International Meeting on Lipid Mediators in Health and Disease

Joint meeting by

Eicosanoid Research Foundation

and

Winter Eicosanoid Conference

August 10 – 12, 2026
The Natcher Center, NIH, Bethesda, MD

Program

Monday, August 10, 2026

8:00 – 9:00 AM
Registration

9:00 – 9:10 AM
Opening Remarks (Charles N. Serhan, and Darryl C. Zeldin)

9:10 – 9:55 AM

Honn-McGiff Lifetime Achievement Award

presentation and lecture:
(Introduction of the awardee: Krishna Rao Maddipati)
Awardee: Professor **Lawrence J. Marnett**, Vanderbilt University School of Medicine, Nashville, TN, USA.

COX-2: Endocannabinoid Cross-talk in the Modulation of Endocannabinoid Signaling and Generation of Bioactive Lipids (Abstract 1)

Monday, August 10, 2026 program continued on next page…

Monday, August 10, 2026

10:00 AM – 12:30 PM

Session 1: Prostaglandins & Leukotrienes
(Sponsored by Cayman Chemical Company)

Chair: Darryl C. Zeldin, NIEHS/NIH, Research Triangle Park, NC

10:00 – 10:30 AM: Plenary talk: **Jesper Z. Haeggström**, Karolinska Institute, Stockholm, Sweden: *The leukotriene pathway, immune modulation at atomic resolution*. (Abstract 2)

10:35 – 10:55 AM: **Daniel Menendez**, NIEHS, Research Triangle Park, NC, USA. *A Molecular Cell Atlas of Mouse Ovalbumin-induced Allergic Lung Inflammation Identifies a Novel CD4+CD8+ T Cell Population Regulated by COX-2.* (Abstract 3)

11:00 – 11:20 AM: **K. Sandeep Prabhu**, Penn State University, University Park, PA, USA. *Redox regulation of Rac1-mTOR-dependent cyclooxygenase-1 expression in macrophages during resolution of inflammation.* (Abstract 4)

11:25 – 11:45 AM: **Mike Malkowski**, University of Buffalo, Buffalo, NY, USA. *The Role of Structural Asymmetry in the Allosteric Regulation of Cyclooxygenase-2.* (Abstract 5)

11:50 AM – 12:05 PM: **Lakshminarayan Reddy Teegala**, University of Toledo, Toledo, OH, USA. *CysLT1R Promotes LPS-induced Inflammation and Sepsis via Macrophage Metabolic Reprogramming.* (Abstract 6)

12:10 PM – 12:25 PM: **Jun Nagai**, Brigham and Women's Hospital, Boston, MA, USA. *CysLT2 receptor signaling works as a checkpoint molecule to suppress leukotriene-dependent mast cell activation and type 2 lung inflammation through a novel Gβγ-dependent mechanism.* (Abstract 7)

12:30 – 2:00 PM
Lunch and Poster Viewing
(*please see the poster presentation schedule at the end of the podium presentation schedule*)

Monday, August 10, 2026 program continued on next page…

2:00 – 5:05 PM

Session 2: Lipid Mediators in Cancer
(Sponsored by Solutex)

Chair: Dipak Panigrahy, Beth Israel Deaconess Medical Center, Harvard University, Boston, MA

2:00 – 2:30 PM: Plenary talk: **Dipak Panigrahy**, Beth Israel Deaconess Medical Center, Harvard University, Boston, MA: *SPMs & the Resolution of Cancer Inflammation.* (Abstract 8)

2:35 – 3:05 PM: Plenary talk: **Imad Shureiqi**, Michigan Medicine, Ann Arbor, MI, USA. *Necessity of 15-lipoxygenase-1 for colonic resolvin production to suppress colorectal carcinogenesis.* (Abstract 9)

3:10 – 3:30 PM: **Daiki Hayashi**, Kobe University, Kobe, Hyogo, Japan. *The mechanistic role of group VIA iPLA2 in ferroptosis suppression in cancer cells.* (Abstract 10)

3:35 – 3:55 PM: **Ganesh Halade**, University of South Florida, Tampa, FL, USA. *Integrative Lipidomic and Transcriptomic Profiling Reveals ALOX5 Dysfunction Drives Unresolved Inflammation in Colorectal Cancer.* (Abstract 11)

4:00 – 4:20 PM: **Neelam Sharma-Walia**, Rosalind Franklin University, North Chicago, IL, USA. *Lipoxin A4 treatment exhibited anti-angiogenic and anti-inflammatory effects on Kaposi's sarcoma-associated herpesvirus (KSHV)-related primary effusion lymphoma (PEL) tumors in NOD/SCID mice.* (Abstract 12)

4:25 – 4:40 PM: **Siddabasave Gowda Bomme Gowda**, Hokkaido University, Sapporo, Hokkaido, Japan. *Lipid biomarker analysis for neurodegenerative diseases.* (Abstract 13)

4:45 – 5:00 PM: **Sugasini Dhavamani**, University of Illinois at Chicago, Chicago, Il, USA. *Phosphatidylcholine Eicosapentaenoic acid uptake and its metabolites and anti-inflammatory effects of molecular forms of omega-3 fatty acids in microglia: a novel finding.* (Abstract 14)

5:05– 5:20 PM: ***Tribute to Professor Bruce D. Hammock***

5:20 – 6:00 PM
Poster Discussion
(*please see the poster presentation schedule at the end of the podium presentation schedule*)

Tuesday, August 11, 2026

8:00 – 9:00 AM
Information session for new investigators
Presented by **Victor Garcia**

9:00 AM – 12:05 PM
Session 3: Cytochrome P450 Metabolism of PUFA
(Sponsored by NIEHS)

Chair: Darryl C. Zeldin, NIEHS/NIH, Research Triangle Park, NC

9:00 – 9:30 AM: Plenary talk: **Michal Laniado Schwartzman**, New York Medical College, Yorktown Heights, NY, USA. *The role of GPR75, the high affinity 20-HETE receptor, in obesity and cardiometabolic complications.* (Abstract 15)

9:35 – 10:05 AM: Plenary talk: **Ingrid Fleming**, Goethe University, Frankfurt, Germany. *PUFA diols promote lymphangiogenesis via AMPK activation and β- oxidation.* (Abstract 16)

10:10 – 10:30 AM: **Matthew Edin**, NIEHS, Research Triangle Park, NC, USA. *The EET Cycle: Regulation of Formation, Disposition and Signaling.* (Abstract 17)

10:35 – 10:55 AM: **Victor Garcia**, New York Medical College, Valhalla, NY, USA. *The Emerging Role of the 20-HETE/GPR75 Axis in the Pathogenesis of Liver Disease: From Mechanism to Therapeutic Potential.* (Abstract 18)

11:00 – 11:20 AM: **Raymond Koehler**, Johns Hopkins University, Baltimore, MD, USA. *Sex-dependent Cyp4a gene expression and role of 20-HETE in outcome from ischemic stroke.* (Abstract 19)

11:25 – 11:40 AM: **Pei-an (Betty) Shih**, University of California, San Diego, La Jolla, CA, USA. *PUFA-Dependent Soluble Epoxide Hydrolase Dysregulation Links Lipid Metabolism to Anorexia Nervosa Psychopathology.* (Abstract 20)

11:45 AM – 12:05 PM: **David Potter**, University of Minnesota, Minneapolis, MN, USA. *Fluorinated cuban-1-yl biguanides inhibit biosynthesis of the endocrine resistance mediator (±)14,15-EET, reverse tumor hypoxia, and transiently overcome hormone therapy resistance in a breast cancer xenograft model.* (Abstract 41)

12:10 PM – 2:00 PM
Lunch and Poster Viewing
(*please see the poster presentation schedule at the end of the podium presentation schedule*)

Tuesday, August 11, 2026 program continued on next page….

2:00 – 5:05 PM

Session 4: Resolution of Inflammation
(Co-Sponsored by OSE Immuno Therapeutics and Metagenics)

Chair: Charles N. Serhan, Mass General Brigham, Harvard Medical School, Harvard School of Dental Medicine, Harvard University, Boston, MA

2:00 – 2:30 PM: Plenary talk: **Patricia Sime**, Virginia Commonwealth University, Richmond, VA, USA. *SPMs in Airway Inflammation: opportunities for therapy.* (Abstract 22)

2:35 – 3:05 PM: Plenary talk: **Bruce Levy**, Mass General Brigham, Harvard Medical School, Harvard University, Boston, MA, USA. *Environmental Influences on the Resolution Of Lung Infection and Inflammation* (Abstract 23)

3:10 – 3:30 PM: **Thayse Bruggemann**, BWH and Harvard Medical School, Boston, MA, USA. *Traffic-emitted ultrafine particles disrupt macrophage efferocytosis and resolution of allergic lung inflammation.* (Abstract 24)

3:35 – 3:55 PM: **Megan Falsetta**, The University of Rochester, Rochester, NY, USA. *The lipid response to oxidative stress may be dysregulated in vulvodynia further exacerbating resolution failures.* (Abstract 25)

4:00 – 4:20 PM: **Ru-Rong Ji**, Duke University Medical Center, Chapel Hill, NC, USA. *Protectin DX resolves fracture-induced postoperative pain via GPR37 activation, macrophage efferocytosis, and neuronal signaling.* (Abstract 26)

4:25 – 4:40 PM: **Yan Lin**, Duke University, Durham, NC, USA. *Lung pathophysiology and nasal lipid mediators in health and mild asthma.* (Abstract 27)

4:45 – 5:00 PM: **Robert Nshimiyimana**, BWH and Harvard Medical School, Boston, MA, USA. *Synthesis and biosynthetic transformation of epoxy resolvins to potent pro-resolving mediators.* (Abstract 28)

5:05 – 6:00 PM
Poster Discussion
(*please see the poster presentation schedule at the end of the podium presentation schedule*)

Wednesday, August 12, 2026

8:30 AM – 12:10 PM

Session 5: Metabolipidomics
(Co-Sponsored by Sciex and Shimadzu)

Chair: Edward A. Dennis, University of California – San Diego, La Jolla, CA

8:30 – 9:00 AM: Plenary talk: **Takao Shimizu**, National Institute of Global Health and Medicine, Shinjuku, Tokyo, and Institute of Microbial Chemistry, Shinagawa, Tokyo, Japan. *Roles of DHA and DHA-containing lipids in brain functions.* (Abstract 29)

9:05 – 9:35 AM: Plenary talk: **Makoto Arita**, RIKEN Center for Integrative Medical Sciences, Yokohama, Kanagawa, Japan. *Lipidome atlas associated with aging and the host-microbiome interactions.* (Abstract 30)

9:40 – 10:10 AM: Plenary talk: **Edward Dennis**, University of California, San Diego, La Jolla, CA, USA. *Lipidomics profiling of complex lipids identifies the specificity of phospholipase A_2's in releasing PUFAs and of eicosanoids in plasma identifies fatty liver disease* (Abstract 31)

10:15 – 10:35 AM: **Joan Claria**, Hospital Clinic de Barcelona, Barcelona, Catalonia, Spain. *Blood multi-omics identify molecular features of dysregulated formation of lipid mediators and mitochondrial dysfunction associated with the outcome of acutely decompensated cirrhosis.* (Abstract 32)

10:40 – 11:00 AM: **Philip J. Kingsley**, Vanderbilt University, Nashville, TN, USA. *An LC-MS/MS method for the analysis of phosphatidylinositol and phosphatidylinositol phosphate species from activated RAW264.7 cells.* (Abstract 33)

11:05 – 11:25 AM: **Sean Davies**, Vanderbilt University, Nashville, TN, USA. *Regulation of macrophage function by NAPE-PLD.* (Abstract 34)

11:30 – 11:45 AM: **Azam Yazdani**, Harvard Medical School, Boston, MA, USA. *The AI-Based Network Integration for Multi-Omics Analysis: An Application to Immune and Inflammatory Resolution Pathways in Genetics, Glycomics, and Lipidomics.* (Abstract 35)

11:50 AM – 12:05 PM: **Matti van Welzen**, University of Rostock, Rostock, MV, Germany. *SPIN: Specialized Pro-resolving lipid mediators INteractome, a knowledge graph to explore mechanism of SPM function.* (Abstract 36)

12:10– 2:00 PM
Lunch and Socialization

Wednesday, August 12, 2026 program continued on next page….

2:00 – 5:05 PM

Session 6: Lipid Mediator Receptors
(Sponsored by ONO Pharma)

Chair: Nan Chiang, Harvard University, Boston, MA

2:00 – 2:30 PM: Plenary talk: **Takehiko Yokomizo**, Juntendo University, Tokyo, Tokyo, Japan. *Protective roles of BLT2 receptor on the plasma membrane disruption-induced epithelial cell damage.* (Abstract 37)

2:35 – 3:05 PM: Plenary talk: **Gabrielle Fredman**, Albany Medical College, Albany, NY, USA. *Aging, Atherosclerosis, and the Failure to Resolve: Targeting Resolution Pathways to Overcome Residual Inflammation* (Abstract 38)

3:10 – 3:30 PM: **Magnus Bäck**, Karolinska Institutet, Stockholm, Stockholm, Sweden. *Deletion of the resolvin D2 receptor GPR18 induces an age-dependent circadian hypertensive phenotype with vascular bed-specific endothelial dysfunction.* (Abstract 39)

3:35 – 3:55 PM: **Stephania Libreros**, Yale University, New Haven, CT, USA. *Eating invaders: Resolvins drive macrophage phagocytosis and resolution.* (Abstract 40)

4:00 – 4:15 PM: **Jason Hellmann,** University of Louisville, Louisville, KY, USA. *15R-Lipoxin A_4 signaling constrains immunometabolic programming during innate immune memory formation.* (Abstract 42)

4:20 – 4:35 PM: **Yan Zhang**, Michigan Technological University, Houghton, MI, USA. *Resolvin D1 Attenuates Renal Inflammation and Cyst Growth in PKD Mice.* (Abstract 43)

5:00 – 6:00 PM Award Ceremony
Adjournment

Poster Presentations

(Co-Sponsored by Ambiotis, Avanti Research, Heel GMBH, and POLM)

Display: Monday and Tuesday, 9:00 AM - 6:00 PM

Discussion:

Monday, August 10, 2026; 5:20 – 6:00 PM

Tuesday, August 11, 2026; 5:05 – 6:00 PM

Outstanding Young Scientist Award contestants:

Posters 44 – 49 (postdoctoral fellows), 50 – 55 (graduate students)

Poster	Author	Abstract Title
44	Yanghui Chen	*Germline Variants in Prostaglandin E Synthase 2 lead to Aortic Dissections via inflammation*
45	Neha Rana	*Pro-resolving lipid mediators prevent cancer cachexia*
46	Thi Yen Ly Huynh	*Lipid signaling modulates JunB and Ly-6A/E pathways to regulate macrophage function, leading to beta cell death and type 1 diabetes development*
47	Gilbert Charles Morgan	*EC5026, a soluble epoxide hydrolase inhibitor, enhances whisker stimulation-induced functional hyperemia and mitigates cognitive impairment in diabetes-associated ADRD*
48	Urmila Jagtap	*Lipidomics-based molecular dissection to identify the role of miR-21 in modulating high-fat diet-induced metabolic and hepatic dysfunctions in mice*
49	Mamoru Ogawa	*Microbiota-derived lipid signaling modulates epithelial wound healing in the ocular surface*
50	Sri Ramya Donepudi	*Investigating the role of epoxyeicosatrienoic acids in allergic asthma: Sex differences and the effect of sEH inhibition on lung function in females and males*
51	Deborpita Sarkar	*GPR44(CRTH2)-dependent regulation of immune checkpoint control in acute myeloid leukemia*
52	Andrew Gregory	*PTUPB, a dual sEH and COX-2 inhibitor, improves cerebral vascular and cognitive function in Alzheimer's Disease*
53	Tenley Weil	*Genetic polymorphisms in arachidonic acid 15-lipoxygenase correlate with airway epithelial cell responses to ozone*
54	Danielle Diegisser	*Targeting the 20-HETE Receptor, GPR75, to Protect Against Diet-Induced Obesity and Improve Metabolic Syndrome*
55	Rafia Virk	*Dietary Docosahexaenoic Acid Protects Against Obesity-Driven Lung Inflammation*
56	Jingrong Tang	*Protective effects of omega-6 dihomo-gamma-linolenic acid on atherosclerosis, inflammation, and senescence biomarkers*
57	Qiang Ma	*PU.1 dependent regulation of Alox5 drives lipid mediator production in macrophages exposed to multiwalled carbon nanotubes*
58	Huiting Jia	*A crosstalk between FADS2 and CYP4F11 in non-small cell lung cancer on the interface of fatty acid metabolism*
59	Jacob Woods	*Resolvins synergize with immunotherapy to induce regression of Fanconi Anemia (Fancc-/-) –associated head and neck squamous cell carcinoma*
60	Nada Birkic	*Temporal changes in plasma 12,13-DiHOME concentrations following the induction of fecal peritonitis: a biomarker of sepsis-associated lung injury*
61	Sugasini Dhavamani	*Altered Erythrocyte Membrane Lipid Composition in Sickle Cell Disease: Implications for Mitochondrial Retention and Hemolysis*
62	Larissa Engert	*Sleep disturbances affect inflammatory resolution physiology in patients with Long COVID*

Poster	Author	Abstract Title
63	Eniko Major	*LPA as a potential mediator of immune escape in human melanoma*
64	Vaishnavi Sirul Velaga	*Understanding plant-based drug mode of action in modulating bioactive lipid pathways associated with inflammation resolution using network pharmacology approach*
65	Patricia Kane	*Addressing epigenetic insult resulting in cellular debris with bioactive lipids, phospholipids and chaperones in neurological disease*
66	Laura Leuenberger	*Peripheral Proinflammatory Cytokines are Associated with Changes in Fatty Acids and Oxylipin Levels During Acute Respiratory Distress Syndrome*
67	Hong Li	*Eosinophils Regulate Th Cell Differentiation Through COX-2-Derived Prostaglandins During Allergic Lung Inflammation*
68	Allyson Motter	*MCTR3 mitigates cigarette smoke-induced epithelial damage and inflammation in differentiated primary human small airway epithelial cells at the air-liquid interface*
69	Jun Nagai	*Platelet CysLT2 receptor mediates a feed-forward loop with mast cells to amplify IL-33–driven type 2 inflammation*
70	Monika Haack	*Can we prevent the inflammatory lipid mediator response to sleep restriction by low-dose aspirin? – A randomized placebo-controlled crossover trial in healthy adults*
71	Meghan Althoff	*Sputum oxylipins are associated with inhaled corticosteroid response in adults with asthma with heterogeneity in response by BMI and sex.*
72	Weicang Wang	*EpOMEs compromise colonic homeostasis through microbiome dysbiosis and inflammatory activation*
73	Nan Jing	*Gut microbiota drive colonic prostaglandin reactivation*
74	Kathryn Alden	*Dysregulation of Arachidonic Acid Metabolism Drives Inflammatory Lipid Production in Localized Provoked Vulvodynia*
75	Jane Border	*Effects of chronic inhibition of soluble epoxide hydrolase on brain oxylipins in APP/PS1 TgF344 AD rats.*
76	Emanuelle Chrysilla	*Soluble epoxide hydrolase inhibition increases EET/DHET ratio and attenuates inflammation and pain in localized provoked vulvodynia*
77	Samaneh Goorani	*Novel compounds that target epoxyeicosanoids protect rat kidney epithelial cells in organ transplant solution during cold storage*
78	John Seubert	*Alterations in the cGAS-STING pathway and cellular senescence in aged female sEH null mice following myocardial infarction*
79	Sophia Smith	*Eicosanoid regulation of cancer cachexia via soluble epoxide hydrolase*
80	Johnny Bui	*Uncovering the Role of Cytochrome P450 2S1 in Endogenous Substrate and Skincare Drug Metabolism*
81	Matthew Edin	*Altered Cytochrome P450 Expression, Oxylipin Levels and Liver Regeneration in Cyp2c29-Deficient Mice with Phenytoin Treatment*
82	Rosangela Hoshi	*Impact of randomized omega-3 supplementation versus olive oil placebo on specialized pro-resolving mediators*
83	Paul Kennedy	*Characterization of human plasma as a reference material for lipid analysis using LC-MS*
84	Kaycee Christopher	*Immunonutritional Targeting of Cancer Through Omega-3 Fatty Acids and Soluble Epoxide Hydrolase Inhibition*

Poster	Author	Abstract Title
85	Guodong Zhang	*Gut microbiota activate hepatic CYP eicosanoid pathway and protect against liver injury*
86	Govindaiah Pilli	*A Validated and Optimized method for the Quantification of Fatty acids Using Differential Mobility Separation and LC-MS*
87	Lu Yue	*Mechanism for HSPC Expansion in the Endothelial Cuddling Niche Microenvironment through Inflammatory Lipid Mediators Receptor CysLTR1*
88	Brendon Naicker	*Adipocyte-specific GPR75 deletion reduces hepatic, but not adipose, eicosanoid levels in high-fat diet-induced obese mice*
89	Krishna Rao Maddipati	*Unalamation: Physiological counterpart of chronic Inflammation*
90	Dorina Krasniqi	*Adipocyte-specific deletion of GPR75 protects against diet-induced obesity: Changes in glucose homeostasis and inflammatory responses*
92	Kin Sing Lee	*Oxidized polyunsaturated fat metabolites drive neurodegeneration mediated by a ferroptosis-like cell death mechanism.*
93	Lois Oviawe	*Oxylipin Remodeling in Cardiac Endothelial Cells Reveals Selective Lipid Pathway Activation During Ferroptosis*
94	Yesim ER Oztas	*Untargeted Plasma Lipidomics of Lipedema Patients Compared to Obese Patients*
95	Yesim ER Oztas	*Plasma Lipidomic Signature of Hereditary Hemolytic Anemias: Elevated Ceramides and Phosphatidylcholine Remodeling as Surrogates of Hemolytic Burden*
96	Daniel Irimia	*Lipid mediators of neutrophil swarming against large microbes*
97	Jianan Zhang	*Sex-dependent responses in mice to NSAID-induced organ injury and gut microbiome-targeted alleviation*
98	Yige Wang	*Gut Microbiota Modulate Adipose Eicosanoid Metabolism: Potential Roles of the Lipoxygenase Pathway*
99	Tarvi Teder	*Structural and dynamic insights into ATP-mediated regulation of human 5-lipoxygenase*
100	Gabor Tigyi	*An extended-release formulation of Radioprotectin-1 for mitigation of gastrointestinal acute radiation syndrome*
101	Aurore Morello	*Agonist anti-FPR2 VHH mAb decreases neutrophil accumulation and initiates chronic inflammation resolution*
102	Lily Ceraso	*Targeting inflammation-induced tumor dormancy escape via eicosanoids*
103	Camille Longabardi	*Targeting glioblastoma via soluble epoxide hydrolase (sEH) inhibition*
104	Si Won Tyoo	*Influence of glycemic control on the association between fatty acid metabolites and cerebral blood flow*
105	Siddabasave Gowda Bomme Gowda	*Analytical Method Development for Quantification and Enhanced Detection of Unsaturated Short-Chain FAHFAs*
21	Zhijun Guo	*The hexyl cuban-1-yl biguanide C5F2-HCB inhibits CYP3A4-mediated (±)-14,15 EET biosynthesis and when delivered in PEG400 reverses immune exclusion of the ovarian dependent SSM2ucd mammary carcinoma allograft while inhibiting tumor growth*