

WEC 2020 VIRTUAL MEETING

Thursday, October 15, 2020

9:00 am - 5:30 pm (Eastern Standard Time-EST)

9:00 am **Opening Remarks**
Dr. Darryl Zeldin, NIEHS (Organizing Committee)

9:05 am **POSTER SESSION I**

CARDIOVASCULAR

Co-Chairs: **Dr. Richard Roman, University of Mississippi Medical Center**
 Dr. Mohammed Nayeem, West Virginia University

9:07-9:14 am	Poster #1	Peng, Liyuan	Tonji Medical College, China	Metabolomics Revealed Increased sEH Activity in Heart Failure
9:15-9:22 am	Poster #2	Azcona, Juan	New York Medical College	Novel Contributions of Neutrophil-derived Myeloperoxidase and Hypochlorous Acid to 20-HETE Production that drives Post-Ischemic Angiogenesis
9:23-9:30 am	Poster #3	Darwesh, Ahmed M.	University of Alberta, Canada	Epoxy Metabolite of Docosaehaenoic Acid Ameliorates Cardiac Ischemia Reperfusion Injury by Stimulating Mitochondrial Sirtuin 3
9:31-9:38 am	Poster #4	D'Addario, Catherine	New York Medical College	The Role of G-Protein Coupled Receptor 75 in Pulmonary Hypertension
9:39-9:46 am	Poster #5	Davies, Sean	Vanderbilt University	Isolevuglandin modification of HDL contributes to atherosclerosis
9:47-9:54 am	Poster #6	Agostinucci, Kevin	New York Medical College	Pharmacological Blockade of the 20-HETE Receptor (GPR75) Lowers Blood Pressure and Alters Vascular Remodeling in Mice with Vascular Smooth Muscle-Specific Overexpression of CYP4A12-20-HETE Synthase
9:55-10:02 am	Poster #7	Sosnowski, Deanna	University of Alberta, Canada	Cardiomyocyte targeted knockdown of soluble epoxide hydrolase preserves cardiac function in a murine model of acute lipopolysaccharide inflammatory injury

(10:02 am Transition)

DIABETES/OBESITY

**Co-Chairs: Dr. Jerry L. Nadler, New York Medical College
Dr. Claus Schneider, Vanderbilt University**

10:04-10:11 am	Poster #8	Haddad, Mary	American University of Beirut, Lebanon	A Potential Therapeutic Target for Peripheral Diabetic Neuropathy: 20-HETE, an Actor Behind the Scenes
10:12-10:19 am	Poster #9	Ghoshal, Kakali	Vanderbilt University	Administration of EET Analogs Ameliorates Insulin Resistance in <i>CYP2C44</i> (-/-) Mice
10:20-10:27 am	Poster #10	Kodani, Sean D.	Joslin Diabetes Center	The Role of Soluble Epoxide Hydrolase in Regulating Thermogenesis and Brown Adipose Tissue Function
10:28-10:35 am	Poster #11	Lin, Lin	University of California-Irvine	Long-term High Fat Diet Disrupts Mast Cell-Driven Oleoylethanolamide Signaling in Liver and Blunts Ketogenesis
10:36-10:43 am	Poster #12	D'Silva, Melinee	New York Medical College	12-LOX Plays a Key Role in Islet Inflammation and Dysfunction
10:44-10:51 am	Poster #13	Zhang, Huawei	University of Mississippi	Inhibition of Soluble Epoxide Hydrolase Ameliorates Cerebral Vascular Function and Reverses Cognitive Impairments in Elderly Diabetic Rats
10:52-10:59 am	Poster #14	Zhao, Ling	University of Tennessee, Knoxville	<i>t</i> -AUCB, a Pharmacological Inhibitor of Soluble Epoxide Hydrolase, Promotes Brown Adipogenesis: Role of PPAR alpha and PPAR gamma
11:00-11:07 am	Poster #15	Hossain, Sakib	New York Medical College	Deletion of G Protein-Coupled Receptor 75 (GPR75) Prevents High Fat Diet-Driven Obesity, Hyperglycemia, and Insulin Resistance
11:08-11:15 am	Poster #16	Anita, Natasha	University of Toronto	Serum soluble epoxide hydrolase related oxylipins and major depression in patients with type 2 diabetes: An exploratory lipidomic study
11:16-11:23 am	Poster #17	Luther, James M.	Vanderbilt University	Soluble epoxide hydrolase inhibition with GSK2256294 reduces F2-isoprostanes but does not alter insulin sensitivity in humans with prediabetes

11:23 am 5-min BREAK

11:28 am POSTER SESSION II

OMICS/METABOLISM

**Co-Chairs: Dr. Ann Skulas-Ray, University of Arizona
Dr. Aditi Das, University of Illinois at Urbana-Champaign**

11:30-11:37 am	Poster #18	Borkowski, Kamil	UC Davis	Serum metabolomic biomarkers of perceptual speed in cognitively normal and mildly impaired subjects with fasting state stratification
11:38-11:45 am	Poster #19	Duval, Caroline	NIEHS	Contribution of CYP2C and CYP2J Enzymes to Fatty Acid Metabolism in Mice
11:46-11:53 am	Poster #20	Hartung, Nicole M.	University of Wuppertal, Germany	Characterization of Cyclooxygenase Expression and Activity in Different Cell Lines using Targeted Proteomics and Lipidomics
11:54am-12:01pm	Poster #21	Nkiliza, Aurore	Roskamp Institute, FL	The APOE ε4 allele differentially influences plasma bioactive lipids in soldiers with mild TBI and PTSD
12:02-12:09 pm	Poster #22	Edin, Matthew	NIEHS	Role of Esterified EETs in the Formation of EET Signals
12:10-12:17 pm	Poster #23	Rund, Katharina M.	University of Wuppertal, Germany	Towards Comparable Results in Oxylipin Analysis
12:18-12:25 pm	Poster #24	Zarrow, Johan	Vanderbilt University	Development of Tools to Assess the Role of N-Acyl-Phosphatidylethanolamine-Hydrolyzing Phospholipase D (NAPE-PLD) in Protecting Against Cardiometabolic Diseases

(12:25 pm Transition)

STROKE

**Co-Chairs: Dr. Samuel Poloyac, University of Texas at Austin
Dr. Fan Fan, University of Mississippi Medical Center**

12:27-12:34 pm	Poster #25	Siler, Dominic	Oregon Hlth & Sci Univ	Subarachnoid Hemorrhage and Soluble Epoxide Hydrolase Inhibition: A Randomized, Placebo-Controlled Pilot Trial
12:35-12:42 pm	Poster #26	Wang, Shaoxun	University of Mississippi	Role of 20-HETE on Cerebrovascular Pericytes

12:43-12:50 pm	Poster #27	Xu, Yifan	Oregon Hlth & Sci Univ	Modulation Of Microvascular Blood Flow And Stroke Outcome Via GPR39
12:51-12:58 pm	Poster #28	Yu, Di	University of Toronto	Serum Oxylipins Indicate Severity of Subcortical Ischemic Injuries in Patients with Cerebrovascular Disease – A Preliminary Report

12:58 pm ***BREAK FOR LUNCH (32 min)***

1:30 pm **John C. McGiff Memorial Award Lecture**
Award Presentation - William B. Campbell, PhD

1:33 pm **Lecture: Michal L. Schwartzman, PhD**
The Road to Discovery:GPR75 - The 20-HETE Receptor

(1:58 pm Transition)

1:59 pm **POSTER SESSION III**

CANCER

Co-Chairs: **Dr. Kenneth Honn, Wayne State University**
Dr. David Potter, University of Minnesota

2:01-2:08 pm	Poster #29	Dovizio, Melania	"G. d'Annunzio" Univ, Chieti, Italy	The generation of 12 HETE and 12 HETE phospholipid esterified in platelet cancer cell crosstalk
2:09-2:16 pm	Poster #30	Santos, Julia	Detroit R&D/Fairmonth State Univ.	14,15-DHET, A Soluble Epoxide Hydrolase (sEH) Metabolite, Predicts Cancer Therapy-Induced Cardiotoxicity and Screening sEH Inhibitors for Medical Intervention
2:17-2:24 pm	Poster #31	Cárdenas, Sofía	Centro de Investigaciones Endocrinológicas, Argentina	20-Hydroxyecosatetranoic acid (20 HETE) modulates the transcriptional activity of the androgen receptor acting through the GPR75 receptor in androgen-dependent prostate cancer cells
2:25-2:32 pm	Poster #32	Ching, McMillan	Johns Hopkins University	COX-2 overexpression reduces extracellular matrix (ECM) stiffness in a xenograft model of triple negative breast cancer (TNBC)
2:33-2:40 pm	Poster #33	Nakashima, Fumie	Vanderbilt University	The 5-LOX/COX-2 cross-over eicosanoid, HKE2, is a novel regulator of endothelial cell angiogenesis

2:41-2:48 pm	Poster #34	Zhang, Jianan	U Massachusetts-Amherst	Excess intake of dietary linoleic acid exaggerates colon tumorigenesis: roles of cytochrome P450 (CYP) metabolites involved
2:49-2:58 pm	Poster #35	Guo, Zhijun	University of Minnesota	Eicosanoids Regulate the Nuclear Pore Complex in Estrogen Receptor Positive Breast Cancer
<i>2:58 pm</i>	<i>5-min BREAK</i>			
3:03 pm	POSTER SESSION IV			
<u>NOVEL THERAPEUTICS</u>				
Co-Chairs:	Dr. Alan Brash, Vanderbilt University Dr. Camille Falck, University of Texas Southwestern Medical Center			
3:05-3:12 pm	Poster #36	Raffaele, Marco	University of Catania, Italy	EETs improve NAFLD by increasing HO-1 and PGC1- α signaling
3:13-3:20 pm	Poster #37	Luis, Paula	Vanderbilt University	Testing the transformation of PGD2 to 11dehydro-TxB2 as a novel pathway of prostaglandin metabolism
3:21-3:28 pm	Poster #38	Trindade da Silva, Carlos	UC Davis/Sao Paolo	Therapeutic effects of soluble Epoxide Hydrolase inhibition on subset Lymphocytes T-helper in rheumatoid arthritis
3:29-3:36 pm	Poster #39	Gonzalez-Fernandez, Ezekiel	University of Mississippi	20-HETE Enzymes and Receptors in the Neurovascular Unit are Implicated in Dementia
3:37-3:44 pm	Poster #40	McReynolds, Cindy	Eicosis, LLC	Clinical Development of a Soluble Epoxide Hydrolase Inhibitor for the Treatment of Pain
3:45-3:52 pm	Poster #41	Kim, Kwang Sik	Johns Hopkins University	Meningitis-causing Pathogens Exploits CysLTs for Penetration of the Blood-brain Barrier
3:53-4:00 pm	Poster #42	Atone, Jogen	UC Davis	Investigating the Effects of Epoxy Fatty Acids against LPS and Pesticide Induced Toxicity

(4:00 pm Transition)

DRUG DEVELOPMENT

Co-Chairs: **Dr. Nancy J. Brown, Yale University**
 Dr. Craig Lee, UNC Eshelman School of Pharmacy

4:02-4:09 pm	Poster #43	Darwesh, Ahmed M.	University of Alberta, Canada/OMEICOS	A Synthetic OMEGA-3 Epoxyeicosanoid Analog Ameliorates Cardiac Ischemia Reperfusion Injury via Suppressing NLRP3 Inflammasome Activation
4:10-4:17 pm	Poster #44	Jankiewicz, Wojciech	Medical College of Wisconsin	PTUPB, a Dual COX-2 / sEH Inhibitor, Mitigates Sorafenib-Induced Renal Injury in Rat
4:18-4:25 pm	Poster #45	Newman, John	USDA-ARS, CA	Quantification of plasma and serum oxylipins, endocannabinoids, bile acids, steroids, PUFAs and nonsteroidal anti-inflammatory drugs in a 96-well plate format
4:26-4:33 pm	Poster #46	Lee, Kin Sing	Michigan State University	Slow, Tight-Binding sEH Inhibitors Exhibit Target- Mediated Drug Disposition.
4:34-4:41 pm	Poster #47	Li, Dongyang	UC Davis	Supersensitive Immunoassay for Mouse Soluble Epoxide Hydrolase (sEH) Detection
4:42-4:49 pm	Poster #48	Pascale, Jonathan	New York Medical College	Characterizing the 20-HETE Binding Site on GPR75, the 20-HETE Receptor
4:50-4:57 pm	Poster #49	Khan, Md Abdul Hye	Med College of Wisconsin	A Dual COX-2-sEH Inhibitor Treated Glomerular Injury in Mouse Focal Segmental Glomerular Sclerosis Model
4:58-5:05 pm	Poster #50	Pecic, Stevan	California State Univ. Fullerton	Synthesis, Biological Evaluation and Molecular Modeling Studies of Dual Soluble Epoxide Hydrolase/Fatty Acid Amide Hydrolase Inhibitors
5:06-5:13 pm	Poster #51	Matsumoto, Naoki	UC Davis	Epoxyfatty acids increase intracellular cAMP via EP2 and another unidentified receptor

5:13 pm **5-min BREAK**

5:18 pm **Awards Presentations**
 Dr. John Seubert

5:28 pm **Closing Remarks**
 WEC Organizing Committee