ONE HEALTH ONE PLANET™

SPEAKER BIOS AND PRESENTATION ABSTRACTS

Phipps Conservatory and Botanical Gardens
Thurs., March 14 | 8:30 a.m. – 5 p.m.

8:30 – 8:40 a.m.
Opening Remarks
Richard Piacentini
Executive Director | Phipps Conservatory and Botanical Gardens

Session 1: Direct Impacts of Diets on Health

8:40 – 8:55 a.m.
Healthy Eating to Prevent, Treat and Reverse Chronic Disease: What Should We Be Telling our Patients?
Dr. Michael Parkinson, M.D., M.P.H., F.A.C.P.M.
Senior Medical Director, Health and Productivity | UPMC Health Plan and WorkPartners

Dr. Parkinson is the senior medical director overseeing employer health and productivity strategies for UPMC Health Plan and WorkPartners. He formerly was executive vice president and chief health and medical officer of Lumenos, a national pioneer of consumer-directed health plans acquired by Wellpoint. Mike is the past president of the American College of Preventive Medicine, the national medical specialty society of physicians trained in and committed to disease prevention, health promotion and systems-based approaches to improving health and health care. A retired Air Force colonel, his final assignment was as associate director of medical programs and resources in the Office of the Surgeon General where he was responsible for policy and planning for over 2 million beneficiaries, 70 facilities and a $4 billion budget. While assigned to the US Public Health Service, he provided oversight of federal programs in public health, geriatrics and preventive medicine training. He served on the National Advisory Committee of the Robert Wood Johnson Foundation Health Care Purchasing Institute assisting employers to purchase higher quality care. Mike was vice chair of the American Board of Preventive Medicine and a member of the Residency Review Committee. Other appointments included the Institute of Medicine (IOM) Committee reviewing NASA employee health programs, and serving as faculty for the 14-cities Robert Wood Johnson Foundation "Aligning Forces for Quality" project. He currently serves on the Policy Committee of the Great Rivers Affiliate American Heart Association, DOD Defense Health Board and IOM Board on Select Populations. He is a member of the editorial boards of the American Journal of Preventive Medicine and American Journal of Medical Quality. Dr. Parkinson received the Air Force Legion of Merit, Distinguished Service Award of the American College of Preventive Medicine, and Distinguished Graduate Award from the Johns Hopkins School of Public Health. He received his A.B. from Cornell University, M.D. from George Washington University, family practice training at UCLA and M.P.H., preventive medicine residency and chief residency at Johns Hopkins.

Abstract: The foundation of a healthy and long life can be simply stated as "what I eat, how I move and what I 'think'". The science of what comprises a healthy eating pattern is now firmly established. Busy clinicians need to understand the science supporting the need to reverse major elements of the "Standard American Diet" in order to achieve their personal, patients' and families prevention, treatment and even reversal of common chronic illnesses. This presentation will briefly review the science and best practice in clinical medicine and introduce the emergence of lifestyle medicine as a primary (rather than "afterthought") approach to improve patient outcomes as well as physician impact and satisfaction.

8:55 – 9:10 a.m.
The Evolving Human-Animal Bond: One Health Implications
Dr. Kathryn Michel, B.A., D.V.M., M.S., M.S.E.D.
Professor of Nutrition and Associate Dean of Education, School of Veterinary Medicine | University of Pennsylvania

Dr. Michel graduated from the School of Veterinary Medicine at Tufts University in 1983. She completed a residency in small animal clinical nutrition and a master's degree at University of Pennsylvania, followed by a postdoctoral fellowship with the Nutrition Support Service at the School of Medicine. Most recently she has received a M.S.Ed. from the University of Pennsylvania Graduate School of Education. She is a diplomate of the American College of Nutrition and currently a professor of nutrition and the associate dean of education at the University of Pennsylvania School of Veterinary Medicine. Her research interests include nutritional assessment, nutritional requirements of hospitalized companion animals and obesity in companion animals.

Abstract: The pet dog and cat population is growing in the U.S. and abroad, and increasingly pet owners are viewing pets as family members. People's views about how and what their pets should be fed are often influenced by their knowledge and beliefs about what constitutes a healthy diet for themselves. They may also be influenced by the marketing done by the pet food industry, globally a $75 billion business. Consequently what people think is appropriate for their pets is not always in accordance with the actual nutritional requirements or healthy feeding practices for these species. Nor are pet owner preferences always the most sustainable options with regards to impacts on food production and the environment. This presentation will discuss recent pet foods trends and their potential consequences.

9:10 – 9:25 a.m.
Leveraging the Built Environment to Advance Dietary and Planetary Health
Anja Mikic
Nourishment Concept Lead | International WELL Building Institute ™

Anja Mikic supports the Standard Development team in the continuous development of the WELL Building Standard™ (WELL). As the WELL Nourishment concept lead, she leads translation of research into evidence-based, implementable design and policy interventions that advance the health and nutritional well-being of individuals in buildings and communities around the world. She also oversees the WELL concept advisories and manages a global, multidisciplinary group of Nourishment advisors. Prior to joining IWBI, Anja served as a research assistant at the New York Obesity Research Center, where she examined the effects of sleep and meal timing on energy balance, hunger hormones and insulin resistance. A California native, she earned her B.S. at the University of California, Los Angeles and received her M.S. in human nutrition from Columbia University. She is both a WELL AP and LEED Green Associate, and happily serves as WELL faculty.

Abstract: In the U.S., we spend 90% of our time indoors, making the buildings in which we live and work powerful determinants of our health. This presents a unique opportunity to utilize the design, construction and operation of built spaces to address leading public health and environmental concerns, particularly at the intersection of dietary and planetary health. Innovative transformation in the design of built spaces is necessary to promote plant-based diets and achieve global sustainability goals. The growing adoption of healthy building rating systems has placed nutrition at the forefront of design and policy interventions to advance well-being. These rating systems leverage the built environment to encourage healthy dietary patterns through interventions that target fruit and vegetable availability, on-site food production, responsible food sourcing, portion sizes and food waste. Thoughtfully-designed buildings can do more than "no harm" — they can enhance the way we live, helping both people and the planet thrive.

Session 2: Indirect Impacts of Our Diets on Human and Environmental Health

10:05 – 10:20 a.m.
Food Contaminants and Additives: Emerging Concerns and Opportunities for Behavioral and Policy Intervention
Dr. Leonardo Trasande, M.D., M.P.P.
Professor and Vice Chair, Department of Pediatrics | NYU School of Medicine

Leonardo Trasande, M.D., M.P.P. is a professor, vice chair for research in the Department of Pediatrics, and Chief of the Division of Environmental Pediatrics at NYU School of Medicine. He also directs the NYU Center for the Investigation of Environmental Hazards. His research focuses on organic contaminants as endocrine disruptors. Dr. Trasande leads one of 35 centers across the country as part of the National Institute of Health's Environmental Influences on Child Health Outcomes (ECHO) program. He is P.I. of studies on preconceptual, prenatal and childhood phthalate and bisphenol exposures in the Rotterdam-based Generation R cohort as well as another project studying the effect of these dietary contaminants in children with chronic kidney disease. He is also Principal Investigator for a research project comparing neurodevelopment, cardiometabolic and respiratory profiles of children exposed in utero to the World Trade Center disaster to a comparison group (U01OH011299). He has served as a member of numerous scientific committees and expert panels, including: the American Academy of Pediatrics' Executive Committee of the Council for Environmental Health; the Science and Technical Advisory Committee for the World Trade Center Health Program; the National Children's Study Methodological Review Panel of the National Academy of Sciences; the United Nations Environment Programme Steering Committee on a Global Outlook for Chemicals; and the Board of Scientific Counselors for the National Center for Environmental Health at the Centers for Disease Control and Prevention (CDC).

Abstract: In July 2018, the American Academy of Pediatrics (AAP) released a technical report and policy statement on "Food Additives and Child Health." The technical report reviews child health concerns related to direct and indirect food additives, including plastic packaging, and the policy statement highlights key policy and regulatory changes needed to protect children's health. These include the Generally Recognized as Safe (GRAS) exemption, which is used to presume safety and limit FDA oversight over synthetic chemicals directly or indirectly contaminating foods in the packaging and manufacturing process. This presentation describes the AAP report, as well as steps people can take to limit hazardous exposures.

10:20 – 10:35 a.m.
Overweight and Undernourished: What Does Nutrient Density Have To Do With It?
Caroline West Passarrello, M.S., R.D.N., L.D.N., C.L.T.
Registered Dietitian Nutritionist, Spokesperson | Academy of Nutrition and Dietetics

Caroline is the owner of Caroline West LLC, a nutrition consulting practice that specializes in science-based savvy solutions for companies and individuals. She is a spokesperson for the Academy of Nutrition and Dietetics and part-time faculty at the University of Pittsburgh. She has extensive experience perceptively designing programs and nutrition education for a wide variety of consumers, most recently working on a project that used a food is medicine approach to improve health through a plant-based eating pattern. Caroline has a specialty certificate in adult weight management, is a certified a lifestyle and eating performance therapist and is certified in integrative and functional nutrition. She has a passion for children's nutrition and all things fruits and veggies.

Abstract: It is no surprise to most people to hear that we have a global epidemic of obesity. We also hear a lot about the increasing rates of food insecurity and malnourishment. Did you know that it is possible for a person to be overweight and undernourished? With the low intake of foods in their whole form and a heavy reliance on convenience foods — for a variety of reasons including taste, cost and access — we are seeing a rise in diet-related non-communicable diseases. It won't be simple, but a global focus on nutrient dense foods can address obesity, malnourishment and diet-related non-communicable diseases.

10:35 – 10:50 a.m.
Antibiotics and Antibiotic Resistance in the Environment: A One Health Perspective
Alison Franklin
Ph.D. Student, Soil Science and Biogeochemistry | Pennsylvania State University

Alison Franklin is a Ph.D. candidate in soil science and biogeochemistry at Pennsylvania State University, University Park, PA in the final year of her degree program. She received her B.S. in toxicology and M.S. in soil science from Pennsylvania State University in 2012 and 2015 respectively. Her research focuses on emerging contaminants in the environment due to reuse of wastewater treatment plant effluent. She is currently looking at antibiotics and antibiotic resistance in agricultural systems impacted by irrigation with wastewater treatment plant effluent. Alison is specifically interested in the long-term ecological issues and toxicological impacts due to reusing wastewater. Notably, Alison was a NASA Pennsylvania Space Grant Consortium fellow in 2016 – 2017 and actively involved with an Antibiotics in Agroecosystems: State of the Science workshop that resulted in a special section in the Journal of Environmental Quality focused on antibiotics and antibiotic resistance in the environment in 2016.

Abstract: With low-levels of human and animal antibiotics in the environment due to release of wastewater treatment plant (WWTP) effluent and applications of manure or biosolids on cropped lands, concern is rising about the potential impacts on the health of humans, animals, and environment (One Health). The level of contamination reaching the environment is variable, but typically in the parts per trillion range for WWTP effluent and up to parts per million for manure or biosolids. While overt toxicity is not necessarily a threat, influxes of low level antibiotic contamination into the environment may lead to altered levels of antibiotic resistance. The amount of antibiotic contamination reaching the environment directly influences how antibiotic resistance is impacted with higher increases in resistance noted more frequently with manure applications. Top questions are what do the presence of low-level contaminants and changes in antibiotic resistance mean to human health, food sources, and ecological processes.

Session 3: Effects of Human Diets on Environmental Processes

11:30 – 11:45 a.m.
The Food Environment Transition Towards Sustainable Diets
Dr. Selena Ahmed, Ph.D.
Assistant Professor of Sustainable Food Systems and Principal Investigator, Agroecology and Ethnobotany Group of the Food and Health Lab | Montana State University

Dr. Selena Ahmed is an assistant professor of sustainable food systems at Montana State University (MSU), co-founder of the Food and Health Lab, and Director of the MSU Translational Biomarkers Core. Her research examines the socio-ecological determinants of environmental and human wellbeing in the food system, focusing on the following three priority areas in the context of global change: strengthening the resilience of farms and farmers through agro-ecological management, enhancing community food environments that support sustainable diets and building capacity of future food system leaders. Selena has carried out food systems research in China, India, Morocco, Venezuela, Belize, the Dominican Republic and the United States. The ultimate translational goal of her research program is to strengthen linkages and innovations in the food system towards supporting biodiversity, livelihoods, and food security at the local, national, and global levels. Towards this goal, she collaborates with diverse stakeholders to apply research findings to develop evidence-based plans, programs and policies towards advancing sustainable food systems.

Abstract: A multifaceted challenge of the Anthropocene is supporting healthy diets while conserving ecological resources in socially acceptable ways. At present, poor diets are the leading risk factor of the global burden of disease. Concurrently, food production places greater stress on ecosystems than any other human activity while being critically dependent on multiple ecosystem services including water, soil fertility, pollination and climate regulation. These food system challenges are exacerbated by global change that has led to a food environment transition with notable consequences for human and environmental wellbeing. The concept of the food environment that targets the multiple socio-ecological determinants of food choices is increasingly applied to understand diets and consumer choices in the food system. This presentation will outline global trends of the food environment transition and associated implications for sustainability. Key aspects of sustainable diets will be highlighted with recommendations of how to support a food environment transition towards sustainable diets.

11:45 a.m. – noon
Geneticallly Modified Organisms: Facts, Fiction and Fantasy
Dr. Patricia DeMarco, Ph.D.
Senior Scholar | Chatham University

Patricia M. DeMarco, a native of Pittsburgh, PA, has a doctorate in biology from the University of Pittsburgh. Her thirty-year career in energy and environmental policy in private and public sector positions, includes service as commissioner of the Regulatory Commission of Alaska and demand side manager for the Connecticut Municipal Electric Energy Cooperative. She was the executive director of the Rachel Carson Homestead Association and director of the Rachel Carson Institute at Chatham University. Her book, titled Pathways to Our Sustainable Future: A Global Perspective from Pittsburgh, explores positive pathways toward sustainability based on 28 case studies in Pittsburgh. She was elected to the Forest Hills Borough Council and serves as Chair of the Finance Committee. She writes a regular blog on living in harmony with nature. She teaches as a senior scholar at Chatham University. She is a trustee of Phipps Conservatory and Botanical Gardens and serves as treasurer for The Battle of Homestead Foundation.

Abstract: Selective breeding to improve crop productivity has been an integral part of human history. The process of hybridization within a species helped to develop more nutritious foods, more showy ornamental plants, and more resilient specimens. Some limited cross-species hybrids also emerged for special purpose animals such as the mule, a cross between a female horse and a male donkey. As the tools of genetic engineering were refined over the last 50 years, the capacity to combine traits from dissimilar species became a feasible possibility, first in the laboratory, then in commercial practice. Genetically Modified Organisms (GMOs) are created by using enzymes and virus vectors to combine DNA from different kinds of organisms to achieve unique properties. Some GMO applications have produced beneficial products, and some have had unintended, and in some cases disastrous, consequences. As with most modern technologies, precautionary principles to enhance benefits and limit or eliminate negative effects should control the promulgation of GMO applications.

Noon – 12:15 p.m.
One Health and the Control and Prevention of Antimicrobial Resistance: Perspectives from Human Medicine
Dr. Neil Clancy, M.D.
Associate Professor of Medicine | University of Pittsburgh

Cornelius J. (Neil) Clancy, M. D. is Chief of Infectious Diseases at the VA Pittsburgh Healthcare System, director of the Mycology Research Unit and XDR Pathogen Lab at the University of Pittsburgh, and tenured associate professor of medicine at the University of Pittsburgh. His clinical, translational and basic science research laboratory is funded by the National Institutes of Health and Department of Veterans Affairs to pursue inter-related areas of investigation in medical mycology, extensively-drug resistant Gram-negative bacterial infections, and antimicrobial resistance and pharmacokinetics-pharmacodynamics. Dr. Clancy has published over 170 papers in the peer-reviewed biomedical literature. He has delivered keynote addresses related to his research and contemporary issues in infectious diseases and microbiology at numerous international medical and scientific conferences. Dr. Clancy serves on the Infectious Diseases Society of America's Committee on Antimicrobial Resistance. He has received awards for excellence as a clinical educator by the Universities of Pittsburgh and Florida.

Abstract: Antimicrobial resistance is widely recognized as one of the biggest threats to modern medicine. The Organisation of Economic Co-operation and Development estimates that antimicrobial resistant infections will cause 2.5 million deaths by 2050, in the absence of changes in patterns of antimicrobial utilization and drug development. In recent years, health care providers worldwide have cared for increasing numbers of patients infected with bacteria and fungi that are effectively resistant to all currently available antimicrobial classes. The emergence of these so-called "superbugs," coupled with disengagement of large pharmaceutical companies from infectious diseases drug development, has raised the spectre of a post-antimicrobial era. Highly drug-resistant Gram negative bacteria, Candida yeast, and Aspergillus mould infections are powerful One Health case studies, highlighting contemporary clinical challenges that have resulted from advances in medical care, changes in agricultural practices, environmental pressures, and the impact of globalization.

Lunch: Lightning Talks

12:45 – 1:45 p.m.

Raqueeb Bey | Black Urban Gardeners and Farmers Cooperative of Pittsburgh

Raqueeb Bey is an urban agriculturist, community activist and mother of six phenomenal children. She is the Garden Resource Coordinator for Grow Pittsburgh Garden Resource Center, a tool lending library in Pittsburgh's East End. Raqueeb found the Black Urban Gardeners and Farmers of Pittsburgh Co-Op (BUGSFPC) in June of 2015, where she is the Executive Director. The Black Urban Gardeners and Farmers of Pittsburgh Co-op" (BUGFPC) was created out of the need to unite black urban agriculturalist in the Pittsburgh area for support and to dismantle the systemic racism that infiltrates our communities to further improvised already oppress people. We are a grassroots organization that has brought together a collective group of black gardeners and farmers to work together to solve challenges that we face here in Pittsburgh as urban growers. We have over 50 years of farming and gardening experience; as well as social activism; community engagement; land conservation and acquisition and entrepreneurship. The mission of The Black Urban Gardeners and Farmers of Pittsburgh Co-op is to establish, educate and assist black people for sustainability and food sovereignty.

Hana Uman | 412 Food Rescue

Hana Uman is the program director of special programs and projects at 412 Food Rescue. 412 Food Rescue was founded as a direct response to the fact that while we waste 40% of our food, 1 in 7 people are hungry. 412 Food Rescue bridges the disconnect between food waste, hunger, and environmental sustainability by redirecting perfectly viable food headed for the landfill directly to nonprofits who serve individuals and families who are experiencing food insecurity. Through our Hidden Harvest urban gleaning program, volunteers glean fruit from previously unharvested public and private city trees, and excess produce from urban farms.

Maris Altieri | Let's Move Pittsburgh

Maris Altieri is the Let's Move Pittsburgh program coordinator. A collaborative program of Phipps Conservatory and Botanical Gardens, Let's Move Pittsburgh provides southwestern Pennsylvania's children and their caregivers with the knowledge, tools and support needed to make nutritious food choices and lead active lifestyles.

Christine Grady | Rivendale Farms

Christine Grady is the general manager of Rivendale Farms. Rivendale Farms sits on 175 acres in Washington County, approximately 20 miles from Pittsburgh. Founded by Thomas Tull in 2015, it is a diversified farm which includes dairy operations, vegetable production, a flock of laying hens, honey bees and maple. Rivendale focuses on bringing together sustainable farming practices and technological innovation to create the highest quality products possible. With some of the best Jersey cows in the world, the dairy operations include a production barn managed with robots, and a breeding program that works with breeders all over the world. Rivendale's customers include many of the finest restaurants and hotels in Pittsburgh, the Pirates and PNC Park and the Steelers. The farm is now entering its second full year of production.

Session 4: Agricultural Impacts on Climate Change and the Environment

1:45 – 2 p.m.

The U.S. Dairy Industry: A Model of Efficiency?

Dr. David Galligan, V.M.D., M.B.A.

Professor of Animal Health Economics, School of Veterinary Medicine | University of Pennsylvania

David Galligan is an endowed professor of animal health economics at the University of Pennsylvania School of Veterinary Medicine, located in Kennett Square, PA. He is the director of the Center for Animal Health and Productivity at the Veterinary School. His area of research is in understanding the economic value of veterinary and associated technologies (products and management strategies) applied to animal production systems. He graduated from the University of Pennsylvania in 1976 with a major in Biology. Upon completion of his veterinary training at the University of Pennsylvania School of Veterinary Medicine in 1981, he entered dairy practice with Gap Veterinary Associates in Gap, PA. In 1982 he returned to the U of PA Veterinary School to complete a residency in clinical dairy nutrition. In 1985 he graduated from the Wharton School, earning an M.B.A. with a focus on decision sciences. His current interest is in understanding how the livestock industries can be a viable component of a sustainable food system.

Abstract: The generational challenge confronting the dairy industry is how it should evolve to meet future domestic and global product demand in a manner that is sustainable for future generations. In response to this challenge, the U.S. dairy industry has embraced new technologies and undergone a dramatic change in herd structure and management. Over the last 75 years, the U.S. dairy industry has more than doubled milk supply while dramatically improving environmental efficiency

(GHG/kg milk). These efficiencies are largely the result of improved milk yield/cow/year through improved genetics, animal health, reproductive efficiency, increased feeding of by-products and nutritional management. With 3% of the global dairy cow population producing at 425% of the world average milk yield/cow, the U.S. dairy industry produces 14% of the global dairy milk (FAOstats, 2017). To make the dairy industry a viable sustainable part of the future world diet, these efficiencies must be embraced by the global dairy industry.

2 – 2:15 p.m.
Collaborative Community Engagement Strategies to Achieve Healthy Watersheds
Matthew Royer
Director, Agriculture and Environment Center, College of Agricultural Sciences | Pennsylvania State University

Matt Royer is the director of the Penn State Agriculture and Environment Center, a research and outreach center in the College of Agricultural Sciences' Environment and Natural Resources Institute. Matt directs the AEC's programs to integrate research, extension, education and community engagement to help solve complex issues of land use and land management impacts on water and the environment. Matt's background and training is in environmental law and policy with an emphasis on water quality law and policy. He has nearly twenty years of experience in building watershed coalitions and partnerships. Prior to becoming the director of the AEC In 2013, Matt directed the AEC's Lower Susquehanna Initiative. Matt also serves as faculty for the Environmental Resource Management program at Penn State. He received his bachelor's degree in biology from Dartmouth College and his law degree from Duke University School of Law.

Abstract: Nutrient pollution of water is a complex, multidisciplinary problem across the globe. While efforts to address nutrient pollution have been ongoing for decades in the United States with some marked progress, accelerated and innovative efforts are needed to fully achieve water quality goals and watershed health. Since sources of pollution are diffuse, landscape-based and often linked to land use and land management by many local actors, collaborative community engagement at the local scale is critical to healthy waters. Several case studies from the Chesapeake Bay watershed involving this approach will be presented as models for addressing nutrient pollution at a landscape level.

2:15 – 2:30 p.m.
Industrial Agriculture: Environmental Impacts and Implications for Our Health
Megan O'Rourke, Ph.D.
Assistant Professor of Sustainable Food Production Systems, Global Change Center | Virginia Tech

Dr. Rourke is an assistant professor of sustainable food production in the School of Plant and Environmental Sciences at Virginia Tech. Her research is focused on agroecology and the ecosystem services provided by different types of agricultural systems. Her specific areas of expertise are in insect pest management and pollinator conservation. Recent research projects include: integrated pest management in Southeast Asia, wildflower habitat restoration on vegetable and cattle farms, and climate change impacts of conservation tillage. In addition to her academic work, Dr. O'Rourke has international and policy experience as a climate change advisor for USDA's Foreign Agricultural Service and as a Foreign Service officer for the U.S. Agency for International Development in Cambodia. Dr. O'Rourke holds a Ph.D. from Cornell University in agricultural ecology and an M.S. from Iowa State University in entomology.

Abstract: Industrial agriculture since the 20th century has brought about huge increases in crop yields. These gains, however, have not come without consequences. The expansive nature of modern agriculture has increased pesticide use and stressed nature's ability to pollinate crops. Intensive production practices also contribute to climate change. In this talk, the links between modern agriculture, pesticide use, pollination and climate change will be explored, along with implications for human health and steps forward towards a more sustainable food system.

2:30 – 3 p.m. | Panel Discussion and Questions

3 – 3:10 p.m. | Break

Session 5: Future Food Trends that Embrace One Health Solutions

3:10 – 3:25 p.m.
Call to Action: Creating Future One Health Collaborators in Food Systems
Bonnie Buntain, M.S.c., D.V.M., D.(E).A.B.V.P., D.A.C.V.P.M.
One Health Consultant | University of Arizona

Bonnie Buntain has a B.S. and M.S. in animal sciences from the University of Hawaii and a D.V.M. from Colorado State University. She is a diplomate emerita, American Board of Veterinary Practitioners, diplomate of the American College of Veterinary Preventive Medicine, fellow in One Health of Aberystwyth University in Wales, and professor emerita in food safety and public

health, faculty of Veterinary Medicine at the University of Calgary, Canada. Her involvement in One Health began in DC as it was emerging and being defined, and when recruited to be one of the founding deans of a new veterinary school in Calgary, Canada, she ensured that One Health became an integral part of education. She has published peer-reviewed articles on One Health, given webinars, and has a chapter in the book *One Health: The Theory and Practice of Integrated Health Approaches*.

Abstract: Food safety and security are impacted by complex inter-relationships among human and animal health and sustainable ecosystem services. The One Health approach requires us to tackle this complexity through integrative research, teaching, business and practice. This means engaging from the beginning and throughout all relevant actors and often going beyond our professional expertise and training. Academia, government and food businesses can play crucial roles developing "transdisciplinary transmitters": people who can collaborate across disciplines, have expertise in leadership and partnership building, and are experts within their respective disciplines and businesses. This talk will describe some tools available to create enabling One Health environments within our institutions that develop food systems research and policy. Some examples are provided, such as innovative career pathways and degrees and purposefully developing advocates and specialists who span multidisciplinary and multi-sectorial knowledge, skills and abilities to create collaborative, sustainable global food systems.

3:25 – 3:40 p.m.
The Living Food Challenge
Richard Piacentini, WELL AP
President and CEO | Phipps Conservatory and Botanical Gardens
Board Member | International Living Future Institute

Since 1994, **Richard Piacentini** has led the green transformation of Phipps Conservatory and Botanical Gardens, including construction of the Center for Sustainable Landscapes, the only building in the world to meet: the Living Building Challenge™, LEED® Platinum, WELL™ Platinum, and SITES™ Platnum certifications. Richard is interested in the important connection between people and plants particularly as it relates to human and environmental health. He serves as past Chair of the International Living Future Institute™ (ILFI) and is a past president of the American Public Gardens Association. He has received numerous professional honors, including APGA, ILFI and USGBC leadership awards. Richard holds a M.S. degree in botany, an M.B.A. and a B.S. degree in pharmacy. He is a Registered Pharmacist and a WELL® Accredited Professional.

Abstract: In May 2018, the International Living Future Institute (ILFI) announced the launch of a pilot for a Living Food Challenge (LFC), a challenge to growers, processors, distributors and consumers to design a food production, processing and distribution system that functions as effectively and efficiently as nature's living ecosystems. The Living Food Challenge will address a food's cradle-to-plate impacts, including food waste, loss of topsoil, hunger and malnutrition, food miles, overconsumption of meat, advertising to children, monocultures, farmworker rights, factory farming, GMOs, and more. The Living Food Challenge is designed to transform the way food is produced, processed and distributed while valuing the nutrient cycle. It identifies advanced measures and seeks to narrow the gap between current limits and sustainable solutions. The LFC is designed to dramatically raise the standard for farming to regenerative agriculture, where we give more than we take. It aims to transform how we think about every single act in the food chain as an opportunity to positively impact the greater community of life and the cultural fabric of our human society.

3:40 – 3:55 p.m.
Moving Targets: The Future of Food, Agriculture and People
Alice Julier, Ph.D.
Associate Professor and Director of the Graduate Program in Food Studies | Chatham University

Alice P. Julier is the director of the Center for Regional Agriculture, Food and Transformation (CRAFT). She is also an associate professor and the founding director of the Food Studies Program at Chatham. She is the past president of Association for the Study of Food and Society. She writes about materiality, social movements, domesticity, labor, consumption and inequality in food systems. Her work includes "Mapping Men onto the Menu," "The Political Economy of Obesity," "Julia at Smith" and "Hiding Race and Class in the Discourse of Commercial Food." Her first book, Eating Together: Food, Friendship and Inequality, focuses on commensality, gender and race. She is the co-editor of the fourth edition of Food and Culture: A Reader, one of the most widely used food studies textbooks..

Abstract: Migration has always been a part of human experience, particularly in the consumption of plants and animals. What drives that movement varies, from population increases and conflicts to environmental changes and more. Today's societies and the food systems that support them are increasingly shaped by global climate changes and sociopolitical upheavals. While analyses of future food systems acknowledge the roles of biodiversity in flora and fauna as adaptive mechanisms for

survival, the role of human biodiversity is often treated as a separate problem, one of culture rather than agriculture. Projects that preserve seeds and plants are built on cultural and environmental criteria, but what if we look at the history of human migration as equally important to document? An adaptive and healthy food system accounts for the movement of human culture as much as for plants and animals.

3:55 – 4:10 p.m.
Towards a "Great Food Transformation": Equity, Values and the Future of Food
Elizabeth Fox, Ph.D.
Hecht-Levi Postdoctoral Fellow | Johns Hopkins Berman Institute of Bioethics

Elizabeth Fox, Ph.D. is a nutritionist and social scientist whose work focuses on improving the design and implementation of nutrition policies such that they effectively reach intended beneficiaries in culturally sensitive ways. She completed her Ph.D. in international nutrition from the Division of Nutritional Sciences at Cornell University in 2016. She is currently a Hecht-Levi Postdoctoral Fellow in the Global Food Ethics and Policy Program at the Berman Institute of Bioethics, where her research investigates value tradeoffs across the food system to support healthy and sustainable diets.

Abstract: Food systems have the potential to support human health and environmental sustainability. However, with growing global populations, poor quality diets and increasingly prevalent diet-related disease, in addition to food production systems that operate well-above current targets to address climate change, our food systems are currently threatening both. The Lancet-EAT Commission on healthy diets from sustainable food systems identified "win-win" diets that are both healthy and environmentally sustainable and that require a "Great Food Transformation." This transformation requires major changes in the behaviors and practices of producers and consumers. Equitably distributing the impacts and costs of the transformation is necessary, particularly when considering economic livelihoods, affordability of food, taste preferences, acceptability, cooking skills, convenience and time. The future of our food systems depends on shifts in our consumption and production practices, which require public policies to support the underlying costs related to those shifts.

4:10 – 4:40 p.m.
Panel discussion and questions

4:40 – 5 p.m.
Closing Remarks
Richard Piacentini
President and CEO | Phipps Conservatory and Botanical Gardens

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