Gulf Coast Center for Precision Environmental Health Renewal Celebration

2-7 pm, Tuesday, October 29, 2024
III by Wolfgang Puck, Dining Room II
6550 Bertner Avenue, 6th Floor, Houston, Texas 77030

PROGRAM

2:00 pm – 2:10 pm	**Arrival & Welcome**		
2:10 pm – 2:30 pm	**Opening Remarks by Cheryl Walker, GC-CPEH Director, BCM**		
2:30 pm – 3:20 pm	**Member Presentations, Session I:** 10-minute Presentation & 5-minute Q&A		
	2:30-2:35 Introduction	**Kees Elferink, GC-CPEH Co-Director, UTMB**	
	2:35-2:50	Mary Majumder, BCM	*Launching the EMPOWER (Engaging community Members to Plan for Dissemination Of Wastewater Epidemiology Results) Project*
	2:50-3:05	Thomas Northrup, UTHealth	*Infant Gut Microbiome Development in Hospitalized Preterm Infants: Exploring Variation by Thirdhand Tobacco Smoke Exposure*
	3:05-3:20	Kristi Hoffman, BCM	*Exploring the Oral-Gut Microbiome Axis in Chronic Pancreatitis*
3:20 pm – 3:35 pm	**Break:** 15 minutes		
3:35 pm – 4:25 pm	**Member Presentations, Session II:** 10-minute Presentation & 5-minute Q&A		
	3:35-3:40 Introduction	**Elaine Symanski, GC-CPEH Deputy Director, BCM**	
	3:40-3:55	Fida Bacha, BCM	*Breaking the Cycle: Understanding the Health Risks of Childhood O besity*
	3:55-4:10	Lauren Richardson, UTMB	*Evaluating toxicants in different feto-maternal interface organ-on-chip models*
	4:10-4:25	Lance Hallberg, UTMB	*Use of a Mobile Clinic to Conduct Community Research*
4:25 pm – 5:00 pm	**Keynote**		
	4:25-4:30 Introduction	**Cheryl Walker, BCM, GC-CPEH Director**	
	4:30-5:00	**Anthony Maresso, BCM**	***Wastewater Science for Public Health Solutions***
5:00 pm - 7:00 pm	**Reception**		

Venue and parking information can be found on page 4.

Dr. Mary Anderlik Majumder is the Dalton Tomlin Professor of Medical Ethics and Health Policy in the Center for Medical Ethics and Health Policy at Baylor College of Medicine, Houston, Texas. She received an A.B. magna cum laude from Bryn Mawr College in 1985, a J.D. from Yale Law School in 1989, and a Ph.D. with a specialization in ethics and biomedical ethics from Rice University in 1997. Her current research interests include the ethical, legal, and social implications of new genomic and other cutting-edge technologies and ethical and policy questions related to problems of cost, quality, and access to health care. She is a co-investigator on the Engaging community Members to Plan for Dissemination of Wastewater Epidemiology Results (EMPOWER) Project.

Dr. Thomas Northrup is a Professor and the Co-Director of the Behavioral Health and Addictions Research Program (BHARP) in the Department of Family and Community Medicine at The University of Texas Health Science Center at Houston, McGovern Medical School. Dr. Northrup's primary research interest is the prevention of environmental tobacco smoke exposure for infants and children, especially for children who live with individuals who smoke or vape. Dr. Northrup is the mPI of an ECHO Cohort site in Houston, TX (https://echochildren.org/) and co-site PI of a NIDA Clinical Trials Network study focused on treating polysubstance use.

Dr. Kristi L. Hoffman is an Assistant Professor in Molecular Virology and Microbiology at Baylor College of Medicine. Her research examines the interactions between environmental exposures, the microbiome, and host immunity across the dysglycemia spectrum. She earned her PhD in Translational Biology and Molecular Medicine at Baylor, focusing on estrogen receptors in bladder cancer. Pursuing her interest in diet and cancer, she completed an MPH in Food, Nutrition, and Health at Johns Hopkins and later a postdoctoral fellowship at MD Anderson, where she studied diet, the microbiome, and cancer in underserved populations. In 2018, she joined Baylor's Alkek Center for Metagenomics and Microbiome Research, leading several major projects. Returning to academia in 2023, her current work focuses on diet-gut microbiota interactions, using microbiomes as biomarkers, and improving microbiome research methods. She also serves as the Core Navigator for the Microbiome and Metagenomics PIPELINE Facility at the Gulf Coast Center for Precision and Environmental Health.

Dr. Fida Bacha is a Pediatric Endocrinologist and physician-scientist with expertise in pediatric obesity, insulin resistance, and associated comorbidities. She is the director of the Metabolic Research Unit and the Energy Metabolism Unit at the USDA/ARS Children's Nutrition Research Center (CNRC), Texas Children's Hospital, Baylor College of Medicine. Her laboratory at the CNRC is funded by the United States Department of Agriculture, the NIH, and other research foundations. Dr Bacha has contributed significantly to understanding the pathophysiology of youth-onset type 2 diabetes and the characterization of prediabetes stages in youth. Her recent work has focused on the pathophysiology of subclinical atherosclerosis in youth, the role of insulin resistance and dysglycemia in cardiovascular complications, and identifying biomarkers of cardiovascular disease risk in children and young adults. She is the BCM-PI of the new NIDDK-funded U01 DISCOVERY of risk factors for youth-onset type 2 diabetes study, aimed at understanding the physiologic and social/environmental risk factors and the pathophysiology of this disease in children. The overarching goals of this work are to prevent youth-onset type 2 diabetes and cardiovascular disease and advance the management of these conditions in youth.

Dr. Lauren Richardson is an assistant professor in UTMB's Ob/Gyn Basic Science and Translational Research Division, a previous BIRWCH Scholar, and a new R01 recipient. She has taken her knowledge of ovarian, breast, and lung cancer metastases from her undergraduate research and adapted these cancer phenotypes to study gestational tissues. During her PhD work, her research focused on the mechanistic processes of fetal membrane remodeling throughout gestation and its dysregulation at term. She completed her NIEHS T32 post-doctoral training in the Department of Electrical and Computer Engineering and the Department of Biomedical Engineering at Texas A&M, where she was introduced to the area of organ-on-chip technology. Her research bridges the gap between bench-to-bedside research by merging advanced engineering and biology concepts. The goal of her research is twofold. One, to utilize microfluidic devices to collect underutilized biological fluids for biomarker screening, and two, to develop novel organ-on-chip devices that physiologically recreate in-utero organs and organ systems. These devices are primed to replace traditional research approaches, limit animal models for research, assess the effects of environmental factors on pregnancy complications, and speed up preclinical experiments to get drugs to clinical trials at a much faster pace.

Dr. Lance M. Hallberg is a notable figure in environmental toxicology, currently serving as an Associate Professor in the Department of Pharmacology and Toxicology at the University of Texas Medical Branch (UTMB) in Galveston, Texas. He also holds the position of Program Director for Environmental & Public Health Education & Engagement at the Sealy Center for Environmental Health and Medicine. Dr. Hallberg's academic journey began with a B.S. and M.S. in Biology from the University of Texas at El Paso. He earned his Ph.D. in Biomedical Sciences with a focus on Environmental Toxicology from UTMB. His post-doctoral work included fellowships at Texas A&M University and UTMB. His research primarily focuses on the effects of ambient environmental air toxicants, indoor air quality, and the impact of tobacco and e-cigarette exposure on lung physiology. Dr. Hallberg manages the Inhalation Toxicology Core Facility at UTMB, which provides advanced capabilities for studying the effects of smoke, gas, and vapor phase environmental toxicants. Dr. Hallberg is deeply committed to community education and engagement, aiming to bridge the gap between scientific research and public health awareness. He is also the MOBI-COACH Navigator for the Gulf Coast Center for Precision Environmental Health.

Keynote Speaker

Dr. Anthony William Maresso is the Melnick Chair/Professor in Molecular Virology at Baylor College of Medicine (BCM). His research focuses on studying, detecting, and generating therapies and vaccines for microbes. He founded TAILΦR Labs, a personalized therapy Center at BCM, and PHIOGEN, a biopharma start-up addressing the growing antibiotic-resistance crisis. He has authored > 80 original papers and 25 research grants totaling $73 million. Relevant to this presentation, he co-founded TexWEB, a statewide initiative that uses wastewater to track viruses. TexWEB was voted the Medical Breakthrough of the Year in 2024 by STAT News.

II by Wolfgang Puck is located on the 6th floor of the John P. McGovern Texas Medical Center Commons Building (6550 Bertner Avenue, Houston, Texas 77030), highlighted in red on the map. **Guests may park** on any floor of the attached McGovern Commons Garage (TMC Garage 15). **Parking validation stickers** will be provided at the host stand on the 6th floor.