



THE OHIO STATE UNIVERSITY



2020 GLOBAL ONE HEALTH CONFERENCE **PROGRAM**

STRENGTHENING GLOBAL
RESILIENCE THROUGH ONE
HEALTH: **A 2020 VISION FOR A
SUSTAINABLE FUTURE**

DAY 1: THURSDAY, NOVEMBER 5

7 – 8 a.m.

POSTER SESSION

Moderator: Amanda Berrian, DVM, PhD, MPH, DACVPM (Assistant Professor, Ohio State)

8 – 8:10 a.m.

Opening Remarks: Gil Latz, PhD (Vice Provost, Office of International Affairs)

8:15 – 8:55 a.m.

Keynote Speaker: Ahmed Ogwel Ouma, PhD (Deputy Director, Africa CDC)

Moderator: Wondwossen Gebreyes, DVM, PhD (Executive Director, GOHi, Ohio State)

Session 1: Health Capacity Building and Implementation Science

9 – 9:40 a.m.

Plenary Speaker: Peter Kilmarx, MD (Deputy Director, National Institutes of Health)

“Strengthening Global Capacity and Partnerships for One Health Research: Perspective from the Fogarty International Center”

Plenary Session Chair: Wondwossen Gebreyes, DVM, PhD

9:40 – 10:40 a.m.

Panel Session: Martha Belury, PhD (Professor, Ohio State), Francisco Olea-Popelka, DVM, MSc, PhD (Associate Professor, Western University, Canada) and Sam Kariuki, PhD (Director of Research and Development, Kenya Medical Research Institute)

Moderator: Amanda Berrian, DVM, PhD, MPH, DACVPM

10:40 – 10:50 a.m.

BREAK

Session 2: Emerging Infectious Disease Preparedness and COVID-19

10:50 – 11:30 a.m.

Plenary Speaker: Nandita Murukutla, PhD (Vice President, Vital Strategies)
“Social behavioral factors in epidemics: Evidence from COVID-19”

Plenary Session Chair: Sanja Ilic, PhD (Associate Professor, Ohio State)

11:30 a.m. – 12:30 p.m.

Panel Session: Linda Saif, PhD (Distinguished Professor, Ohio State), Barbara Sina, PhD (Program Officer, Fogarty International Center Division of International Training and Research, National Institutes of Health) and Gregory Gray, MD, MPH, FIDSA (Professor, Duke University)

Moderator: Amanda Berrian, DVM, PhD, MPH, DACVPM



DAY 2: FRIDAY, NOVEMBER 6

7 – 8 a.m.

POSTER SESSION

Moderator: Sanja Ilic, PhD (Associate professor, Ohio State)

Session 3: Plant Health and Food Protection

8 – 8:45 a.m.

Plenary Speaker: David Rizzo, PhD (Professor, University of California, Davis)
“Plant health is critical to One Health”

Plenary Session Chair: Sally Miller, PhD (Distinguished Professor, Ohio State)

8:45 – 10 a.m.

Panel Session: Arie Havelaar, PhD (Professor, University of Florida), Robert Onsare, PhD (Kenya Medical Research Institute) and Kang Zhou, PhD (Food and Agriculture Organization)

Moderator: Barbara Kowalczyk, MA, PhD (Director of the Center for Foodborne Illness Research and Prevention, Ohio State)

10 – 10:15 a.m.

BREAK

Session 4: Genomics and Bioinformatics

10:15 – 11 a.m.

Plenary Speaker: Cristina Tato, PhD (Associate Director of Chan Zuckerberg Biohub)

“Putting theory into practice for next generation sequencing capacity”

Plenary Session Chair: Robert Baiocchi, MD, PhD (Professor, Ohio State)

11 a.m. – 12:15 p.m.

Panel Session: Ann-Kathrin Einfeld, MD (Assistant Professor, Ohio State), Rosemary Rochford, PhD (Professor, University of Colorado) and Zelalem Mekuria, DVM, PhD (Associate Director of IDMEL, Ohio State)

Moderator: Robert Baiocchi, MD, PhD (Professor, Ohio State)

12:15 – 12:45 p.m.

Special Session – “Solidarity in One Health”: Caesar Atuire, PhD (Philosopher and Bioethicist, University of Ghana)

Moderator: Dónal O’Mathuna, MA, PhD (Associate Professor, Ohio State)



DAY 3: SATURDAY, NOVEMBER 7

7 – 8 a.m.

POSTER SESSION

Moderator: Shu-Hua Wang, MD, MPH&TM, PharmD, FIDSA (Professor, Ohio State)

Session 5: Antimicrobial Resistance

8 – 8:45 a.m.

Plenary Speaker: Patrick McDermott, PhD (Director, National Antimicrobial Resistance Monitoring System, Food and Drug Administration)

“One Health and the U.S. National Antimicrobial Resistance Monitoring System: A framework for the future”

Plenary Session Chair: Shu-Hua Wang, MD, MPH&TM, PharmD, FIDSA (Professor, Ohio State)

8:45 – 10 a.m.

Panel Session: Dubra Diaz-Campos, DVM, PhD (Assistant Professor, Ohio State), Paul Plummer, DVM, Diplomate ACVIM-LA (Professor, Iowa State University) and Alejandro Dorado Garcia, DVM, MSC VEE, PhD (Animal Health Officer, Food and Agriculture Organization)

Moderator: Thomas Wittum, PhD (Professor, Ohio State)

10 – 10:15 a.m.

BREAK

Session 6: Climate Change and Health

10:15 – 10:55 a.m.

Plenary Speaker: Matthew Sullivan, PhD (Professor, Ohio State)

“Climate change and the microbiome: A case study from the global Tara Oceans Expeditions”

Plenary Session Chair: Michael Bisesi, PhD, REHS, CIH (Professor, Ohio State)

10:55 – 11:55 a.m.

Panel Session: Qinghua Sun (Professor and Assistant Dean, Ohio State), Marta Jarzyna, PhD (Assistant professor, Ohio State) and William Ogara, DVM, PhD (Associate Professor, University of Nairobi)

Moderator: Michael Bisesi, PhD, REHS, CIH (Professor, Ohio State)

CLOSING CEREMONY

11:55 a.m. – 12:10 p.m.

Poster Award Winner Announcement by Sanja Ilic, PhD

12:10 – 12:20 p.m.

Summary Statements by Wondwossen Gebreyes, DVM, PhD

12:20 – 12:30 p.m.

Closing Remarks by Bruce McPheron, PhD (Executive Vice President and Provost for Academic Affairs, Ohio State)

POSTER SESSIONS

Below is the schedule of the Poster Session presentations.

THURSDAY, NOVEMBER 5 | Moderator: Amanda Berrian, DVM, PhD, MPH, DACVPM

- 7:10 a.m.** **Abera Kumie, Professor, Department Head, Addis Ababa University, Ethiopia**
“Non-pharmaceutical Intervention (NPI) related community practice for the prevention of COVID-19 in Addis Ababa, Ethiopia: A 10 weeks trend analysis”
- 7:20 a.m.** **Touseef Ahmed, PhD Scholar, Texas Tech University, United States/Pakistan**
“A Cross-Sectional Survey on Ecology and Epidemiology of Bat Rabies in Pakistan. One Health Perspective”
- 7:30 a.m.** **Ashley Bersani, Senior Program Manager, Ohio State University Global One Health initiative, United States**
“Eyes Wide Shut: Uncovering Gender Bias in Global Health Leadership”
- 7:40 a.m.** **Carina Rodrigues da Silva, MSc Student, Universidade Federal do Vale do São Francisco, Brazil**
“Mental health and social skills of veterinary residents of Pernambuco State, northeastern Brazil – Preliminary Data”
- 7:50 a.m.** **Muhammad Yasir Zahoor, Researcher, University of Veterinary and Animal Sciences, Pakistan**
“Knowledge, attitude and practice (KAP) survey of zoonotic tuberculosis prevention and associated determinants amongst livestock workers in Punjab, Pakistan”

FRIDAY, NOVEMBER 6 | Moderator: Sanja Ilic, PhD

- 7:10 a.m.** **Nicola Criscuolo, PhD Student, ETH Zürich, Switzerland**
“Resistancebank.org: an open-access repository for surveys of antimicrobial resistance in animals”
- 7:20 a.m.** **Ryan Mrofchak, MSc Student, Ohio State University, United States**
“Evaluating Extraction Methods to Study the Urine Microbiome”
- 7:30 a.m.** **Kilmer Oliveira Soares, Visiting Scholar, Ohio State University, United States**
“Effects of tetracycline hydrochloride on the microbiota of Africanized honey bees”
- 7:40 a.m.** **Claudia Foerster, Assistant Professor, Universidad de O'Higgins, Chile**
“Risk estimation for aflatoxin M1 due to dairy consumption in Chile”
- 7:50 a.m.** **Wanderson Bucker Moraes, PhD Student, Ohio State University Plant Pathology, United States**
“Effect of Moisture on Wheat Grain Contaminating with Zearalenone, an Estrogenic Metabolite produced by the fungus *Fusarium graminearum*”

POSTER SESSIONS

SATURDAY, NOVEMBER 7 | Moderator: Shu-Hua Wang, MD, MPH&TM, PharmD, FIDSA

- 7:10 a.m.** **Joseph Nguta, Senior Lecturer, University of Nairobi, Kenya**
“Antimicrobial activity of Solanum torvum hydroethanolic extracts against important mycobacterial strains”
- 7:20 a.m.** **Govindan Rajamohan, Senior Principal Investigator, CSIR-Institute of Microbial Technology, India**
“Role of flavohemoglobin from multidrug resistant Staphylococcus aureus in cellular physiology and virulence”
- 7:30 a.m.** **Rafael Vieira, Professor, Federal University of Paraná (UFPR), Brazil**
“Hemotropic Mycoplasma sp. and tick-borne disease pathogens in white-eared opossums (Didelphis albiventris) from Foz do Iguaçu City, Paraná State, southern Brazil: A tri-border area of Brazil, Paraguay and Argentina – Preliminary Data”
- 7:40 a.m.** **Oleksandra Kepple, Researcher, National University of Life and Environmental Sciences of Ukraine, Ukraine**
“Spatial-Temporal Analysis of Clostridium chauvoei Endemic Cases among Ruminants in Volyn Oblast, Ukraine”
- 7:50 a.m.** **Abdulkarim Abdulle Yusuf, MSc Student, Federal University of Paraná (UFPR), Brazil/Somalia**
“Seroprevalence of anti-Toxoplasma gondii and anti-Brucella spp. antibodies in pregnant women from Mogadishu, Somalia”

SPEAKERS & PANELISTS



Caesar Atuire, PhD

Atuire is a philosopher and bioethicist based at the Department of Philosophy and Classics at the University of Ghana. He is a Visiting Fellow of All Souls College, University of Oxford. He is also a member of the lead team of the NYU-UG Training Programme in Research Ethics and a founding member of the Ghana Research Ethics Consortium. He is also a member of the Planning Committee of the Global Forum on Bioethics in Research, 2020. He is also the founder and president of a non-governmental organization, Amicus Onlus.



Robert Baiocchi, MD, PhD

Robert Baiocchi is a medical oncologist who treats patients with blood cancers. He is a fully tenured professor of internal medicine, as well as the associate director for Translational and Clinical Science in the Division of Hematology and was named to the Castle Connolly list of “Regional Top Doctors” from 2016-2018. He is also the director of the Physician Scientists Training Program and assistant program director for The Ohio State University Internal Medicine Residency Program.



Martha Belury, PhD

Martha Belury, PhD, is a professor in the Department of Human Sciences at The Ohio State University. Her research interest lie in the study of whole-body energy metabolism as regulated by interactions between adipose, liver and muscle tissues. In 2012, she won the College of Education and Human Ecology Award for Distinguished Scholarship, and in 2014, the Robert H. Herman Memorial Award for Outstanding Research from the American Society of Nutrition.



Dubra Diaz-Campos, DVM, PhD

Dubra Diaz-Campos, DVM, PhD, is an assistant clinical professor of veterinary clinical microbiology and the section head of the Clinical Microbiology Laboratory of the Veterinary Medical Center of The Ohio State University. She is interested in the diagnostic of infectious diseases and zoonotic infections. Her research interests include antimicrobial resistance and antimicrobial susceptibility testing, the use of new technologies for the diagnostic of infectious diseases, and the development of antimicrobial stewardship programs in veterinary medicine.



Alejandro Dorado Garcia, DVM, MSc VEE, PhD

Alejandro is a veterinary epidemiologist with working experience in the private sector, academia, public health and international development. He holds a DVM degree from Complutense University of Madrid (Spain), and an MSc and PhD in Epidemiology of AMR from Utrecht University (The Netherlands). He joined FAO in Rome early in 2018 where he works as an Animal Health Officer. He coordinates and provides technical support for implementing a number of projects related to AMR.



Ann-Kathrin Eisfeld, MD

Dr. Eisfeld is a physician-scientist whose research focuses on acute myeloid leukemia genetics, as well as age-associated differences in mutational landscape and prognostic significance of molecular markers. Her studies aim to identify prognostic factors and lead to refinements of disease classification and molecular subtypes, followed by the identification and functional characterization of coding and non-coding candidate genes. In addition, she is working on tumor genomics specific to the of adolescent and adult cancer patient population with rare malignancies.



Gregory C. Gray, MD, MPH, FIDSA

Dr. Gray is an infectious disease epidemiologist and professor at Duke University's School of Medicine. He also serves as a professor at Duke-NUS Medical School, Singapore and at Duke Kunshan University in China. He leads the Duke One Health Network which involves more than 30 professionals studying more than 30 pathogens under 30 research and training projects running in multiple countries. He has conducted diverse epidemiological studies of infectious diseases and has authored more than 340 peer-reviewed manuscripts and book chapters.



Arie Havelaar, PhD

Arie Havelaar, PhD, joined the University of Florida in fall of 2014. He brings international knowledge on risk assessment of infectious diseases and food safety.

His research covers the broad field of public health aspects of pathogens in food and the environment, and the effectiveness of preventive measures. He is coauthor of more than 250 scientific publications, several books and numerous scientific reports.



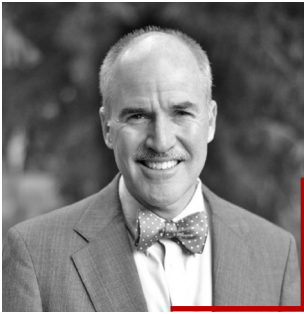
Marta Jarzyna, PhD

Marta Jarzyna, PhD is an assistant professor in the Department of Evolution, Ecology and Organismal Biology at Ohio State. She is a broad-scale ecologist and global change biologist interested in understanding the processes underlying biodiversity dynamics across different spatial, temporal, and taxonomic scales. Marta is a proud alumna of Warsaw University of Life Sciences (MS), Michigan State University (PhD) and Yale University (postdoc).



Samuel Kariuki, PhD

Sam Kariuki obtained his PhD in tropical medicine from the Liverpool School of Tropical Medicine. He is currently the director for research and development at KEMRI and is a Wellcome Sanger Institute International Fellow. His research interests are in the epidemiology and molecular characterization of enteric bacterial pathogens and antimicrobial resistance (AMR). He has published 146 manuscripts in peer-reviewed journals and written chapters in four text books in related fields of AMR and foodborne infections.



Peter Kilmarx, MD

Peter H. Kilmarx, MD, an expert in infectious diseases, has served since 2015 as the deputy director for the Hohn E. Fogarty International Center, NIH. He previously held leadership positions at the CDC. Dr. Kilmarx helped lead Ebola response efforts in Sierra Leone, Guinea and the Democratic Republic of Congo.

He served 23 years in the Public Health Service, rising to the rank of Rear Admiral.



Patrick McDermott, PhD

Patrick McDermott, PhD, is the director of the National Antimicrobial Resistance Monitoring System at the FDA Center for Veterinary Medicine, Office of Research, where he is also director of the Division of Animal and Food Microbiology. He has worked for over 25 years in the field of antimicrobial resistance. He is a fellow of the American Academy of Microbiology, and recipient of the FDA's Francis Kelsey award for excellence and courage in protecting the public health.



Zelalem Mekuria, DVM, PhD

Zelalem Mekuria DVM, PhD is a researcher specializing in microbial genomics as well as serving as associate director for the GOHi's Infectious Diseases Molecular Epidemiology Laboratory (IDMEL) at The Ohio State University. Previously, he was a postdoctoral scholar at the Maxwell Gluck Equine Research Center at the University of Kentucky, where he extensively used next generation sequencing technologies to investigate evolution and transmission dynamics of rapidly mutating RNA viruses.



Nanditha Murukutla, PhD

Nanditha Murukutla, PhD, is a social scientist with a background in behavioral economics. At Vital Strategies, Nanditha leads research on the social, behavioral and political factors that affect the success of health interventions and policies. With a mission to empower policymakers and program managers to make evidence-driven decisions that achieve impact and protect investments, she collaborates with academic experts and leads a team of researchers in primary research, monitoring and evaluation, and policy analysis. She holds a PhD in Social Psychology from Yale University.



John Nkengasong, PhD

John N. Nkengasong, MS, PhD, serves as the director of the Africa Centers for Disease Control and Prevention, Addis Ababa, Ethiopia, and is the keynote speaker. He has received numerous awards for his work. He is an adjunct professor at the Emory School of Public Health at Emory University, in Atlanta, Georgia.

He has authored over 250 peer-review articles in international journals and published several book chapters.



William Ogara, DVM, PhD

William Ogara, DVM, PhD, is a professor and director of the Center for International Programmes and Links at the University of Nairobi. He holds a PhD in veterinary medicine and has vast experience in the in the animal health and production sector, contributing substantially to the development of the veterinary profession and livestock industry nationally and internationally. Professor Ogara specializes in trans-disciplinary studies for student training and research.



Francisco Olea-Popelka, DVM, MSc, PhD

Francisco Olea-Popelka, DVM, MSc, PhD, is a veterinary epidemiologist, who works in close partnership with stakeholders in different sectors of society to use scientific evidence to evaluate health programs and to inform decision makers during the implementation of strategies to address health issues in different species. His main area of interest is tuberculosis, and for the past ten years, he has led global efforts to address the main challenges posed by zoonotic tuberculosis.



Robert Onsare, PhD

Robert Onsare, PhD, is a senior research scientist with expertise in molecular epidemiology, genomics and bioinformatics of infectious diseases. The overarching goal of his research is to develop preventive strategies, control measures of antimicrobial resistance in enteric infectious diseases including discovery of new vaccine targets. He has worked on antimicrobial resistance surveillance and monitoring, molecular and epidemiologic characterization of enteric pathogens obtained from hospitals, community and food animals in both outbreak and non-outbreak settings.



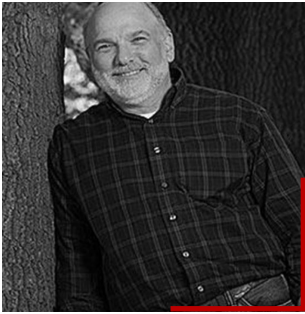
Ahmed Ogwell Ouma, PhD

Ahmed Ogwell Ouma, PhD, serves as the deputy director of the Africa Centers for Disease Control and Prevention. He is an accomplished international civil servant and an expert in global health. He has competency in governance in public health; partnerships and resource mobilization; health security including health emergencies; the prevention and control of NCDs; building multi-sectoral partnerships; international co-operation across sectors; tobacco control; global health diplomacy; and development of international instruments that impact positively on public health.



Paul Plummer, DVM, Diplomate ACVIM-LA

Paul Plummer, DVM, is the executive director of the National Institute of Antimicrobial Resistance Research and Education (NIAMRRE), housed at the Iowa State University Research Park. His clinical specialty is internal medicine and infectious disease of ruminants. He has been board certified in Large Animal Internal Medicine by the American College of Veterinary Internal Medicine since 2004. He is also the only individual in the United States (and one of only two in North America) that is board certified by the European College of Small Ruminant Health Management.



David Rizzo, PhD

Dave Rizzo is a professor and chair in the Department of Plant Pathology at the University of California, Davis. His research focuses primarily on diseases of forest and orchard trees with an emphasis on fungal diseases. He teaches a number of courses in the Global Disease Biology undergraduate major which has a strong One Health focus. He has served on a number of committees relevant to One Health including the One Health Action collaborative of the National Academy of Medicine.



Rosemary Rochford, PhD

Rochford's research has been on endemic Burkitt's lymphoma (BL), the most common childhood cancer in sub-Saharan Africa. Endemic BL is linked to infection with both EBV and Plasmodium falciparum malaria. Through her research program based in Kisumu, Kenya she has uncovered a number of ways that repeated infection with P. falciparum malaria dysregulates EBV persistence, and ultimately increases the risk for BL in children. More recently, she has extended her studies to Uganda to understand how malaria increases susceptibility to KSHV.



Linda Saif, PhD

Linda J. Saif is a virologist, immunologist and a distinguished professor at The Ohio State University. In 2015, she became the first female recipient of the Wolf Prize in Agriculture for her research in virology and immunology. Saif is a Fulbright scholar and a member of the National Academy of Sciences. Her research focuses on comparative aspects, including the zoonotic potential, of enteric and respiratory viruses (coronaviruses, rotaviruses and caliciviruses) of food animals and humans.



Barbara Sina, PhD

Barbara Sina, PhD, is a program officer in the Division of Training and Research at the Fogarty International Center, National Institutes of Health. She manages the Global Infectious Disease Research Training program, the Bioethics Training program and is a coordinator for the The Human Heredity and Health in Africa (H3Africa) Initiative.



Matthew B. Sullivan, PhD

Matthew B. Sullivan, PhD, studies viruses that infect microbes in their natural settings using viral ecogenomics, an experimental and informatics toolkit he pioneered and now applies to the oceans, soils, humans and extreme environments. He is a professor of microbiology and civil, environmental and geodetic engineering at Ohio State, a co-founder of the UA Ecosystem Genomics Institute and co-director of Ohio State's Infectious Disease Institute Microbial Communities Program. He is also a Kavli Fellow and a Fellow of the American Academy of Microbiology.



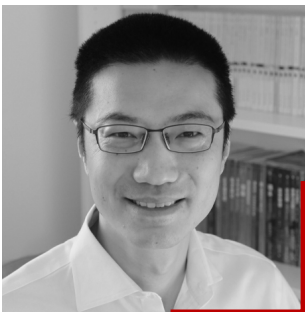
Qinghua Sun, PhD

Qinghua Sun, PhD, is an assistant dean for global public health and professor at Ohio State. His research has been focused on studying air pollution on human diseases, especially cardiovascular diseases. He has published close to 170 peer-reviewed papers. He has numerous awards, including the Clinical Pharmacy and Pharmacology Specialty Award from Society of Critical Care Medicine (SCCM, USA), Paper of the Year Award from Inhalation & Respiratory Specialty Section of Society of Toxicology and Distinguished Undergraduate Research Mentor Award from Ohio State.



Cristina Tato, PhD, MPH

Cristina Tato, PhD, MPH, earned her PhD in immunology from the University of Pennsylvania. As a post-doctoral fellow (NIH and Schering-Plough Biopharma) her work focused on how transcription factors mediate host resistance to infection, regulate production of inflammatory cytokines and affect development of innate and adaptive immunity. At Stanford, she focused on the tactical application of systems immunology methods for studying human health and disease and for evaluating vaccine efficacy. She now leads the Rapid Response Team at the Chan Zuckerberg Biohub.



Kang Zhou, PhD

Kang Zhou, PhD, is a food safety and quality officer at the Food and Agriculture Organization of the United Nations (FAO).

He serves on the Joint FAO/WHO Expert Meeting on Microbiological Risk Assessment as a secretariat to provide microbiological risk assessment and scientific advice to support the development of international guidelines and standards, and also transfer the technology to member countries for capacity development.

PLANNING COMMITTEE

The 2020 Global One Health Conference was planned and organized by GOHi, members of its Executive Committee and Faculty Advisory Committee, and partners.

- **Center for Foodborne Illness Research and Prevention**
- **College of Education and Human Ecology**
- **College of Food, Agricultural, and Environmental Sciences/Intentional Extension Programs**
- **College of Medicine/Wexner Medical Center**
- **College of Nursing**
- **College of Public Health**
- **College of Veterinary Medicine**
- **Global One Health initiative**
- **Infectious Disease Institute**
- **Office of Government Affairs**
- **Office of International Affairs/Global Gateways**
- **OSU Extension**

ABOUT ONE HEALTH DAY

One Health Day, celebrated annually on November 3, is an international campaign co-coordinated by the One Health Commission, the One Health Initiative, and the One Health Platform Foundation. The goal of One Health Day is to bring attention around the world to the need for One Health interactions and for the world to 'see them in action'. The One Health Day campaign is designed to engage as many individuals as possible from as many arenas as possible in One Health education and awareness events, and to generate an inspiring array of projects worldwide.

By participating in Ohio State's Global One Health Day Conference, you are demonstrating your support for One Health worldwide. Learn more at go.osu.edu/GOHC.



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