



## OFFICE OF INTERNATIONAL AFFAIRS

# Global One Health initiative

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### WHO WE ARE

The Global One Health initiative (GOHi) is the university's largest interdisciplinary example of institutional teamwork operating on a global scale. GOHi improves the health of communities, build's capacity among public health professionals and provides learning opportunities for students, faculty and staff around the world focused on One Health. Founded in 2009 by a team of diverse faculty at Ohio State, GOHi actively helps those in need across the United States, Africa, Central and South America and Asia.

### MISSION

Expand capacity for a One Health approach via applied education, training, research, and outreach to more efficiently and effectively address causes and effects of diseases at the interface of humans, animals, plants and the environment.

### VISION

Capable professionals and institutional systems that support and advance a healthy, enduring global community.

### FOCUS AREAS

Training, research and implementation, and outreach and engagement.



THE OHIO STATE UNIVERSITY

## TRAINING CAPACITY

A diverse group of Ohio State faculty work with partners in Ohio, the United States and across the globe to strengthen health systems and support the next generation of One Health professionals. GOHi's trainings incorporate e-learning platforms, hands-on training at Ohio State and partner's laboratories from Columbus to Nairobi, field-based training where One Health professionals work every day, and practical mentorship. GOHi promotes mutually beneficial exchanges of knowledge with partner institutions where learning and discovery happen together.

### Global One Health Summer Institute

GOHi's flagship summer training program makes the cutting edge of One Health practice and research accessible to all. Our zero-fee annual training program consists of robust learning modules that refresh, or kick start One Health practitioners' knowledge in new and emerging areas of importance in One Health. With annual participation from over 45 countries, our Summer Institute is an important part of our annual calendar and often leads to new collaborations and research among participants and facilitators. Over 5,300 participants have been trained since 2012. The courses are taught by international experts from Ohio State and other academic institutions via in-person, virtual and hybrid platforms. Most of the courses are recorded and available for asynchronous learning opportunities.

### Curriculum Twinning for Veterinary Medicine and Nursing

Assessing, revising, and harmonizing core veterinary medicine curriculum to align with World Organization for Animal Health (WOAH) Day 1 Competencies for Graduating Veterinarians. National-level needs assessment and prioritization activities in Ethiopia led by Ohio State and University of Gondar. Regional expansion into Southeast Asia (with institutional hubs in Thailand and Philippines) supported by the Bill & Melinda Gates Foundation. Supporting University of Gondar nursing PhD students through learning exchanges and training at Ohio State.

### Training Critical Mass of One Health Researchers Across Eastern Africa

The One Health Eastern Africa Research Training Program, implemented in collaboration with universities in Kenya, Tanzania and Ethiopia, GOHi conducts training and supports research with Eastern African doctoral fellows through a multi-year training and mentorship program designed to advance the science and practice of One Health in the region. To date 28 participants have graduated with their PhD. This NIH program also provides master level graduate students with technical hands-on laboratory skills training. This work is supported by the Fogarty International Center at the National Institutes for Health.

### Trailblazing One Health Ethics Education

Ohio State is working to advance the field of One Health Ethics that addresses the One Health interface where human, animal and environmental ethics intersect. Within the PhD training program, research is investigating the ethics reviews systems for One Health research in Africa. Our interdisciplinary collaboration across several colleges at Ohio State, University of Nairobi and the Kenya Medicine Research Institute has the goal of establishing a master's degree in research ethics at the University of Nairobi. This program will train future One Health practitioners in the ethical, social and regulatory issues in One Health and emergency research ethics. This work is supported by the Fogarty International Center at the National Institutes for Health.

### Strengthening Higher Education Leadership, Management, and Governance

After years of collaboration with several Ethiopian Universities, GOHi and Ohio State senior leaders provide leadership mentorship for two cohorts of Ethiopian university leaders through mentored leadership workshops, short on campus visits to three public U.S. universities- Ohio State, Texas Tech University, and Oklahoma State University, and continued mentorship through projects at participant's home institutions with a goal to transform the Ethiopian higher education system. This work is supported by the U.S. Department of State.

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## RESEARCH AND IMPLEMENTATION

GOHi's work has made contributions to COVID-19 response; decreasing antimicrobial resistance; expanding whole genome sequencing for critical food, water- and vector- borne pathogens; clinical trials; outbreak responses; serosurveillance studies; drug discovery; and reduction in rates of rabies, brucellosis, and other priority zoonotic disease over the years. The GOHi current portfolio includes:

### Pandemic Preparedness and Response

Actively working to support the COVID-19 response and disease surveillance in Ethiopia, GOHi has successfully opened four regional laboratories, supported capacity building and workforce development for key surveillance and laboratory cadres, promoted COVID vaccine uptake, built capacity to identify adverse events following immunization, completed multiple national seroprevalence studies, and helped re-establish laboratory functionality at nine hospitals damaged in conflict. Building upon systems strengthened to respond to COVID-19 GOHi has also been called upon to support Ebola, Malaria, and Cholera in collaboration with Ethiopia Ministry of Health and the Ethiopian Public Health Institute (EPHI) and partners. This work is supported by the U.S. Centers for Disease Control and Prevention (CDC).

### Addressing Antimicrobial Resistance

GOHi has been working to address Antimicrobial Resistance from its founding. The foundation of the work on AMR is collaborative research, training, outreach and capacity building to prevent and control antimicrobial resistance (AMR) in Brazil, Ethiopia, Kenya, Mexico and Thailand. The current project in Ethiopia addresses AMR in hospital-based settings. Ohio State is providing intensive support to decrease healthcare associated infections by strengthening hospital infection prevention and control efforts along with building laboratory capacity to detect multidrug resistant pathogens. Activities include training personnel, establishment of protocols, and impact monitoring. This work is supported by the CDC.

### Epstein-Barr Virus Cancer Research

Collaboration with the James Cancer Hospital and Solove Research Institute and Addis Ababa Black Lion Hospital, researching the prevalence of Epstein-Barr Virus associated cancer in HIV positive individuals and setting the groundwork for vaccine research. This work is supported by the NIH.

### Leishmaniasis Tropical Medical Research Center (TMRC)

GOHi is working to establish a multi-country TMRC in East Africa involving key partners in Sudan, Kenya and Ethiopia. This center is on the forefront of vaccine research for Leishmaniasis and poised to move progress toward elimination through a strong consortium of Ohio State faculty and Eastern Africa expertise. This work is supported by the NIH.

### Foodborne Illnesses Assessment and Risk Management

GOHi is implementing two key projects that strengthen food safety and security in Ethiopia and Kenya by implementing a risk-based, decision-making roadmap for food safety practices for raw beef and dairy products, implemented in collaboration with University of Florida, Kenya Medical Research Institute (KEMRI), the University of Nairobi, University of Gondar, EPHI and International Livestock Research Institute (ILRI). This work is supported by the Bill & Melinda Gates Foundation and USAID.

### Campylobacter Genomics and Enteric Dysfunction

A project digging deeper into childhood malnutrition in Ethiopia using a One Health approach to explore links between food safety and childhood stunting have shown that while food commodities are critical, we must take a One Health approach to see our children flourish. This work is supported by the Bill & Melinda Gates Foundation and USAID.

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## RESEARCH AND IMPLEMENTATION

### Guinea Worm Eradication

Ohio State faculty collaborate with academic partners, government, international organizations, and local communities to prevent the spread of Guinea Worm among mammalian hosts and are conducting a clinical trial of a canine medication to help Chad reach eradication in the near future. This work is supported by The Carter Center.

### Cholera Genomics and Geospatial Mapping

With the leadership of the Kenya Medical Research Institute (KEMRI), GOHi has been partnering on this project that aims to understand and characterize Cholera in endemic and outbreak settings. The project is aimed to understand the epidemiology of Cholera in slum settings. This work is supported by the Wellcome Trust Foundation.

## RECOGNITION

- Universitas 21 Award
- NIH Gold Medallion
- APLU Michael P. Malone International Award



## OUTREACH CAPACITY

### International Congress on Pathogens at the Human Animal Interface

This regular congress with international partners and One Health experts has served as a catalyst to accelerate global capacity building and knowledge-sharing to reduce the burden of disease, environmental hazards and their risk factors.

### Participation in Key One Health Planning Forums

As a result of GOHi's many initiatives and advancements in One Health and the growing interest and acknowledgement of the importance of One Health worldwide, Wondwossen Gebreyes, DVM, PhD, GOHi's executive director, currently serves as a member of the NIH Fogarty International Center Advisory Board; chair of the USAID One Health Workforce NextGen External Advisory Board, is a member of the Forum on Microbial Threats of the National Academies of Science, Engineering and Medicine (NASEM); a member of the Countering Zoonotic Spillover Committee of the NASEM among others.

## PARTNERSHIP, RESEARCH, AND PROJECT COLLABORATIONS CAN BE DIRECTED TO:

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