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Global Health Matters

FOGARTY INTERNATIONAL CENTER

Dietitians in Benin develop meal plans tailored to local culture and local tastes.

JULY/AUGUST 2025 | ISSUE 4

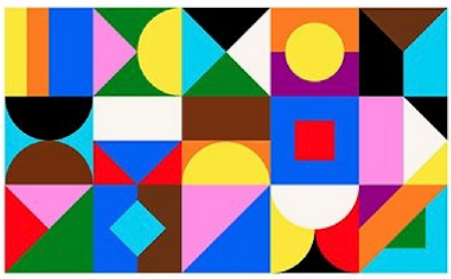
BUILDING CAPACITY FOR

Research on Sexually Transmitted Infections

IN LOW- AND MIDDLE-INCOME COUNTRIES

By providing funding and protected time for both mentors and trainees, Fogarty has played and continues to play a crucial role in the development of research capabilities worldwide.

STI&HIV2025
WORLD CONGRESS



I STARTED MY FEDERAL GOVERNMENT CAREER three decades ago in the CDC Division of Sexually Transmitted Disease Prevention, so I was excited to travel to Montreal in July for the World Congress of the International Society for Sexually Transmitted Diseases Research and the International Union against Sexually Transmitted Infections.

For the convention, I'd organized a symposium that emphasized how the burden of sexually transmitted infections (STIs) in low- and middle-income countries (LMICs) is eight-fold higher than in high-income countries. This means the need for STI research in LMICs is substantially higher, yet opportunities are increased as well. Research priorities include developing affordable point-of-care diagnostics as well as novel antibiotics, antivirals, and vaccines; investigating antibiotic resistance; optimizing behavioral interventions; integrating STI services with other health programs; using digital health solutions; and conducting research of at-risk groups such as teens, sex workers, men who have sex with men, and people living with HIV.

The symposium attracted a standing-room-only crowd and began with a presentation by Dr. Le Minh Giang and his mentee, Dr. Bùi Thị Minh Hảo, from Hanoi Medical University in Vietnam. Their Fogarty D43 research training grant is building on the national HIV prevention program (with support from PEPFAR).
Next, Dr. Jenell Stewart from Hennepin Healthcare in Minnesota spoke on behalf of herself and Dr. Elizabeth Bukusi, a former Fogarty trainee and current Fogarty grantee. They've been building research capacity in Kisumu, Kenya, based on the work of the late Dr. King Holmes, a former Fogarty grantee and board member and an early leader in AIDS care and research.

Next up was Dr. Patty Garcia, a

former Fogarty trainee and grantee from Universidad Peruana Cayetano Heredia, Peru, who spoke about her own early research as a mentee of Holmes. Their work led to the development of a robust HIV and STI clinical care and research infrastructure in Peru. The final presenter, Dr. Álisson Bigolin, described how, with the support of mentors, he now leads STI diagnostics development in the Brazilian Ministry of Health.

Co-moderator Dr. Francis Ndowa, director of the Skin & Genito-Urinary Medicine Clinic in Zimbabwe, underscored the need for translating evidence-based research findings into practice, while co-moderator Dr. Kees Reitmeijer, an editor of the journal *Sexually Transmitted Diseases,* highlighted the role of journals in supporting early-career researchers worldwide.

Perhaps surprisingly, these various presenters from Asia, Africa, and Latin America shared commonalities. Notably, they all started by developing public health and clinical infrastructure and later added a research component, which could then support research training. All believe the commitment of both U.S. and LMIC mentors as well as the dedication of their mentees has been instrumental for growth.

By providing funding and protected time for both mentors and trainees, Fogarty has played and continues to play a crucial role in the development of research capabilities worldwide. Undoubtedly, STI research conducted by former Fogarty trainees in all corners of the globe has improved health not only worldwide, but also in the United States, where it has informed STI prevention and treatment guidelines and practices and contributed to the development of STI diagnostics and vaccines that benefit all humanity.

Afterwards, Bigolin introduced me to his mentor, Dr. Angelica Espinosa Miranda, STI Unit Coordinator in the Brazilian Ministry of Health, who mentioned that she is also a former Fogarty trainee. Later, I met Dr. Sunil Sethi, a professor at the Post Graduate Institute of Medical Education and Research in Chandigarh, India. He'll be hosting the 2027 World STI & HIV Congress and we discussed including a day-long session on research capacity building. He is also a former Fogarty trainee!

Such chance conversations underscore the ways in which Fogarty, by pursuing its vision of capacity building, has extended the frontiers of health research and disseminated scientific advances across the globe. I expect more former Fogarty trainees will be attending the 2027 World STI & HIV Congress in India.

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profile

Gwyneth Lee gathers with her colleagues while working on the EcoMiD project in Ecuador.

Gwenyth Lee

PhD, MPH

Fogarty Fellow
2014-2015

U.S. institution
Johns Hopkins Bloomberg School of Public Health

Foreign institution
Asociacion Benefica Prisma (NGO)

Project
Impact of enteric infections on the growth and development of children living in the Peruvian Amazon

Current affiliation
Rutgers School of Public Health

IQUITOS, PERU, IS OFTEN DESCRIBED AS THE LARGEST CITY IN THE WORLD THAT'S INACCESSIBLE BY ROAD,

says Gwenyth Lee, PhD, assistant professor in the Department of Biostatistics and Epidemiology at the Rutgers School of Public Health.

"So if you take a big boat up the Amazon, Iquitos is about as far as you can go before the river gets a lot shallower and you have to switch to a small boat." Situated east of the Andes in Loreto province, it is home to more than 150,000 people and served as a major port for the global rubber trade during the 19th Century. "All of my formative research—master's, PhD, postdoc—has been in the general area of early child health," says Lee, who lived in Iquitos on and off for more than two years while working on her PhD. "Spending that amount of time there allowed me to make certain connections to child health and become interested in questions based on observations or discussions with people." Iquitos, then, was a natural setting for her Fogarty LAUNCH Fellowship.

Investigative independence

Lee's project examined the impact of enteric (intestinal) infections on the growth and development of a cohort of children in Iquitos. Specifically, she looked at how enteric infections, and other exposures related to nutrition, impact child growth and development. Her work used social network analysis to evaluate how social ties within communities function to improve food security.

The project allowed her to continue her research in a familiar field, yet it also enabled her to transition to nutritional epidemiology, which examines child development in relation to diet, a field of interest to Lee. "My fellowship was very much a building block, scientifically, to the projects that I work on now."

(Left) Lee outside Hospital Esmeraldas in Ecuador
(Right) Lee (in front, writing) contributes to sample collection for the EcoMiD project in Ecuador.

Her Fogarty project also pushed her towards independence. "Field work wasn't completely new to me, but what was new is that, increasingly, I was left to figure out what I wanted to do and then run with it." She also managed her own administrative paperwork, a significant advance. "It was the first project where I had a large number of people working directly for me—during my PhD, I had two people helping me collect data, for the Fogarty project, eight or 10. My mentors started to, in an appropriate way, step back and make me responsible as a project manager."

Results of her fellowship year also include publications, presentations, and landing a post-doctoral position. "Being in-country was very helpful for finding those opportunities and networking and disseminating my research more readily." She continued working with her Peruvian colleagues at UPCH during her postdoc training funded by Fogarty's Inter-American Training for Innovations in Emerging Infectious Diseases program.

Subsequently, she began a research faculty position at University of Michigan School of Public Health, where she received a K01 award from the National Institute of Allergy and Infectious Diseases. Her Ecuador-based project, *Dynamic modeling of antagonism between enteric infection and undernutrition in infancy*, officially ended in May but continues under a no-cost extension.

"I work as a co-investigator with Dr. Joseph Eisenberg and Dr. Karen Levy for Enteropatógenos, Crecimiento, Microbioma, y Diarrea (EcoMiD), a pediatric cohort study that looks at environmental exposures and child health outcomes with a specific focus on the microbiome across rural and urban communities in Ecuador." (The microbiome is the community of microorganisms that can be found living together in your gut.) Offered a position at Rutgers University, Lee transferred and began working with another early career investigator, Shauna Downs, an associate professor in the Department of Health Behavior, Society and Policy. Combining interests, they received funding from the Eunice Kennedy Shriver National Institute of Child Health and Human Development for a project in Kenya that aims to reduce teen malnutrition.

One year into that project, Lee has begun to steer students and colleagues to apply for LAUNCH fellowships. "It's invaluable for people interested in research, especially global health research, but even research in general."

Traditional diets

The fruits of global health research recompense Americans in two ways, says Lee. "It provides training opportunities for American students while advancing general scientific knowledge."

One example of this is her Ecuador project. "It's increasingly understood that the American microbiome is affected by our diets and exposures to our environment. Now that is not necessarily representative of the way humans have lived for thousands of years, right?" Researchers who study the microbiome in Ecuador encounter an urban-to-rural gradient, with part of the population eating a more westernized diet and living a more westernized lifestyle, while the diet and lifestyle of river communities, including residents of Iquitos, reflect regional traditions.

"SO THERE'S A VARIETY THERE THAT WOULD BE HARD TO FIND IN THE U.S. AND WE CAN LEARN FROM THAT AND POTENTIALLY APPLY LESSONS LEARNED BACK IN THE STATES."

Gwenyth Lee's global work focuses on infectious disease and nutrition.

Mon plan de repas

OSanDiaBé

“My meal plan” is a dietary guide tailored to the tastes and preferences of patients in Benin.
Courtesy of Halimatou Alaofè

RESEARCH EXPLORES FOOD AS MEDICINE

GLOBALLY & IN THE U.S.

Good nutrition is crucial for maintaining health. A balanced diet fuels the body and also lowers the risk of illness, including type 2 diabetes, heart disease, and infectious diseases.

Earlier this year, the U.S. Department of Health and Human Services (HHS) crafted a plan for ending chronic disease in the U.S. The Make Make America Healthy Again (MAHA) initiative aims to ensure that all Americans live longer, healthier lives, supported by systems that prioritize prevention, wellbeing, and resilience.

In particular, the HHS' report, *Make Our Children Healthy Again: Assessment,* summarizes the decline in children's health and identifies potential drivers of rising disease where progress is most likely. First among these is "poor diet."

In light of the MAHA agenda, this issue's FOCUS: Nutrition spotlights two Fogarty-supported projects centered on using food as medicine—one seeking to improve the health of patients with type 2 diabetes in Benin, the other aiming to prevent and treat tuberculosis in Tanzania.

The researchers believe that these nutritional studies, despite their far-off locations, have direct implications for Americans.

CULTURALLY RELEVANT MEAL PLANS LEAD TO BETTER HEALTH

STANDARD NUTRITION ADVICE OFTEN FAILS TO RESONATE WITH LOCAL PREFERENCES AND PRACTICES IN LOWER-INCOME NATIONS. Unfortunately, this leads to poor diet adherence and suboptimal health outcomes, says Halimatou Alaofè, PhD, associate professor at the University of Arizona. Her International Research Scientist Development Award (IRSDA) Program project in her native Benin aims to "bridge that gap between advice and practice by designing a culturally relevant, sustainable nutrition intervention that can empower patients in low resource settings to improve their dietary adherence."

Specifically, her research focuses on long-term nutritional management of type 2 diabetes, which develops when the body cannot use insulin correctly, leading to excess sugar in the blood, in turn causing damage to the eyes, kidneys, nerves and heart.

Tailored plans

An alarming increase in type 2 diabetes-related illness and mortality is occurring in Benin, a west African country that borders Nigeria and sits just south of the Sahara. Diabetes prevalence has quadrupled in this French-speaking country of 14.7 million people, from 3% to 12.4% over the last decade, reaching as high as 22% in some regions. The negative effects impact not only those who live with the condition, but also their families and the healthcare system, says Alaofè.

Small scale studies of nutritional interventions for type 2 diabetes conducted in Benin have found very low adherence to the recommended diet. "Just 20%, but it might be even lower," says Alaofè, who suspects that the suggested food plans are difficult to adhere to or unacceptable for patients. When developing a dietary intervention, researchers need to include general guidelines yet also consider the many additional factors that encourage uptake of an eating plan.

Dietitians learn how to measure blood pressure.

Courtesy of Halimatou Alaofè

For example, medical nutrition therapy, which is formulated by a registered dietitian or nutritionist, helps patients manage specific health conditions. The evidence based process begins with a clinical assessment, followed by a diagnosis and intervention plan, and then requires monitoring. For this to work, personalization is required.

"Culturally tailored nutrition therapy has proven particularly effective with type 2 diabetes. It recognizes the connection between food, dietary habits and culture, and understands that effective behavior change necessitates that an intervention be both meaningful and relevant to each patient," says Alaofè.

Halimatou Alaofè, PhD.

Courtesy of Halimatou Alaofè

In short, food preferences and cultural beliefs are baked into each individual plan.

Challenges

Alaofè sees a chasm between the official guidelines and actual patient behavior. When listening to people, she often hears a "lack of awareness at the patient level, but also at the healthcare provider level."

Before beginning her IRSDA project, she conducted formative research which included focus group interviews with stakeholders. She found that nutritionists often "present the idea that Benin doesn't have good local resources. But it's not true. We have seasonal fruits and vegetables and many of our national dishes are vegetable-based."

Her formative research also showed that patients don't want to participate in projects delivered via healthcare systems because "healthcare means death. Can you imagine? If you provide a service at the healthcare level, the population will never come and listen to you," In turn insufficient patient interaction leads to out-of-touch recommendations. "We still say, 'eat five portions of fruit and vegetables.' We still say, 'one spoon of oil.' What does that even mean, when in Africa the food is shared?"

Alaofè asked one patient focus group: Why don't you eat more fruits and vegetables?

The answer: "Fruits and vegetables are for the poor. When you have a guest, you have to put out a rice dish or spaghetti." Carb-based, westernized food confers prestige, she notes.

"In the media, everywhere, nutritionists talk about obesity and a good diet, but how do you convince people to eat good food, when they believe that eating a particular carb means they belong to a higher status?"

Having examined perceptions of obesity, she found that people reject the negative connotations of "obesity" because for them, weight "is related to wealth and to attraction and to fertility. Women say, 'I have to gain weight when I'm pregnant,' so how do I convince those who are overweight to lose pounds to help with glycemic control [lowering blood sugar]?"

Nutritional communication strategies need to change, says Alaofè. "We need to adjust so our patients don't run from us."

Family matters

Alaofè, who previously worked as a lab technician in both rural and urban areas of Benin, saw first-hand how nutrition intersects with disease prevention and long-term health outcomes. Overall she hopes to better understand the biological, social and policy dimensions of diet, while contributing to evidence based solutions to improve population health.

> **"MOST PEOPLE DIE DUE TO UNDERNUTRITION, NOT BECAUSE OF THE DIABETES—THEY DIE BECAUSE THEY DON'T KNOW WHAT TO EAT."**

Alaofè believes her project will be relevant to many U.S. citizens on whose behalf her research is funded. "We have low health literacy and under-resourced communities facing food insecurity who need help to access adequate and nutritious food."

Although her project is not yet complete—it will end in 2027—Alaofè has already published three papers. One paper examines best practices for engaging social networks in nutrition interventions. Another shows how both culture and family relate to diets.

"Most people die due to undernutrition, not because of the diabetes—they die because they don't know what to eat. Families don't know how to support the patient, so we have to help them do that."

It's not necessary to require the entire family's constant participation, but family members need to be invited along whenever there's crucial information to be shared, says Alaofè. "People become isolated when they have diabetes. They feel they have to solve it alone, when, really, they need the support of their families."

NUTRITIONAL RESEARCH IN TANZANIA MAY HELP COAL MINERS IN THE U.S.

Chronic respiratory disease, including asthma, is a common diagnosis in the United States—in fact, it's the fifth most common cause of death. By contrast, tuberculosis (TB) is an unusual diagnosis in the U.S.

Yet TB research conducted in Tanzania will likely prove very beneficial for Americans, say Dr. Scott Heysell, a professor of international medicine at University of Virginia (UVA), and Dr. Stellah Mpagama, a physician-scientist at Kibong'oto Infectious Diseases Institute in Tanzania. They are co-principal investigators of a Fogarty Global Infectious Diseases Research Training Program project.

"In the U.S. and where I work in Appalachia, there's a lot of coal mining," explains Heysell. In Tanzania, there's a roughly equal rate of mining as in Appalachia (though for different commodities), and so people develop lung disease from silicosis or other environmental aspects of the industry just as they do in the U.S.

This shared history of similar environmental exposures and chronic lung disability suggests Tanzanian research will likely translate to the American context. Studying how a targeted nutritional intervention, given either before or during a TB episode, impacts chronic lung disease "will possibly have direct implications for any nation where chronic lung disease is common," says Heysell.

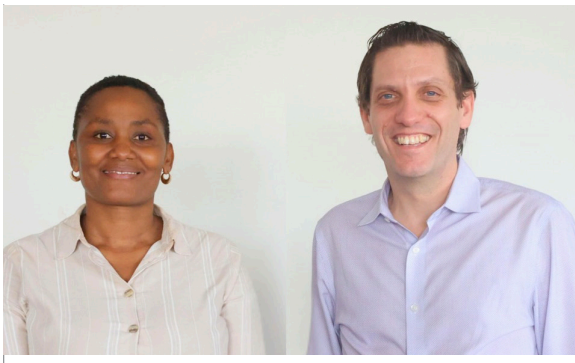
Learning by doing

Ancient in origin, tuberculosis is a serious infectious illness affecting the lungs. It's caused by bacteria that spreads via droplets propelled into the air when an ill person coughs or sneezes.

Some people who inhale TB germs have strong immune systems, so their bodies successfully fight off disease. Others have weaker systems and so disease develops, leading to weight loss and possibly wasting.

"Malnutrition is a consequence yet also a cause of tuberculosis—it is the leading risk factor for developing tuberculosis," says Heysell. People who are undernourished lack a healthy immune response, so, following exposure to germs, they're likely to progress to disease, which leads to a worsening of their famished condition.

This bidirectional relationship between sustenance and disease is where Heysell and Mpagama center their TB project.



Drs. Stellah Mpagama & Scott Heysell

Mpagama says, "Our research explores all forms of nutritional status in TB patients to understand how nutrition influences disease outcomes." Undernutrition and poor nutrition are closely related but distinct, she explains. Undernutrition is defined as inadequate food intake that leads to deficiencies in essential nutrients and then presents as wasting, stunting, or being underweight.

> "Malnutrition is a consequence yet also a cause of tuberculosis—it is the leading risk factor for developing tuberculosis."

Grant writing workshop and data science bootcamp, Moshi, Tanzania 2024

Photos courtesy of Scott Heysell

Courtesy of Scott Heysell

Scott Heysell at a Tanzanian research symposium.

"Malnutrition is a broader term that includes both undernutrition and overnutrition—where excessive or imbalanced intake (such as too much sugar, salt, or fat), often without meeting essential nutrient needs, leads to overweight and obesity." Overnutrition can lead to diabetes, where high levels of blood sugar affect immune cell function, impairing the body's ability to defeat infections.

Heysell's and Mpagama's project will train six post-doctoral candidates to become independent researchers at leading institutions across the country including Kibong'oto Infectious Diseases Hospital, the Kilimanjaro Christian Medical University College and Kilimanjaro Clinical Research Institute, Muhimbili University of Health and Allied Sciences, and the University of Dodoma. Pursuing separate research plans, each trainee will investigate how the gut microbiome, nutritional interventions, pulmonary rehabilitation, chronic lung disease, and the bacterial infection of TB interact and intertwine.

"Our role is to provide guidance, mentorship, and encouragement to help them build confidence and pursue their professional goals," says Mpagama.

Why Tanzania?

Mpagama's and Heysell's training grant began in March 2022 and ends in February 2027, by which time each trainee should be capable of competing for National Institutes of Health grants and other global funding, setting research agendas, and overall contributing to policymaking and to the community. "Two of the six total postdocs in the earliest cohort are just finishing their projects and the latest cohort just started," says Heysell.

Metrics of success include academic promotion, development of a research team, and grant submission and receipt. Heysell says, "So we've had a fair amount of success; those who started at the beginning have been academically promoted and their research teams have grown. They've published scientific papers and submitted research grant proposals to NIH and other funders. They haven't yet received word back, so it's too early to determine the success of those grants."

Training in Tanzania, a country with a high burden of TB, is crucial because TB needs to be studied in endemic areas (where it's most common). "While tuberculosis exists in the United States—for instance, a little over 10,000 people were diagnosed with the disease in 2024—we need a much greater scale of impact and severity of disease presentation to really understand scientifically how to intervene," says Heysell.

Tanzania is also a country with high rates of undernutrition. "We need to understand how undernutrition leads to TB disease, and then how we might target and treat undernutrition either before tuberculosis develops or during the disease course itself," Heysell explains.

Building the research workforce in Tanzania is an equally important goal. "The approaches, findings, and the frameworks we develop are designed to be transferable and applicable to other diseases, including pandemics and other health threats on and outside the continent," Mpagama says.

WE NEED TO UNDERSTAND HOW UNDERNUTRITION LEADS TO TB DISEASE.

Conducting research in Tanzania provides opportunities not found in the U.S., but there are snags as well, says Heysell. "Getting the timeline right is one challenge. For instance, we think we'll be able to do this in two months when in fact it takes six because of the regulatory environment or getting something shipped and having it arrive on time with the proper paperwork."

"The long-term relationship that UVA has established with partners in the region facilitates a lot of the work that would be more difficult if we were starting from scratch," says Heysell.

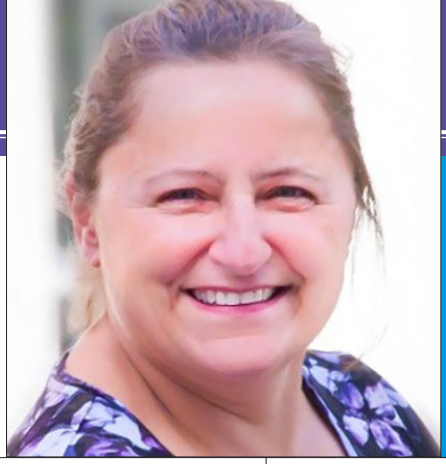
Nutritional challenges

Mpagama says the current U.S. administration is addressing poor nutrition as a national health concern, "so the methodologies and key insights generated from our work may be applicable—either directly or indirectly—in the American context."

She adds, "There is also an opportunity to expand this research to the U.S. to address its own malnutrition challenges. This would produce valuable cross-country comparisons that help reveal common, underlying mechanisms and inform more effective strategies for addressing malnutrition in both local and global settings."

Heysell concludes, "Through the work we're doing in Tanzania, we'll be able to understand how a nutritional intervention affects the immune system in an important way."

Christine F. Sizemore, PhD



Q&A

A pragmatic perspective on global health

Christine Sizemore retired from her position as the director of Fogarty's Division of International Relations (DIR) on April 30. Her career began in the biopharmaceutical industry, where she worked in drug discovery and development. Prior to joining Fogarty in 2018, she spent 18 years at the National Institute of Allergy and Infectious Diseases (NIAID) as chief of the Tuberculosis, Leprosy and Other Mycobacterial Diseases section. Sizemore received her Master's degree in Biology and her Ph.D. in Bacterial Genetics from the Friedrich Alexander Universität in Erlangen, Germany.

What was your first job at NIH?

Al started as a program officer in the tuberculosis (TB) program at the National Institute of Allergy and Infectious Diseases (NIAID) in 2000. It was an opportunity to work on a much larger scale and on the full spectrum of research and product development for TB and other mycobacterial diseases. The job fit me to a T. Along with being practical, I'm a big picture person. I like seeing and making connections and figuring out strategy to fill gaps in knowledge in the most straightforward and practical way. At first, there were just two of us, but once we began to strategically grow the program and more program officers and medical officers joined the team, we became a Section within the Division of Microbiology and Infectious Diseases and I was named Section Chief. I remained in that role until I became the director of DIR in 2018.

Do Americans benefit from NIH-funded research in low- and middle- income countries (LMICs)?

When I was at NIAID, I worked a lot with LMICs, because TB is a disease of poverty. I learned very quickly that the way scientists from lower resource countries think and the way they approach challenges is more pragmatic and often more outcome-oriented. What we call "neglected diseases" are very real for them and any solutions they can develop will have real impact for their communities. They see interventions or programs that work at the local level as worthwhile even if they do not scale globally. This has been a challenge for some very innovative projects criticized for not being "global enough" despite making a huge difference for local communities.

This practical thinking is a great complement to the science that is conducted in richer countries where doing research is not uncommon.

If we want to crack the hard nuts in research, then the two sides must work together—the pragmatists and the technologists. Collaborations between low- and high- income countries give investigators a lot of technological access, including large data centers and large infrastructure, all of which are necessary to holistically tackle a problem. But when it comes to direct patient outcomes and impact, you need to start with the pragmatism of LMIC researchers who have the experience and insights into what is needed to make prevention, diagnosis or cure a reality.

What do you tell global health researchers?

We would do well by communicating outside a narrowly-focused cluster of like-minded individuals. For example, try to explain the relevance of your scientific work to your non-scientific neighbors and take their questions seriously. If you can't answer, "Why does that matter?" in a way that resonates with them, then more introspection may be needed.

To really understand a disease and what it means, you need to go to where it is. My first trip to Africa showed me what it means to have TB as a patient, as a community and what TB means for healthcare providers—what infrastructure is available, what it takes to get your drugs and finish months' worth of treatment, and what nurses and doctors, as well as community health workers and families do, to help patients. That immediately puts a different perspective on the utility of a fancy, sensitive diagnostic machine vs. a low tech, easy to use, fast diagnostic test. After that trip, I never thought about my job the same way again.

Resolute vision: Caring for casualties in low-resource conflict settings

"When people think of military trauma care, they often think of what existed in Iraq and Afghanistan. But that paradigm has shifted," says Hannah Binzen Wild, a former Fogarty fellow whose project in Burkina Faso focused on improving casualty care for patients with conflict-related injuries.

Unlike the wars in the Middle East, irregular warfare as well as large-scale combat operations between great powers will not be characterized by air superiority or intact echelons of care. Instead, U.S. military trauma care personnel may face conditions resembling those seen in Burkina Faso: specifically, prolonged transportation times, restricted supply chains, and severe resource limitations.

Solutions devised by trauma care personnel in Burkina Faso reflect long years of experience with warfare in a context that might more closely resemble what the U.S. may face in the future. "It would be ideal to synthesize these lessons, which can be beneficial to the U.S. for the planning and preparedness of its military, while also providing more resources and technical advisory support to personnel in low-resource conflict settings," says Wild.

Providing care during conflicts

Wild, now a general surgery resident at the University of Washington, spoke at July's orientation for Fogarty's Launching Future Leaders in Global Health Research Training Program. As part of her own Fogarty fellowship in Burkina Faso, she worked on a range of proposals, all focused on trying to improve casualty care for patients with conflict-related injuries.

"The formal project was piloting integration of explosive ordnance risk education with community first aid responder training in communities affected by the threat of IEDs (improvised explosive devices)," says Wild.

Led by Dr. Nicolas Meda, a professor at University of Ouagadougou in Burkina Faso, Wild's team conducted this pilot through a collaboration with the Mines Advisory Group, a global advocacy group. (Mine action generally comprises explosive ordnance detection and clearance, risk education, and victim assistance.)

With their networks of community liaisons, charitable mine action programs already possess a platform to deliver community first-responder training in conflict and post-conflict settings. Programs like the Burkina Faso pilot are now underway in Syria, Afghanistan, and Mozambique. The Antipersonnel Mine Ban Convention recognized the value of merging community first responder training with explosive ordnance risk education and added an integrated program to its most recent action plan.

During her Fogarty fellowship Wild also collaborated closely with local military surgeons including Dr. Yves Sanou and Dr. Yves Aziz Nacanabo. The team conducted one of the largest analyses of local casualties in the Sahel to date (roughly 1,400), filling a long-standing evidence gap on casualty care within local health systems.

Wild and Colonel Bassinga in the operating room

Courtesy of Hannah Binzen Wild

The team is also studying other key casualty care problems such as tourniquet application and blood availability.

One life's mission

Wild discovered her passion in life at a young age and never wavered from it.

"I was five years old during the Rwandan genocide and, being an early reader, I learned about it and could not comprehend how people knew that this was happening in the world and moved on with their lives." As she grew older, Wild read about conflicts taking place in Bosnia and in the Middle East. "I decided to spend my life trying to be useful in this type of setting."

Though her passion places her in harm's way, Wild does not dwell on this. "I calculate and moderate risk as much as I can. But the purpose of my existence is making a contribution in this environment, so when you're lucky enough to be doing exactly what you're built to do and want to do, personal risk factors differently." She notes that her colleagues in low-resource conflict settings provide care for the wounded under extraordinarily challenging conditions with little recognition. "I follow the path that I think will make me most effective in mitigating human suffering," says Wild.

What do you mean when you say capacity building?

Yukari Manabe, MD

"I didn't know what capacity building meant until I went to Uganda, and then someone said that phrase to me every hour," says Dr. Yukari Manabe, a professor of medicine at Johns Hopkins University School of Medicine. Between 2007 and 2012, she served as head of research at the fledgling Infectious Diseases Institute (IDI), founded in Kampala in 2002.

"The research capacity building pyramid became the focus and the guide of everything that occurred at the institute when I worked there," says Manabe. At the top are the easy things to accomplish, such as bringing in tools, equipment, and research money. The next step on the pyramid is skills. "So equip the person, right? We all know how to do that with courses and training," says Manabe. Harder tasks to complete—such as developing a core staff, infrastructure and systems—requires the help of international faculty to fill specific gaps and to provide mentorship. The final step encompasses the most difficult goals, including comprehending and interpreting local context (to appropriately assist the country's Ministry of Health) and building enduring partnerships.

As it matured, the institute necessarily updated its strategic plan, says Manabe. The first plan reflects "the era of dependence. It's narrowly focused. You're still trying to build a critical mass of talent and training key staff abroad. Grants are led by external partners." The second strategic plan reflects a new era, that of independence. "We could replicate most things in-country. We'd partnered with policymakers. We had key staff and a larger group of funders. We started to disseminate knowledge to others on the continent." With its third strategic plan, the institute entered the era of interdependence. "We've become a national node within continental networks. We have global and regional links and sustainable funding. We get major grants directly. Talent comes to us."

Today, IDI is considered a true center of excellence able to foster independent researchers, says Manabe, who spoke to Fogarty fellows attending the Fogarty's Launching Future Leaders in Global Health Research Training Program orientation in July. "Now people try to steal [talent] from us, which is the surest sign of success."

Cascade effect

U.S. research dollars go farther in places where things happen at a much higher frequency, says Manabe. For example, congenital syphilis has risen precipitously over the last decade in the U.S., still it's more efficient and less expensive to study syphilis in a hot spot where the prevalence is up to 30% compared to 0.01% in the U.S. "Money going overseas actually comes back to benefit people in the U.S. afterwards."

Currently, as director of Johns Hopkins' Center for Innovative Diagnostics for Infectious Diseases, Manabe focuses on point-of-care diagnostics, which enable health care providers to test and treat patients within a single visit, rather than waiting days for test results (with patients needing to make additional visits).

Point of care diagnostics "exploded" during COVID, says Manabe. (The NIH's Rapid Acceleration of Diagnostics program was a multi-billion-dollar investment in COVID-19 testing methods.) She now urges companies to consider using the platforms created during the pandemic when creating new diagnostics for other diseases instead of wasting "this investment that American taxpayers have already made."

So how does Manabe define capacity building today? "It means friends and colleagues—cultivating your network through training. It also means just getting things done and having a public health impact. You train a few who go on and train 10 and that leads to hundreds of people trained who have an impact on thousands."

This cascade effect is the joy of capacity building, she says.

"IN SOME PLACES, THEY NO LONGER NEED US AS MUCH AS THEY USED TO, AND THAT MAY BE DIFFICULT EGOTISTICALLY, BUT MAYBE THE SIGN OF REALLY HAVING MADE A DIFFERENCE IS WHEN YOU TEACH YOURSELF OUT OF A JOB."

Capacity Building Pyramid

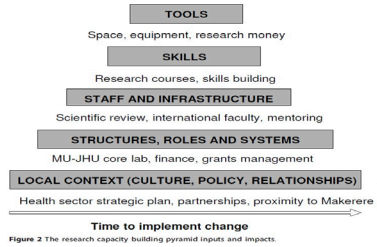
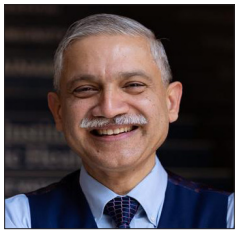


Figure 2 The research capacity building pyramid inputs and impacts.

The Infectious Diseases Institute in Kampala, Uganda, used this capacity building pyramid as a guide.

Courtesy of Yukari Manabe

Community



Adnan Hyder tapped by BU School of Public Health

Boston University has appointed Dr. Adnan Hyder the Robert A. Knox Professor and next dean of its School of Public Health beginning fall 2025. Hyder's Fogarty- and National Institutes of Health-funded research has contributed to the global understanding of the epidemiological burden, risk factors, potential interventions, economic impact, and socio-cultural correlates of noncommunicable diseases and injuries globally. Currently, Hyder is senior associate dean for research and innovation and professor of global health at The George Washington University Milken Institute School of Public Health.

Simone Badal honored with a Sabga Award

The Anthony N. Sabga Caribbean Awards for Excellence has selected Simone Badal, MD, for this year's Science & Technology laureate. Badal, a senior lecturer at The University of the West Indies, Mona, has been recognized for her work in developing Caribbean-specific cancer cell lines. Her research led to the creation of the first prostate cancer cell line derived from a Caribbean man, addressing a gap in cancer research, where models have historically focused on Caucasian populations. Badal, a Fogarty Emerging Global Leader, has more than 45 peer-reviewed publications.

Katherine O'Brien wins Albert B. Sabin Gold Medal

The 2025 recipient of the Albert B. Sabin Gold Medal is Katherine O'Brien, MD, for her work in the licensure and global introduction of vaccines against pneumococcal disease, rotavirus, and respiratory syncytial virus. O'Brien is widely considered a pioneering global health leader whose innovative work in vaccine access and policy has transformed immunization programs worldwide. Previously, she served as an Epidemic Intelligence Service officer at the U.S. Centers for Disease Control and Prevention and led vaccine research and development initiatives at the Johns Hopkins Bloomberg School of Public Health. Her past work includes large-scale vaccine impact studies and clinical trials.

Abdoulaye Djimdé wins Hideyo Noguchi Africa Prize

The Hideyo Noguchi Africa Prize in Medical Research has been awarded to Abdoulaye Djimdé, MD, director of the Parasites & Microbes Research & Training Center at the University of Science, Techniques and Technologies of Bamako, Republic of Mali. Djimdé is a Fogarty grantee who has also been supported by the National Institute of Allergy and Infectious Diseases for his efforts to combat infectious and other diseases in Africa. The award recognizes his work in the areas of treatment and control of malaria as well as training of young researchers in African countries.

Barbara Sina secures bioethics leadership award

The 2025 Oxford Global Health & Bioethics International Conference honored Barbara Sina, PhD, with a Global Health Ethics Leadership Award. Sina serves as acting director of Fogarty's Division of International Training and Research. This annual award recognizes a member of the bioethics community who has made immense contributions to the advancement of the field, often under challenging circumstances. The selection committee noted that Sina's efforts have shepherded vital initiatives across the training, research and policy/practice spectrum while also yielding lasting benefits for many.

Global HEALTH Briefs

Gut microbiome study includes previously under-sampled populations

In 2007, the Human Microbiome Project (HMP) set the goal of characterizing the human microbiome and measuring its contribution to disease. Large cohorts in high income countries have been well represented in HMP studies, yet low- and middle-income nations, which account for nearly 84% of total population, have been under-represented; this reduces the generalizability of HMP's conclusions. To help rectify this, Stanford's Dr. Dylan G. Maghini conducted a cross-sectional gut microbiome study sampling 1,801 women from Burkina Faso, Ghana, Kenya, and South Africa for her Fogarty fellowship project. Using shotgun metagenomic sequencing—a technique that enables microbiologists to detect both the bacterial diversity and the abundance of microbes in the gut—Maghini's team identified taxa (hierarchical groups of microbes) with geographic and lifestyle associations and also an HIV infection signature defined by taxa not previously linked to HIV. The study is published in *Nature*.

How do newly approved vaccines affect RSV hospitalizations?

Each year respiratory syncytial virus (RSV), which usually causes mild, cold-like symptoms, leads to 1,500 to 2,800 hospitalizations per 100,000 infants in the U.S. A research team, led by Fogarty's Chelsea Hansen, used mathematical modeling to examine impacts of newly introduced immunization strategies on RSV hospitalizations in King County, Washington. (Beginning in 2023, the CDC's Advisory Committee on Immunization Practices recommended a monoclonal antibody or *passive* vaccine, nirsevimab, for routine use in infants and a single dose of either one of the two approved *active* vaccines for older adults.) The team estimate that vaccination cut RSV hospitalizations by two-thirds in babies less than 6 months old and by a third in seniors over age 75 during the 2024-25 season (when compared to no vaccination). Fogarty's Dr. Cécile Viboud is senior author of the paper published in *JAMA Network Open*.

Researchers identify a new diabetes subtype in sub-Saharan Africa

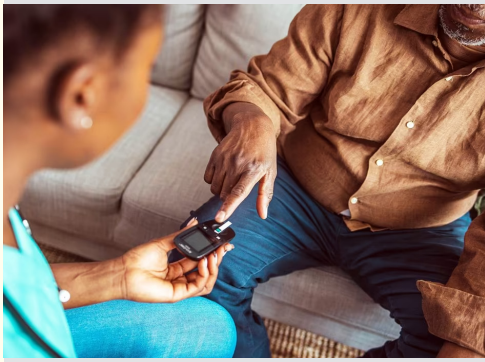
Type 1 diabetes results from autoimmune destruction of insulin-secreting cells—according to studies of mostly European populations. Now a new study published in *Lancet Diabetes and Endocrinology* provides evidence that many young people in Africa, and some in the U.S., may have a non-autoimmune form of type 1 diabetes. Dr. Dana Dabelea of University of Colorado, who receives funding from the National Institute of Diabetes and Digestive and Kidney Diseases, participated in this project. The researchers enrolled 894 participants with young-onset diabetes from Cameroon, Uganda, and South Africa and assessed their blood levels of antibodies against insulin-producing cells and calculated their genetic risk of developing diabetes. Next, the team compared findings with similar, age-matched studies performed in the U.S. Discovery of a form of type 1 diabetes that is not caused by immune system dysregulation could change how diabetes is diagnosed, treated and managed, while paving the way for more effective medicines and better outcomes.

Fogarty alumnus co-leads study of cardiovascular health in southeast U.S.

Each year, rural areas in the U.S. experience 60,000 more cardiovascular-disease related deaths than urban areas due, in part, to a lack of specialists and cardiac imaging machines that are required to detect, diagnose, and manage cardiovascular disease. The RURAL (Risk Underlying Rural Areas Longitudinal) Cohort Study aims to address critical gaps in awareness and knowledge related to heart and lung disorders in several southeastern states. RURAL mobile exam units, which are outfitted with a lab, private exam rooms, and cardiovascular assessment and imaging tools, travel to the counties where the study's more than 3,000 enrolled participants live. Dr. Gerald Bloomfield, a former Fogarty fellow and associate professor at Duke University School of Medicine, is co-lead of the study's Imaging Core, which is responsible for obtaining CT scans and also storing, processing, and accessing the images.

NIH HUMAN MICROBIOME PROJECT

SCAN
TO READ MORE



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FUNDINGNEWS

On behalf of the Fogarty International Center at the U.S. National Institutes of Health (NIH), the following funding opportunities, notices and announcements may be of interest to those working in the field of global health research.

Funding Announcement	Deadline	Details
International Research Scientist Development Award (IRSDA) (K01 Independent Clinical Trial Not Allowed) (K01 Independent Clinical Trial Required)	March 9, 2026	https://www.fic.nih.gov/Programs/Pages/research-scientists.aspx
Mobile Health: Technology and Outcomes in Low and Middle Income Countries (R21/R33 Clinical Trial Optional)	March 9, 2026	https://www.fic.nih.gov/Programs/Pages/mhealth.aspx
Global Infectious Disease Research Training Program (D43 Clinical Trial Optional)	August 6, 2026	https://www.fic.nih.gov/Programs/Pages/infectious-disease.aspx

Fogarty fellows gather in Bethesda

Once again, Fogarty welcomes trainees from across the U.S. and the globe!

Orientation for Fogarty's Launching Future Leaders in Global Health (LAUNCH) Research Training Program took place on July 7-11 at the Hyatt Regency in Bethesda, Maryland, near the National Institutes of Health (NIH) campus.

LAUNCH supports one-year mentored research training opportunities for U.S. and international scholars at biomedical research institutions and established project sites in low- and middle-income countries.

The orientation included workshops, presentations, lectures, and panel discussions featuring global health leaders and experts as well as NIH leadership, including NIH Director Dr. Jay Bhattacharya. This year's trainees are supported by 24 NIH Institutes, Centers, and Offices.

NIH Director Dr. Jay Bhattacharya talks with a scientist following his fireside chat.

Photos courtesy of Fogarty staff

Speakers, left to right: Ellie Dehoney (Research!America); Dr. Wafaie Fawzi (Harvard T.H. Chan School of Public Health); Jane Simoni, PhD (NIH); Fred Ssewamala, PhD (Washington University School of Medicine); and Dr. Magaly Blas (Universidad Peruana Cayetano Heredia)

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