Cambridge University Strengthens Links With African Institutions

By Pauline Essah

It was great to be able to meet and interact with THRiVE researchers (both Africa- and UK-based) and fellows face-to-face during the 2013 AGM in Uganda. The University of Cambridge was represented by six delegates (Dr Jennifer Barnes- Pro-Vice Chancellor for International Strategy; Professor David Dunne- Director of the Cambridge-Africa Programme; Professors James Wood and Andrew Lever, Dr Pauline Essah and Miss Jenny Mackay- all members of the Cambridge-Africa Committee). All delegates were excited to attend and contribute to the various sessions, while also reinforcing Cambridge University’s commitment to engaging with African researchers.

While in Uganda, the Cambridge group also took the opportunity to link up with other research units there. We visited THRiVE partner UVRI to meet with Doctors Pontiano Kaleebu and Alison Elliot (plus a wide range of UVRI and MRC Uganda researchers from the MRC Unit in Entebbe whom we unfortunately do not have enough space to list here). We were very grateful for the warm reception we received there, and the opportunity to discuss Cambridge’s current programmes (e.g. MUII and THRiVE) and future engagements with UVRI and the MRC Unit. The Cambridge delegation was given a tour of the impressive facilities at the Institute, and their clinics nearby. Professor Lever (who is a Professor of Infectious Diseases) also gave a presentation titled

My one year experience on an online Masters Program in Research Administration

By Harriet Nambooze

I had for a long time desired to pursue postgraduate training in research administration and management but such opportunities had been very rare. It was therefore a moment of excitement when I received my admission into the two year University of Central Florida (UCF) Online Masters in Research Administration (MRA). Little did I know what lay ahead of me. I have worked hard to keep up with the reading, submit my assignments on time, while continuing with my day job and perform the daily administrative functions, keep up with my hobbies as well as maintaining contact with my family and friends. I must proudly say that I have been able to score highly on most fronts though this has come at the expense of few others. The MRA has taught me to manage my time, set priorities and appreciate the environment in which I live.

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Dear Reader,

THRiVE is well positioned to become major contributor in enhancing research capacity in Africa with the view to impacting health improvements in the region. THRiVE must take cognisance of major developments that provide the context for its future plans. The year 2015 is around the corner. We are in the race against time to achieve the Millenium Development Goals (MDGs) and Africa is the region showing the least progress towards the achievement of the MDGs. The UN Secretary-General’s High Level Panel of Eminent Persons on the post-2015 Development Agenda released its report on May 30, 2013. The Panel recommended that the “unfinished business of the MDGs cannot be swept aside and that the goals set 13 years ago are ripe for renewal and remodelling” to focus on sustainable development. In the same month of May the Commission on the Future of Health in Africa had its first meeting in Accra Ghana. For four years now the Wellcome Trust has been funding a major research capacity building effort named the African Institutions Initiative (AII). In July this year the Trust announced its intent to provide a one year cost extension to the current five year grants while the longer term plan and funding for the AII is being carefully decided upon. All the above developments provide opportunity to critically reflect on the future direction for THRiVE and its role in the new era of regional and global health development. What is our comparative advantage compared to the other research capacity building initiatives in the region? How do we through partnerships create synergies to add value to the above efforts? There should be very porous boundaries between networks in order to allow free sharing of ideas, innovations and creative experiences. One of the urgent issues is how do we build capacity for knowledge translation so that we can maximally utilise the existing knowledge and bridge the know-do-gap? Initiatives like THRiVE provide opportunity for Africans to provide leadership in addressing global health challenges that are of priority importance to the region.

Membership of the THRiVE Advisory Board

1. Prof. Wilfred Mbacham, Chair, Rest of Africa
2. Prof. Hannah Akuffo, Outside Africa
3. Dr. JPR Ochieng’Odero, Other Consortia
4. Prof. Jerome Kabykenga, Uganda
5. Prof. Florent Senyana, Rwanda
6. Dr. Val Snewin, Wellcome Trust
7. Prof. Dominic Makawiti, Kenya
8. Dr. Hassan Mshinda, Tanzania
9. Prof. Nelson K. Sewankambo, Director, THRiVE
10. Dr. Saidi Kapiga, Deputy Director

HIV assembly and genomic RNA encapsidation’ and had one-to-one discussions with some of the local HIV/AIDS researchers during this visit.

The Cambridge delegation listening to a presentation by Dr. Pontiano Kaleebu of UVRI

The Cambridge team was also able to visit the Infectious Disease Institute and the Maternal Unit at Mulago Hospital (thanks to organisational support from our MUII colleagues in Uganda). We were introduced to the Heads of these research/clinical units, and were very privileged to meet several of their exceptionally hard working and inspiring staff. We hope to maintain links long-term. An unforgettable highlight for the Cambridge team, though, was when we were presented with unexpected ‘Makerere’ gifts by the acting Deputy-Vice Chancellor Professor Joseph YT Mugisha (on behalf of our CAPREx partners - a new Programme which evolved out of the THRiVE Programme in Cambridge and is funded by the Carnegie Corporation of New York and the Isaac Newton Trust). The three Cambridge men were very honoured to be given Makerere University ties, which they proudly wore during our visit (see photograph below).

We are all back in the UK now, and looking forward to hosting more THRiVE fellows in Cambridge over the next few months. In the time being, we are very pleased to be supporting 16 academic research fellows and four research management fellows from Uganda (Makerere University) and Ghana (University of Ghana, Legon) to visit Cambridge for six months each, between July 2013 and June 2014, sponsored by the CAPREx Programme. Two academic fellows from Ghana have already arrived in Cambridge to begin collaborating with Cambridge researchers and commencing their tailor-made training programmes. We are expecting 10 more by December 2013!

Finally, we have recently prepared (and are soon to launch) a new Cambridge-Africa website (http://www.cambridge-africa.cam.ac.uk) which incorporates all of the University of Cambridge’s links with Africa, including the THRiVE Programme. We will be publicizing our range of on-going Cambridge-Africa activities (and hence the THRiVE Programme) on this new website, across Cambridge and beyond…..

The Cambridge delegation visit Uganda Virus Research Institute
My one year experience on an online Masters Program in Research Administration

The funder did not delay in agreeing to the request from THRiVE for a ‘No-object’ to sponsor me for this course.

An online program is doable if one has easy access to tuition fees, fast and efficient instructors, peer-to-peer support, fast and reliable internet connectivity and access to textbooks. The first three items came in a nicely knit package which did not require any intervention. The UCF instructors are highly experienced in handling online students, and are always available to offer help to whoever needs it.

The courses offered in the program have all the ingredients on which peer-to-peer support hinges. For internet connectivity I have to rely on our very own Makerere University server and of course the very popular mobile internet modems (dongles). Textbooks required for the course can easily be purchased from Amazon.com however the challenge of shipping to Africa complicated the process. I have to rely on family and colleagues from Makerere University and the US and largely my classmates to purchase books for me. Adopting to the Blackboard Learning Management System (LMS) which has since transitioned into the Canvas LMS wasn’t a walk over either. The MRA is a fast-paced course with instructors and peers who are always on top of their game. My growing up and studying from an environment where ‘Africa Time’ rules made matters a little more complicated for me. However, one year into the programme has taught me that no matter how full your plate is, with proper planning and focus, you can still take on a little more.

The MRA enables me to interact with strong network of research administrators who are ready to help out whenever I am are faced with a problem. It provides one with knowledge, skills, abilities and other characteristics that allow one to be in position to handle most of the delicate issues related to research administration in the 21st century right from the pre-award stage to the post-award stage. As part of the requirements of the program students are required to post an assignment and also provide positive feedback to any two classmates’ posts each week. This provides one with the opportunity to improve one’s writing style and also critiquing other people’s work. I have been amazed by the way one is groomed into developing a concept right from scratch to submission. The MRA has indeed changed my outlook to life.

I will forever be indebted to my sponsors, the Wellcome Trust and the supportive employers. There is something to celebrate when one’s institution and funders support the growth and development of research administrators to advance professionally and academically. Many programs support the development and growth of researchers while research administrators are left behind. There is need to develop the career path of such individuals as a way to turn African universities and research institutes into research engines. I wish all THRiVE institutions would follow this path.

Given that it was now two to three years since the first THRiVE PhDs embarked on their studies, there was a lot to share. Each PhD and post-doctoral fellow along with masters’ degree students made brilliant presentations regarding the research they were doing. Similarly doctoral fellows supported by another Wellcome Trust-funded Makerere/UVRI Infection and Immunity (MUII) Research Training programme shared the platform and showed amazing progress regarding their research work. What a rich AGM it was and clearly there is outstanding research capacity building and knowledge creation in THRiVE and MUII. To add to the achievements, progress reports from concluded and ongoing research funded throughTHRiVE’s pump priming small grants and the mini-sabbatical schemes, supplemented by administrative reports characterized this

THRiVE 2013

Annual General Meeting: a Resounding Success

The 2013 THRiVE Annual General Meeting (AGM) was an absolute blast. Over 100 delegates traveled to Makerere University from Uganda, Rwanda, Kenya, Tanzania, Cameroon, United Kingdom and Sweden. This was the 5th anniversary of the THRiVE (Training Health Researchers into vocational Excellency) initiative, and the second AGM to be hosted by Makerere University. Opening the three day meeting, the Chancellor of Makerere University – Professor George Mondo Kagonyera called on researchers to prioritize research and tackle issues that are of great importance to population needs. The opening ceremony was also attended by the University Secretary – Mr. David Kahundha Muhwezi.

David Meya - a PhD Fellow discusses his progress with THRiVE supervisors at the THRiVE 2013 AGM in Kampala.
Epidemiology and Control of Risk Factors for Hypertension among the Urban Poor in Kibera Slum, Nairobi, Kenya

Beatrice Olack, THRiVE PhD Fellow

Hypertension is one of the most important risk factors for cardiovascular (CVD) morbidity and mortality. Urbanization accompanied by changing lifestyles, has contributed to rising prevalence of hypertension and other cardiovascular risk factors. In Kenya > 60% of the urban population reside in urban slums. The urban poor have the worst of both worlds; they adopt less healthy lifestyles (e.g. sedentary lifestyles and diets high in saturated fat, salt and sugar) and have poor access to healthcare, partly related to their poor purchasing ability which places them at a higher risk for Non-Communicable Diseases like hypertension.

Tackling the problem of hypertension demands that people are aware of their blood pressure status, risk factors precipitating hypertension and take necessary lifestyle modification to slow down the rising trends of CVD mortality. It is anticipated that results from our study (Epidemiology and Control of Risk Factors for Hypertension among the Urban Poor in Kibera Slum, Nairobi, Kenya) will establish risk factors for hypertension. Stage 1 hypertensive patients will actively engage in lifestyle modification to control hypertension. Ultimately, the study will generate larger scale scientific evidence that will contribute in influencing and guide the development of Primary Health Care policy for control of hypertension in resource-limited settings.

The THRiVE Equipment Grant

The THRiVE Equipment grant enabled us purchase Omron automatic blood pressure monitors, large and small sizes of Omron blood pressure cuffs, Seca BMI calculators and Seca measuring tapes. All these equipment purchased are portable and allow for easy transportation from one household to another. The equipments also allow for measurement of blood pressure and other related risk factors for hypertension that include the Body Mass Index (BMI) and waist circumference.

Currently all the equipment are being used for the collection of baseline information to establish the risk factors of hypertension at the household level and shall be subsequently used for monitoring blood pressure, Body Mass Index, and waist circumference at follow up visits. The instruments shall also be shared with the Tabitha clinic which is situated in Kibera slums and used for taking vital measurements of patients presenting at the clinic.
year’s August assembly. Each THRiVE fellow had an opportunity of presenting his or her work to THRiVE PhD committee members to assess progress – a process that further enriched the doctoral candidates’ work. “Perspectives from different committee assessors have helped me refine my ideas”, remarked one PhD fellow.

A few months before the AGM, Wellcome Trust – the British charity that funds THRiVE made a decision to grant a one year extension to all consortia participating in the African Institutions Initiative. This AGM accorded THRiVE partners the unique opportunity to create consensus on what activities they intended to engage in during the one year extension. Commenting on the extension, the Trust officers at the meeting advised THRiVE partners to wisely exploit the one year extension to prepare for the upcoming African Institutions Initiative funding opportunity announcement. “We need to document our successes and learn from our failures”, remarked the THRiVE Director – Prof Nelson Sewankambo while stressing the need for THRiVE partners to prioritize proper reporting as part of our evaluation and learning. “This way”, he added, “we will have no trouble coming up with a winning proposal come next Wellcome Trust call”.

Community prevention of postpartum hemorrhage using self-administered misoprostol: Role of village health workers in follow up

Dr. Sam Ononge, THRiVE PhD Fellow

Dr. Sam Ononge is a lecturer in the Department of Obstetrics and Gynaecology Makerere University College of Health Sciences qualified with a masters degree in Obstetrics and Gynaecology of Makerere University and a Masters Degree in Clinical epidemiology and Biostatistics of Makerere University. He mentors both the undergraduates and postgraduate students. Dr. Ononge started this project by asking; “How do we prevent excessive bleeding after child birth in mothers who do not access skilled birth attendants”. He is exploring the role of a self-administered misoprostol in the prevention of excessive bleeding after child birth so that women’s lives can be saved.

The study is being carried out in Mpigi District, about 36 km from the capital city, Kampala. The study involves recruiting pregnant women at the antenatal clinics, follow them at delivery and within the first week after delivery. This includes doing a home visit on 3rd to 5th day post partum. Dr Ononge believes the wealth of information he is gathering will help partners in reproductive health design of programs that
Community prevention of postpartum hemorrhage using self-administered misoprostol: Role of village health workers in follow up

will meet the women’s needs when it comes to scaling up prevention of excessive bleeding technologies. In order to reduce loss to follow up, Dr. Ononge keeps on emphasizing to the research assistants to get the study participants’ correct addresses and telephone as well as the spouses’ telephone numbers. The unforeseen challenge that Dr. Ononge experienced during the initial period of study especially in follow up was when the research assistants would reach the village and fail to locate the study participant. Some of the participants’ and spouses’ telephone numbers are not accessible for various reasons; and the local people in the area may not have heard of the names the research assistant is looking for. Dr Ononge had to be innovative on how to locate the study participants after delivery. He sought support from the village health teams (VHTs) who have records of almost all the pregnant women and they are very helpful and willing to guide the research assistant to participant’s homes. The VHTs now alert the research team when the mother delivers and they have helped the research assistants locate where the study participants reside. Dr. Ononge advises anyone planning a community study to engage VHTs; They are a resource that needs to be utilised and Dr Ononge appreciates the support from THRiVE (financial, training and procurement). Through this PhD program, Dr. Ononge has learnt to network with others through local and international conferences. He has been doing joint work with Reproductive Health Division of Ministry of Health Uganda, who are interested in knowing more about the advanced antenatal distribution of misoprostol for PPH prevention. He is in contact with international research group Gynuity Health Projects. Through the same research group, Dr Ononge has been nominated to participate in PPH panel discussion on prevention and treatment of excessive bleeding after child birth in the African FIGO conference in Adis Ababa in October 2013. During Dr. Ononge’s interaction with rural communities, in particular traditional birth attendants, he was shown and told of more than 20 different herbal remedies for the prevention of excessive bleeding after child birth. For his post-doctoral training he plans to investigate if any of these herbal remedies consumed by women have any contracting effect on the uterus (Oxytocic effect).

Top and below; the researcher collecting data in the field

Dr. Ononge during a follow up visit to one of the mothers
Since 2004 there has been a rapid rollout of antiretroviral therapy (ART) providing treatment for about 5 million people in Africa. Consequently, there were over 300,000 HIV infected individuals on ART in Uganda by end of 2012. However, due to the uniquenesses of the HIV virus such as its high mutation rate and the need for lifelong treatment, there is public health concern about the potential for rapid evolution and development of significant levels of HIV drug resistance (HIVDR) in Uganda. There is therefore an urgent need to continuously monitor and control the development of resistance. The WHO protocol for monitoring HIVDR employs very expensive and cumbersome transportation of plasma samples in liquid nitrogen. My post-doctoral project is evaluating a cheaper and simpler method of collecting and storing dry blood samples (DBS), blotted on filter paper, dried at room temperature and transported to the laboratory under ordinary conditions. I have had enriching experiences that I would like to share with you in this article.

A Little Background

My PhD thesis was on drug resistance of *Plasmodium falciparum* strains in Uganda. This PhD work was very useful to the nation as it contributed to new anti-malarial policy guidelines in 2006 when Uganda changed to co-artem as first line therapy, from a combination of Chloroquine and Sulfadoxine Pyrimethamine. Shortly after words, I analyzed the molecular mechanisms of HIV resistance to anti-retroviral therapy (ART) at the Infectious Diseases Institute (IDI) and published the work in 2012. So, I noted that although ARTs have been widely available in rural settings for at least more than half a decade, evidence about the rate at which resistance occurs in the real field is lacking.
Investigating the prevalence of Schistosomiasis and Patient perspectives about the causes, prevention and treatment

DIVERSITY OF TABANIDAE IN THE LAKE VICTORIA BASIN IN UGANDA

By Claire Mugasa, Makerere University College of Veterinary Medicine, Animal Resources and Bio-secuirty

For this study, we set up Fly (F-) traps impregnated with chemical attractant and geo-located around the shores of Lake Victoria, specifically Wakiso district, with the aim of capturing and identifying the genera and species of tabanids. In addition, at selected sites, flies were harvested every 2 hours to give an estimate of the daily fly activity. The flies were identified and dissected for physiological aging of the females as well as removal of the gut for downstream laboratory analysis of the source of blood meal, to give an indication of the animals at greater risk of fly bite and possibly, the pathogens they vector.

In order to investigate local farmers’ awareness of the prevalence, health impact of tabanids and their control, focus group discussions (FGDs) with farmers and local leaders were held in various parishes.

Skills attained during the process of implementing this study, include trapping and identification of tabanids, and community participatory approaches and science communication. Some of the samples collected have been used for teaching purposes in Parasitology related modules in the College of Veterinary Medicine, Animal Resources and Bio-secuirty (COVAB). At completion of the research, at least two publications will be submitted; one focussing on farmer awareness and prevalence of tabanids around Lake Victoria (Manuscript under preparation), and the other describing the blood meal source of tabanids. This research is done in collaboration with International Centre of Insect Physiology and Ecology (icipe), Kenya, with technical input from Wakiso District and Co-ordinating Office for Control of Trypanosomiasis in Uganda (COCTU). Preliminary findings from field survey have been used to win post-doctoral research funds from The World Academy of Sciences (TWAS).
Post-Doctoral Training Support Facilitates my Contribution to Investigating the Looming Problem of HIV Resistance to Antiretroviral Therapy

and health center settings was not known and so was the wider HIV treatment policy implication for the near future in Uganda and Africa. Currently, there are about 400 Ministry of Health accredited facilities providing ART country-wide in line with WHO guidelines. These guidelines are not followed routinely though, due to inadequate resources. Viral load monitoring is rarely done and long-term virological data is therefore scarce. Consequently, ART is thought to be continued indefinitely in some persons with virologic failure, providing a context for evolution of drug-resistant viruses. As I did for malaria, I joined the HIV field to help develop national guidelines on HIV management.

So far, we have found that there is a significant emergence of primary HIV-1 DR in Uganda after rapid scaling up of ART. About 4.5% of the individuals initiating ART already have resistance, raising concerns about the risk of early treatment failure in patients with primary HIV-1 DR. There is a need to explore and identify drug exposure before initiating therapy and design interventions to prevent the transmission of HIV-1 drug resistance as a way of preventing treatment failure and improving patient outcome.

The post doctoral experience

I feel privileged to have been a THRiVE Post-Doctoral fellow. Some of the challenges I have met, turned out to be wonderful experiences. One thing I personally consider as a major contribution of the THRiVE post-doc to my scientific career so far, has been my ability to establish this collaboration and receive mentorship from Prof. Pontiano Kaleebu and the UVRI-MRC laboratory and research teams. This is because, getting mentorship during my previous work as a clinical scholar was very difficult. While as a post doc, I was involved in the recruitment of study participants and training field staff. I have participated and helped in competing for an NIH grant. I have helped my junior colleagues in the department of microbiology to build their research skills.

At the 4th THRiVE AGM in June 2012. I was partially relieved and energized to hear other post-docs from all over East Africa raising the same concerns I had; the dilemmas of African scientists who combine the real problems of science with cultural issues that are inherently African. Participants at icipe showed growing concern about the plight of the physician and bio-medical scientists who complete their doctoral degrees, whether locally or abroad, and return to Africa but quickly get frustrated by a multitude of factors that do not support career development in science and public health. It was mentioned that many have gone into management and it was feared that some could have left Africa again as part of the international brain drain, further crippling the already fragile systems. I have used this discussion to write a proposal to WHO to fund a project aimed at identifying and documenting public health career opportunities in East Africa, for PhD graduates and what could entice physician scientists to stay longer and have a career in Africa.

I spent 3 months at the London School of Hygiene and Tropical Medicine between Oct and Dec 2012, working and doing courses in epidemiology. I spent time with my mentors and had chance to develop several concepts and protocols that I am submitting for very competitive grants. I feel I am a far better scientist than I was 2 years ago.

I thank so much the Wellcome Trust, the THRiVE consortium and the secretariat, field staff in the three research sites, Mbale,Nsamba and Masaka, the Department of Microbiology at MakCHS, the Ministry of Health, the MRC/UVRI laboratory and support staff for all the support they have accorded me during my post-doctoral training. I am really thankful to all my mentors and sponsors namely; Prof Kaleebu Pontiano, Dr. Alison Grant, Dr. Wilford Kirungi and Prof Moses Joloba for the continued guidance.
It is through THRiVE that my dream of pursuing doctoral studies and advancing my career is realised. As a THRiVE fellow I had an opportunity to present the status of Uganda’s population and harnessing the demographic dividend during a dialogue with Members of Parliament on family planning, at the launch of the Family Health Research and Development Centre-FHRDC in Kasangati-Kampala. I was recently selected as a Population Communications Fellow for 2013/2014. The Population Communications Fellowship is a prestigious programme organized by Population Reference Bureau-USA, that trains selected doctoral students in dissemination of research findings to the global community. It is the THRiVE training workshops and skills gained that gave me an edge over other applicants and ensured my successful admission to this programme.

With the available data collected as part of my PhD programme, working with five other senior researchers, I recently submitted a paper to BioMed Central- Reproductive Health.

I am also scheduled to present a paper at the forthcoming International Population Conference organized by IUSSP-International Union of the Scientific Study of Population in Korea-Busan, 2013. The paper to be presented is “Perceived Partners’ Desire for More Children and Modern Contraceptive Use among Married Women in Uganda” authored by me, Olivia Nankinga, Gideon Rutaremwa, James Ntozi and Alice Reid. I was selected among the conference participants from Uganda to be supported for travel and some costs by UNFPA country office.

However, for my studies it has been challenging to get published papers from highly indexed journals to which Makerere University has no full access. During my visit at the University of Cambridge I had opportunity to access all journals through their website, although access was only limited to the period I was in the UK, which was brief. Though hectic, I mitigated this challenge by requesting for articles from my supervisor from the University of Cambridge as well as from colleagues and friends attached to other Universities.

After completing my PhD, I plan to go ahead with a post-doc and follow up on the study population especially the men and carry out research to provide strategies of engaging them in the promotion and use of modern contraceptives. I wish to further explore the use of traditional methods, their effectiveness and why people continue to use them. I plan to apply for research grants and continue to inform policy through research.

### Latent tuberculosis infection among paramedical students in Uganda

**By Isaac Okullo, MakCHS**

The prevalence of latent TB infection among health workers in Uganda has been found to be high; however, the magnitude of the problem among students in health facilities who are equally at high risk of nosocomial TB infection was not known. We therefore set out to carry out a study with the objective of determining the proportion of paramedical students with latent TB infection in Mulago and Gulu teaching hospitals.

This project was jointly carried out by Makerere University College of Health Sciences (MakCHS) and Gulu University Faculty of Medicine. It was an interdisciplinary undertaking involving the disciplines of dentistry, nursing, medicine and public health from the two institutions. Technical input on data collection was received from the Makerere University-Case Western Reserve University collaboration on TB study.

Interesting study results have been generated and a draft research manuscript has been developed that will be soon be submitted to the BMC Infectious Diseases Journal. The study indicates that up to 43% of the students are at risk of developing TB. This information has been brought to the attention of the clinical instructors of the three training programmes so as to improve infection control in the training environment.

There is need to carry out a bigger study to confirm this worrying trend and we are in discussion with a number of stakeholders, including the National TB Control Center, on how to take it forward especially on the policy aspects.

The study findings have also been shared with the dental fraternity at the monthly scientific meetings, as well as disseminated to the nursing, dental and clinical officer’s schools where data was collected from. The findings were also presented at the Joint Annual Scientific Conference organized by the College of Health Sciences in September 2013.

We are grateful to the THRiVE consortium Makerere University for financially supporting this study and we look forward to more support in the future.
By Emmanuel Ochola, Pontius Bayo, Carolyn Oleo, Amos D. Mwaka.

The prevalence of Hepatitis B among pregnant mothers was found to be 11.8% among pregnant mothers attending Antenatal clinics Gulu Regional Referral Hospital and Lacor Hospital, and the potential to transmit from mother to baby is high. This finding and many others come from a study supported by a THRiVE Pump Priming grant. The researchers involved were Bayo Pontius, a Gynaecologist from Lacor Hospital and Gulu University, Emmanuel Ochola, Clinical Epidemiologist from Lacor Hospital, Carolyn Oleo, teaching Assistant (now Postgraduate OBSGYN student) from Gulu University, and Mwaka Amos Deo, a Physician from Makerere University.

Our experience through the process has been interesting... from the application to the manuscript written thus far. First, we had to get a team. Forming this team had to involve people with related research interests, but across different institutions, and preferably with different skill sets. This had to involve some level of personal knowledge, previous work together, or meetings in research related fora. Beyond the THRiVE institutions, this grant gave us the opportunity to be more practical in terms of research, and enrich the collaboration between Gulu University Faculty of Medicine and its teaching hospitals at Lacor and Gulu.

Most of us were first timers, and the application process was both a challenge and an avenue for learning. Putting up a concept, and soon a proposal, within strict time limits helped us to solidify our collaboration. We found the THRiVE selection / review process both critical and friendly. Weaknesses in our proposal were highlighted and we had to modify our protocol in order to fit the award requirements. The investigators have since applied for a few other grants, winning at least one. “Working on this application has for me been a stepping stone to try even more challenging and bigger grants”, said Dr. Bayo Pontius, the Principal Investigator.

During the study, we had to work with clinic teams from Gulu Hospital and Lacor hospital, again strengthening collaboration between the two antenatal clinics, as well as the laboratories in the two hospitals. The institutions benefited from the partial payment/remuneration of the staff members involved closely in the study, as well as set up of some shelves that were used by the study.

We are adding voice to the fight against Hepatitis B, a big problem in Uganda, but especially in Northern Uganda, hopefully towards provision of guidelines and treatment. Two abstracts have been submitted for presentation at Ugandan research fora, and we have written a manuscript for submission to a peer reviewed journal. This should ultimately contribute to improvement in the care for Hepatitis B in Uganda. One study nurse lamented, “We had many clients who tested positive and I am worried about their health and children knowing that there is no clear treatment in Uganda”.

The research has raised interesting research questions that we are planning to pursue. The most important is, what happens to those who develop HBV after birth? We would like to know if a vaccine given alone immediately after birth is as effective as immunoglobulins for prevention of HBV transmission.

Some of the challenges met included limited funding to support more frequent meeting of the study team, as well as inability to import Immunoglobulins for the babies born to HBV positive mothers. We had to give them HBV vaccines immediately after birth.

We are grateful to THRiVE for the pump priming grant, which gave us the opportunity for learning and contributing to research, which to us has been a stepping stone, to improve both partnerships and research, not only in the THRiVE institutions, but even beyond. We recommend that THRiVE’s scope is widened, budget increased, and more active follow up is made of the study teams.
Mosquito Study Leads to Further Research and Collaboratives

By L. Nabyonga, S. Nalwanga and F. Kironde

Lydia Nabyonga received a THRiVE award to study insecticide susceptibility, knockdown resistance and molecular form identification of *Anopheles gambiae* mosquitoes from Iganga and Gulu. This work aimed at generating preliminary information on vector mosquitoes in Iganga Health Demographic Site (IHDSS). From February to June 2013, Lydia and her team collected mosquitoes (n = 1500) from Iganga, undertook genotyping work and carried out survival experiments with insecticides. They found notable resistance to insecticides: DDT (25% resistant), and acyhalothrin (11% resistant).

This work is a collaboration between MakCHS (Lydia Nabyonga and Fred Kironde) and Gulu University (Joseph Okello-Onen).

A few presentations are already being made out of this work and July 15th-19th 2013, Lydia presented findings in to Kolymbari, Greece at the EMBO conference on Molecular and Population Biology of Mosquitoes and Other Disease Vectors: From Basic Vector Biology Research to Disease Control. In the same meeting, Nabyonga attended a grant writing session.

Contributions to bigger funding

The Malaria Sub-program at the Makerere University College of Health Sciences (MakCHS) to which the Principal Investigator (PI) is affiliated, collaborates with a group of molecular entomology researchers in Europe under the TRANSMALBLOC project. Through this interaction, several prospective collaborative efforts have been initiated. Prof G. Christophides of Imperial College London (ICL) visited Makerere University recently and extension of the work in this THRiVE project was discussed. The visit of Lydia Nabyonga to the meeting in Greece was partly supported through the TRANSMALBLOC collaboration. Higher training of Lydia at PhD level with thesis research in transmission blocking immunity is proposed. A member of the malaria sub-program (Dr. Ndagire), working with Lydia, visited at ICL for one month to learn transmission blocking technology (advanced experimental Anopheles gambiae rearing, infection with *P. falciparum* and genotyping). Dr Ndagire will transfer the technologies to colleagues back at Makerere University. An insectary for transmission blocking work is being constructed by the Malaria Program at IHDSS and a grant proposal is being written to support these collaborations.

The first manuscript out of this work is in preparation and will be submitted for review as soon as it is ready.

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Genotypic and Phenotypic HIV Drug Resistance Capacity Building in East Africa: Benefits from Pump Priming Grant

*By Chris Parry, MRC/UVRI*

From the 30th April to the 11th May 2012 two scientists from NIMR Mwanza (Mr Eric Lyimo and Mr Juma Mugambo) received practical training in HIV drug resistance genotyping including RNA extraction, nested RT-PCR, DNA sequencing reactions and running on the sequencer. They also were trained in sequence analysis, base calling, contig assembly and producing a good quality consensus sequence that can be used in downstream applications. Methods of determining HIV drug resistance mutations were shown. While the PCR reactions were running we also arranged training in the principles of phylogenetic analysis, how to produce and how to interpret phylogenetic trees, including determining statistical support using bootstrap analysis. The bio-informatics training was very successful and as a result HIV sequences generated in Mwanza are being reviewed and analysed for potential publication.

We have also carried out initial HIV phenotypic drug resistance experiments. Our preliminary results show that some strains of HIV from patients in Uganda that have no protease inhibitor drug resistance mutations are less susceptible to protease inhibitors than the standard reference strains used when developing the drugs. Thus more drug is required to inhibit the replication of the Ugandan strains to the same extent. Work on this is continuing.
THRiVE Seedling Sprouts from Gulu University

Dr. Carolyne Oleo, Resident in Obstetrics and Gynaecology, Makerere University

Education remains one of the world’s greatest investments. It forms the basis for quality health care, economic growth and development, guiding policy and decision-making. Education does not decay; it is modified and carried on from generation to generation. Training Health Researchers into Vocational Excellence in East Africa (THRiVE) has given young upcoming Ugandan researchers an opportunity to be mentored by committed teams of scientific advisors to become internationally competitive and self-sustaining scientific leaders, “seeding a regional research community with the critical mass to address Africa’s health priorities”; hence lifting the face of Africa through education.

I am a resident, in Obstetrics and Gynaecology, at the College of Health Sciences, Makerere University, currently in my second year. I am honoured to be a beneficiary of THRiVE funding support. I got to know about THRiVE while working in Gulu University, as a teaching assistant, in the department of Obstetrics and Gynaecology.

As a beneficiary of this support, I have had several privileges:

1. I have been mentored, guided and inspired by some of the best researchers in the country, both in Gulu University and Makerere University.
2. I am part of a research team that carried out the study titled, “Hepatitis B virus infection among pregnant women in Gulu-Northern Uganda: Prevalence, Infectivity, and associated factors”, a study that THRiVE supported through a Pump priming grant.
3. I have been empowered with knowledge and skills to develop my own research ideas and profile.
4. The research that I am doing for my master’s dissertation is being funded by THRiVE.

My dream is to be a part of a body of competent African professionals, academics and researchers who “will take the lead in scientific research in Africa as well as mentor and guide other upcoming young researchers”. It is my hope that the project will be around much longer to provide these wonderful opportunities to all aspiring young researchers in the country. Perhaps arrangements for alternative sources of funding should be explored should the present source of funding end.

I would sincerely like to thank THRiVE for their effort in grooming professional researchers in this country. I love my country, Uganda, and it has always been my vision to see and be part of the process of Uganda evolve from a third world developing country to a first world country. THRiVE you have equipped us, and given us the tools, the ball is in our hands as young researchers to use every opportunity, exercise integrity, and work dedicatedly to see that vision is realized in our generation.
By Humphrey D. Mazigo, PhD
THRiVE-Wellcome Trust fellow

Finally at NIMR, Mwanza, we are able to measure DNA and RNA quantities in the samples targeted for molecular analysis. The arrival of the NanoDrop 2000c has opened a new way of thinking as far as molecular studies are concerned. As Eric Lyimo (a molecular biologist at NIMR) admits “We are now able to analyse DNA and RNA particles from only samples which the NanoDrop 2000c has shown us that they contain what we want, this has assisted us to reduce costs and time compared to previous experience, when we used to do it blindly on the PCR”. With Dr Alphaxard Manjurano (specializing in molecular genetics of infectious diseases) joining the NIMR Mwanza, we hope that, the machine will add its value in his research studies and other molecular and immunology studies in the pipeline.
Pneumonia is a major cause of child mortality in Tanzania. Although, the availability of vaccines for *Streptococcus pneumoniae* and *Haemophilus influenzae*, which are the two main causes of pneumonia, has boosted the fight against pneumonia, these may help to reduce only about 50% of morbidity and mortality since there are no vaccines for other causes of pneumonia like *Staphylococcus aureus*, *Klebsiella pneumoniae* and viruses. Thus, case management will remain an important strategy for preventing prolonged-morbidity and mortality which is mainly due to severe pneumonia. Hence the need to be aware of factors contributing to development of severe pneumonia, and to poor treatment outcomes among children aged below five years. We are conducting a case-control study among 150 patients with severe pneumonia, non-severe pneumonia and controls to assess risk factors for severe pneumonia and unfavourable treatment outcomes among under-fives. Demography, socio-economic status, clinical symptoms and signs, treatment history, vaccination history and treatment progress and outcome are collected by interviewing the caretaker and by retrieving information from participant’s case files and postnatal clinic card. When the child is recruited we do anthropometric measurements and collect nasopharyngeal swabs for isolation of bacterial and viral pathogens. In addition, we collect blood samples for culture and drug susceptibility testing and HIV serology, and we collect stool for helminth examination.

This work is unique and important to NIMR Mwanza and pediatric population in Mwanza in at least three ways. First, it is helping in building scientific and laboratory capacity in carrying out research in the field of respiratory medicine and pediatrics at NIMR. Already two lab staff involved in this study have been locally re-trained on isolation of bacterial and helminth infections from samples collected from young children. Plans are ongoing to further train these staff on isolation of respiratory viral pathogens using PCR-based techniques when more funds are available. Second, the lab results from samples collected are immediately sent back to doctors managing recruited children and therefore unlike other studies, this study is directly and immediately contributing to improving the care of young children with pneumonia in Mwanza. Third, part of the data which is being generated is on the interactions of respiratory infections with HIV, malnutrition and helminths among underfives in this setting. With these data we are planning to develop applications to further explore the role of childhood co-infections and co-morbidity on health in order to develop and test interventions that might help address multiple health problems in this population.

**Progress of the study:** We are excited to report that after long ethics and logistics delays, the study started recruitment on 27th May 2013. To date we have recruited 20 children and are hoping to complete recruitment and report to THRiVE in the next 4 months.

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**By George PrayGod**

(National Institute for Medical Research (NIMR)), Estee Torok (University of Cambridge and Jeremiah Kidola (NIMR))

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**Epidemiology of Childhood Severe Pneumonia in Mwanza, Tanzania**
Collaboration in Capacity Building for Qualitative Data Collection Methods

Elialilia S. Okello, MakCHS

I was awarded a Mini-Sabbatical grant by the THRiVE Educational and Small Grants Committee (ESCG) on 30th October 2012. The General objective was to initiate and foster collaboration in capacity building in the use of qualitative methods of data collection and analysis for postgraduate students at KCMU and Makerere University College of Health Sciences through training and mentorship program. With this grant, I expected to make three short visits (March, June and September) to KCMU to participate in;

1. qualitative methods course which was offered in March 2013
2. mentoring postgraduate students interested in using qualitative methods of data collection and analysis
3. identify core staff at KCMU that initiate discussion for future research and training collaborations

I made the first visit in March 2013 from 10th to 19th and participated in three main activities:

i. Facilitated a one-week qualitative course in collaboration with facilitators from KCMU College, and University of Roskilde in Denmark and others. Participated in one-on-one mentorship activities for 6 post-graduate students (1 PhD student, two potential PhD students and 3 MPH students).

Second visit was made in July 2013. During this visit, I provided support in qualitative analysis to MPH students who had qualitative components in their MPH dissertations. KCMU College also requested me to be part of the facilitators’ team in a manuscript writing workshop which took place on 15-19 July 2013. I will also sit with my collaborators at KCMU College to explore possibilities of funding to sustain the capacity building activities between the two institutions.

The third and final visit was expected to happen in September 2013. This visit aimed at among other things, planning for future collaboration including writing and submitting joint funding applications.

My Experience of and Benefits from THRiVE Funding

By Stella Kepha, MakCHS

A PhD undertaking is the hallmark of any aspiring scientist; it gives one a ‘licence’ to do science; an opportunity that THRiVE has accorded me. My biggest interest was on the PhD training process rather than the certificate; over the years I have learnt that some skills are learnt through mentorship as opposed to lectures in a class room. This PhD process has been a learning journey for me; I was previously a laboratory based scientist with no field experience. However, this project has plunged me into a new experience in science. My research topic addresses a public health question among school children; it’s largely a field based study with a laboratory component. Setting up a clinical trial is not an easy or straightforward process, but it is very rewarding and with it comes numerous opportunities to develop new skills. During the proposal development I benefited from my supervisor’s scientific network who critiqued my proposal and pointed out ideas which helped seal loopholes and make the study design better.

Along the way, I am learning what it takes to be an accomplished researcher and effective communicator; both in writing and speech. One of the key activities that I have been involved in is community mobilization starting from the community gate keepers (local administrative officials, health and education officials) to the parents. I have had opportunities to give talks in local leader’s meetings, churches and school meetings. Working and talking to a range of people from diverse cultures and backgrounds has boosted my confidence, and improved my public speaking and presentation skills. I have organized and conducted seminars with both head teachers of the study schools and field workers (recruited to carry out community mobilization and consenting). In addition, my study is co-funded by the EU-IDEA consortium; I bear the responsibility of ensuring that both the THRiVE and IDEA financial statements of the disbursed funds are up to date. Finally, conducting
My Experience of and Benefits from THRiVE Funding

the study has given me competencies in organizing, planning, negotiating and managing people; skills important for an independent researcher that I am aspiring to be.

I work in a very rural district in Kenya, with high (30%) school dropout rates especially among the girls. I have informal talks with the children in my study schools to encourage them to complete school despite the challenges they face. In addition, I have also organized mentorship session at a local high school with a focus on science and research. Recently I hosted two newly registered PhD students at my study site so that they can gain experiential training in conducting field studies.

Some of the challenges I have faced include, being relatively young and supervising older predominantly male technicians, which I overcame by being assertive, providing consistent leadership with clearly defined goals, identifying people’s strengths and drawing from their diverse personalities to build concession. Secondly, since the study is school based, I work within the school term dates and activities. To ensure seamless flow of activities without inconveniences, I work together with head-teachers to draw a schedule of activities at every beginning of term. However, sometimes we may get to a school and find the children are out for another activity, which leads to delays.

So far, I have selected 30 schools in Bumula district and conducted school meetings where I enrolled 8000 children. Then I screened 7100 children as per our inclusion criteria with the main interest being infection with any of the soil transmitted worms. I am still doing data entry.

After completing my PhD training I plan to undertake post-doctoral studies in spatial modeling and it’s relation to immune- epidemiology.

THRiVE Mini_sabbatical Grant; a Welcome Support for that Extra Need

Joel Francis, NIMR

Working as a researcher in the developing world is very challenging particularly due to inadequate funding from governments. The creation of North-South partnerships therefore, is an attempt to address this anomaly.

I am a beneficiary of the THRIVE mini-sabbatical grants; this fund facilitated my travel and accommodation in London for three months. During my stay there, I met with my PhD supervisors, which helped in shaping my PhD ideas. I immediately started work on a systematic review with the guidance of the supervisors.

The review provided very useful information for the on-going work to describe the epidemiology of alcohol use among young people in northern Tanzania. It also emphasized the need to validate alcohol-screening tools/ instruments for Eastern Africa settings. The London School of Hygiene and Tropical Medicine has a very stimulating research and academic environment; during my stay there I learnt a lot from fellow students and faculty, through one-on-one meetings and seminars in various departments. These arrangements made it possible for me to successfully complete the review and some other PhD training requirements. In addition, the systematic review and meta-analysis skills are important in my career and I will transfer the knowledge gained to interested colleagues at our research centre through training and hands-on support.

I wish to encourage the donors to continue supporting these initiatives for they help researchers/students in resource-limited settings to further their careers through networking and access to state-of-the-art facilities in the developed world.
Pharmacoepidemiologic Assessment of Medication Errors and Adverse Drug Reactions among Inpatients in Uganda

By Ronald Kiguba, MakCHS

Since Feb 2011, I have been receiving grant support from the THRiVE consortium for my PhD studies. My research project is entitled “Pharmacoepidemiologic Assessment of Medication Errors and Adverse Drug Reactions among Inpatients in Uganda”. It is divided into 3 sub-studies; understanding the current state of pharmacovigilance in the country, understanding the risks of medication errors and adverse drug reactions among inpatients, and assessing the reliability of tools used to determine causality of adverse drug reactions. Makerere University granted me full registration as a PhD student on 12th April 2012. I have since commenced data collection for sub-study 1 which involved interviewing of healthcare professionals across the country about the pharmacovigilance system in Uganda.

However, I have encountered several challenges along the way including the following:

- delay by health facilities to grant the necessary permission to access their employees
- the ever-busy healthcare professionals in understaffed health facilities who were usually difficult to recruit into the study coupled with the task of convincing them to return filled questionnaires
- two unscrupulous research assistants selected to collect upcountry data provided fake data/questionnaires but close monitoring of the data collection process ensured that we were able to catch them and weed them out of our research team

A total of 1,345 out of a targeted 1,500 healthcare professionals were interviewed for this study. One in 7 had not reported any suspected adverse drug reactions (ADRs) in the previous 12 months while healthcare professionals in private-for-profit health facilities were less likely to report suspected ADRs when compared to those in public health facilities. This may be attributed to the current emphasis of the National Pharmacovigilance Centre on training of health workers in public health facilities.

Data collection for sub-studies 2 & 3 commenced in June 2013 and is expected to take up to 6 months.

Over the past 12 months, I have applied for several small grants, attended workshops, and registered varying levels of success;

- Participated in a MESAU Scientific Paper writing workshop and managed to draft the first manuscript from my work
- Successfully applied for USD 10,000 from the African Doctoral Dissertation Research Fellowships (ADDRF). This grant offered additional training in Research Methodology in Nairobi in 20-24 May 2013 and will also cover additional equipment (small scanner & mobile phone) and research costs previously not covered by THRiVE
- I received a THRiVE Equipment grant worth GBP 1,000. I obtained a Desktop computer and STATA software which have improved efficiency in data entry, management & analysis

I intend to engage intensively in grants writing and take up postdoctoral studies in Pharmacoepidemiology and Pharmacoeconomics.

THRiVE Award Offer Letter: the Perfect Antidote to my Christmas Doldrums

By A.D Mwaka, MakCHS

I clearly remember when a senior colleague with a very sick sister on my ward in Mulago Hospital met me at about 7.15pm on 20th December 2010 as I was preparing to head to Kitgum to join my family for Christmas. I had to change course and go with her to the ward because the intern doctors had failed to secure a functional intravenous (IV) site for blood transfusion, IV fluids and IV quinine. The patient had severe anaemia, congestive heart failure and severe P. Falciparum malaria. After twenty minutes of search, I found an access; connected the pint of blood very quickly and ensured it was flowing smoothly. I moved on to hang the pint of blood on a drip stand by the patient’s bed. There was an old drip line with blood from the patient’s clogged wound on the same drip stand. The old drip line unwound itself all of a sudden and the old drip line with blood from the patient’s bed. There was an old drip line with blood from the patient’s clogged wound on the same drip stand. The old drip line unwound itself all of a sudden and

While I struggled with the PEP, painfully missing out on my favourite Christmas altar wine (red wine) sharing with the family this time round, I checked my email on 24th December 2010, and what did I find? A congratulatory message...
THRiVE Award Offer Letter pulls me out of a bad Christmas Experience

and letter of award for a full THRIVE PhD Scholarship! That letter, dated 22nd December 2010 completely transformed my life. Since the THRIVE award, I have successfully managed my time and made great progress. The contributions of my supervisors, doctoral committee members and Cambridge mentors are invaluable to my progress and transformation.

I undertook several essential short courses both at Makerere University and Cambridge; these courses have shaped my research orientations and enriched my skill set. The qualitative research courses taken at Makerere University and the selected courses in medical and social anthropology during my visit to Cambridge are worth singling out as they filled a major knowledge gap.

I also obtained small grants from Makerere University’s Directorate of Research and Graduate Training under the Carnegie Corporation of New York and from the HIV Research Trust, UK, during 2012; these grants supplemented my data collection and living costs in the UK respectively. I completed two thirds of my data analysis and drafted three manuscripts during my three and half months in Cambridge. This was a great achievement.

I also made presentations of my research work at the 6th International Conference on Cancer Awareness and Primary Care Research International (CaPRI) held at Cambridge University from 14th to 16th April 2013.

The major challenge faced has been the slow recruitment rate of patients occasioned by the departure of one of the resident gynaecologists which resulted in delayed confirmation of cancer diagnoses. However, corrective measures are being undertaken and the recruitment rate will hopefully improve.

My PhD project is to delineate the factors associated with patient-related and socio-cultural barriers to early health seeking for symptoms of cervical cancer in low income countries. Upon completing my PhD project, and having clearly documented the health seeking barriers, I will seek a Post-doc position during which time I will design and establish randomized community trials to test targeted interventions to deal with the barriers identified.

I will seek to prevent disease occurrences, late presentations and complications. Patients with late stage cervical cancer often present with severe anaemia; cervical cancer is HIV-associated/defining malignancy; encouraging early health seeking and early stage diagnosis when anaemia has not set in might save another person.

THE THRiVE SUPPLEMENTARY GRANT: A STITCH IN TIME

By Harriet Rachel Kagoya, MakCHS

In April 2012, THRiVE offered me a supplementary grant worth 2,000 GBP for my MPH research titled “Awareness, responsiveness and practice of patients’ rights at public health facilities in Uganda: a case of Mulago Hospital“. The funds covered part of the data collection costs and publication in an open access peer reviewed journal; The African Journal of Primary Health Care and Family Medicine (PHCFM). This support was a great boost to the timely completion of my MPH research and getting published.

I am Harriet Rachel Kagoya; originally a teacher by profession, an MBA graduate with extensive work experience in public health and development work. I had a passion to better understand health seeking behavior and public health issues, and why they seemed to persist in communities. This partially motivated me to apply for the MPH (DE) program at Makerere University School of Public Health in 2009. As a non-health sciences student, admission to the course meant more hard work to learn and apply health sciences concepts. I was yet to encounter more challenges in completing the programme.

Halfway through the programme in 2011, my family temporarily relocated to Namibia for work, implying higher study related costs or the likelihood of abandoning the course. The flights between Windhoek and Entebbe, plus the tuition fees exhausted the family’s financial reserves and dimmed my hopes especially as research drew nearer. However, my commitment to the programme was galvanised by the THRiVE research grant.

Today, I can look back and say ‘It was a dream come true’; I was able to complete my MPH in the stipulated time and made a maiden publication with THRiVE support. I look forward to extensive dissemination of the findings and strategies identified for creating awareness, improving responsiveness and practice of patients’ rights in resource constrained Uganda.
Supervisor - student interaction is key to a successful and rewarding higher education experience, and helping new scholars become independent researchers. Students stay in contact with the supervisors during their academic career and some even become life-long friends or collaborators. Having adopted the joint supervision model where each PhD fellow is required to have at least two supervisors, one from the Northern institution and the other from the African institution, THRiVE has created an online supervision platform (http://community.thrive.or.ug) to enhance the student - supervisor interaction without being affected by the geographical distance and the time difference barriers. The platform has been designed with collaborative functions between fellow and supervisor in form of chats, internal mail system and forum that can be public or private. It allows fellows to develop an online personal development plan (PDP) in which they set their goals, objectives, specify achievements and set targets. With the Learning Zone embedded into it, fellows can create/download and share learning content in form of text or videos. The alert function allows fellows and supervisors to receive timely notification on any ongoing activity within the platform. A PDP administrator is assigned the role of overseeing the student/supervisor relationship to ensure that the two parties are actually in contact. This platform will facilitate the evaluation of the frequency and content of supervisor – student interaction and how or what networks are sharing as part of their capacity building efforts.

The systems allows authorised access to and sharing of content with other capacity building programs such as the Malaria Capacity Development Consortium (MCDC) hence building and strengthening collaboration between research networks in Africa.

This platform can be customized to individual needs making it easily adaptable by any academic and research institution. It is our hope and desire that with time many African universities will adopt this online supervision model to supplement their existing approaches.