

Inside this issue

Building infrastructure
for digital health tech-
nology in Africa... p. 5



FOGARTY INTERNATIONAL CENTER • NATIONAL INSTITUTES OF HEALTH • DEPARTMENT OF HEALTH AND HUMAN SERVICES

Fogarty welcomes international Fellows & Scholars

For the first time since 2019, NIH hosted orientation for Fogarty Global Health Fellows and Scholars in the LAUNCH program. Over the last two decades, trainees have embarked on their 'Fogarty year' with this orientation at NIH before being embedded into established, in-country research teams. The cherished tradition continues to provide an opportunity for the new cohort to connect, discuss vital global health topics, and get energized as they begin their research endeavors.



Incoming fellows and scholars in Fogarty's LAUNCH program gathered at NIH for the first in-person orientation since 2019.

Fogarty International Center

Peru's research infrastructure continues to blossom

By Judy Coan-Stevens

During the early years of the AIDS epidemic, Fogarty pivoted from training mostly European researchers to building and strengthening research capacity in low- and middle-income countries. It was within that context that Fogarty-supported training programs in Peru began in earnest during the early 1990s. These initial programs, which combined training with research, aimed to develop a network of health scientists, while fostering collaborations with health research institutions both inside and outside the South American nation.

In the words of Dr. Andres "Willy" Lescano, a former Global Infectious Diseases (GID) program trainee, seeds planted decades ago "fell onto fertile ground." Thirty years later, former trainees and projects resulting from those original programs and partnerships continue to blossom.

The Center of Technological, Biomedical and Environmental Research at the National University of San Marcos, the Universidad Peruana Cayetano Heredia (UPCH), the

Alexander von Humboldt Tropical Medicine Institute (IMTAvH), and IMPACTA Perú serve as hubs of research in Peru today. All have benefitted from various Fogarty programs.

For example, the AIDS International Training and Research Program (AITRP) supported some of Peru's earliest Fogarty trainees. Former AITRP trainees include Dr. Jorge Alarcón, an executive director at the National University, and Dr. Carlos Cáceres Palacios, vice-president of research at UPCH. Another former trainee is Dr. Patty García, Peru's former Minister of Health and the former dean of UPCH's School of Public Health. Garcia, who continues to mentor trainees (primarily through Fogarty's LAUNCH program), said, "Fogarty's investment in Peru has been catalytic."

Other Fogarty programs have also contributed to the educations of influential Peruvian scientists. Drs. Monica Pajuelo, Maribel Paredes, Patricia Sheen, Manuela Verastegui, and Mirko Zimic all received training through

... continued on p. 2

FOCUS



Fogarty's Bioethics program

- A seat at the table: Diversifying voices in bioethics
- Reflecting back, looking forward in bioethics
- Expanding bioethics in Uganda
- Bioethics program perseveres in wartime Ukraine

Read more on pages 6 – 9

Peru's research infrastructure continues to blossom

... continued from p. 1

Pajuelo, Maribel Paredes, Patricia Sheen, Manuela Verastegui, and Mirko Zimic all received training through the GID program, while Dr. Stella Hartinger trained in Fogarty's Environmental and Occupational Health program and Dr. Maritza Calderón Sanchez was a former Fogarty scholar. These seven scientists all run UPCH labs; between them, they've mentored 30 former and current Fogarty trainees.

Dr. Javier Lama, director of research for IMPACTA Perú, counts himself among the AIRTRP alumni. The clinical research center focuses on HIV care and clinical trials and regularly hosts Fogarty fellows and scholars. "The scholars reinvigorate us," said Lama.

Current Fogarty fellow Juliet Bramante will work with Lama on comparing HIV-related and skin disease-related stigma in urban Lima with experiences of stigma in the rural Loreto region.

Dr. Theresa Ochoa, director of IMTAvH and former GID trainee, is now principal investigator on a GID grant. The Peru Vanderbilt – PREvention through Vaccination Training (PREVENT) program plans to support 10 trainees. The PARACAS program, run by IMTAvH's Dr. Eduardo Gotuzzo, has provided doctoral-level implementation science mentored-research training to 14 researchers over the last decade.

Dr. Pablo Tsukayama, a former global health Fellow, focuses on bioinformatics. His lab identified the Lambda variant of COVID-19. His goal is to decentralize genomic sequencing to spread capacity beyond Lima to other parts of Peru, hopefully with help from a Fogarty training grant.

The research landscape in Peru has been improved by grants from Fogarty and other NIH institutes and centers, according to Lescano. Now an associate

professor at UPCH and adjunct professor at Johns Hopkins University, he counts "generations of Peruvian scientists born out of Fogarty D43 (training) grants." These generations have contributed to scientific discovery and helped build infrastructure so that local doctors, health care providers and scientists can improve their skills while advancing regional health.



Fogarty International Center

Dr. Mirko Zimic, former trainee in Fogarty's GID program, runs the Laboratory of Bioinformatics at UPCH.

NIH hosts symposium on emerging topics in global health

NIH recently hosted the "Emerging Topics in Global Health" symposium, sponsored by the Global Health Interest Group. Topics included climate change, health equity, and advances in health technology.

Arctic thawing and disease

Our planet's north is heating up twice as fast as the rest of the globe, causing permafrost—the frozen soil covering a quarter of the northern hemisphere—to thaw. Yet ice is an important ecological barrier that limits pathogen spread from old hosts to new. This along with the ongoing reduction in Arctic ice and other factors contribute to changes in infectious disease distribution and risks.

Proof of this danger is the increased number of mammals found stranded

and sick with protozoal disease, noted Dr. Michael Grigg of the National Institute of Allergy and Infectious Diseases in his presentation.

"Expansion of Arctic parasites south to susceptible populations with no pre-existing immunity is an inevitability," said Grigg. For example, the geographic range of Arctic ringed seals, in which the protozoan parasite *Sarcocystis pinnipedi* are prevalent, now overlaps with that of gray seals. In March 2012, more than 400 gray seals died when a *Sarcocystis* species spread a fatal form of hepatitis among them.

Patients' quality of life

By 2040, scientists predict a 90% increase in cancer cases in Lao People's Democratic Republic

(PDR) compared to 2020. Dr. Lena Lee, an intramural scientist at the NIH Clinical Center, presented an observational study focused on cancer patients' quality of life.

Of 193 study participants, more than a quarter (26%) were not receiving cancer treatment, either because of facility-related factors, such as a lack of trained providers and a shortage of medication, or due to high patient-related costs (for transportation, care, and drugs). In fact, 87% of participants experienced financial difficulties related to their illness.

Lee proposes developing and implementing health equity policies and guidelines to improve symptom management. She also recommends financial support for poor patients to reduce out-of-pocket expenses.

Profiling the lung microbiome to fight COPD in Uganda

By Susan Scutti

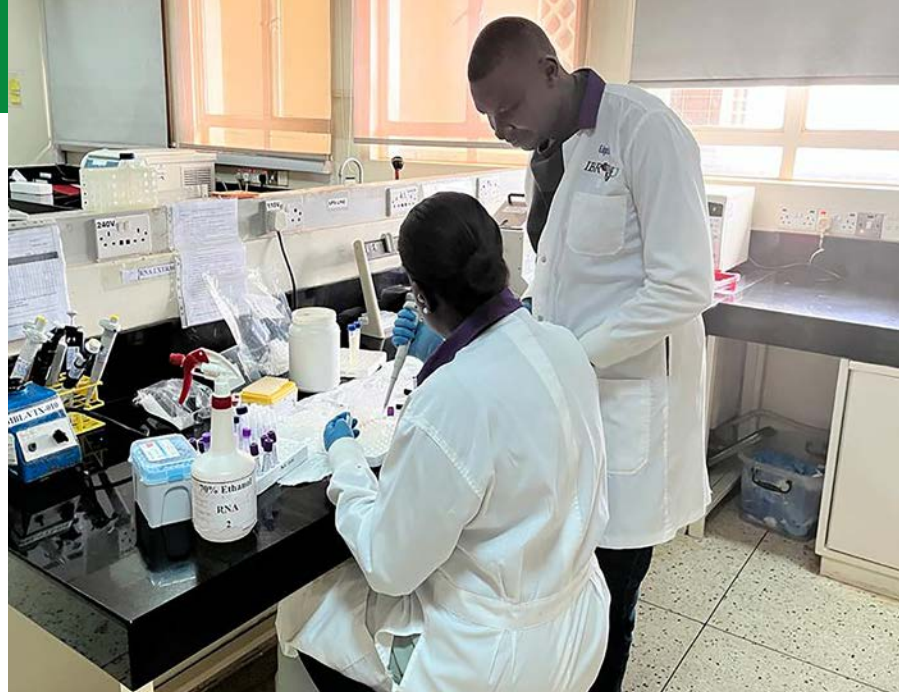
Attempting a bold new idea—a scientific first—can inspire a young researcher. Dr. Alex Kayongo, a Fogarty-trained investigator, is using bronchoscopies to examine the lung microbiome of Ugandans living with HIV and chronic obstructive pulmonary disease (COPD). His work at the intersection of these diseases is unique and so is his approach to understanding disease phenotypes.

COPD, an inflammation of the lungs that causes wheezing, cough, and difficulty breathing, has grown more common among people living with HIV as widespread use of antiretroviral therapy has increased longevity. In rural Ugandan clinics, COPD prevalence is estimated at approximately 6%. “We didn’t find significant differences in the prevalence of COPD in patients with HIV versus those without, but there was something peculiar about the association of HIV with COPD,” said Kayongo, an immunology fellow at Makerere and Rutgers universities. The difference: Severe COPD is much more common among people living with HIV. Reasons why this is the case might lie in the bacterial communities that inhabit patients’ airways, thought Kayongo. A simple study profiling these microbes showed unique microbial populations and microbial density in the individuals with both diseases. This prompted Kayongo to identify the core microbiome composition to understand whether “bystander” organisms might be the drivers of inflammation in individuals with COPD.

A mentor pushes for progress

Kayongo chose a semi-invasive procedure called sputum induction, where a patient inhales nebulized saline solution (a mist), which liquifies airway secretions, and promotes coughing and expectoration. “It was a prerequisite for us to put in place a negative pressure environment, so these procedures were safe and would not transmit infectious pathogens, like TB, to those doing the inductions or to other patients.” Based on this work, Kayongo created a profile for each patient’s microbiome and immunity, yet his mentor, Dr. Trishul Siddharthan suggested he use bronchoscopy to look at the distal airways.

Kayongo enlisted the help of the bronchoscopy team at Makerere, Professor William Worodria and Dr. Rejani Lalitha Kumari. They agreed to conduct the delicate



Dr. Alex Kayongo's lab continues to decipher the lung microbiome to better understand immune responses in people living with HIV and COPD.

Photo courtesy of Alex Kayongo

procedure, which involves passing a fiber optic tube through the mouth or nose into a lung airway, introducing a sterile saline solution, and collecting fluid for analysis. Kayongo, himself, had the necessary training to perform the in-depth lab work and analysis.

Sadly, an Ebola outbreak interrupted his progress in September 2022. “We delayed recruitment until February 2023, when Uganda was declared Ebola-free. We started our first procedure later that month. To date, we’ve performed about 40 bronchoscopies,” he said.

Personal development and institutional growth

His lab has already published three manuscripts and, as part of the project, he’s mentoring three research fellows in microbial immunology. “Currently, I’m the lead of the lung infection and immunity working group at Makerere University Lung Institute, established in 2015,” said Kayongo. “Its mission is to conduct high quality lung health research that integrates disease prevention, clinical care, as well as training in sub-Saharan Africa.” The lung institute has nine working groups, which have active projects that are generating good preliminary data while influencing policy within Uganda as well as Africa at large, he noted.

As Kayongo continues to decipher the microbiome code in the context of host immune responses, the institute where he works is poised to grow.

“There are some limitations that we face in Africa but through collaboration with Fogarty and the U.S., we’ve been able to get training as well as gain access to high-end technologies. My mentors, as well as my colleagues based locally and in the U.S., Germany and the UK, have been critical in making sure I do robust and rigorous research on the continent.”

PROFILE

TB drug interactions among people living with HIV in Uganda

As winner of the 2018 Stephen Lawn TB-HIV Research Leadership Prize award, an award that acknowledges young researchers conducting promising work focused on reducing the disease burden of tuberculosis (TB) and HIV/AIDS in Africa, Dr. Christine Sekaggya-Wiltshire is considered a trailblazer in her field of study.

A clinical scientist who leads the TB and HIV clinic at the Infectious Diseases Institute (IDI) at Makerere University, Sekaggya-Wiltshire also works as a physician in the hematology unit at Mulago Hospital. Her research at IDI focuses on drug pharmacokinetics, the study of how drugs are absorbed and metabolized to better understand their impact on the patient. As an investigator in pharmacokinetic studies, she specifically focuses on the interaction between anti-tuberculosis drugs and antiretroviral drugs taken by people living with HIV. TB drugs are known for their high levels of toxicity that can often cause adverse events like nerve pain and bone marrow suppression, especially in patients co-infected with HIV.

The first phase of her Fogarty project, which was the foundation of her Ph.D., was a systematic review of the existing literature on the correlation between the blood concentration of anti-TB drugs and treatment outcomes in TB-HIV co-infected patients. At the time, Sekaggya-Wiltshire found conflicting evidence around whether or not concentrations of anti-TB drugs in the blood correlate with the levels of toxicity to the patients and, ultimately, whether or not these concentrations are associated with curing TB disease. In her larger Ph.D. project, Sekaggya-Wiltshire studied a cohort of 268 patients to determine if the blood concentration of anti-TB drugs was associated with toxicity and time to cure among patients living with HIV.

She found through this review and the cohort study that people living with HIV who were treated with the recommended doses of Rifampin and Isoniazid, two common anti-TB drugs, were not achieving the recommended concentration of the drugs in their systems and that there was no correlation between the level of



Christine Sekaggya-Wiltshire, MD

Fogarty Fellow:	2015-2016
U.S. institution:	University of North Carolina, Institute for Global Health and Infectious Diseases
Foreign institution:	Infectious Diseases Institute (IDI), Makerere University, Uganda
Research topic:	Drug pharmacokinetics and non-malignant hematology

anti-TB drugs and toxicity to the patient. While toxicity levels were not affected, more studies are needed to determine if these lower levels of anti-TB drugs in patients' blood are enough to fight off TB microorganisms.

Since completing her Fogarty Fellowship, Sekaggya-Wiltshire serves as a mentor for up-and-coming Fogarty Fellows at IDI. "Seeing what it takes to complete this project independently from inception to publication and helping others do the same has been invaluable to my career."

Today, Sekaggya-Wiltshire continues to supervise care for complex cases of TB and is currently studying the clinical predictors of adverse reactions related to TB preventive therapy in people with and without HIV, with support from the National Institute of Allergy and Infectious Diseases (NIAID). Her current study aims to describe the adverse events or drug reactions people get when taking a three-month regimen of TB preventive medication and to determine who is susceptible to these adverse events and what determines who will experience them.

She hopes to continue building capacity for pharmacokinetics research in sub-Saharan Africa, especially for early-phase clinical trials, which are often started in the West and later brought to the region.

"We need to build our capacity to implement early-phase clinical trials here not only for the researchers but patients as well because the burden of disease is here."

DESHEN MOODLEY, PHD

Deshen Moodley, an associate professor at the University of Cape Town, co-founded the South African National Centre for Artificial Intelligence Research (CAIR). After completing his master's in computer science, he worked at a series of software development companies in South Africa and abroad. Returning to the continent in 2001, he completed a Ph.D., specializing in AI, and eventually lectured at the University of KwaZulu-Natal (UKZN). He's been a visiting researcher at Massachusetts Institute of Technology (MIT), U.S., University of Edinburgh, UK, and University of Muenster, Germany. His current research is carried out within the AI Research Unit at the University of Cape Town, where he holds the SARCHI Research Chair in AI Systems.



How has your experience in industry influenced your career?

The massive advantage is I understand the skills our future computer science graduates will need to become employed in the field. Comprehending high-level corporate management has been incredibly valuable in terms of my own research management and leadership. Software engineering is a very professional discipline. Setting up and managing organizational structures is something I learned on the job, so I've assumed several leadership roles, including heading the computer science department at UKZN, based on that experience.

What brought you back to South Africa?

My last industry job was at a startup in Denver, Colorado, back in 2000. I was a typical techie and enjoyed the start-up culture—despite working long hours. As I entered my late 20s, I decided that this vibrant corporate environment wasn't enough to drive me for the rest of my life and I also felt an emotional attachment to the community that had supported me. I decided to return to South Africa, to UKZN in my home province to begin my Ph.D. and to take up a position as a lecturer. There, I was able to cultivate my own skills while developing young people and sharing my experience with them. I took a long time to complete my education because I put a lot of time into training students and teaching Java programming to doctors and health care professionals (as part of an NIH program). For me, impact was more important than building an academic profile.

How does your work in South Africa influence global health research?

Along with CAIR, I work with Jembi Health Systems, an NGO which designs and builds information systems for tackling health problems. Jembi worked in Rwanda, Mozambique, and a few other continental African nations, so we produced a body of knowledge for creating national health information systems.

Settings with less access to technology constantly import it from other countries, yet there are many differences between high-income and low-income countries—resourcing, culture, political environments, and other dissimilarities. When people have tried to use non-local technology, there have been some very costly failures. I believe that it is very important to train innovators and build infrastructure for creating new digital health technologies in Africa. In this way, we can contribute to other nations in the region and beyond... and even expand to nations with much greater access to resources. My international colleagues will say, “Hang on, your ideas are equally applicable to high resource settings. Your technologies would work in our rural areas or for certain populations.”

What's ahead in the health informatics field?

I'm working on a low-cost wearables project with my Ph.D. students. We want to dynamically use machine learning to build a model of an individual's personal health in real-time using wearables, and then we want to integrate this monitoring and sensing into their daily activities, so they can adapt and learn their own optimal health state.

My bigger vision is that AI and the broader advanced technologies, like wearables, virtual reality and digital twins (virtual models that accurately reflect individual bodies), could drive more prevention-based public health systems, especially epidemic control mechanisms, in African countries. My colleagues and I are going to publish some interesting pieces about that shortly. Generally, technology is under-utilized in health so there's an opportunity for us to reimagine the ways we see medical solutions. In a low-resource setting, you cannot afford to put all your eggs into the curative basket—it's too costly and we don't have the facilities and staff. For me, prevention is the most compelling idea and I believe that AI can bring radical change to our approach to public health.

A seat at the table: Diversifying voices in bioethics

By Mariah Felipe

While the field of bioethics was established in the 1960s, federal regulations for the ethics of research involving human subjects were not codified until 1972. Exponential growth of biomedical science in the 1970s led to the expansion of bioethics, previously dominated by philosophers and theologians, into a multi-disciplinary endeavor involving anthropologists, policy-makers, physicians, scientists, and the public.

Fast forward to 1997. U.S. trials had shown that the first HIV antiretroviral treatment, AZT, was effective in reducing perinatal HIV transmission (when a mother living with HIV passes the virus to her baby during pregnancy). A complex drug delivery regimen throughout pregnancy, delivery, and during the newborn's first six weeks of life quickly became the standard in wealthy countries. A debate began about the implications of using this treatment in countries where the cost might be prohibitive, fewer births occurred in hospitals, and prenatal care began later in pregnancy, but LMIC voices were largely missing from the debate. This prompted Fogarty to develop a framework to help build bioethics training programs in LMICs and officially launch the International Bioethics Training in 2000.

Fogarty's Dr. Barbara Sina, who manages the program says, "Our ultimate goal has always been to develop research ethics capacity and expertise so that countries can create their own ethical oversight processes and participate equally in the global dialogue on research ethics."

Dr. Florencia Luna, principal investigator of the Training Program in Research Ethics in the Americas, meeting with trainees from Mexico and Colombia in Buenos Aires in 2019.

Fogarty's bioethics training grants were initially designed to help LMIC institutions develop master's level educational opportunities in ethics related to biomedical research involving human subjects. Another early focus was building the capacity of local ethics review boards.

Dr. Nancy Kass is the Phoebe R. Berman Professor of Bioethics and Public Health at Johns Hopkins, where she is also both deputy director for Public Health at the Berman Institute of Bioethics and a professor of health policy and management at the Johns Hopkins Bloomberg School of Public Health. She is also among the first set of grantees who helped shape Fogarty's bioethics program. She says, "The impact of the programs Fogarty created, with minimal funding, is remarkable."

Over the last 23 years, the program has grown from an initial group of just five programs to a network of over 30 covering six continents and has expanded to offer doctoral and postdoctoral level training. Through these programs, hundreds of academics, scientists, and health officials have developed expertise to address the issues affecting their populations in their own contexts.

Dr. Florencia Luna, principal researcher at CONICET (National Scientific and Technological Research Council) in Argentina and principal investigator of the Training Program in Research Ethics in the Americas at the University of Buenos Aires, was also one of the program's inaugural grantees. "The influence that Fogarty has had in our region is enormous," said Luna. "It's impressive to see the impact of training one person; that person goes on to train dozens more in the region."

Given the increasingly collaborative nature of research, and rapidly evolving technology in biomedical research, it's important to bring new voices with different perspectives to the global ethics conversation. "For the future of this program I hope to see more ownership of these trainings by professionals in LMICs infusing local values and priorities," says Kass. "It's already happening, which was always the goal, and Fogarty will remain critical for us as we continue to make that shift."

Photo courtesy of Florencia Luna



Reflecting back, looking forward in bioethics

During their first in-person meeting since 2019, staff and grantees from more than 30 Fogarty-funded bioethics programs met at the Stone House on the NIH campus to discuss the history, current state, and future goals of their individual programs and the Fogarty International Bioethics Training Program writ large.

The Fogarty program supports education and research training to develop ethics expertise in low- and-middle-income countries (LMICs) through collaborations between U.S. and LMIC institutions. These partners develop bioethics doctoral and postdoctoral research training programs that incorporate didactic, mentored research and career development components to prepare trainees for positions of scholarship and leadership at health research institutions in LMICs. The program also supports master's level and skill development training courses, practicum experiences, and mentorship opportunities.

Dr. Robyna Khan of Aga Khan University in Pakistan shared details about the recently funded Bioethics Capacity Building Program in Pakistan. This program has developed 11 new bioethics training courses in the past year and has also published a casebook titled "Bioethics in Pakistan: Local Contexts, Local Cases."

“ We started this program with the goal of including the LMIC voice in the conversation around bioethics, and while we’ve made headway in this area there is still much work to be done.”

Later, Dr. Troy Moon of Tulane University presented to the group an update on the UEM Collaborative Research Ethics Education Program at Eduardo Mondlane University in Mozambique. The program, created in response to the projected growth of research activity in Mozambique, aims to train the next generation of researchers in ethical research and strengthen capacity in the local system for ethical review of human research protocols while also building a network of bioethics educational resources with other Portuguese-speaking African nations.

Dr. Emily Anderson, the principal investigator of the



Dr. Shehu Usman Adamu from the National Open University of Nigeria asks a question at the 2023 Fogarty bioethics network meeting.

Loyola-Ukrainian Catholic University Bioethics Research Training Program, credited the grit and determination of her trainees, along with Fogarty's support, for keeping the program afloat and growing despite the ongoing war. They currently have 10 trainees in the program, four of whom joined in 2023.

Nalini Anand, JD, director, and Blythe Beecroft, global health research and policy analyst, of the Center for Global Health Studies (CGHS) at Fogarty, presented the results of a recent Fogarty request for information on equity in global health research. The responses covered issues such as limited funding opportunities for LMIC investigators, administrative burdens, differences in research priorities between funders and LMIC institutions, among others. The full report is available on the Fogarty website.

Other presenters included Rene Sterling from NHGRI's Ethical, Legal, and Social Implications Research Program, Dr. Michael Parker from the Oxford Ethox Centre and Global Health Bioethics Network, and Dr. Dan O'Conner from the Wellcome Trust, who discussed different grants and funding opportunities for bioethics research.

The last day of the meeting allowed the group to reflect on how the bioethics program came to be, and how it can be improved in the future. Attendees discussed the last evaluation of the program and potential new goals for the next 10 years, emphasizing the importance of local control and input in research ethics issues and projects.

Program director Dr. Barbara Sina said, "We started this program with the goal of including the LMIC voice in the conversation around bioethics, and while we've made headway in this area there is still much work to be done." Biomedical research technology will only continue to change at an ever-more rapid pace, making bioethics research increasingly important. As Acting Fogarty Director Dr. Peter Kilmarx said in his opening remarks, "With issues like genomics research and artificial intelligence growing every day there's job security in ethics research and Fogarty will continue to be supportive of that."

Expanding bioethics in Uganda



Dr. John Barugahare's interest in bioethics is rooted in his background in philosophy. His first in-depth work in bioethics was his Master of Philosophy thesis completed at the University of Bergen, Norway, in 2011 titled, "The Ethics of Scarce Health Resource Allocation: Towards Equity in the Uganda Health Care System."

A senior faculty member and chair of the Department of Philosophy at Makerere University in Uganda, Barugahare currently sits on the research ethics committees at the School of Health Sciences and the Mulago National Referral Hospital, and teaches in two Fogarty-funded bioethics training programs at Makerere.

Early in his academic career, he studied political philosophy focusing primarily on social and distributive justice. Barugahare says, "From an ethical perspective, I was interested in figuring out how we can ensure we give priority to those in the poorest areas who urgently need access to health care the most." Following the completion of his Ph.D., he decided to pursue an academic career in bioethics with the hope of driving social justice in health.

In 2018, Barugahare joined Johns Hopkins University as a Fogarty-funded trainee in bioethics. He studied community engagement in research in Uganda, which was almost unheard of at the time outside HIV research, working to identify the best methodologies for ethical community engagement. During his time at Johns Hopkins, he took several courses in bioethics and was under the mentorship of senior faculty who helped the

fellows identify research areas to write and publish their papers.

Uganda's first touchpoint with bioethics was in the early 1990s with the HIV/AIDs epidemic and mandates requiring community advisory boards and community engagement guidelines in HIV studies. The study of bioethics in the country continues to evolve. Efforts are being made to engage communities, protect vulnerable populations, and ensure ethical standards are upheld nationwide in research and clinical practice. Barugahare chaired a national task force that developed national guidelines for bioethics in research in 2022. While these new guidelines have piqued the interests of potential bioethicists in the country, Barugahare says there are still several barriers to growing the number of professionals in the field.

“Now that we have these two Fogarty-funded programs, there is a great opportunity to grow.”

“It is difficult to get the right people into master's level bioethics training programs, often because of the level of their work experience and lack of funding. On top of that, there are no obvious job opportunities for graduates apart from serving as administrators for research ethics committees, which is more administrative.” He adds that most of these issues are not specific to Uganda or Africa as bioethics continues to find its place as a discipline across the globe.

On a more optimistic note, he says bioethics has become a more prominent part of the conversation in research. “In academia, most people know a little bit about bioethics and are interested, which was not the case before, and now that we have these two Fogarty-funded training programs, there is a great opportunity to grow.”

Today Barugahare continues in his roles at Makerere and is currently a project lead on an H3Africa project titled “Genetics and Genomics Research Towards Context Specific Guidelines.” The research team is asking Ugandans how they think genetics and genomics studies should be regulated, with the ultimate goal of developing context-specific guidelines for this type of research.

Women participate in a community dialog in Uganda.



Bioethics program perseveres in wartime Ukraine

By Mariah Felipe

In 2017, Dr. Emily Anderson, a bioethics professor at Loyola University Chicago, visited Ukrainian Catholic University (UCU) for the first time. She was invited to speak at their School of Bioethics which at the time offered short certification programs but no formal degrees.

After returning to Ukraine to teach several times, Anderson got a sense of what the bioethics community needed. She began working on a partnership to provide master's and doctoral-level degrees for students at UCU, to build capacity in the region.

But just as they received funding COVID-19 began to spread in Europe, forcing Anderson to manage the program and work with trainees from halfway across the globe. Now in 2023, the ongoing conflict in Ukraine has further isolated trainees from their studies over the last year and a half. Despite these devastating setbacks, the program has grown and currently has 10 trainees, four of whom joined in 2023.

The program primarily consists of women, with only two male trainees, reflecting the predominance of women in the health professions in Eastern Europe. Tragically, one of these trainees, Dr. Maksym Basarab, who wrote "Oncology, Bioethics, and War" for the Hastings Center Forum, died of a stroke in 2022 after escaping the war with his family to Poland.

The Loyola-Ukrainian Catholic University Bioethics Research Training Program (LUC-UCU) provides advanced training through doctoral and post-doctoral fellowships in research ethics to scholars and professionals from Ukraine. Fellows spend about one to five years completing online coursework in Loyola's doctoral bioethics program while living in Ukraine.

The hope is that the competencies gained through this fellowship will allow trainees to hold leadership positions at their institutions and teach bioethics, lead ethical reviews of research, and provide consultation on ethical issues to biomedical as well as behavioral and social science researchers.

Dr. Yaryna Pikulytska is a pediatrician and project manager at the School of Bioethics at UCU who started in the program in January 2022. She recently opened an ambulatory clinic in the city of Vynnyky outside of Lviv, Ukraine.

Working in western Ukraine where many of the trainees have relocated to, she had been mostly unaffected by the



Ukrainian Catholic University, pictured, in partnership with Loyola University Chicago, provides doctoral and post-doctoral bioethics training to Ukrainian fellows.

Photo courtesy of Ukrainian Catholic University

strikes from Russian forces. However, on the morning of her interview with Fogarty, there was an air strike in Lviv. In spite of this, she still decided to go through with our interview, which speaks to the perseverance of the trainees in this program.

Pikulytska says that even with the chaos outside, she couldn't imagine giving up on this program. "This program has given me a connection to a normal life without war, to normal people who are living without missile attacks." She also says, "It's allowed us to share our experience and communicate with other students in the program and raise difficult questions about wartime health care ethics."

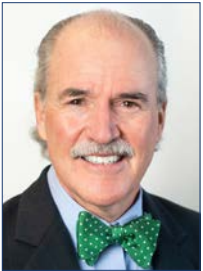
Anderson credits the resilience and determination of her trainees, exemplified by Pikulytska, along with Fogarty's support for keeping the program afloat and growing despite the ongoing war. "Subconsciously, when I'm looking for master's and doctoral level students, I'm looking for some indication of grit, and this group of trainees has shown me that no one is grittier than the Ukrainian people."

While the war in Ukraine makes planning for the future of the program difficult, Anderson believes that research will be a huge part of the rebuilding process in Ukraine, and they need to be prepared. She says, "Rebuilding the research infrastructure will be an important step for Ukraine following the war, and having educated scholars who understand the ethical issues around research will be critical."

DIRECTOR'S COLUMN

By Dr. Peter Kilmarx, Acting Director, Fogarty International Center

Building research resilience in Eastern Europe & Central Asia



In June, I had the opportunity to travel to Warsaw, Poland, and meet with Fogarty grantees and trainees from Eastern Europe and Central Asia. Although there are not many Fogarty-supported programs in this region, there has been a series of grants to support training and research in several

countries since the early 1990s, and former trainees have had leading roles in health research, policy, and programs.

The main reason for the visit was an implementation planning meeting for a new five-year grant for the Ukraine HIV Research Training Program. This is a continuation of a previous five-year HIV research training program with some important differences. One key change is that Dr. Kostyantyn Dumchev, a former Fogarty trainee, will be a co-principal investigator (co-PI) of the program. As scientific director of the Ukrainian Institute of Public Health Policy based in Kyiv, Dumchev will bring his depth of local knowledge to the program. The other co-PI of the Ukraine program is Dr. Jack DeHovitz, a professor at State University of New York (SUNY) Downstate Medical Center and director of the New York State International Training and Research Program.

In the previous five years, considerable progress was made building implementation science research capacity in Ukraine, addressing challenges in access to HIV care related to an ongoing injection drug use epidemic and a poorly developed health care sector. Ukraine, like several other countries in Eastern Europe and Central Asia, is one of the few regions in the world with rising HIV rates. Another key feature of the new program will be a focus on the humanitarian crisis resulting from Russia's invasion of Ukraine. This includes issues of continuity of HIV care in the context of population displacement, supply chain disruptions, attacks on medical facilities, and widespread mental health challenges.

It was very inspiring to hear how Dumchev and his colleagues have been able to continue supporting and tracking care and treatment for Ukrainians living with HIV

infection as they were displaced by the hostilities. They have even been able to continue collecting research data on retention in care and adherence to HIV medication by their study participants. Dumchev shared that the ability to maintain contact and provide support has been important to the health and well-being of their clients, and has given the study staff a sense of purpose and cohesion during very difficult times.

There are currently six Fogarty grants in Ukraine including research training on bioethics and noncommunicable diseases and research on HIV stigma and brain disorders. Five of the six principal investigators were present at the meeting. All concurred that it is important to their teams for these programs to continue despite the challenges, in part as an expression of their optimism and hopes for a future with a strong research ecosystem and evidence-based health policies.



During his visit to Warsaw, Dr. Peter Kilmarx met Dr. Alyona Mazhnaia, a former trainee of the Fogarty-supported Ukraine HIV Research Training Program.

Photo courtesy of Peter Kilmarx.

Also present were Dr. Mamuka Djibuti from Tbilisi, Georgia, and Dr. Zhamilya Nugmanova, who joined virtually from Almaty, Kazakhstan. Both are co-principal investigators

for Fogarty HIV research training programs in their countries and, together with others from the region, provided valuable guidance on HIV research training in post-Soviet academic and public health settings. Other health officials from Poland and Ukraine also joined the meeting, together with colleagues from the U.S. CDC based in Ukraine and Georgia. I was pleased to be able to meet with these exceptional leaders and learn about their accomplishments and challenges and about potential areas for future collaboration, including possibilities for a regional Ph.D. program and research on a concerning surge in antimicrobial resistance and other conflict-related health challenges. My message of strong support and encouragement to form additional partnerships and apply for more grants from Fogarty and NIH was well received. I came away with the impression that much has been accomplished in the region and there is substantial local support and interest in further expanding partnerships and research areas. The conflict, unfortunately, presents new research imperatives and opportunities. NIH-wide encouragement and full support for competitive funding applications from the region should continue.



NIH selects Marrazzo to lead NIAID

Dr. Lawrence Tabak, acting NIH director, has named Dr. Jeanne Marrazzo as director, National Institute of Allergy and Infectious Diseases (NIAID). Marrazzo is currently the director of the Division of Infectious Diseases at the University of Alabama at Birmingham. She is expected to begin her role as NIAID Director in the fall.



Troyer named NHGRI extramural director

NHGRI has appointed Dr. Jennifer Troyer as the incoming director of the Division of Extramural Operations (DEO) within their Extramural Research Program. As DEO director, she will provide leadership in coordinating the institute's extramural research grants, operations and policies. Troyer was NHGRI program director for the H3Africa program.



NIDCR scientists recognized by IADR

Drs. Rena D'Souza, John Chiorini, and Niki Moutsopoulos of the National Institute of Dental and Craniofacial Research (NIDCR) received 2023 International Association for Dental Research (IADR) Distinguished Scientist Awards. D'Souza, director of NIDCR, received the IADR Distinguished Scientist Award in Craniofacial Biology Research for her work studying tooth anomalies like dentinogenesis imperfecta, ectodermal dysplasia, and cleft palate.



Gray steps down as SAMRC President

Dr. Glenda Gray has resigned as the president of the South African Medical Research Council, the first woman to hold the position. A former Fogarty trainee, Gray serves as co-principal investigator on the HIV Vaccine Trials Network (HVTN) and board chair of the Global Alliance for Chronic Diseases (GACD).



Deputy U.S. Global Malaria Coordinator retires

After more than 40 years of service to the global malaria community, Deputy U.S. Global Malaria Coordinator Dr. Rick Steketee will retire. Steketee has been instrumental in guiding the global malaria community on issues ranging from maintaining malaria services during the COVID-19 pandemic to maximizing the impact of the new malaria vaccine.

State announces health security bureau

The U.S. Department of State has launched a new Bureau of Global Health Security and Diplomacy, with the mission to prevent, detect, control, and respond to infectious diseases. Dr. John Nkengasong will lead the bureau, serving as Ambassador-at-Large, U.S. Global AIDS Coordinator, and Senior Bureau Official for Global Health Security and Diplomacy.

UN issues state of food security report

The global assessment of the state of food security and nutrition from the UN's Food and Agriculture Organization (FAO) found global hunger in 2022 far above pre-pandemic levels. While hunger at the global level did not worsen between 2021 and 2022, economic recovery from the pandemic was dampened by the global repercussions of the war in Ukraine.

Malaria vaccine allocated to African countries

Via a partnership between Gavi, WHO and UNICEF, 12 countries across different regions in Africa are set to receive 18 million doses of the first-ever malaria vaccine over the next two years. Malaria remains one of Africa's deadliest diseases, accounting for approximately 95% of global malaria cases and 96% of deaths in 2021.

CUGH launches young professionals network

The Young Global Health Professional Network of the Consortium of Universities for Global Health (CUGH) aims to provide a global network where students and young global health professionals can share interests, advice, and opportunities. Members must be under the age of 40.

WHO releases AMR agenda

The agenda focuses on antimicrobial resistance (AMR) in the human health sector, especially infections caused by bacterial and fungal pathogens designated priorities by WHO. In an effort to guide policy and research to inform antimicrobial resistance interventions, the agenda outlines 40 research topics on drug-resistant bacteria, fungi and *Mycobacterium tuberculosis*.

Funding Opportunity Announcement	Deadline	Details
Fulbright-Fogarty Fellowships in Public Health	Oct 10, 2023	go.nih.gov/FulbrightFogarty
Emerging Global Leader K43 Clinical Trial Required (Non-AIDS) K43 Clinical Trial Not Allowed (Non-AIDS)	Nov 3, 2023	go.nih.gov/FogartyGlobalLeader
Global Brain Disorders Research R21 Clinical Trial Optional R01 Clinical Trials Optional	Nov 15, 2023	go.nih.gov/FogartyBrainResearch

For more information, visit www.fic.nih.gov/funding

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Newborn sepsis deaths linked to ineffective antibiotics

Every year more than 200,000 newborns die of sepsis, the life-threatening bloodstream infection that affects up to 3 million babies annually. Newborn sepsis is most often caused by bacteria: During delivery, the newborn may be exposed to an infection in the birth canal. Once born, a baby may be exposed to infections in the hospital or at home.



A woman, her husband, and her healthy baby in the Oromia Region of Ethiopia. A recent study found no single accepted “standard of care” for neonatal sepsis in LMIC hospitals.

An observational study published in *PLOS Medicine* looked at more than 3,200 newborn babies diagnosed with sepsis at 19 hospitals in 11 countries between 2018 and 2020. It found considerable variation in deaths due to sepsis—from 1.6% to 27.3%, with the highest rates seen in settings with the fewest health care resources. Hospital locations included Asia, Africa, Europe, and South America.

The study also revealed wide disparities in treatment. More than 200 different antibiotic combinations were used by the hospitals. Approximately 20% of initial regimens used to treat the babies were carbapenem-based drugs, classified by the WHO as “high watch” antibiotics (those with the greatest power against resistant bacteria) or “reserve” antibiotics (those needed to treat infections caused by multi-drug-resistant organisms).

The results of the study, funded by the Global Antibiotic Research and Development Partnership, have been used to design a clinical trial to find better treatments for newborn infections in the context of increasing resistance.

Photo courtesy of USAID/Adedy Abebe