

<https://hepi.mak.ac.ug/>

THE SOCIAL MEDIA SITES

 @Hepishssu
 @HepiShssu

TOPICS

- 1 HEPI-SHSSU OPENING OPPORTUNITIES FOR RESEARCH
- 2 THE ROAD FROM IMAGINATION TO REALITY
- 3 THE STUDENT AND LECTURER: A DUAL EXPERIENCE OF LEARNING & TEACHING AT CLARKE INTERNATIONAL UNIVERSITY (CIU) DURING THE COVID 19 PANDEMIC
- 4 CATALYZING THE ESTABLISHMENT OF RESEARCH ETHICS COMMITTEE AT BUSITEMA UNIVERSITY
- 5 PUTTING RESEARCH KNOWLEDGE AND MENTORSHIP AT THE HEART OF DEVELOPMENT IN SCIENCE
- 6 MY EXPERIENCE TEACHING THE FIRST ONLINE CLASS
- 7 THE NIGHTMARE OF POST GRADUATE RESEARCH AND JUBILATION OF BEING AN ACHIEVER AND A CHAMPION
- 8 WHY YOU SHOULD TAKE THAT COVID-19 JAB
- 9 HEPI TURNS UNDERGRADUATE RESEARCH IDEAS INTO REALITY
- 10 EARLY NEONATAL LIFE "GOLDEN HOUR," THE POWER OF FIRST IMPRESSIONS.
- 11 HEPI-SHSSU: A REASON TO ASPIRE
- 12 REALISING MY RESEARCH DREAM WITH HEPI
- 13 HEPI PROJECT CHANGING LIVES FOR UNDERGRADUATES
- 14 SUPPORTING RADIOLOGY TRAINING TO TACKLE GAPS IN SERVICE DELIVERY
- 15 MY RESEARCH JOURNEY
- 17 EXPERIENCES OF FACULTY DURING CLINICAL SKILLS TRAINING FOR PRE-CLINICAL MEDICAL STUDENTS IN THE SKILLS LABORATORY AT MAKERERE UNIVERSITY
- 18 HEPI-SHSSU CAME TO MY RESCUE

Message from the Principal Investigator, HEPI Project

Dear Reader,

Greetings from the HEPI-HSSU Project Implementation Team!!

Implementation of the "Health Professions Partnership Initiative Project: Health Professions Education and Training for Strengthening the Health System and Services in Uganda (HEPI-HSSU)" Project started in October 2019. We are completing the 3rd Year of the Project; whose partner institutions include Makerere University College of Health Sciences (MakCHS), Busitema University, Faculty of Health Sciences, Kabale University School of Health Sciences, Clarke International University, ACHEST, and Mulago School of Nursing and Midwifery. We also have 2 International Partners: Yale University and John Hopkins University, USA.

We are excited to share with you the latest edition of the HEPI-SHSSU Newsletter, which shares the highlights of HEPI activities. The past six months have been challenging because of COVID-19, and its restrictions.

However, the implementation of HEPI Project as well as all activities at Partner Institutions continued to take place.

This edition has "Voices from the students and faculty". It shares



Prof. Sarah Kiguli
PI-HEPI

the opportunities and excitement that the students and junior faculty have had as recipients of the HEPI Research Fellowships. We hope that opportunities for research training and publications for students will be sustained at our partner institutions. This will require establishing mentorship programmes by peers and senior faculty, as well as commitment from institutional leaders.

We are excited that a number of undergraduate student teams, graduate students and junior faculty who received HEPI support have published or working towards publication of their work.

We shall also plan for sustaining the education innovations introduced by the HEPI Project in our institutions.

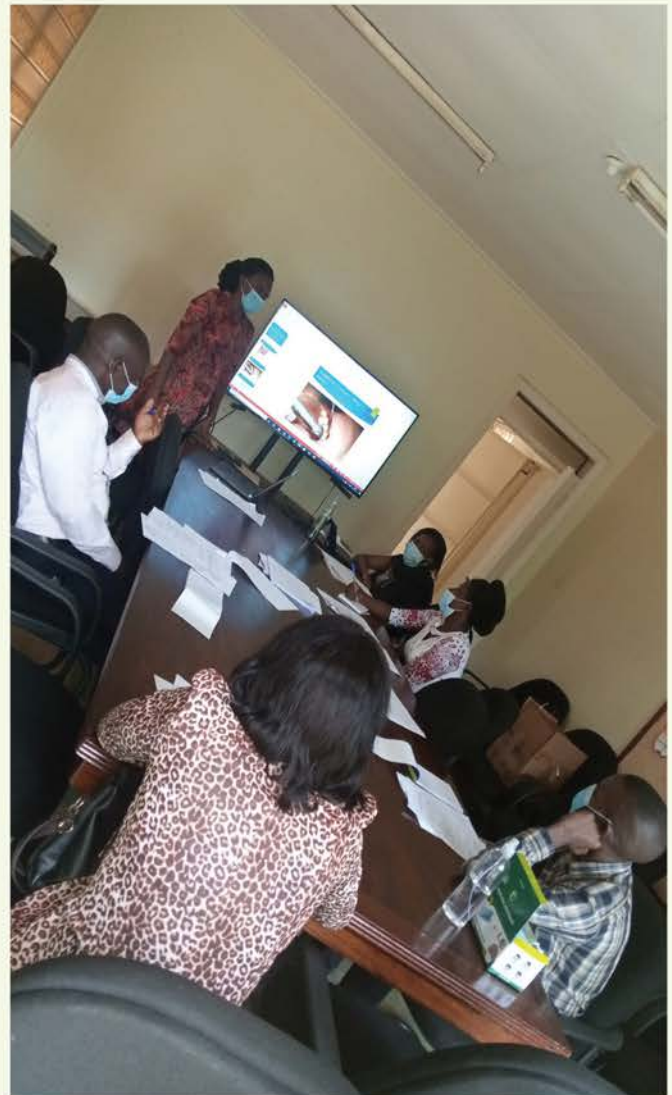
Finally, I request faculty, students and other partners to take this opportunity and write articles for future editions of the HEPI-HSSU Newsletter.

Dr. Barbara Ndagire, Lecturer, Department of Dentistry, Makerere College of Health Sciences

I am Dr. Ndagire Barbra, a lecturer in the Department of Dentistry, Makerere University. My research interests are in the field of Cariology specifically new innovative methods for the prevention and management of dental caries. In the recent past, my research concentrated on prevalence and severity of dental caries that revealed a growing burden of the disease here in Uganda. I strongly believe that adoption and application of different preventive approaches in the management of dental caries could check the growing burden of this disease in developing countries like Uganda. This can only be achieved by conducting research to describe the determinants of the current management strategies and designing appropriate programs for dental practitioners and the general population. This can only be realized through conducting scientifically sound research.

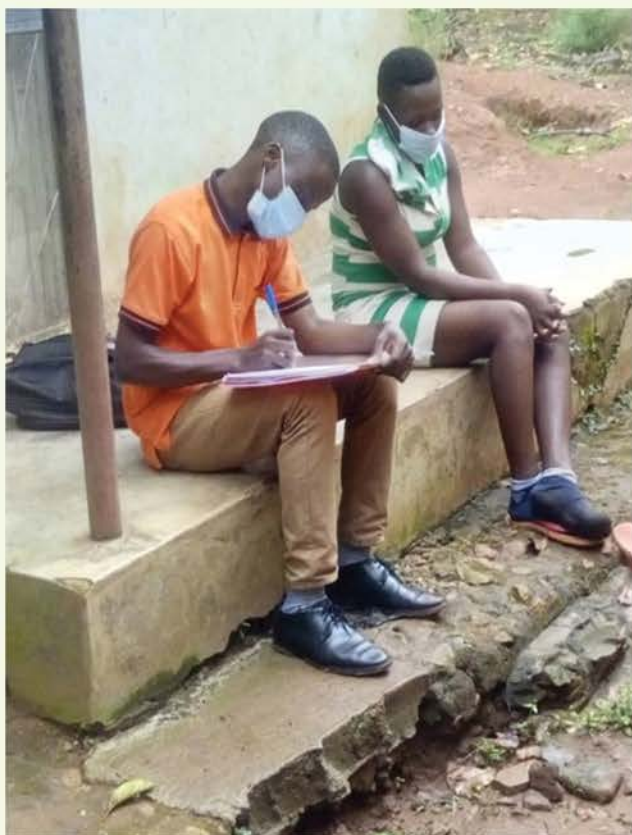
As faculty at Makerere University, the HEPI-SHSSU fellowship offered a timely opportunity to nurture my research skills and competencies paramount to advance both in academics and as an independent researcher. I was profoundly honored to learn that I had been awarded the HEPI-SHSSU fellowship. In addition to offering a funding opportunity, this fellowship included mentorship support throughout the project cycle. So important for early career researchers. The funding has enabled the implementation of the study 'Knowledge, Attitudes and Practices' of Dental Practitioners' Towards Caries Risk Assessment in the Management of Dental Caries. A key project that will generate baseline information crucial for the designing and development of preventive programmes

aimed at reducing the burden of dental caries in Uganda. Being part of this HEPI-SHSSU cohort of awardees, offers an opportunity to work and learn in an interdisciplinary environment. Working with the entire HEPI-SHSU program team has helped to advance my skills about handling health research.



The research team training, in the Boardroom Department of Dentistry, MakCHS

Blaise Kiyimba, Makerere College of Health Sciences



One of the research team members conducting an interview

"If You Are Working On Something That You Really Care About, You Do not Have To Be Pushed. The Vision Pulls You (Steve Jobs)" - goes the Slogan much liked by one of my inspirational HEPI coordinators and I too, now. I have witnessed this come true and it has always pushed me ahead whenever I reflect upon it the moment I feel like giving up on something. Though passion for something may exist, resilience is key to transforming one's idea into reality because the road between the two points may not always be a smooth one. This time I would like to share the dark/challenging but full of learning side of my research experience. Following HEPI's call for proposals for the 1st Cohort, I was a team member among the teams that applied. Having

been successfully selected was real music to every team member's ear. Unfortunately, shortly along the way our Principal Investigator got communication challenges and missed out on one of the last vital confirmatory messages from HEPI, only seeing it when the deadline had already passed. It was such a sad moment to all of us getting such news because it meant that we were not going to attend the training despite our early successful qualification. This taught me how significant a Principal investigator(PI) is in any study. Nevertheless, I didn't grieve forever. I patiently waited for the call for the 2nd cohort.

This time round I ensured that I am the Principal Investigator for my new team, just to minimize any other risk of disqualification due to mere communication gaps or any other minor reason. Successfully selected, we moved on well with the training, and while at the level of full proposal readiness and submission to IRB, the very same study topic was published at that time by someone else, meaning we couldn't continue with that already published work. Though allowed some time to generate a new topic by HEPI, I genuinely saw every team member had lost hope because everyone had invested much time and energy. After a few weeks of contemplation, I decided we had to move on. I always encouraged my team to remain positive. We went back to the drawing table, brainstormed, and got a better topic than even the one before, developed a proposal, accepted by HEPI, approved by IRB, and we couldn't believe seeing ourselves in the field collecting data finally and currently awaiting our manuscript publication. Being a student-driven process, conducting this study was so informative as it equipped us with important research skills. Never Give Up.

Florence Githinji, Quality Assurance Office and Member of the HEPI Institutional Committee, Clarke International University

The Covid-19 pandemic elicited multiple challenges and difficulties for everyone, affecting lifestyles, work, school, how we manage and how we interact with others. During the pandemic I played multiple roles at Clarke International University (CIU): The Quality Assurance Officer, a Part-time lecturer, and a student of the Post graduate Diploma in Medical Education.

As a student

My peers and I had just embarked on our second and final semester in the PGD Medical Education program and were looking forward to graduating at the end of the year when the virus hit the streets of Kampala for the first time. There was a Presidential order for closure of all learning institutions followed by a myriad of other public health measures that brought the majority of our routine activities to a halt. The measures were warranted, however, this left most of us in a space of uncertainty: "Have you ever finished a task before you realized you had done something wrong in the beginning which will force you to restart?". It truly felt like we would have to start all over again. In addition, most of us weren't really ready for online classes and had taken for granted how significant the human interaction was. Like most people, I also found being secluded at home very difficult. I mostly felt tired and anesthetized by a nondescript boredom. At school, I was used to being in constant motion and interacted more with my peers. It gave me purpose. Despite this pause, our dream never completely got shuttered. CIU immediately came up with the online engagement to ensure that students got

engaged throughout the lock-down. In September, the National Council for Higher Education (NCHE) gave the university the green light to go ahead with the Emergency Open Distance and eLearning (ODEL) Online teaching. In Spite of the challenges such as poor internet access for some students, lack of proper gadgets, and less skill of (or lack of familiarity) utilizing different education applications, the ODeL program at CIU flourished like never before. Enabling factors included provision of data to students, quite a number of orientation sessions and trainings on ODeL as well as ample consultation with staff of CIU who provided the technical assistance needed. We got an opportunity to do the take home examination and teaching practice while observing strict SOPs and managed to graduate in March, 2021.



Graduation Day : Receiving best student pin. At graduation, I emerged as the best student with a CGPA OF 4.92.



As a Staff

The situation was not so different, 20th March 2020 marked the day of uncertainty for most institutions. The students were sent home by order of the President and that meant that staff and administrators were also going home. As a part time lecturer, I needed a new strategy and had to plan on spending most of the free time working with students online or via correspondence. This additionally helped to keep students engaged but I realized I needed to spend boundless energy to motivate students who were highly distracted by the pandemic mania. In my position as the University Quality Assurance Officer, I had to ensure students were engaged by our lecturers, that students keep on track even during lock down, and that the quality of these interactions was also maintained. This was achieved through conducting several evaluations.

The university management team kept our spirit high despite a lot of uncertainty surrounding the continuation of normal learning and teaching. Finally, there was light at the end of the dark tunnel, in September, when the NCHE approved ODeL and then subsequently in November approved physical classes for finalists and online classes for the continuing students. This called for a mandatory Covid-19 infection prevention and control training to both staff and students, which I spearheaded in collaboration with the CIU Covid-19 Task Force. We carried this out both physically and virtually. The Quality Assurance Unit rolled out a survey to evaluate the readiness of both staff and students for undertaking classes via ODeL, the parameters that were considered; Institutional Enabling factors—Technology access, Technological Confidence, Support and Attitudes towards a successful online learning et cetera. Early this year, the NCHE has allowed medical institutions to continue with blended teaching and learning.

As a teacher I am aiming at filling the learning gaps that are emerging as we implement this new normal, and also addressing the social-emotional needs and safety concerns for students by ensuring observation of SOPs in physical classes/skills lab/placements and using more interactive online platforms and simulations to enhance learning. I am learning both as a teacher, as a learner and as a manager. It's a balancing act. Working with an organization that pays attention to quality and to detail really helps. During this tough pandemic era, CIU portrayed Resilience; Adaptability; Transparency; Flexibility and Lots of Creativity and Innovation. Staff, like students, were also supported with data, orientation and ongoing training to ensure mastery of the new skills we needed to adapt and to continue teaching. When times change, one has to be ready and open to change with the time.

CATALYZING THE ESTABLISHMENT OF RESEARCH ETHICS COMMITTEE AT BUSITEMA UNIVERSITY

*Dr. Joseph L. Mpagi, Busitema University
Faculty of Health Sciences, Research Ethics
Committee*

Busitema University Faculty of Health Sciences (BUFHS) started feeling the need for its own Research Ethics Committee (REC) in 2014/15, that is, one year after its establishment. Its pioneer cohort, a group of 56 medical students, was due for community placements during which students conduct research on health problems confronting communities in Eastern Uganda. While the REC of Mbale Regional Referral Hospital provided short-term relief, the glaring need for BUFHS-REC remained. The faculty responded to the need by inviting an expert in research ethics in Uganda to sensitize staff members and this exercise culminated into a selection of 9-member committee of BUFHS-REC. The committee was tasked with the development of standard operating procedures (SOPS) of BUFHS-REC. However, for reasons yet to be established, this committee did not make significant progress; no tangible output was realized during its period, from 2015 – 2019. When the implementation of HEPI project commenced at Busitema University, in 2019, establishment of BUFHS-REC was included on this project's work plan. Initial meetings were organized during which new members

were appointed, especially to replace those who had left or re-assigned other duties, and time lines given within which to produce BUFHS-REC SOPs. By June 2019, six months after, draft SOPs were circulated and eventually discussed in the faculty meeting. Revisions were made and accompanying BUFHS-REC forms developed in the subsequent 3-4 months. In December 2019, a consultant was engaged to improve the drafted SOPs and to guide the faculty in applying for accreditation of BUFHS-REC. By the end of May 2020, the application for accreditation of BUFHS-REC was submitted to the government regulatory agency, the Uganda National Council of Science and Technology (UNCST). In addition, HEPI had by then helped the faculty to acquire office space for BUFHS-REC, including connecting it to internet, furnishing and erecting its sign posts. Three months later, on 10th August 2020, BUFHS received a response to its application on accreditation of its REC. After making the extensive corrections and suggested changes, the application was re-submitted in the first week of November 2020. In March 2021, UNCST informed BUFHS that its Accreditation Committee would pay BUFHS-REC a site inspection visit on 13th April 2021 and meet with all the REC members and staff. Led by Dr. Alex Opio, the 5-persons UNCST Accreditation Committee arrived at BUFHS at 11.30 am and the meeting started shortly after. Present to



UNCST ACCREDITATION COMMITTEE VISITING BUFHS-REC/13/04/2021



receive the accreditation committee were all the 13 members of the BUFHS-REC, its two administrative staff, faculty dean and his deputy. After welcome remarks by the faculty Dean, the accreditation committee read out the objectives of its inspection visit; formed the basis of that meeting's agenda. The meeting culminated in the inspection of BUFHS-REC office, the boardroom were BUFHS-REC meetings will be held and signage directing researchers to the location

of BUFHS-REC office. If all the BUFHS-REC members had already undergone the required training, chances are high the accreditation of BUFHS-REC would have been granted shortly after this visit. Indeed, BUFHS is now looking for USD 4120 to facilitate a 4-day face to face training of its REC members, in June 2021, by the officials from UNCST.

PUTTING RESEARCH KNOWLEDGE AND MENTORSHIP AT THE HEART OF DEVELOPMENT IN SCIENCE

05

Kigozi Edwin, Bachelor of Science in Nursing, Year 4, Makerere College of Health Sciences



The HEPI-SSHU program outsmarted the power of intellectuals for it understood the value of evidence-based practice. Availing research training and mentorship to an undergraduate student is steering the wheel of science out of the turbulence experienced in the past, for it has instilled a sense of self-discipline, integrity and self-drive through the resilient coordination between the mentors and mentees. My efforts to seek an opportunity under the HEPI-SSHU program are never regrettable, for this has

left indelible marks in my own personality, as a mentee, research trainee, mentor to my peers, but most importantly as an author, thus putting research knowledge at the heart of development. The research training received from the program sparked off the motivation which has kept me going; for instance, I enrolled for and successfully completed an eight-weeks course in research entitled "Research and Proposal Writing in the Sciences", with INASP, an international development organization in the United Kingdom, under the AuthorAID project, in 2020. I still attribute my success in this course to the prior knowledge I received from the HEPI-SSHU program training. HEPI has smoothed my way from research conceptualization, data collection, manuscript drafting, submission as well as familiarity with different computer software programs and academic databases thereby easing development of my final year project proposal, which I believe would be cumbersome without prior orientation. I therefore remain indebted and continue to thank the HEPI team for enabling us as achieve our dreams in the world of science.

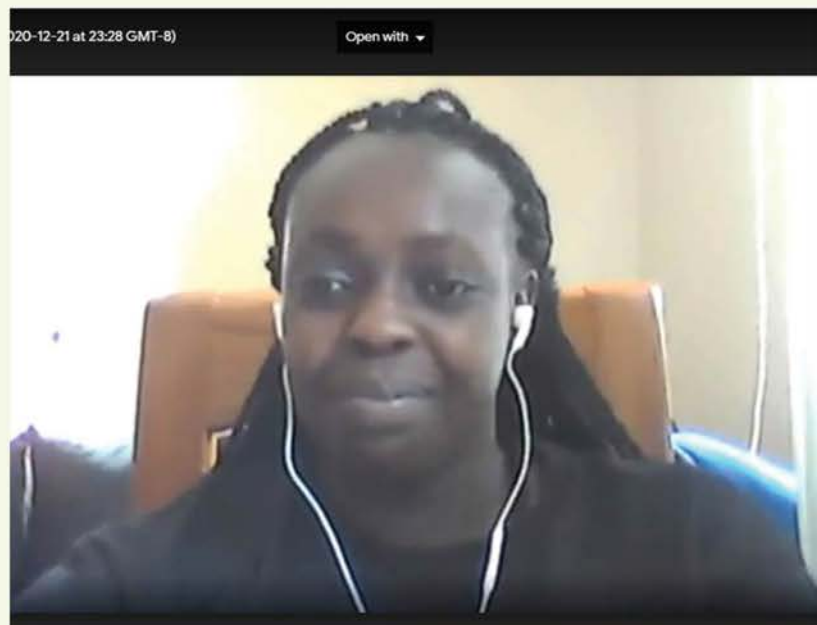
Kinyi Hellen, Kabale University School of Medicine

The Covid-19 pandemic imposed amongst others teaching and learning challenges in Higher Education Institutions. However, these institutions rapidly adapted and resumed learning activities through the Open Distance and e-learning (ODEL) model, which has been approved by the National Council of Higher Education (NCHE). At Kabale University (KAB), preparations for the E-learning, started as early as March 2020. Uganda was in lockdown during this period, but nonetheless, preparations such as creating lecturer user accounts, making the learning management system (LMS) more user friendly and organization of course materials to the recommended format was done. This was followed by Faculty based face-face staff training sessions running from 14th to 25th September 2020. Students were also trained on e-learning in October 2020. In addition to the KAB training, Faculty from the School of Medicine received additional training through HEPI in the NIH-HEPI Onlinisation course which was taught for 12 weeks running from August to October 2020. This training was conducted online and involved engaging lectures and practical assignments which required the learners to engage with the LMS of their institutions.

First online class experience

Although I had attended several online classes, I had never been a facilitator and hence was a bit anxious. I made mental notes of small mistakes I had noted as I attended online sessions and thought of ways to make sure they didn't occur in my class. In preparation, I had uploaded the learning activities I expected the students to go through, two weeks in advance. For the online session, I had prepared for Q &A. I expected the students to ask me

questions on areas they did not understand. I had also formulated some questions which could stir a discussion on the various aspects of the topic. As I went through my slides two hours before the class, I found myself worrying about the stability of internet, if the students will attend the class and if the LMS had actually sent the students a notification of the class as it was supposed to do. An hour to the class found me checking the camera and microphone several times to ensure everything was okay.



Ms Kinyi checking the camera and sound before her class

It was a relief when the first student entered the online session 5 minutes early. Other students slowly joined the session and 10 minutes into the class almost 50% of the students had joined. I started the session by welcoming the students and asking them to keep their microphones and camera off, to reduce the bandwidth of the class. I asked them to type their questions in the chat which I could read and respond to. I also asked them to put up their hand when they wanted to ask questions and when chosen they could put on their microphones. Many of the students did not know where some of the controls were and



I had to share my full screen and show them the various controls. About 30 minutes in the session a student put up his hand and told me that his colleague had informed him he was unable to join the class. He further explained that the platform we were using Big Blue button (BBB) was unable to host a large class. I was caught a bit off guard as I had expected all students to enter the class at will. I then remembered I had even forgotten to record the class and hence, what we were discussing could not be accessed by all the students later on. I asked the students to excuse me a bit, and I called a staff in the IT department. He informed me that they had noted that BBB could not host many students especially since there several online classes happening at the same time. He informed me that they were in the process of integrating Google meet and Zoom

with the LMS. I felt my hands were tied at that moment. I went back to the session, informed the students of the development. I informed them I could spend half an hour responding to their questions and then we could have a second class on the google meet platform where they could answer the questions I had set for them. They agreed to this proposition. I then requested for their permission to record the class and started recording. The session ended after 1 hour 10 minutes. I shared the recording of the class in the LMS. Despite the few interruptions, I thought the class went pretty well and I felt confident to continue with online facilitation. Since then, I have facilitated more than 10 online sessions for students of Medicine, Nursing and Environmental Science.

The diagram on the left illustrates the Hershey-Chase experiment. It shows two parallel paths starting from bacteriophages. The left path uses sulfur-labeled protein capsids, while the right path uses phosphorus-labeled DNA cores. Both paths proceed through three stages: 1. Infection, 2. Blending, and 3. Centrifugation. The results show that sulfur is found in the supernatant and not in the cells, while phosphorus is found in the cells and not in the supernatant. The diagram is titled 'The Hershey-Chase Experiment'.

On the right side of the screenshot, there is a video feed of a man, identified as 'Kinyi Helen', who is facilitating the class.

Ms. Kinyi facilitating an online Biochemistry class

THE NIGHTMARE OF POST GRADUATE RESEARCH AND JUBILATION OF BEING AN ACHIEVER AND A CHAMPION

*Dr. Kyomugisa Beatrice, Senior House officer
Department of Paediatrics and Child Health,
Makerere University College of Health Sciences*



Now, I'm neither a researcher or a statistician. I can't take sides as a new researcher but to accept the reality. The phobias of research started way back as an undergraduate. The saying by many that research is hard always sharply strikes my heart and triggers palpitations. It sounded like a nightmare every time a person mentioned it. After practicing for three years as a medical officer on pediatric ward in a peripheral hospital this increased my love for pediatrics. I processed my academic credentials and applied for pediatrics and luckily enough my name appeared on the list of those admitted. I got so much excited when I was told to pick my admission, yet I was burying my fears for the so called monster in medical research. My friends and family were happy for me but they didn't know what I was hiding from them. I kept contemplating whether to accept the offer. I always tell myself never postpone what i can do today for tomorrow but this time my fears were beyond my imagination.

I never like missing the orientation day because those first words really give me a lot of strength to move on. I then relocated my family quickly to Kampala and I was then ready to face my dream course. A few days in to the course each pediatric resident was allocated a research

supervisor. The additional supervisors were dependent on the expertise in the research topic. Generally speaking, in total I had three amazing and dedicated supervisors. My worries were not the supervisors but how to overcome the huddles of research. I kept my fears for one semester without even meeting my primary supervisor. I later took the courage and scheduled an appointment to meet her and share my research ideas. She gave me an excellent audience but the ideas didn't seem good enough as I had not done the literature search. She advised me to go and read around the topic which I did but found scanty literature. I then knew this will be so difficult for me as a new researcher. I dropped the research ideas immediately and looked for three more topics and prepared myself to present them to her. We agreed on one of them, I got so excited for that achievement and was to email her my concept paper in two weeks' time. Thereafter i was given the opportunity go ahead and start the write-up on chapter one. We again agreed that I share the draft in two weeks' time. After that review she gave me feedback and told me to write up on all the three chapters and we decided I share the draft in two weeks. The pressure of reading for the course units was building up and ward schedules were as well demanding not forgetting the social life back home. My children were more bothered about my sleepless nights as I was giving them little attention. Sadly, the children would ask in the morning whether I slept because they would fall asleep when I am seated and then wake up in the morning when I am in the same posture.

There is nothing as interesting and tiring as looking for literature. Sometimes I would search for the literature the whole day without documenting a single sentence. I got demoralized a bit but would remember my motto is never giving up in life when I still can. As days went



by I became stronger and dedicated. After three times of addressing the corrections my supervisors allowed me to present my proposal to the department. The excitement increased but then I was scared to face the audience, the anticipation of being asked questions in front the pediatricians and post graduate students was another nightmare. As the days drew closer I became so anxious had sleepless nights in preparation for the D day. My supervisors were more supportive telling me how I was ready to present my work. To build my confidence and not to disappoint them I remembered the words of my senior lecturer that as a pediatrician walk with your head high. I then realized that I was an achiever when I became the first to present the proposal to the pediatric department and later to Institutional Research Board (IRB). Amazingly, i then gained ground and became more confident and the rest was history. I became the champion of research for my class. I spearheaded the research team for the class. I turned all the nightmares of research after being the first to share my findings with the department. I now love research but hate the part of the statistician. The following helped me overcome the nightmares of post graduate research:

- My slogan was never to postpone what can be done today for tomorrow.
- I was honest to myself by looking at my abilities
- Preparing and identifying the research topic early.
- I identified a topic that I can do justice to in terms of time, money and study participants.
- Working well with my supervisors and continuously updating them on every step always kept them in the know.
- I decided the first week into the new course unit was primarily for research and I would always catch up in the

remaining period.

- I utilized more of my night time to do the research since day time was pre occupied with ward activities and tutorials.
- I kept consulting my course mates for guidance whenever I would be stuck and I would take the feedback positively.
- I would share my draft document with my discussion mates and course mates to read through and give comments.
- I honored my appointments with my supervisors
- I was supported by the departmental mentor who checked on me often about my academic progress.
- When other students would be presenting I would keep record of the questions asked and revise them for my project work.
- I would rehearse to myself loudly to make sure what I have written makes sense and print out my project work to be able to identify gaps and typos.

Finally, who were these amazing and great ladies in my life as I walked this long journey to my post graduate research: Professor Sarah Kiguli was my primary supervisor and the co supervisors were Dr. Thereza Piloya Were and Dr. Oriokot Lorraine. Thank so much for the amazing job well done, we are all achievers in this. Thank you HEPI-SHSSU for the research scholarship and for giving me a chance to share my story I am forever grateful.

Dr. Nalubega Raihanah, Masters of Paediatrics and Child health, Year 2, Makerere College of Health Sciences



COVID-19; as the most recent pandemic has left most people baffled. Nearly 2 years into the pandemic, more than 3 million deaths have occurred worldwide; and more than 140 million people are still grappling with disease. Needless to say, a number of people have recovered with an approximate of 85 million people globally. However, a number of those who have recovered survive with long-term complications aka 'long COVID'. Researchers from PHOSP-COVID study in the UK followed 1077 patients who were discharged from hospital between March and November 2020 following COVID -19 treatment, report that; 'Less than a third of survivors described themselves as fully recovered 5 months after discharge from hospital. People with severe disease admitted to intensive care were most likely to have ongoing symptoms. Also, more than 25% of the participants had symptoms of anxiety and depression and 12% had post-traumatic stress disorder at their 5 months follow up'. Other long-term common symptoms include physical slowing down, cognitive impairment, breathlessness and impaired sleep

quality among others. Most people have lost their jobs following the adverse effects whereas those with pre-existing comorbid conditions like diabetes are more likely to suffer worse long-term consequences. Therefore, in regards to the above complications, prevention is better than cure! The second wave of COVID-19 being faced by some countries like India could even be more devastating; as dangerous new variants have been reported. Human behavior has been cited as one of the major risk factors to this. However, those that are fully vaccinated are less likely to get infected and potentially less likely to spread the virus to others. Young adults are also at risk of suffering from disease and some developing severe and lasting symptoms. Data from one study in the US in September 2020 showed that of more than 3000 adults aged 18-34 years who contracted COVID-19 and became sick enough to require hospital care, 21% were admitted to intensive care, 10% placed on breathing machines and 2.7% died. Yet, the young black population is even at a higher risk than their white counterparts due to the long-standing health inequities and social determinants of health that leave them more vulnerable; hence the reason to receive this vaccine. More than 1000 million vaccine doses have been administered worldwide, equal to 13 doses for every 100 people. Uganda has 0.85% of its population vaccinated as compared to US which has over 40% of its population vaccinated and more than 27% fully vaccinated. Most of the vaccines currently in use require 2 doses for a patient to be fully vaccinated; a case in point is AstraZeneca and Pfizer-Bio-Tech. A vaccinated person refers to someone who has received at least one dose of a vaccine whereas a fully vaccinated person is one who has received all required doses of a vaccine. Diseases like Small pox have been completely eradicated by vaccination, there's a shaft of light for COVID-19 as well but it all starts with YOU and ME!

*Phillip Musoke, MBChB 5, Makerere University
College of Health Sciences*



In Africa, we do not have strategies and interventions to fight dementia even when the condition lives among us and is expected to affect many more people as they age. Dementia is robbing many people of their memory worldwide. To understand dementia, one needs to have experienced or cared for a patient with the condition. Dementia makes people lose their life before they actually die. Therefore, we have a golden opportunity to do something about the condition when we still have our memory. My interest in dementia was sparked very early in my life after experiencing and caring for a patient with dementia. No one would like to be asked the same questions every after 5 minutes in a day. These patients go through hell on earth, they forget everyone and everyone forgets them. As a medical student, the greatest

weapon at my disposal to fight an “enemy” is through scientific research. However, before the pandemic happened; If one narrates to you the circumstances around schooling as of January 2020, you wouldn't even believe it compared to the new normal now. The obvious change in times took its effects on our relaxed brains too when ideas started to boil. Seated on my family porch with my smartphone in hand is where the idea of “Assessment of the Knowledge and Attitude Towards Dementia among University students in Uganda” bloomed from. It was in the same year I got to know about the HEPI-SSHU program and that it was accepting applications. Penning down the idea, HEPI took me and my team up to be supported and nurtured. HEPI program provided me and my team with training in research methodology and ethics, guided us through concept development, proposal writing, IRB submission, data collection, and manuscript writing. It was amazing to find out that the majority of the university students in Uganda have a positive attitude towards patients with dementia, whereas a significant number still have poor knowledge of the same. I strongly believe my idea would still be intangible without all the guidance. On behalf of my team, I would like to thank HEPI for the outstanding support, mentorship program, which was constant, always available, and very resourceful. I walk away from this project daring and with a lot of motivation having put my idea into reality. I encourage all medical students to set goals, work towards them, and mostly if an opportunity arises, embrace it.

EARLY NEONATAL LIFE “GOLDEN HOUR”, THE POWER OF FIRST IMPRESSIONS:

Dr. Rachel Owomuhangi, Master of Medicine Paediatrics, Year 2, Makerere College of Health Sciences



The power of first impressions is well known and none is more significant than the experiences of the newborn. The first 60 minutes after birth are critical for both the mother and her newborn. It has been called the “golden hour” (sharma and shastri, 2017) adopted from adult trauma where it is used for the initial first hour of trauma management. This is a critical time for the transition of a newborn moving from intrauterine life to external environment. The first hour of life requires rapid adaptation of multiple newborn organ systems which include the pulmonary, circulatory, metabolic and hemodynamic changes but also psychological development. The neonatal management within the first hour has an impact on both immediate and long-term outcomes of all neonates. The

3 key components of the golden hour consist of maternal-neonatal skin-skin contact, delayed cord clamping and breastfeeding, all of which serve to improve mother-newborn bonding and neonatal adaptation (Moore, Bergman and Medley, 2016). Skin to skin involves the performance of newborn assessments with the newborn on his/her mother’s abdomen and delay of non-urgent tasks for at least 60 minutes. There is good evidence that normal, term newborns who are placed skin to skin with their mothers make a better transition from fetal to neonatal life because it promotes, neonatal thermoregulation, decreases newborn stress levels, improves mother-newborn attachment and encourages breastfeeding (Philips, 2013). Our first impression outside the womb, the welcome reception we receive immediately after birth may color our perceptions of life as difficult or easy, hostile or safe, painful or comforting, frightening or reassuring, cold and lonely or warm and cherished. If babies are indeed capable of forming memories that remain in their subconscious, then their early experiences at birth matter much more than we have been led to believe. Therefore, if the events surrounding this first hour have the potential to set the stages of patterns of subconscious thought process and memories that persist for a life time, then they are capable of influencing greatly behavior and social outcomes. Hence it’s a serious mistake for us health care givers who provide care for neonates to assume that principles of the sacred hour don’t really apply to psychological development because the risk of suppression or disruption of this process is very significant and potentially last a lifetime.

*Rubahika K Ntabaare, Senior House Officer;
Department of Paediatrics; Kabale University
School of Medicine*



In late August 2019, I matriculated at Kabale University School of Medicine for the Master of Paediatrics and Child Health. Two months later, I was invited to attend a Manuscript Writing workshop. That was the first time I learnt about HEPI-SHSSU. The workshop was conducted under the auspices of HEPI-SHSSU facilitators who were luminary Scientists. It was not only manuscript writing that was taught but also other important components such as the student mentorship program.

Truth be told, at the outset I was green, as in VERDANT. What is a manuscript? What is a publication? What are these reference systems: EndNote, Zotero and all? Then there was this dread that looms around research in masters programs that likens it to a colossal active volcanic mountain with streams of magma that one must surmount to graduate. But, by the time the seminar reached its end, all my fears had been assuaged and I was inspired immensely to have a go at being a Scientist, not just a doctor. About a year later, I got knowledge of a call for applications to the HEPI-SHSSU Master's Fellowship programme. I submitted my candidature and I was fortunate to be a beneficiary of the scholarship. This tremendously improved my financial status quo; but in exceeding measure, it enhanced my

academic zest by entrusting me with a mentor. I was enraptured to learn that the seasoned researcher, Prof James K Tumwine, was going to be my shepherd! We have since hit the ground running putting together a study to explore the scourge that creeps from valley to valley taking daughter here and son there: MALNUTRITION. I was happy to browse the previous editions of the HEPI-SHSSU newsletter. The articles were so uplifting. I was particularly impressed by the accomplishments registered by the undergraduate students in research. I, as an undergraduate, did not have such exposure and in any case, I did not know of any initiatives that encouraged medical students (undergraduate) to generate and carry out research activities. Research was viewed as the cross to be carried by the residents, and all we had to do was to attend to the books and clinical tasks, pass and go treat the world. Manifestly, it is seminal to introduce the Scientist/Researcher concepts right from the first year of medical school so that students can exercise both their ingenuity and curiosity.

This will go a long way to bolster the facility of their post-graduate studies and consequently yield quality Scientists. Hence, I have been abetted to liaise with the student's medical association here at Kabale University and commit my participation in the activation of the Research and Writer's club and Medical Journal homologous to those in the senior sister institutions. I hope that, in the budding minds, it will nurture the researcher's craft: Observe, Question, Find-out and Tell the world. If indeed iron sharpens iron, then surely HEPI-SHSSU is the smith. HEPI-SHSSU has undoubtedly levelled the field and fostered pedagogic interaction amongst faculty and students of the partner institutions. No one is alone. It is an absolute privilege to be HEPI-SHSSU protégé, and I am forever grateful to the consortium and its management for this revolutionary project.

Sarah Maria Najjuka, MBChB Year 5, Makerere College of Health Sciences

I am Sarah Maria Najjuka, a fifth-year medical student at Makerere University College of Health Sciences, a mentee and an awardee of the HEPI project. My curiosity about human behaviour drives my passion for involvement in scientific research. During my clinical rotation in Palliative care medicine, I was intrigued by the caregivers' role in the care of patients with advanced cancer which inspired our current study exploring caregivers' experiences of caring for patients with advanced cancer. With the call for undergraduate students interested in research, my teammates and I hurriedly came up with concept which was fortunately selected among many to be funded by the HEPI Project. Following our selection, we went through a training that equipped us with the knowledge and skills in conduction of scientific

research from proposal development through IRB submission, budgeting and finance management and manuscript writing. This enhanced our confidence for hands-on practice to undertake our study with guidance from our mentors. Joining the HEPI project was both timely and a great life time opportunity to fulfill my research dream and for my professional growth. In addition to sponsoring my research project, I was honored to be sponsored by HEPI to attend The Network Towards Unity For Health (TUFH) conference 2020. In this conference I participated in exciting discussions about interprofessional education and I got more insight in to research as I listened to a number of research projects presented all over the world. I would like to extend my sincere gratitude to the entire HEPI program especially prof. Sarah Kiguli for both financial and professional support towards our project. We look forward to completion of the study and dissemination of our research findings.



Sarah Najjuka (right, in a white clinical coat) conducting an interview

Ssebatta Gerald, Intern Nurse Kampala International University - Teaching Hospital



My name is Ssebatta Gerald, currently an intern nurse at Kampala International University-Teaching Hospital, completed a Bachelor's degree of science in Nursing from Makerere University College of Health Sciences. Since most of scientific research starts with a concept, during my clinical rotation at family planning clinic Kawempe National Referral Hospital, I observed that women discontinued their method of contraception before the recommended period. This was before when I had gone through a course unit called research methods and critical inquiry that equipped me with the knowledge concerning research process. It also gave me an insight that through research I would be able to find out the magnitude of women who discontinue implants early, reasons to why they opt to do so, and also the possible solutions available. Being an undergraduate nursing student, one of the core tasks is to submit a research dissertation, and this provided me

with an opportunity to start writing a research proposal about "Early Contraceptive Implants Removal and associated Factors among Women using implants at Kawempe National Referral Hospital, Kampala Uganda." The proposal received IRB approval but afterwards, I faced a challenge of shortage of funds necessary for data collection and analysis. I talked to my research supervisor, Dr. Scovia Mbalinda Nalugo Nursing Department Makerere university, whether I was eligible for a grant from HEPI-SHSSU project that I had seen on the notice board, of which she said yes. Fortunately, with great pleasure I was contacted by the HEPI-SHSSU secretariat that I was among those who had received a research grant after I had applied. Never the less, around that time learning institutions were closed due to covid-19 pandemic and most of the services were under lockdown especially transport. The situation during that time was not favourable for collection of data, mentorship, and scientific consultation. Currently, I have submitted to BMC Women's Health Journal and the manuscript is under revision. I appreciate the grant and mentorship received from HEPI-SHSSU program together with my colleagues that enabled me to complete undergraduate research. I thank Dr. Scovia Mbalinda Nalugo for mentorship and supervision without hesitation throughout the research process.

SUPPORTING RADIOLOGY TRAINING TO TACKLE GAPS IN SERVICE DELIVERY

Dr. Walubemebe Jonathan, Masters of Medicine in Radiology, Makerere College of Health Sciences



Dr. Walubemebe Jonathan in the Radiology Department

Radiology is vital medical imaging (x-ray, CT, ultrasound, MRI, reporting systems, minimally invasive procedures etc.) essential for healthcare. According to the world health organization, over half the world lacks access to radiology services, impacting diagnosis and treatment of cancer, heart disease, infections, trauma, maternal-infant complications, and much more. This global radiology gap poses a threat to public health. For example, pregnancies cannot be monitored easily without ultrasound; the effectiveness of tuberculosis treatment can be assessed by chest X-Rays, and CT scanners can catch incidences of internal bleeding. A countrywide research article published in the Pan African Medical Journal by Elsie Kiguli et al, showed that there were 15.5 units of equipment per one million people, which is less than the WHO recommendation of 20 units per one million. Regarding the equipment distribution across the country, the research showed a skewed distribution. Most of the radiology equipment was found within the Central region of Uganda, a more urbanized and economically advantaged compared to other regions(1). This mal-distribution is not

only for the equipment but also the radiology human resource since the availability of human resource depends on the availability of equipment. A study by Kawooya et al (2), revealed that the imaging coverage for the five selected hospitals was 36% and the hospital based utilization was 186 per thousand, reflecting low performance levels, largely attributable to inadequate funding. There were shortfalls in imaging requisitions and inefficiencies in the imaging systems, financing, and health policy. It is not only the lack of equipment which is causing the global radiology gap but also the quality of equipment. In Uganda, Onzinga et al, found that imaging premises were of poor quality and output of imaging services was generally low (3). Uganda is experiencing an epidemiological transition like most of sub-Saharan Africa where cardiovascular diseases like stroke and its major risk factor hypertension are on the rise. There will be increased demand for the already limited radiological services especially to tackle non communicable diseases. Having started my medical practice in a mostly in a rural setting, I recognize that high end imaging by CT and MRI for stroke while important will be inaccessible to a mostly rural poor population in the near future which I intend to serve after my postgraduate training. This precipitated interest in carotid Doppler imaging for stroke, a relatively cheaper imaging modality. However, the financial implications of carrying out such a study demanded I look for some significant amounts of money. It was great news and relief that HEPI SHSSU offered me the opportunity and funds to start this research project. The team and mentors that HEPI is providing are supportive in helping me achieve my dreams of getting the research done. With HEPI tuition and research support, I am confident I will finally achieve my dream of being a radiologist, a win for my rural community I serve. I still believe continuous interactions with the HEPI team will help model me into a better doctor and researcher.



*Wembabazi Abel, Bachelor of Dental Surgery,
Year 3, Makerere College of Health Sciences*



I am Abel Wembabazi, a 3rd year undergraduate student of Bachelor of Dental Surgery at the School of Health Sciences, College of Health Sciences, Makerere University and a Principal Investigator of the HEPI-funded study on 'Prevalence of *Cryptococcus gatti* in patients with Cryptococcal Meningitis at the Infectious Disease Institute, Kampala, Uganda'. I have a strong interest in research that stems from my initial engagement in high school innovative and science clubs.

When I joined Makerere University in 2018, I was further inspired by reading articles on social media, success stories of researchers and the thought of making discoveries that can benefit the health care and science community. When I saw the HEPI advert for undergraduate students to conduct and learn the research process, I knew this was my call and counted myself lucky to have the opportunity apply. I immediately started a search for a mentor and found Dr. Beatrice Achan who is very helpful and encouraging. Thereafter, I organized my colleagues into a team and submitted our application with guidance from our mentor. After application, I waited anxiously until I received a congratulatory e-mail from

the HEPI coordinator. Hooray! My dream was becoming a reality. However, just a week to the commencement of anticipated research training, the ongoing COVID-19 pandemic intensified and the country was put under total lockdown on 18th March, 2020. This brought in uncertainty about the future of the research training although I remained hopeful. Due to the pandemic, activities slowly became digitalized until it was the 'new normal'. Following, HEPI staff invited me to defend our research concept via zoom, which I did well.

The next activity was undergraduate pre-research training which we also attended on zoom for three weeks. My experience from the pre-research training was eye opening to research and its related activities. I acquired knowledge and skills in identifying a research gap, writing a concept, proposal and research protocol from various interesting speakers. In the course of the training, HEPI also allocated the participating teams a HEPI mentor and thus got a second mentor, Prof. David Meya who is very instrumental too. This has since widened my network base. Another experience was the IRB process after developing the protocol, which included a number of reviews and research protocol adjustments until our research project was approved. At the moment, the project is at the stage of data collection.

I applaud HEPI for funding us to conduct this project. We are grateful for the opportunity to participate, learn, conduct research and related activities. I believe our research findings can foster sustainability, development, improvement in the health care and influence policy both at national and international levels thus, better standards of living.

Jane Frances Namatovu, Jude Onyango, Simon Mutauza, Edith Nshimye & Cynthia Mukisa
 Department of Family Medicine, Makerere University College of Health Sciences

Clinical skills training for undergraduate students at Makerere University medical school starts as early as the first of their pre-clinical years of study. The HEPI-SHSSU project at Makerere University College of Health Sciences (MakCHS) in collaboration with Yale University currently support continued faculty development to offer skills training through regular online workshops for academic staff.

The objectives of the skills training in the undergraduate curriculum are to; promote early clinical exposure among pre-clinical students, develop students' confidence in dealing with clinical scenarios, promote knowledge application in clinical scenarios, increase collaborative learning, and demonstrate proper clinical skills in a safe learning environment where students can learn from their mistakes without negative repercussions as would be the case in an actual patient environment. The assumption is that early training will ensure better clinical reasoning, improved confidence in patient handling, improved clinical skills and collaborative practice during the clinical years and beyond.

The skills to be trained are aligned to the courses in the existing students' curriculum so that they appreciate the relevance of the training sessions. These skills are also very important and relevant for the other medical students apart from those in the MBChB program; for instance, the training in medical history taking that emphasizes the important aspects of effective 'health worker-patient' communication.

The methods employed to deliver the training complement each other. These include;

simulation, role-play, visual demonstrations, group work and timely feedback.

In practice, the training session for a selected clinical skill takes about three hours to complete. The average number of students ranges between 10 and 20 with two to four faculty facilitating the session.

The session begins with self-introductions from students and faculty followed by a PowerPoint presentation on; the session objectives, the science, and other basics of the skill to be learnt. This is followed by an appropriate video clip demonstrating the skill to be learnt, and a question and answer session before dividing into groups to practice among themselves.



Introductory session by Dr. Onyango Jude (Standing)

In groups of three to five, a student volunteers to simulate as a patient and another student systematically follows through with the process of history taking or physical examination as demonstrated by the health worker in the video clip. The other students observe and give feedback to the pair with guidance from faculty before another pair is given a chance. The Faculty distribute themselves equitably supervising each group to steer them in the right direction where necessary.



2nd year medical students practicing the skill of history taking

The whole group then reconvenes to have a volunteer pair demonstrate what they have been practicing, immediate feedback is given from fellow students and faculty on what was well done and what needs improvement. The session is crowned by a general summary on the skill by faculty.



A pair of students demonstrating to the whole group after practice for constructive feedback

The experience has demonstrated to faculty that online learning resources are very helpful, for instance those found on authentic sites from YouTube. Large student numbers require faculty commitment because the students themselves value the sessions. Students are a learning resource themselves because they are always willing to simulate. We are yet to carry out a formal evaluation of the sessions so that recommended areas of improvement are worked on for continued improvement.

Tumwebaze Elizabeth Tracy, Department of Immunology and Molecular Biology, Year 2, Makerere College of Health Sciences

Postgraduate studies in Africa are very expensive, even though career development and the generation of ideas for the betterment of the community depend on them.

Having successfully applied for the Master of Science in Immunology and Clinical Microbiology, I gladly ventured into the program without clear knowledge of where the tuition fees or research fees would come from. After the first year of study, I was awarded a HEPI-SHSSU scholarship that promised to take over the tuition payments, provide research funding and facilitation. I have since enjoyed the benefits including mentorship, encouragement, and being constantly checked on by a fellowship that cares for the welfare of its members.

I am currently in the final stages of developing my research proposal intended to quantify and correlate HIV-1 plasma p24 antigen with viral load in Ugandan patients, whose data and findings will be used in the development of an HIV p24 sVL assay for viral load screening and Early Infant Diagnosis of HIV-1 in Uganda, and possibly across borders as a surrogate and cheaper method.

I intend to maximize the resources provided by HEPI-SHSSU to finish my research to dissertation level as well as publishing it in a recognised journal, and will forever be grateful to the fellowship for the thorough skill impartation, confidence boost, encouragement and facilitation even as I encounter new research projects.



Tumwebaze Elizabeth Tracy in the Department of Immunology and Molecular Biology Lab