One Health | One Global Environment Conference











JAPHI / IFEH Americas Region Conference on Environmental Health

October 02-05, 2023

Hilton Rose Hall Resort & Spa Montego Bay, Jamaica

CONFERENCE PROGRAMME onehealthconference.com















Hosted by the Jamaica Association of Public Health Inspectors (JAPHI) and the **International Federation of Environmental** Health (IFEH) Americas Region



PROGRAM AT-A-GLANCE

TIME	MONDAY OCT 2	TUESDAY OCT 3	WEDNESDAY OCT 4	THURSDAY OCT 5
AM		Academic/Research Presentations 9-11:00 a.m. Two simultaneous sessions take place Keynote Session 11:10a-12:20p: Dr. Wondwossen Gebreyes	Academic /Research Presentations 9:00-10:05 a.m. Plenary Session at 10:15-12:20 a.m. Keynote 10:15a Michael D'Andrea Keynote: 11:15a Dr. Jiyoung Lee	JAPHI Business Meeting 9:00a-12:00 p.m.
Lunch	Lunch	Lunch 12:20 -1:30 p.m.	Lunch 12:20-1:30 p.m.	Lunch 11:30a-2:00 p.m.
PM	Opening Evening 4-6 p.m. including: Welcoming Remarks 4:30 p.m. Keynote (Dr. Maureen Lichtveld) 5:30 JAPHI Awards Opening Exhibition & Poster Display Cocktail Hour ~6:00-7:00 p.m. 7:00-9:00 p.m. Dinner Program & Entertainment	Plenary Session at 1:30-2:40 p.m. Women in EH Leadership Academic/Research Presentations Two simultaneous sessions 2:50-3:20 p.m. Plenary Session Guinea Worm: Eradication in the Crosshairs 3:30-5:00 p.m.	Academic /Research Presentations Two simultaneous sessions 1:00-3:00p Plenary Session & Remarks with Dr. David Dyjack (Moderator) 3:15-4:15 p.m. IFEH Americas Panel with NEHA, IFEH and CIPHI 4:20 p.m. Official Closing Ceremony. Keynote Speaker Hon. C. Tufton, Min. of Health	11:30 a.m.— 2 p.m. Drop-in Lunch Conversation, Recap summary of major themes and reflections. Summary for journal article submission.

Disclaimer: The Jamaica Association of Public Health Inspectors (JAPHI) and the International Federation of Environmental Health (IFEH) presents a wide variety of speakers who are invited to present the latest training, education, and information on a specific area of expertise within Environmental Health/Public Health. The speakers are given general guidelines to facilitate their respective presentation; however, they are solely responsible for the content of those presentations. This is also true for the abstracts and materials provided by the speakers for their presentations. Moreover, any comments or observations made by an individual speaker are the sole responsibility of that speaker and do not necessarily reflect the judgement or views of IFEH, NEHA, CIPHI, JAPHI, or the Governments of Canada, Jamaica, or the United States. No liability, either expressed or implied, for any such statement or the content of any given presentation at the One Health Conference and Exhibition, will under any circumstances be assumed by IFEH, NEHA, CIPHI or JAPHI.

WELCOME FROM CONFERENCE CHAIR

It is with great pleasure and much appreciation, that I welcome all attendees to this our second "One Health One Environment Conference - An interdisciplinary collaboration for a Healthier World," at the Hilton Rose Hall Resorts and Spa, October 2-5, 2023. A warm welcome to you all!

Let me hasten to thank all the members of our Planning Committee for the many and diverse roles that they played and the invaluable contributions that they made in making this conference a reality. The Committee benefited immensely from the wide range of expertise that characterised its composition (environmental health practitioners, academics, industry representatives, entrepreneurs, local and international partners). Our most able Co-Chair and Technical Chair, Professor Jason Marion, must be specially commended for his yeoman contribution to this effort.



As Chairman, I commend the leadership of the Region of the Americas of the International Federation of Environmental Health (IFEH) for its vision and insightfulness in organising this very important conference, and the Jamaica Association of Public Health Inspectors (JAPHI) for hosting it a second time. The environment is said to be the least emphasised in the "One Health" triad despite its enormous importance in the achievement of One Health objectives. Accordingly, the environmental health portfolio must of necessity assume its rightful place as a key partner in the One Health movement. This conference represents an important step in that direction within the Region of the Americas of the IFEH. As such, I thank our most imminent keynote speakers, our presenters of best practices and innovations and all attendees.

I encourage you all to make the very best of this conference and be reminded that it is "One Health One Environment: An interdisciplinary collaboration for a Healthier World!

Best regards,

Norbert Campbell PhD, MPH

Lecturer/coordinator OESH Programmes

The University of the West Indies, Mona Kingston, Jamaica

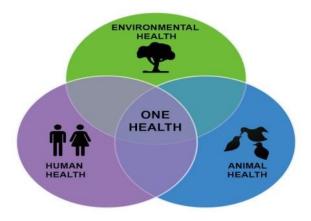
JAPHI'S PRESIDENT MESSAGE

Welcome! "Whah gwa'an everybody?!" JAPHI celebrates its 77th year of ANNIVERSARY as an organization advocating for the welfare and working conditions of Public Health Inspectors. We stand on the shoulders of giants gone before to celebrate a monumental achievement in owning a plot of Land to build our Mulicomplex building (office space, etc). We are also hosting our second International One Health, One Global Environment Conference, October 2-6, 2023, at the Hilton Rose Hall Resorts and Spa. This prestigious conference is jointly hosted by the National Environmental Health Association (NEHA), USA and the Canadian Institute of Public Health Inspectors' (CIPHI), which together with JAPHI comprise the Region of the



Americas of the International Federation of Environmental Health (IFEH).

This conference has academia and practitioners organized around the theme "One Health, One Global environment-A Multidisciplinary Collaboration for a Healthier World," focused on recognizing the critical link that Environmental Health (EH) provides in the protection of human health from human-to-human, vector-borne, and zoonotic diseases transmission. The One Health Initiative describes the One Health concept as "a worldwide strategy for expanding interdisciplinary collaborations and communications in all aspects of healthcare for humans, animals, and the environment" (One Health Initiative).



The benefits of One Health Concept include (1) Improving Animal/Plant/Human Health globally through collaboration with all the health science. (2). Developing centers of excellence for education and training in the various disciplines, 3. Provide data on the impact of Climate change on Vectors, Disease transmission, ecosystem, Health services and Natural Resources to response to health threats efficiently.

We have seen the emergence and re-emergence of many diseases globally, we have observe little or no regard for species barriers and human-constructed boundaries, and so we as Health Professionals need to be flexible in our thoughts and actions. In a world that is

getting closer, warmer, and more easily connected by rapid transportation, our aim-our desire-our passion should be entrenched in continuing to work together with our allies under the One Health Concept. We must maintain the collaborative spirit across all sectors. Collaboration was and is the key; it's time for greater ACTION.



One Health Concept must be engraved in the culture of each discipline using strategies for enhancing diversity in each professional discipline by embracing, integrating and institutionalizing such concept in curriculum at our universities (into existing science-based environmental health curricula/agricultural disciplines/medical and nursing disciplines/financial discipline, etc.), various Ministries and our practices. LET'S LIFT OUR VOICES to empower individuals through training; media of all forms, political representatives, church, all sector of society must be empowered to know that they have a personal responsibility to prevent the transmission of diseases. It starts from their home, community, parish, Jamaica and to the WORLD!!!

Additionally, we need to share data/information through networking, collaboration, and technology. **Sharing of data across discipline is critical to good health care management**. Research and an effective data management system support sharing of data and can provide all parties critical data for greater accuracy in treating patients or intervention.

The Environmental health community has embraced the One Health concept and is seeking to strengthen relationships and partnerships with animal/plant and human health disciplines. Furthermore, we are advocating, informing, campaigning to work together to ensure that discipline outside of health are informed, that they understand, accept and are enthused about the concept of One Health and are willing to embrace partnership and

provide funding. Such recognition and enthusiasm by those outside the health professions adds value to all of our professions.

The question is what are you doing to make a difference? I want to challenge you to make a difference. We must communicate in ways that inspire all sectors to support One Health concept. Inherent in the DNA of environmental health professionals is the power to partner-Collaborate-work together with unity of purpose. If we successfully work together, we will protect and save millions of lives across the generations. Therefore, we should move forward from this conference with a vast understanding of the One Health Concept and a tremendous enthusiasm and expectation to build greater momentum to this cause. One Health should be our culture. Our response to One Health is a response to Good Health.

Together we are stronger - Together we respond to the future.

Thank you,

Michael Myles

President, JAPHI



Welcome from Conference Technical Chair

Dear Colleagues and Friends,

Welcome to Montego Bay! You are among delegates and attendees from dozens of countries spanning four continents united by a common bond. By being here, you are committed in doing more or learning how to better protect our fellow local and global citizens by ensuring we have healthy environments wherever we spend our days.



Over the next few days, you will experience a dense, actionpacked agenda including several of the global experts in One Health, food safety, veterinary preventive medicine, environmental health, water quality, and more.

Upon completing this conference, you are building upon the work we have already started in environmental health not only in the Americas, but abroad. As we all know, the world's diseases move with little or no regard for human-constructed boundaries such as academic disciplines or geopolitical borders (counties, parishes, states, provinces, nations, or continents). Together, in a world that is more disaster prone, getting closer, hotter, and struggling with ensuring economic security for all nations, all while being easily connected by rapid transportation, we must strive to continue to work together, it is our only hope.

Here, in Montego Bay, we further build upon our existing efforts to celebrate environmental health as a continued "active" member of the One Health community. On behalf of our committee, we truly hope you embrace your role in the One Health Initiative. Please stay connected with the activities of the One Health Commission and Initiative and work diligently to keep your professional peers in-the-know on what it means to embrace One Health.

I look forward to meeting all of you, especially those who have come so far.

Most respectfully,

Jason W. Marion, Ph.D., RS/REHS Professor, Eastern Kentucky University

Richmond, Kentucky, USA

Maureen Lichtveld, MD, MPH

Dean, School of Public Health,
Jonas Salk Chair in Population Health, and
Professor of Environmental & Occupational Health
University of Pittsburgh, USA

MD, Universities of Suriname and Leiden, Suriname & the Netherlands; MPH, Johns Hopkins Univ. Baltimore, USA

Presentation Theme: Environmental Health + One Health = 0, 1, 2, or 10?



MONDAY (4:30 P.M.)

BIO: Maureen Lichtveld, MD, MPH, is dean of the School of Public Health, where she oversees the growth and continued success of the school's seven academic departments and hundreds of students, faculty, and staff. She also serves as professor of environmental and occupational health and is the Jonas Salk Professor of Population Health.

Dr. Lichtveld studies environmental public health, focusing on environmentally induced disease, health disparities, environmental health policy, disaster preparedness, public health systems, and community resilience. Her research examines the cumulative impact of chemical and non-chemical stressors on communities facing environmental health threats, disasters, and health disparities.

Before assuming the deanship at Pittsburgh in January 2021, Dr. Lichtveld chaired Tulane University's Department of Environmental Health Sciences in the School of Public Health and Tropical Medicine. She also directed the Center for Gulf Coast Environmental Health Research, Leadership, and Strategic Initiatives within Tulane's public health and tropical medicine school. In that role, Dr. Lichtveld led development and implementation of disaster management, health promotion, and disease-prevention strategies for Gulf Coast communities. Prior to her arrival at Tulane in 2005, Dr. Lichtveld spent 18 years with the U.S. Centers for Disease Control and Prevention and the U.S. Department of Health and Human Services Agency for Toxic Substances and Disease Registry, where she designed public health research tools and protocols to guide environmental health studies in communities located near hazardous waste sites.

Dr. Lichtveld is a member of the National Academy of Medicine and a member of the board of the Consortium of Universities for Global Health. She received her MPH from Johns Hopkins University's School of Hygiene and Public Health and her MD from Anton de Kom University of Suriname and the University of Leiden in the Netherlands.

Wondwossen A. Gebreyes, DVM, PhD, ACVPM

Executive Director of the Global One Health
Initiative, The Ohio State University (OSU),
Professor of Veterinary Preventive Medicine,
College of Veterinary Medicine, and Hazel C.
Youngberg Professor of Molecular Epidemiology,
Center for Foodborne Illness Research & Prevention
Columbus, Ohio, USA

DVM, Addis Ababa University, Addis Ababa, Ethiopia PhD, North Carolina State University, United States

Presentation Theme: The Global One Health Paradigm: Strengthening Capacity in Low-Resource Settings

TUESDAY | 11:10 a.m.



BIO: Dr. Gebreyes is professor of molecular epidemiology, Executive Director of Global Health and Global One Health Programs at The Ohio State University, College of Veterinary Medicine and Chair of the Ohio State Ethiopia One Health Task Force. Dr. Gebreyes is the principal investigator of the National institute of Health (NIH) Fogarty International Center, Global Infectious Diseases, research and training program on Molecular epidemiology of food borne pathogens for eastern Africa including Ethiopia, Kenya and Tanzania. He is engaged in various foodborne research activities mainly at the interface of pork and humans; also in global capacity building efforts including teaching annual courses on molecular epidemiology of infectious diseases in Brazil and Ethiopia and currently an online format (http://go.osu.edu/MolEpid). He also directs the Infectious Diseases Molecular Epidemiology Laboratory (IDMEL). IDMEL has a major goal and activity investigating molecular mechanisms of multi-drug resistance in gram-negative organisms (http://vet.osu.edu/idmel). He has published more than 120 peer-review scientific manuscripts in the area of antimicrobial resistance and molecular epidemiology in food borne infections. He also co-founded and currently serves as president of International Congress on Pathogens at the Human Animal Interface (ICOPHAI) (http://icophai.org). He is the recipient of numerous awards including the prestigious Malone Award for International Service given by the American Public Land Grant Universities (APLU) and the American Society of Microbiology International Professorship Award. More information on Dr. Gebreyes can be found at http://vet.osu.edu/about-us/people/wondwossen-gebreyes.

Michael D'Andrea, M.E.Sc, P.Eng.

Chief Engineer (Ret.) and Executive Director (Ret.), Engineering and Construction Services, City of Toronto, Canada

M.E.Sc., University of Western Ontario, Professional Engineer

Presentation Theme: Toronto's Beaches: Past, Present and Future

WED. | 10:15 a.m.



Michael D'Andrea recently retired as the City of Toronto's Chief Engineer and Executive Director of Engineering and Construction Services. Michael held that position for over nine years, leading a team of over 650 professional and technical staff providing engineering design and construction services for the City of Toronto's water, wastewater, stormwater, transportation and solid waste infrastructure; delivering capital projects valued at an estimated \$1 billion CAD, annually.

Michael has over 36 years of experience in the water and wastewater services industry having worked in engineering consulting and the Province of Ontario's Ministry of the Environment before joining the City of Toronto in 1997.

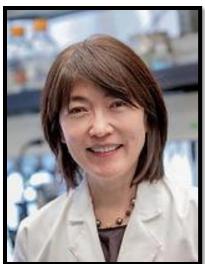
He has led several environmental stewardship initiatives including a climate change adaptation strategy to help reduce the risk and impact of sewer backups and flooding from extreme storm events, and the development of the City of Toronto's comprehensive Wet Weather Flow Master Plan. The implementation of this innovative, and multi-facetted, watershed-based Plan is directed at addressing the water quality impacts of storm sewer and combined sewer overflow discharges and thereby improve water quality within the City's six major watersheds and the nearshore area of Lake Ontario, which includes the City's ten waterfront beaches.

Jiyoung Lee, PhD

Professor of Environmental Health Sciences, Professor of Food Science & Technology, and Director of the Ecology, Epidemiology, and Population Health Program in the Infectious Diseases Institute at The Ohio State University, Columbus, Ohio, USA

PhD in Environmental Health Sciences, University of Michigan, USA|| MS in Microbiology, Seoul National University, Seoul, Korea

WED. | 11:15 a.m.



Presentation Theme: Microbial and Antibiotic Resistance Hazards in Environments & Human Gut Microbiome: Applications of One Health Approach

Dr. Jiyoung Lee directs her Environmental Microbiology and One Health Lab (EMOHL) which has focused primarily on a *One Health & One Water* paradigm for solving pathogen, antibiotic resistance, harmful cyanobacteria (blue-green) algae bloom problems. Current foci in her laboratory and field studies relate to research on pathogens and microbe-derived metabolites (cyanotoxins) in environmental matrices that leads to direct human exposures and subsequent linkage to health risks. Her laboratory has a focus on microbial transmission dynamics, emerging exposure pathways, interactions within microbial community and with hosts in multi-temporal and spatial scales. Her interdisciplinary laboratory uses microbial source tracking, metagenomics, epidemiology, and geospatial tools for addressing these major global environmental and public health challenges.

Areas of research expertise include the following: (1) Heath risks from cyanotoxin exposure (liver disease, cancer, neurodegenerative diseases, (2) Impact of environmental exposure on microbiome & resistome, (3) cyanobacteria, cyanophage and toxin ecology, (4) water-food-climate nexus: Ecology of emerging infectious diseases, (5) sustainable intervention of pathogen and antimicrobial resistance spread, and (6) wastewater-based epidemiology of COVID-19 and possible application for emerging pathogens.

Dr. Lee has led to the development of well over 100 research products in the last decade spanning topics related to several One Health topics, including but not limited to: water quality and health in Cameroon and Ethiopia, urban watersheds, agricultural waters, food contamination, antibiotic resistance, and cyanotoxin-related carcinogenesis.

CONFERENCE VENUE

Hilton Rose Hall Resort & Spa Montego Bay, Jamaica

All conference activities occur at the Hilton Rose Hall Resort.

The Hilton Rose Hall Resort & Spa located in Montego Bay, Jamaica provides over 44,000 square feet of meeting space and is a tropical paradise setting. The hotel has exclusive beach access to the longest white sand beach in Jamaica. Historical ruins, mountains, and more surround this 18th-century tropical estate.





02 OCT	Monday Evening
MONDAY	Opening Plenary (Room A)
Monday	Environmental Health + One Health = 0, 1, 2, or 10?
~4:30-5:30p~ Room A	Dr. Maureen Lichtveld, MD, MPH, <i>University of Pittsburgh, USA</i> Introduction/Moderator: Dahlia Plunkett, JAPHI Secretary
03 OCT TUESDAY	Tuesday Morning Technical Sessions Water & One Health (Room A) Moderator: Oneil Brown, Vice President, JAPHI
	Environmental influences and prediction of <i>Escherichia coli</i> concentration in recreational beaches in Canada
	Part 1: Environmental influences and prediction of <i>Escherichia coli</i> concentration in freshwater recreational beaches in Southern Ontario
Tuesday 9:00-9:45 Room A	J. Johanna Sanchez MIPH, PhD; Ian Young, Binyam Desta, and Jordan Tustin. School of Occupational and Public Health, Toronto Metropolitan University, Toronto, Canada.
	Part 2: Environmental factors associated with <i>Escherichia coli</i> concentration at freshwater beaches in Lake Winnipeg, Manitoba, Canada
	Binyam N. Desta, PhD; <u>Johanna Sanchez</u> , Cole Heasley, Ian Young, and Jordan Tustin. <i>School of Occupational and Public Health, Toronto Metropolitan University, Toronto, Canada</i> .
Tuesday 9:45-10:05	An Epidemiological survey of Non-municipal Drinking Water Supplies among Rural Communities in the Blue and John Crow Mountain Ranges Jamaica, 2019-2023
Room A	<u>Karlene Atkinson</u> , PhD, <i>University of Technology, School of Public Health & Health Technology, Kingston, Jamaica</i>
Break	Break from 10:05 – 10: 15 a.m.
Tuesday	Surveillance of Antibiotic-Resistant <i>E. coli</i> in Appalachian Kentucky Watersheds Impacted by Various Land Uses
Tuesday 10:15-10:30 Room A	Jayden Hamlet, ¹ S. Travis Altheide, PhD, MLS(ASCP) ^{CM} SM, ² <u>Jason W. Marion</u> , PhD, REHS/RS, ^{3*} ¹ Stockton University, Galloway, New Jersey, USA; ² Medical Laboratory Science Program, Eastern Kentucky University, Richmond, Kentucky, USA; ³ Environmental Health Science Program, Eastern Kentucky University, Richmond, Kentucky, USA
Tuesday	Leveraging Analytics and Machine Learning for Accurate Beach Water Quality
10:30-11:00 Room A	Advisories <u>Mahesh Patel</u> , MSc, <u>Ravin Lathigra</u> , MSc, Toronto Public Health, Toronto, Canada
Break	Break from 11:00 – 11: 10 a.m.

03 OCT TUESDAY	Tuesday Morning Technical Sessions Social & Cultural Dimensions to One Health (Room B) Moderator: Murie Edwards, Exec. Member JAPHI
	Cultural factors and their importance for One Health in the Indigenous Communities of Latin America Part 1: The importance of indigenous peoples' languages, for the promotion
	of indigenous and intercultural health: Analysis from the Mapuche world- view
Tuesday 9:00-9:45 Room B	Michelle Lapierre, MPH; Luz Marina Huenchucoy. Universidad Santo Tomás, Chile, Faculty of Health, Temuco, Chile
	Part 2: Ancestral medicine for the care of people with disabilities in the Mapuche and Mixe communities of Latin America: reflections for One Health
	Michelle Lapierre ¹ , MPH; Zoila Romualdo Pérez ² . ¹ Universidad Santo Tomás, Chile, Faculty of Health, Temuco, Chile; ² Universidad Nacional de México, Mexico City, Mexico
Tuesday 9:45-10:05	Telemedicine: The key to the professional practice of "One Health" by Public Health Inspectors and other healthcare providers (streamed in Room B by Zoom)
Room B	Prof. Winston Davidson ^{1,2} , CD; JP; MBBS; DTM&H. ¹ Doctor on Call, Kingston; ² School of Public Health and Health Technology, University of Technology, Kingston, Jamaica (https://tinyurl.com/japhi-telemed)
Break	Break from 10:05 – 10: 15 a.m.
Tuesday 10:15-11:00 Room B	Climate Communication Amidst Media Depictions Leon F. Vinci ^{1,2} , DHA, DAAS, MPH, RS. ¹ Roanoke, Virginia, USA; ² Drexel University, College of Nursing and Health Professions, Department of Health Administration, Philadelphia, Pennsylvania, USA
Break	Break from 11:00 – 11: 10 a.m. Keynote/Plenary Session Begins in Room A at 11:10 a.m.

03 OCT TUESDAY	Tuesday Late Morning Keynote (Room A)
Tuesday 11:10a-12:15p Room A	The Global One Health Paradigm: Strengthening Capacity in Low-Resource Settings (Moderator: Mr. Paul Ximines, JAPHI Vice President) Wondwossen A. Gebreyes, DVM, PhD, ACVPM. Global One Health Initiative, College of Veterinary Medicine, and Center for Foodborne Illness Research & Prevention, The Ohio State University, Columbus, Ohio, USA
Lunch	Lunch from 12:20 – 1:30 p.m. at all-inclusive restaurants on site
03 OCT TUESDAY	Tuesday Early Afternoon Plenary Panel Session (Room A)
Tuesday 1:30-2:30p Room A	Women in Leadership: A Conversation with Environmental Health Women Leaders, Part 1 (Moderator: Mr. Michael Myles, JAPHI President) Priscilla Oliver ¹ , PhD, MPA; Sandra Long ² , REHS; Karen Brown ³ , MPH, REHS; Alicia Enriquez Collins ⁴ , REHS. ¹ NEHA & PAUSE Partnerships & U.S. EPA (retired), Atlanta, Georgia, USA; ² NEHA & City of Addison, Texas, USA; ³ JAPHI & North East Regional Health Authority, Ocho Rios, Jamaica; ⁴ NEHA & Steritech, Atlanta, Georgia, USA.
Break	Break from 2:30 – 2:40 p.m.
03 OCT TUESDAY	Tuesday Afternoon Technical Sessions (Room A) Environmental & Occupational Health & Safety Moderator: Mr. Steve Morris, JAPHI Asst. Secretary
Tuesday 2:40-3:00p Room A	Assessing the Quality of NIOSH Sound Level Meter App for Evaluation and Prevention of Community Noise Exposures Sarah Morgan, MPH, D. Gary Brown, DrPH, REHS/RS, DAAS, CIH, and Jason W. Marion, PhD, REHS/RS. Eastern Kentucky University Environmental Health Science & Sustainability Program, Richmond, Kentucky, USA
Tuesday 3:00-3:20p Room A	Using Large Atmospheric Chambers and Real-World Processes to Challenge Air Pollution Models Kim Lichtveld, PhD, MSPH and Seth Ebersviller, PhD, CIH. University of Findlay, Environmental, Safety, and Occupational Health Management Program, Findlay, Ohio, USA
Break	Break from 3:20 – 3:30 p.m. (Plenary Panel Session at 3:30 p.m. in Room A)

03 OCT TUESDAY	Tuesday Late Afternoon Plenary Session (Room A)
Tuesday 3:30 - 5:00p Room A	In the eradication crosshairs: A multi-disciplinary One Health examination of Guinea worm at the human-animal-environment nexus, and the use of resulting evidence for action (Introduction of Moderator: Jason Marion, Conference Co-Chair, Moderated by Dr. Maryann Delea) Fitsum Alemayehu ¹ , DVM, MSc; Fasil Bimerew ¹ , MSc; Joshua Proctor ² , PhD; Maryann G. Delea ³ , PhD, MPH. ¹ The Carter Center – Ethiopia, Addis Ababa, Ethiopia; ² Institute for Disease Modeling at the Bill & Melinda Gates Foundation, Bellevue, Washington, USA; ³ The Carter Center – Atlanta, Atlanta, Georgia, USA.

The Carter Center's Guinea Worm Eradication Program Goal:

"Since 1986, The Carter Center has led the international campaign to eradicate Guinea worm disease, working closely with ministries of health and local communities, the U.S. Centers for Disease Control and Prevention, the World Health Organization, UNICEF, and many others.

Guinea worm disease could become the second human disease in history, after smallpox, to be eradicated. It would be the first parasitic disease to be eradicated and the first disease to be eradicated without the use of a vaccine or medicine."

04 OCT Wednesday	Wednesday Morning Technical Session (Room A) Multisectoral One Health Approaches & Capacity Building Moderator: Orvelee Jones, Public Relations Officer of JAPHI
Wednesday 9:00-9:20a Room A	Building capacity among public health students to address the social and political dimensions of the ecological determinants of health Warren Dodd, PhD, School of Public Health Sciences, University of Waterloo, Ontario, Canada
Wednesday 9:25-9:45a Room A	One Health, Many Hands: Overlapping Jurisdiction and Responsibility Gaps in Animal Surveillance Oluwaseun Akinyede, DVM, MPH, Mary El-Afandi, Katey Pelican, Michael Mahero, Janice Mladonicky, Michelle Willette, Victoria Hall, Jeff B. Bender, Joni Scheftel; University of Minnesota, Center for Animal Health and Food Safety, St. Paul, Minnesota, USA.
Wednesday 9:45-10:05a Room A	Multi-class analytes in animal waste: a valuable tool for monitoring mixed contaminants in food producing animals Javiera Cornejo, Veterinarian, PhD, Aldo Maddaleno, Lisette Lapierre, PhD, Ekaterina Pokrant, Constanza Vergara, Vet DSc, Héctor Hidalgo; University of Chile, La pintana, Chile
Break	Break from 10:05 – 10: 15 a.m. // Keynote in Room A at 10:15 a.m.
04 OCT Wednesday	Wednesday Morning Technical Session (Room B) General Environmental Health (Student Presenters) Moderator: Dehan Brown, JAPHI Parish Representative
Wednesday 9:00-9:20a Room B	A quantitative study of the knowledge, attitudes, and practices of consumers regarding handling and preparation of the Jamaican ackee for human consumption in South Central Jamaica Sashagay Smellie, Georgi-Ann King, Euphemia Jones. School of Public Health, University of Technology, Kingston, Jamaica
Wednesday 9:25-9:45a Room B	Participatory Action Research to Improve Environmental Health Conditions in a Rural Township in Jamaica Annique Peart, School of Public Health, University of Technology, Kingston, Jam.
Wednesday 9:45-10:05a Room B	A Study of Public Health Inspectors' practices and meat contamination in Kingston & St Andrew, Jamaica Reneki Daley, Eleshia McPherson-Clarke, Tizana Thomas, and Supervisor Andrea Hardware. School of Public Health, University of Technology, Kingston, Jamaica Break from 10:05 – 10: 15 a.m. & Keynote Session in Room A at 10:15 a.m.

04 OCT Wednesday	Wednesday Mid-Morning Keynote (Room A)
Wednesday 10:15-11:15a Room A	Toronto's Beaches: Past, Present and Future Moderator: Michael Myles, JAPHI President Michael D'Andrea, M.E.Sc, P.Eng, Chief Engineer (Ret.) and Executive Director (Ret.), Engineering and Construction Services, City of Toronto, Canada
04 OCT Wednesday	Wednesday Late Morning Keynote (Room A)
Wednesday 11:15-12:20 Room A	Microbial and Antibiotic Resistance Hazards in Environments & Human Gut Microbiome: Applications of One Health Approach Moderator: Karen Brown, Immediate Past-President, JAPHI Jiyoung Lee, Ph.D, Division of Environmental Health Sciences, College of Public Health, Dept. of Food Science & Technology, College of Food, Agriculture, and Environmental Sciences, Ecology, Epidemiology, and Population Health Program, Infectious Diseases Institute, The Ohio State University, Columbus, Ohio, USA
Lunch	Lunch from 12:20 – 1:30 p.m. at all-inclusive restaurants on site
04 OCT Wednesday	Wednesday Afternoon Technical Session (Room A) Multisectoral One Health Approaches & Capacity Building Moderator: Steve Morris, Assistant Secretary of JAPHI
Wednesday 1:30-2:10p Room A Break	Infectious Diseases in Animals: Current threats to human health & well-being Dr. Paul Cadogan, Veterinary Surgeon, co-chair annual One Health Conference of the Jamaica Veterinary Medical Association and the Caribbean College of Family Physicians – Jamaica Chapter, Clarendon, Jamacia Break from 2:10 – 2:20 p.m.
Wednesday 2:20-2:40p Room A	Opportunities to build capacity among community health workers to engage with environmental health amid extreme weather events: A case study from the Philippines Warren Dodd ¹ , PhD; Lincoln L. Lau ² , PhD. School of Public Health Sciences, University of Waterloo, Ontario, Canada; Dalla Lana School of Public Health, University of Toronto, Toronto, Canada

Wednesday 2:40-3:00p Room A	The public health system resilience scorecard: A tool for strengthening One Health? Benjamin J. Ryan ¹ , PhD, MPH, REHS; Shelby Garner ^{1,} PhD, RN, CNE, FAAN; Bryan Brooks ² , PhD, MS; Mayumi Kako, PhD, RN. ¹ Belmont University, Nashville, Tennessee, USA; ² Baylor University, Waco, Texas, USA; ³ Hiroshima University, Hiroshima, Japan
Break	Break from 3:00 – 3:15 p.m. // Panel at 3:15 p.m. in Room A
04 OCT Wednesday	Wednesday Afternoon Technical Session (Room B) Multisectoral One Health Approaches & Capacity Building Moderator: Oneil Brown, JAPHI Vice President
Wednesday 1:30-2:10p Room B *Online Program Reflects This New Time*	Strategies Learned from Ethiopia for Tackling Borderless Zoonotic Diseases in a World with Borders through Multisector Cross-Border Collaboration Part 1: Priority Zoonotic Diseases Surveillance integration into the existing polio eradication Program in Ethiopia: Opportunities, Successes and Challenges. Part 2: Existing Opportunities for Multi-Sectoral One Health Cross-Border Collaboration in CORE Group Partners Project Intervention Areas Muluken A. Alemu, PhD; Filimona Bisrat, MD, MPH. Consortium of Christian Relief and Development Associations (CCRDA) CORE Group Global Health Security Agenda Project. CCRDA, Lemi Kura Subcity, Woreda, Ethiopia
Break	Break from 2:10 – 2:20 p.m.
04 OCT Wednesday	Wednesday Afternoon Technical Session (Room B) Vector borne Diseases Moderator: Oneil Brown, JAPHI Vice President
Wednesday 2:20-3:00p Room B	Dengue prevention and control in Jamaica Henroy Scarlett, DrPH, MPH, BHSc, REHS/RS, DAAS. Faculty of Medical Sciences, Department of Community Health and Psychiatry, Section of Community Health, University of West Indies at Mona, Jamaic
Break	Break from 3:00 – 3:15 p.m. // Panel at 3:15 p.m. in Room A

04 OCT Wednesday	Wednesday Closing Session (Room A)
Wednesday 3:15-4:20p Room A	Panel with Remarks and Moderated by Dr. David Dyjack: An examination of the roles & functions of the Environmental Public Health workforce in the anthropogenic era: a conversation with organizational leaders Introduction of Dr. Dyjack: Mr. Paul Ximines, Vice President of JAPHI Henroy Scarlett ^{1,2} , Dr.PH, REHS/RS, DAAS; David T. Dyjack ³ , Dr.PH, CIH; Casey Neathway ⁴ CPHI(C) & D. Gary Brown ³ , DrPH, REHS/RS, DAAS, CIH. International Federation of Environmental Health; ² Jamaica Association of Public Health Inspectors; ³ National Environmental Health Association; ⁴ Canadian Institute of Public Health Inspectors
Wednesday	Closing Ceremony (Closing Remarks)
4:20-5:30 Room A	Honorable Christopher Tufton, MP, Minister of Health; Norbert Campbell & Jason Marion, Conference Co-Chairs

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POSTERS - OPENING RECEPTION AFTER OPENING KEYNOTE Monday, 02 OCT 6:00 – 7:00 p.m.

Gender distribution on bicycle infrastructure types in Toronto: An observational analysisAllison Spearin, BASc, Anne Harris, PhD, and Linda Rothman, BscOT, MHSc, PhD.

School of Occupational and Public Health, Toronto Metropolitan University, Toronto, Canada

Phenotypic characterization of antimicrobial resistance in *Enterococcus faecium* and *E. faecalis* isolated from owned dogs

Lisette Lapierre, PhD; Javiera Cornejo, Veterinarian, PhD; Constanza Vergara, Veterinary DSc, Faculty of Veterinary and Livestock Sciences, University of Chile, Santiago, Chile.

Deployment and Evaluation of a Tetracycline-Resistant *E. coli* Enumeration Approach for Surface Water

Callie Boggs¹, MPH; Kidus Shiferawe¹, MPH; Eckhardt Karsten², Jayden Hamlet³ & Jason W. Marion, PhD, RS/REHS¹

¹Environmental Health Science Program, Eastern Kentucky University, Richmond, KY, USA; ²Dept. of Microbiology, Miami University, Oxford, OH, USA; ³School of Natural Sciences and Mathematics, Stockton University, Galloway, NJ, USA

Surveillance for antibiotic-resistant *E. coli* in wildlife feces from areas disturbed by agricultural and residential land uses in Appalachian Kentucky

Olivia S. Salazar¹, Student; Jason W. Marion², PhD, RS/REHS

Department of Natural Sciences, The University of Virginia at Wise, Wise, VA, USA; Department of Environment Health Science, Eastern Kentucky University, Richmond, KY, USA

Thank You Moderators from JAPHI:

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Murie Edwards, Executive Committee Member
Steve Morris, Assistant Secretary
Michael Myles, President
Dehan Brown, Parish Representative
Orvelee Jones, Public Relations Officer
Paul Ximines, Vice President
Dahlia Plunkett, JAPHI Member & One Health Team Lead

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