Lab manager. From 2013-2020 the Laboratory has collaborated with internationally renowned universities in support of numerous research projects. All of these projects have the potential to lead to better treatment options for patients in Uganda and worldwide.

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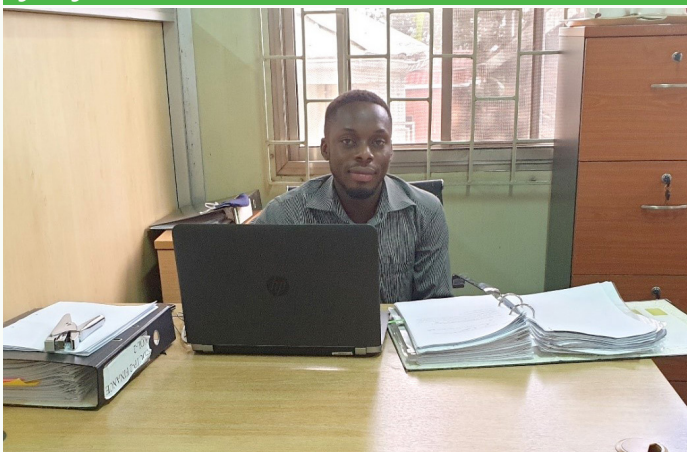
The laboratory supports clinical research and trainees mostly from Makerere University namely: Post-docs, PhD fellows, MSc students and undergraduates.



Richard Kwizera in the Translational Research Laboratory

Memoirs of my time as a UVRI-THRIVE 2 graduate-intern

By Raymond Nviiri (Graduate –Intern UVRI-THRIVE-2)



Nviiri Raymond at his work station at UVRI

A moment comes when you want to run so hard to snatch your portion of life from this world, your head bursts with ideas, dreams and hopes. Within yourself, you say: "I wish I could get a chance!" I had the same dilemma. I graduated with Bachelor of Arts Degree in Project Management and Entrepreneurship from the Uganda Christian University in 2018 and was on the lookout for any employment opportunities.

A glimmer of hope shot through my world in February 2019 when the Uganda Virus Research Institute THRIVE-2 program called for applications for graduate interns. I quickly submitted my application. Having been a graduate student of project management, wielding some experience in administration obtained from previous internship placements, the assessments of my application turned out positive and I was given a placement as a graduate intern attached to the UVRI- THRIVE-2 Administration and M&E office.

Later, I received a congratulatory call to receive my letter of placement at the end of April 2019. I reported for internship in the first week of May 2019. I hit the ground running working on a number of tasks given to me by my supervisor. These include: internalizing the Monitoring and Evaluation frameworks for the THRIVE-2 program. My supervisor helped me understand the program activities and introduced me to drafting memos for internal communication.

During my internship, I drafted minutes of meetings, initiated and followed up procurements up to the point of delivery of items in the stores and participated in process documentation. With support from my supervisors, I also coordinated trainings and drafted reports. One of the interesting reports I documented and got involved in was the coordination of the research management training. This training targeted Masters students who were conducting research and I was directly in charge of receiving their applications, evaluating them and selecting participants. My supervisor greatly appreciated the work I did.

Furthermore, during my time as a graduate intern, I upped my skills in project management, boosted my confidence through interacting with people at various levels and learned about procurement procedures. Owing to the skills I obtained, I was given a short term engagement to collect and enter data on the Crimean Congo Hemorrhagic Fever (CCF) Study supported by the European and Developing Countries Clinical Trials Partnership (EDCTP).

I would like to acknowledgment DELTAS Africa Initiative through THRIVE for supporting my six months placement at UVRI- Entebbe.

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Gulu University partners with THRIVE to develop SOPs to facilitate research

By Robert Kiduma, Administrator, THRIVE-2 and Gulu University Research Ethics Committee.

Uganda implemented a countrywide lockdown on March 21 2020 to slow the spread of COVID-19. This in turn affected progress of several research, including THRIVE-2 sponsored community based research in Northern Uganda. Moreover, continued closure of teaching and research institutions continued to propagate uncertainty among students regarding completion of their research projects.

However, with gradual easing of the lockdown in June 2020, the Uganda National Council for Science & Technology (UNCST) issued formal guidelines permitting researchers to resume recruitment of research participants. Thus, THRIVE-2 Gulu has partnered with the Gulu University Research Ethics Committee (GUREC) to create awareness, sensitize and monitor research amidst COVID-19 pandemic. This is

being done through sharing safety measure messages through WhatsApp, skype, mails, virtual meetings etc. The monitoring is done through field visits.

In compliance with UNCST guidelines, GUREC teamed up with THRIVE-2 Gulu University members and developed participants' recruitment standard operational procedures (PR-SOPs) format to guide researchers into developing PR-SOPs for their own studies. The PR-SOPs contain awareness messages about COVID-19 such as the identity of the disease, its symptoms, when it presents, how it spreads and a contact number to call for help, among others.

However, it is envisaged that as researchers resume participants' recruitment, they will encounter a series of challenges. In studies where interviews and observations are used and where facial expressions are important during data collection, the use of masks may compromise the quality of data collected as some of the facial parts like mouth and eye

shall be wholly or partially covered. Also during focus group discussions (FGDs) and community public engagement (CPEs)– participants may be unwilling to participate in the discussions and engagements due to fear of contracting COVID -19. The need for limited number of people that can gather in one place while observing social distancing will affect who gets selected to participate in the FGD or community and public engagement (CPE).

Therefore, researchers may have to use multiple techniques of data collection, and also conduct adequate training of their research teams on the data collection techniques, community entry techniques and safety measures

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to observe during research. For example, research teams have to be taken through respiratory ethos. Financially, it calls for optimal utilization of available resources by researchers and investigators, or sourcing for additional funds to meet the safety requirement during participants' recruitment. The quick and short-term measure is for researchers to revise their budgets to provide for Personal Protection Equipment (PPEs) such as face masks, hand sanitizers, soap and

water for hand washing and temperature guns. Administratively, researchers have to be prepared for a prolonged administrative scrutiny prior to being allowed to enter the community to reach their study participants.

*Better be safe than sorry
Stay Safe*

My journey on THRiVE's 'Owning our future' community engagement study



» **The surprisingly down-to-earth team of facilitators, administrators and more experienced RAs demonstrated and encouraged stunning reciprocity of knowledge with us during the five weeks training.**

By Leoson Jr. Ssetaba, Research Assistant, Owning our Future Research Project.

Owning our future project has been uniquely educative right from the start of the recruitment process up to the current project implementation phase. As a team, we are currently executing household random sampling and selection for inclusion and/or exclusion in the study baseline and end point surveys. Sounds complex, huh?! Don't fret. It is easy. Allow me break it down to its simplest element by retracing my steps, together with you, on this obviously interesting journey of self-worth unearthing.

The journey is long! It started back in the second week of June. I was just a laboratory personnel extracting SARS-CoV-2 nucleic acid material with the QIAamp Viral RNA extraction Kit when an unanticipated but surely most longed for phone call came through. The voice on the other end was Dr. Semakula's and he was notifying me of upcoming research assistant opportunities on a new community engagement project, led by Prof. Nelson Sewankambo, which was set to begin as soon as was possible. How auspicious for me!

Not long after the COVID-19 testing team at Makerere was asked to rest, I was invited to a zoom meeting. This call, henceforth, blessed me with fulltime occupation for what I thought I understood but the gist of which I had never actually grasped. Certainly, assisting on one or two small scale community related projects while still a student of Biomedical Sciences at Makerere University couldn't have ever exposed me to the full repertoire of community engagement knowledge and skills that I

was about to experience. A short but critical project introductory meeting was held. In this meeting my interest in the 'upcoming' project was appropriately cultivated by Prof. Sewankambo's concise but thorough explanation of the work that we were to undertake in the following six months.

I opened my door to a heaven of new opportunities when I heeded to the PI's request of full-time commitment. I pledged to offer my best to this project and right from that call, it has been an enriching journey.

The job interview was in itself outright challenging. Never had I had to revisit my class material after an interview. Never! But the bullets for questions that fired from the recruiting panel made it clear that I was to set foot into strange lands (contrary to my previous thinking). At this point, my journey became adventurous but to my convenience. Not bumpy at all.

The surprisingly down-to-earth team of facilitators, research administrators and experienced Research Assistants (RAs) demonstrated and encouraged stunning reciprocity of knowledge with us during the five weeks training. In doing so, they maximised learning, ensured mutual impact, empowered the learners' perspective and certainly guaranteed brilliant communication and planning that shall surely last throughout the project life. There was selfless sharing of past experiences, knowledge and opinions. I vividly recall my colleague Sheila narrating a story of how an army doctor lifted and held another person up in the air by their collar, giving me a laugh or two every so often. Each research assistant considerably impacted my cultural

understanding and beautifully shaped my ethical and experiential learning. Though he was thousands of miles away in Sudan, Dr. David Mafigiri, the co-principal investigator, got us all savouring at the thought of his goat head meals.

The now 10 weeks of the research process have moulded me into a young researcher of sundry skills. The research process has been participatory and highly illustrative with academic and non-academic lectures, team discussions, SOP development and presentations, questionnaire development, mock FDGs and surveys, site visits, household listing and mapping exercises. I am now able to relate the public health/epidemiological and anthropological research skills and knowledge acquired from the facilitators and teammates with my basic scientific research bias. I am positive that this will usher me into the world of writing projects that will enable me contribute to science like I have always dreamed. Dr. Semakula has taught me to start small and the results of his humble mentorship are becoming tangible.

Just as four of my peers; Emmanuel Mukasa, Eddy Kyagulanyi, Michael Aldrich Kakande and Winnie Nabbanja are, I am forever grateful and indebted to the entire project.

Long live THRiVE and the leadership team of Owning Our Future!

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Learning to love virtual mentorship sessions in the coronavirus era



Samples of the weekly series of the THRiVE Fellows Presentations and Mentorship Sessions held via Zoom



By Racheal Ninsiima,
communications officer, THRiVE

Before the outbreak of COVID-19, THRiVE was planning to hold face-to-face mentorship sessions between PhD fellows and their supervisors. But when the pandemic caused educational institutions to shut down and restricted physical meetings, there was need to rethink the Fellows' Presentation and Mentorship Sessions. A seismic shift happened and the sessions went virtual. This new format offers a range of opportunities such as wider audiences and greater peer review of research.

Dr. Gerald Mboowa, a PhD fellow, had not planned to present his research to an audience beyond his supervisors and the THRiVE team. However, when COVID-19 forced THRiVE to call-off the face-to-face meetings, he had to brace himself for an online presentation to an audience of over 40 people including professors and doctors from Cambridge University and London School of Hygiene and Tropical Medicine in the UK, and other East African based partner institutions. His presentation was a smashing success and he testifies of the upside of virtual presentations.

"I had about 30 minutes to explain my research rather than the 10 we are usually assigned during face-to-face meetings and was given time to listen to and respond to a host of questions," Dr. Mboowa said in an interview.

Although these virtual sessions might lack the intimacy of a face-to-face meeting, it's still possible for attendees to connect with each other. Zoom (THRiVE's digital tool of preference) provides a chat function for real-time feedback and attendees get to ask the presenter questions. Additionally, many of the fellows have been able to attend their peers' sessions, a feat that would have been impossible if it were face-to-face. With boundaries being a non-issue, participants

connect from wherever.

Furthermore, the virtual mentorship program has created a larger pool of mentors as there is more space for potential mentors to participate. For example, during Dr. Arthur Kwizera's presentation on 'acute respiratory failure', he received insightful feedback and guidance from Dr. Bruce Kirenga, director of Makerere University's Lung Institute who was invited as a discussant during his sessions. Thus, the nature of this mentorship has opened up new possibilities and offered fresh perspectives for mentees.

The Inception

The sessions officially started on 9th July 2020 and have been taking place every Thursday from 11:00AM to 1:00PM. Given the urgent need to sustain mentorship of scientists in the COVID-19 era, THRiVE's PhD/Post-doc Mentorship Committee (PPMC) thought it worthwhile to invest in virtual mentorship.

"A zoom link will be provided some days before each session. Kindly make the necessary arrangements for the presentations. It will be good for all of you to reserve time to listen to each other for support and peer mentorship. The presentations will commence next Thursday with presentations from Dr. Joel Bargul and Dr. Jovin Kitau," reads an email that was sent to the fellows on July 3, 2020.

Since these sessions were initiated, 21 PhD and postdoc fellows in Uganda, Tanzania and Kenya have been able to present their research. The number of participants on the calls has gradually risen from just about 20 at the start to about 50 currently.

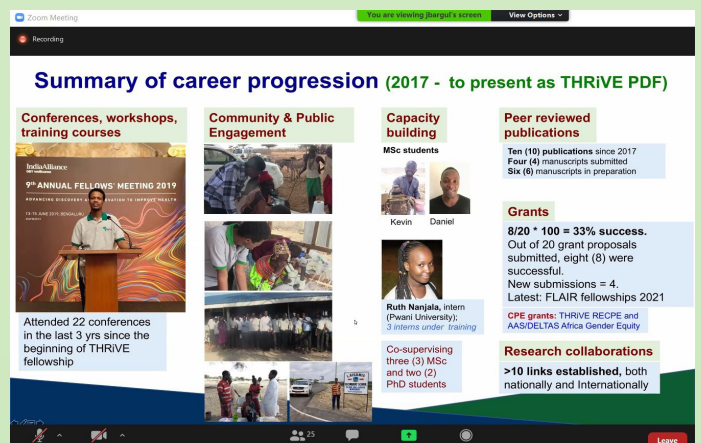
Since these sessions were initiated, 21 PhD and postdoc fellows in Uganda, Tanzania and Kenya have been able to present their research. The number of participants on the calls has gradually risen from just about 20 at the start to about 50 currently.

Owing to the success of these mentorship sessions, the Career Development Award Committee (CDAC) has also decided to review the academic progress of the awardees, starting October 15, 2020.

Challenges

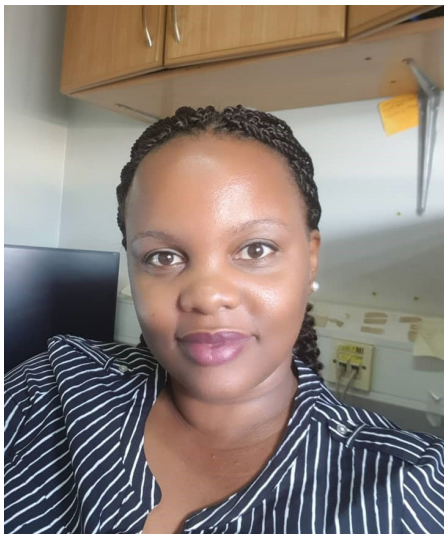
Despite the numerous benefits that have been reaped from the virtual sessions, some challenges still lurk. For example, there are incidents of poor and slow internet connections where some participants keep dropping off calls. Additionally, unlike the face-to-face meeting where discussions extend beyond the allocated time for the presentation, online meetings are time constrained and hardly allow for extended discussions.

Nevertheless, although shifting from face-to-face mentorship to electronic communication may feel abrupt, it's a necessary transition. This virtual mentorship program will keep participants engaged and connected, while staying committed to the consortium.



Here's a physician on quest to examine liver fibrosis among HIV patients

By Racheal Ninsiima
communications officer, THRiVE



Dr. Clara Wekesa

Dr. Clara Wekesa's background in research and medical work exposed her to these two areas in a very complementing way. It was almost natural for her to develop a career in medical research. The more mentorship she received, the more motivation she developed to pursue a career in research. Today, she is a THRiVE PhD scholar based at the Infectious Disease Institute. Her PhD research aims to examine liver fibrosis among individuals with HIV infection in Kampala. Fibrosis, the formation of an abnormally large amount of scar tissue in the liver, is an indication of liver disease and it compromises the function of the liver.

With ever increasing access and use of anti-retroviral therapy (ART), persons with HIV/AIDS are increasingly prone to non-HIV related morbidity and mortality, such as liver disease. Results from a 2011 study conducted in Rakai district indicated that prevalence of fibrosis was 17% among HIV-infected and 11% in HIV-uninfected participants. It was discovered that HIV infection was associated with a 50% increase in liver fibrosis among HIV patients.

As a way of building onto the rural study in Rakai, Dr. Wekesa's research focuses on the evaluation of liver fibrosis using Fibroskan technology among HIV-infected persons attending an urban clinic in Kampala. Fibroskan technology works like an ultrasound scan to ascertain presence of liver fibrosis or the absence thereof.

"My research sets out to examine how much fibrosis is among HIV patients and what risk factors drive this burden e.g. alcohol and tobacco use, aflatoxin exposure and other non-communicable conditions such as abnormal sugar and fat metabolism," she said in an interview.

One of the research objectives is to evaluate for other blood based screening indices for liver fibrosis that are widely accessible and cheap in order to facilitate timely referral of those identified with liver fibrosis with the hope that disease progression can be halted. Dr. Wekesa envisions that her study will bring to light liver disease as a significant NCD in the region and also highlight the role non-communicable risk factors in its causation, most of which are modifiable and for which preventable measures can be fashioned and or strengthened.

The only limitation to her desire is the fact that fibroskan technology is only limited to research settings owing to the costliness of the equipment, but just like the Gene Xpert technology for TB, she is hopeful that it shall soon be widely available.

➤ Although she had a three weeks' baby, THRiVE afforded her the flexibility to do interviews and was awarded the fellowship. Dr. Wekesa's PhD research is an extension of the study that on liver fibrosis that she conducted in Kyamulibwa.

Road to Excellence

Dr. Wekesa was fortunate to find a mentor in every step of her career who offered guidance and support. After her bachelor's degree she found a mentor in Dr. Fred Semitala when she joined the Makerere University Joint Aids Program (MJAP). She benefited from his advice and solidified her interest in building a science career. Thereafter, she returned to Makerere University to pursue her Master's Degree in Internal Medicine. For her thesis she received further mentorship from her supervisors and mentors Prof. Moses Kamya, one of the founders of the Infectious Diseases Institute, Dr. Achilles Katamba, a seasoned researcher and Epidemiologist attached to the College of Health Sciences Makerere University and Dr. Bruce Kirenga, Head of the Uganda Lung Institute. Furthermore, she also looked up

to women who had excelled in the science career.

"When I saw many women in science who had excelled and climbed up the academic ladder such as Prof. Mayanja, Prof. Pauline Byakiika and Prof. Nakanjako I believed I could also make it," she said.

After her master's degree, Dr. Wekesa joined the Medical Research Council (MRC/UVRI) where she oversaw a number of projects, involved in the day to day running and offering support supervision. Owing to the fact that she was in charge of several studies related to hepatitis, she picked interest in studying liver diseases.

She went on to write a grant and was awarded the Trust in Science Africa Grant with GlaxoSmithKline (GSK) to study liver fibrosis among HIV patients in rural Uganda, particularly, Kyamulibwa in Kalungu district. In 2015, Wekesa moved to Mengo in Kampala and here she was in charge of overseeing a diabetes project run by MRC/UVRI. This project was part of a multi-site study being conducted in six other African countries. It is after the completion of this study that Dr. Wekesa made a decision to apply for the THRiVE PhD opportunity.

Although she had a three weeks' baby, THRiVE afforded her the flexibility to do interviews and was awarded the fellowship. Dr. Wekesa's PhD research is an extension of the study that on liver fibrosis that she conducted in Kyamulibwa. She is studying the same phenomenon among HIV patients in urban areas and comparing her observations with a non-HIV infected population.

Word to the wise

If she was to give advice to her younger self, she would tell her to regard mentorship as an important element in life. This is because after completing school, there are many pending decisions to make such as: furthering a career and starting a family, for each one needs to be guided well.

And as she is garnering more milestones up her sleeve, her advice to early-career scientists is:

'It is important to be patient, keep focused and follow through with something that you are passionate about.'



For More Information about THRiVE

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