SCIENTIFIC PROGRAM

16th International Conference

on

Bioactive Lipids in Cancer, Inflammation and Related Diseases

Sponsored by

Eicosanoid RESEARCH Foundation™

October 20 – 23, 2019

Hilton St. Petersburg Bayfront

St. Petersburg, Florida

Sunday, October 20, 2019

Registration opens: 9:00 AM

Venue: Grand Bay Ballroom

12:30 PM ***Welcome address*** **Kenneth V. Honn**
Chairman, Organizing Committee

Keynote Address

Introduction of the speaker by Edward A. Dennis

12:40 PM **Lewis C. Cantley**
Meyer Director of the Sandra and Edward Meyer Cancer Center
at Weill Cornell Medical College/Ronald P Stanton Clinical Cancer Program at New York-Presbyterian
Professor of Cancer Biology in Medicine, Weill Cornell Medical College, Cornell University, New York, NY

PI 3-Kinase and Cancer Metabolism (Abstract 1)

Lifetime Achievement Award Lectures

(Sponsored by Cayman Chemical Company)

Introduction of the awardees by Kenneth V. Honn and Gabor J. Tigyi

1:30 PM **Lina M. Obeid**
SUNY Distinguished Professor of Medicine,
Dean for Research, Vice Dean for Scientific Affairs
Stonybrook University School of Medicine, Stonybrook, NY

Bioactive sphingolipid metabolism and role in disease (Abstract 2)

2:20 PM **Yusuf A. Hannun**
SUNY Distinguished Professor
Joel Strum Kenny Professor in Cancer Research, Director, Stony Brook University Cancer Center
Vice Dean for Cancer Medicine, Stonybrook University School of Medicine, Stonybrook, NY

Bioactive Sphingolipids: Discovery, Foundations, Principles, Developments (Abstract 3)

3:10 PM ***Coffee break*** *(Grand Bay Lobby)*

Sunday, October 20, 2019 program continues on next page

Exceptional Contributions to Human Physiology and Translational Medicine Award lecture

Introduction of the awardee by Charles N. Serhan

3:30 PM **Sven-Erik Dahlén**

Professor of Asthma and Allergy Research, Fellow of European Respiratory Society
Member of Academia Europaea, The Institute of Environmental Medicine
Director of The Centre for Allergy Research
Karolinska Institute - Stockholm, Sweden

Eicosanoids are fundamental effector molecules and valuable biomarkers in asthma - evidence from human studies (Abstract 4)

INAUGURAL SESSION

Cannabinoids

Session Chair: Lawrence J. Marnett

4:20 PM	*The Structures and Functions of the CB1 and CB2 Cannabinoid Receptors* (Abstract 5)	**Alexandros Makriyannis** *Northeastern University* *Boston, MA*
5:05 PM	*Endocannabinoid Signaling: Novel Mechanism of Regulation* (Abstract 6)	**Cecilia J. Hillard** *Medical College of Wisconsin* *Milwaukee, WI*
5:50 PM	*Endocannabinoids Modulate Appetitive and Addictive Behaviors via Distinct Pathways of Periphery to Brain Signaling* (Abstract 7)	**George Kunos** *NIAAA/NIH* *Bethesda, MD*

Session ends at 6:35 PM

Opening reception: 6:40 – 8:00 PM

Hilton St. Petersburg Bayfront

Pool Area

Cocktails and hors d'oeuvres

Monday, October 21, 2019

PLENARY SESSION 1

Venue: Grand Bay Ballroom

Session Chairs: Charles N. Serhan & Takehiko Yokomizo

8:00 AM	*Enzymes of the 5-Lipoxygenase Pathway, molecular mechanisms and therapeutic opportunities* (Abstract 8)	**Jesper Z. Haeggström** *Karolinska Institute, Stockholm, Sweden*
8:50 AM	*Novel lysophospholipid receptors: their structure and function* (Abstract 9)	**Junken Aoki** *Tohoku University, Sendai, Japan*

Session ends at 9:40 AM

Coffee break: 9:40 AM (20 min) (Grand Bay Lobby)

Time	**Session 1:** **Resolution of Inflammation - I** **(*sponsored by* Solutex)** **Chairs: Catherine Godson & Charles N. Serhan** *(Grand Bay Ballroom-South)*	**Session 2:** **Sphingolipid and LOX Metabolites in Inflammation** **Chairs: Haydee E. Bazan & Timothy Hla** *(Grand Bay Ballroom-North)*
10:00 AM	**Catherine Godson:** *Lipoxin and Lipoxin Mimetics: Resolve Inflammation, Suppress Fibrosis and Promote Regeneration* (Abstract 10)	**Haydee E. Bazan:** *Novel RvD6 isomer modulates corneal innervation and wound healing* (Abstract 15)
10:30 AM	**Charles N. Serhan:** *Resolvins and Pro-Resolving Mediators in Resolution of Inflammation: Evidence for a New Vagal Pro-Resolving Reflex* (Abstract 11)	**Timothy Hla:** *Transcriptional regulation by S1P receptors during vascular development* (Abstract 16)
11:00 AM	**Thomas E. Van Dyke:** *Intervention Strategies to Promote Resolution of Inflammation* (Abstract 12)	**Luccia H. Faccioli:** *Lung edema and mortality induced by scorpion envenomation are mediated by NLRP3 and regulated by lipid mediators* (Abstract 17)
11:20 AM	**Ted Holman:** *Altered positional specificity of 15-Lipoxygenase-1 in the biosynthesis of the Maresin 1 analogue, 7S,14S-diHDHA, implicates a novel biosynthetic pathway of Resolvin D5 from 15-Lipoxygenase-2* (Abstract 13)	**Neelam Sharma-Walia:** *Concurrent Control of KSHV Life Cycle through Chromatin Modulation and Host Hedgehog Signaling: A New Prospect to the Therapeutic Potential of Lipoxin A4* (Abstract 18)
11:40 AM	**Martin Hersberger:** *Resolvin D1 reduces Adipose Tissue Inflammation by Triggering Human Macrophages* (Abstract 14)	**Darlene A. Dartt:** *Maresin1- and Maresin-2 Use Distinct Signaling Pathways to Regulate Goblet Cell Function in the Eye* (Abstract 19)

Sessions end at 12:00 Noon

Lunch Break: 12:00 to 1:30 PM

Working Lunch: *Courtesy of* ***Zone Labs, Inc.***

12:15 – 1:15 PM **Venue: St. Petersburg Ballroom**

The role of high-dose omega-3 fatty acids in the Resolution Response

Presentation by Barry Sears, Ph.D., President, Zone Labs, Inc.

Monday, October 21, 2019 program continues on next page

Monday, October 21, 2019 *continued…*

Time	**Session 3:** **Neuronal Inflammation** **(*sponsored by* Metagenics Institute)** **Chairs: Nicolas G. Bazan & Kenneth V. Honn** *(Grand Bay Ballroom-South)*	**Session 4:** **Lysophospholipids and Receptor Physiology** **Chairs: Zoltan Benyó & Irma Machuca-Gayet** *(Grand Bay Ballroom-North)*
1:30 PM	**Nicolas G. Bazan:** *Elovanoids counteract oligomeric b-Amyloid toxicity, regulate transcriptome architecture and function; Significance to Alzheimerís and Age-related Macular Degeneration* (Abstract 20)	**Zoltan Benyó:** *Vasoactive effects of LPA and its interactions with other vasoregulatory pathways* (Abstract 25)
2:00 PM	**Danielle Piomelli:** *NAAA-regulated lipid amide signaling as a point of control in neuroinflammation* (Abstract 21)	**Irma Machuca-Gayet:** *Role of Lysophopatidic/Autotaxin Axis in the Development of Inflammatory Bone Disease* (Abstract 26)
2:30 PM	**Nan Chiang:** *Identification of a Maresin 1 Receptor for Immunoresolvent Functions with Phagocytes* (Abstract 22)	**David N. Brindley:** *Targeting the autotaxin-lysophosphatidate-inflammatory cycle to improve outcomes from chemotherapy and radiotherapy for breast cancer patients* (Abstract 27)
2:50 PM	**Laila Abdullah:** *APOE4-dependent and independent changes in lipids and metabolites of the L-carnitine transport system indicate mitochondria dysfunction in early Alzheimerís disease* (Abstract 23)	**Kenji Monde:** *Structure-inspired design of a sphingolipid mimic sphingosine-1-phosphate receptor agonist from a naturally occurring sphingomyelin synthase inhibitor* (Abstract 28)
3:10 PM	**Patricia Soares de Souza:** *Enriched marine oil supplements increase peripheral blood SPM concentrations and reprogram host immune responses: A randomized double-blind placebo-controlled study* (Abstract 24)	***Progress in Lipid Research - Young Investigator Awardee Lecture*** **Toshiaki Okuno:** *Identification of a novel mutation in SLCO2A1 gene, encoding a prostaglandin transporter* (Abstract 29)

Session ends at 3:30 PM

Poster Sessions I-A & I-B (Abstracts 86-144)

Monday, October 21, 2019 **Poster Viewing: 9 AM – 6 PM**

Venue: *St. Petersburg Lobby*

Poster Session I-A: *Posters 85-94* and 95-114* **Discussion Time: 4:00-5:00 PM**

****Santosh Nigam Memorial Outstanding Scientist Award Contest – Discussion Time: 4:00 – 6:00 PM***

Abstract	Presenting Author	Abstract Title
85*	**Surjyadipta Bhattacharjee**	*Elovanoids (ELV) protect telomere length shortening and restore of Telomerase activity upon exposure to uncompensated oxidative stress (UOS) or oligomeric amyloid β (Oaβ).*
86*	**Romain A. Colas**	*Pro-Resolving Mediator Profiles in Cerebrospinal Fluid are Linked with Disease Severity and Outcome in Adults with Tuberculous Meningitis*
87*	**Vasundhara Kain**	*Maresin 1 facilitates cardiac repair by promoting reparative macrophages and limits cardiorenal inflammation in acute heart failure*
88*	**Stephania Libreros**	*Novel Resolvin E4 Biosynthesis and functions during Physiological Hypoxia*

Abstract	Presenting Author	Abstract Title
89*	**Brian Sansbury**	*Resolvin D1 Engages Myeloid Cell-Dependent Revascularization During Ischemia via its Receptor, ALX/FPR2*
90*	**Anna Fishbein**	*Stimulation of resolution of inflammation via pro-resolving lipid mediators to prevent tumor growth*
91*	**Laura Menke**	*Shifting eicosanoid balance: Dual treatment of dihomo-γ-linolenic acid and aspirin inhibits platelet reactivity and alters the proteomic releasate profile*
92*	**Thang L. Pham**	*Elovanoids attenuate inflammation and neovascularization of the eye surface in experimental models of cornea injury*
93*	**Fenghua Qian**	*Suppressory Role of Gpr44 in Acute Myeloid Leukemia*
94*	**Hao Wang**	*Lipid regulation of amyloid β production*
95	**Yasmine Amgoud**	*Pulmonary hypertension treatments: Effect of 17β-estradiol on PGI2 pathway in human pulmonary vessels*
96	**Juan A. Azcona**	*Novel Contributions of Neutrophil-derived Myeloperoxidase and Hypochlorous Acid to Post-Ischemic Endothelial 20-HETE Production*
97	**Amel Bouhadoun**	*Prolonged effects of inflammation and prostacyclin mimetics on cAMP production in pulmonary hypertension*
98	**William B. Campbell**	*Macrophage 12(S)-HETE Enhances Angiotensin II-mediated Vasoconstriction Through Endothelial Release of a Thromboxane Receptor Agonist in Murine Aortas*
99	**Marilena Crescente**	*Determining the eicosanoid fingerprints of aspirin's effects at platelet and non-platelet sites*
100	**Agnes Keszler**	*Role of Lipid Droplets in Red Light Mediated Vasodilation*
101	**Tamas Kriska**	*The Role of Macrophage 12/15-Lipoxygenase in the Development of Angiotensin II Hypertension in Mice*
102	**S. Kiran Koya**	*Accurate identification of breast cancer margins in microenvironments of ex-vivo basal and luminal breast cancer tissues using Raman spectroscopy*
103	**Kelsey C. C. North**	*Molecular mechanisms of cholesterol protection against alcohol-induced BK channel inhibition and its associated vasoconstriction*
104	**Xiao Tang**	*Triggering succinate receptor GPR91 promotes TXA_2 and 12-HETE driven platelet activation*
105	**Bochra Tourki**	*Aging Drives Cardiometabolic and Cardiorenal Defects in Resolution Sensor Deficient Mice with Defective Inflammation-Resolution in Heart Failure*
106	**Adriana Yamaguchi**	*The antithrombotic effects of 12-LOX metabolites of DHA*
107	**Lucia H. Faccioli**	*Evaluation of lipid mediators associated with resistance of human melanoma to BRAF inhibitor*
108	**Michael C. Goodman**	*Structural and functional analysis of inflammatory enzyme complexes in synthetic nanodisc lipid bilayers*
109	**Samantha Hyder**	*A New, Efficient Synthesis of ω-NBD sphingosine*
110	**Margaret A. Park**	*The role of CPEB2 alternative splicing in sphingosine-1-phosphate metabolism*

Abstract	Presenting Author	Abstract Title
111	**Andrew Peck**	*Characterizing the Plasma from Patients Diagnosed with Bladder Cancer using a Novel LC-MS Methodology*
112	**Karim P. Romero**	*Lights and shadows on tumor-infiltrating immune cells lipidomic characterization.*
113	**Jianan Zhang**	*Excess consumption of linoleic acid exaggerates colorectal cancer via CYP monooxygenase modulation*
114	**Roberta De Matteis**	*Pro-resolving mediators mediate the protective actions of aspirin in colitis associated colorectal cancer.*

Discussion Time: 5:00-6:00 PM **Poster Session I-B: *Posters 115-144***

Abstract	Presenting Author	Abstract Title
115	**Suraj Dhungana**	*Label Free Spatial Mapping of Lipids and Metabolites on Tumor Sections for Two- and Three-Dimensional Tissue Classification and Pathway Mapping*
116	**Victoria Hallisey**	*Stimulating the resolution of inflammation with resolvins and protectins to inhibit brain cancer*
117	**Kelsey Kendzulak**	*Suppression of debris-stimulated tumor growth by a dual COX-2/sEH inhibitor*
118	**Maroua Mbarik**	*Steroid hormones induce PUFA elongation and desaturation in hormone-dependent carcinomas*
119	**Yuka Sasaki**	*Role of prostacyclin synthase in chemical-induced bladder carcinogenesis*
120	**Aram Asatryan**	*Elovanoids suppress overt activation of NOD-2 intracellular patter recognition receptor (PRR) signaling triggered by OX-LDL and IL-1α injury in human Retinal Pigment Epithelial Cel*
121	**Taka-Aki Ichu**	*ABHD12 and LPCAT3 regulate immunostimulatory (lyso)phosphatidylserine metabolic pathways*
122	**Charlotte Jouvene**	*Resolvin D4: biosynthesis and actions in pathological thrombosis in mice*
123	**Seung-Hyun Kim**	*Sphingolipid metabolic signatures correlate to airway inflammation in asthmatics*
124	**Lucy Ly**	*MCTR1, MCTR2, and MCTR3 resolve inflammation and protect joints in Inflammatory Arthritis*
125	**Selma Mani**	*Relationship of Cyclooxygenase-2, EP2 and EP4 receptors and chronic obstructive pulmonary disease (COPD): genetic polymorphisms, protein expression, prostaglandin concentrations*
126	**Sky W. Reece**	*Sex differences in pulmonary eicosanoid metabolism in response to ozone exposure*
127	**Ashley E. Shay**	*Relationship Between the Biosynthetic Metabolomes of Cysteinyl-Containing Immunoresolvents and Cysteinyl-Containing Leukotrienes*
128	**Carlos A. Sorgi**	*Paradoxical role of eicosanoids during Mycobacterium tuberculosis infection*
129	**Katherine Walker**	*Protectin D1 and Protectin Conjugate for Tissue Regeneration 1 Reduce Viral Load and Lung Inflammation during Respiratory Syncytial Virus infection*

Abstract	Presenting Author	Abstract Title
130	**Zhihong Yuan**	*Non-tuberculous mycobacteria infection induces prostaglandin-cytokine crosstalk in macrophages*
131	**Kenneth V. Honn**	*Effects of prenatal alcohol exposure and DHA (docosahexaenoic acid) on the inflammatory lipid profile of newborn rat brain*
132	**Krishna Rao Maddipati**	*Effects of prenatal alcohol exposure on the inflammatory lipid profile of newborn rat brain*
133	**Kyosuke Shishikura**	*Acyl-CoA synthase 6 regulates long chain polyunsaturated fatty acid composition of membrane phospholipids in spermatids and supports normal spermatogenic processes in mice*
134	**Ansari M. Aleem**	*Temporal Dissociation of Cyclooxygenase-2-Dependent Arachidonic Acid and 2-Arachidonoylglycerol Metabolism in Macrophages*
135	**Claus Schneider**	*Aspirin-induced synthesis of 15R-prostaglandins by COX-2*
136	**Josephine E. Watson**	*CYP Epoxygenases Metabolize Omega-3 Endocannabinoids to form a Novel Class of Anti-inflammatory Lipid Mediators*
137	**John C. Freedman**	*Allosteric regulation of 12LOX and 15LOX1 and their Roles in the Biosynthesis of Maresins*
138	**Yulemni Morel**	*Quantitation of Vinyl Ether Phosphatidylethanolamine: Application to Traumatic Brain Injury*
139	**Abrar E. Al-Shaer**	*Metabolites of the SPM Family Inhibit the Enrichment of Pro-Inflammatory B Cells in Adipose Tissue of Obese Mice*
140	**Issa Beegun**	*Maresin 1 regulates peripheral leukocyte responses in patients with chronic eosinophilic nasal polyposis*
141	**Xavier de la Rosa Siles**	*Novel Resolvin Conjugate in Tissue Regeneration 1-3 (RCTR1-3) Stereochemical Assignments and their Proresolving Functions in Infection*
142	**Khanh Do**	*Elovanoids counteract oligomeric β-Amyloid-induced gene expression and protect photoreceptors.*
143	**James Evans**	*Nicotinamide riboside improves brain bioenergetics and reduces neuroinflammation in a mouse model of Gulf War Illness.*
144	**Esteban A. Gomez**	*Identification of pro-resolving mediators-based predictive biomarkers to DMARD responsiveness in rheumatoid arthritis*

Meet the Exhibitors Reception
Grand Bay / St. Petersburg Lobby intersection
3:30 – 5:30 PM

Tuesday, October 22, 2019

PLENARY SESSION 2

Venue: **Grand Bay Ballroom**

Session Chairs: Gabor J. Tigyi & Makoto Arita

8:00 AM	*Targeting the sphingosine-1-phosphate axis as a novel therapy for breast cancer and chemotherapy induced neuropathic pain* (Abstract 30)	**Sarah Spiegel** *Virginia Commonwealth University School of Medicine, Richmond, VA*
8:50 AM	*Synthesizing and Imaging Sphingolipids from within Living Cells* (Abstract 31)	**Neal K. Devaraj** *University of California at San Diego San Diego, CA*

Session ends at 9:40 AM

Coffee break: 9:40 AM (20 min) (Grand Bay Lobby)

Time	**Session 5:** **Resolution of Inflammation-II** **(*sponsored by* Metagenics Institute)** **Chairs: Joan Clària & Jesmond Dalli** *(Grand Bay Ballroom-South)*	**Session 6:** **PUFA Reorganization and Metabolism** **Chairs: Takao Shimizu &** **Lawrence J. Marnett** *(Grand Bay Ballroom-North)*
10:00 AM	**Joan Clària:** *Pathways and Mediators of Resolution in Chronic Liver Disease* (Abstract 32)	**Takao Shimizu:** *Roles of polyunsaturated fatty acids in vivo. Revisit from mediators to membranes* (Abstract 37)
10:30 AM	**Jesmond Dalli:** *Insights mechanisms elicited by immunoresolvants in the maintenance of homeostasis and the termination of inflammation* (Abstract 33)	**Lawrence J. Marnett:** *COX-2-Dependent Production of Glyceryl Prostaglandins In Vitro and In Vivo* (Abstract 38)
11:00 AM	**Shuntaro Hara:** *Participation of long-chain acyl-CoA synthetase ACSL4 in inflammatory reactions* (Abstract 34)	**Michael G Malkowski:** *Time-Dependent Inhibition of Cyclooxygenase-2 by Aspirin and Celebrex: The Roles of Arg-513 and Leu-531* (Abstract 39)
11:20 AM	**Nicos A. Petasis:** *Chemistry of MCTRs, PCTRs and RCTRs - Proresolving and Tissue Regenerative Sulfidoconjugates* (Abstract 35)	**Matthew Edin:** *Regulation of EET Formation and Hydrolysis* (Abstract 40)
11:40 AM	**Melody Duvall:** *Lipoxin A4 Enhances and Dexamethasone Inhibits LIM Kinase to Regulate Human Natural Killer Cells* (Abstract 36)	**Bruce D. Hammock:** *A soluble epoxide hydrolase inhibitor and investigational new drug candidate spares opioids and reduces pain in multiple models* (Abstract 41)

Session ends at 12:00 Noon

Lunch Break: 12:00 to 1:30 PM

Working Lunch: *Courtesy of* **SCIEX**

12:15 – 1:15 PM **Venue: St. Petersburg Ballroom**

Sensitive and Comprehensive Analysis of Lipid Mediators Using the Latest Technologies
Presentation by Mackenzie Pearson, Ph.D. and Paul Norris, Ph.D., SCIEX

Tuesday, October 22, 2019 program continues on next page

Tuesday, October 22, 2019 *continued…*

Time	**Session 7:** **Eicosanoid and Sphingolipid Signaling** **Chairs: Edward A. Dennis & Darryl C. Zeldin** *(Grand Bay Ballroom-South)*	**Session 8:** ***ERF Young Investigator Award Competition*** **Chairs: Richard P. Phipps & Krishna Rao Maddipati** *(Grand Bay Ballroom-North)*
1:30 PM	**Edward A. Dennis:** *Membrane Allostery and Unique Hydrophobic Sites Promote Phospholipase A2 Substrate Specificity* (Abstract 42)	**1:30 PM: Raja-Elie E. Abdulnour:** *Maresin Conjugates in Tissue Regeneration Regulate Pro-phlogistic Lung Actions of Cysteinyl Leukotrienes* (Abstract 47)
2:00 PM	**Darryl C. Zeldin:** *Role of Cytochrome P450-Derived Fatty Acids in the Ischemic Heart* (Abstract 43)	**1:50 PM: Aditi Das:** *Anti-inflammatory and Potential Anti-pain properties of novel omega-3 and omega-6 dopamine- and serotonin-based endocannabinoids and endovanilloids* (Abstract 48)
2:30 PM	**Xavier Norel:** *Interaction between PGI2 and ET-1 pathways in vascular smooth muscle from Group III pulmonary hypertension patients* (Abstract 44)	**2:10 PM: Valerio Chiurchiu:** *Specialized pro-resolving mediators are altered in multiple sclerosis patients and modulate the inflammatory responses of key pathogenic cells at the interface between blood and the brain* (Abstract 49)
2:50 PM	**Victoria A. Blaho:** *Sphingosine 1-phosphate receptor 1 signaling regulates hematopoietic stem and progenitor cell life and death* (Abstract 45)	**2:30 PM: Ganesh V Halade:** *Resolving and non-resolving inflammation in heart failure* (Abstract 50)
3:10 PM	**Nawajes Mandal:** *Sphingosine 1-phosphate in retinal structure and function* (Abstract 46)	**2:50 PM: Jace W. Jones:** *Sphingolipid analysis: combining newly optimized base hydrolysis with mass spectrometry-based multidimensional datasets* (Abstract 51)
		3:10 PM: Sungwhan F Oh: *Immunomodulation by α-galactosylceramides of gut symbiont origin: A multifaceted study* (Abstract 52)

Sessions end at 3:30 PM

Poster Sessions II-A & II-B (Abstracts 145-203)

Tuesday, October 22, 2019 **Poster Viewing: 9 AM – 6 PM**

Venue: *St. Petersburg Lobby*

Poster Session II-A: *Posters 145-174* **Discussion Time: 4:00-5:00 PM**

Abstract	Presenting Author	Abstract Title
145	**William C. Gordon**	*Adipor1 and Mfrp regulate retinal DHA lipidomics to provide neuroprotective elovanoid mediators.*
146	**Trond V. Hansen**	*Synthesis, Configurational Assignment and Biological Evaluations of RvD1$_{n\text{-}3\ DPA}$*
147	**Christa D. Jackson**	*The role of BLT2 in experimental Lyme arthritis*
148	**Hans Jagusch**	*A 1,8-diol-Forming Rearrangement of an Algal Oxylipin Reveals an Alternative Pathway to Leukotriene B$_4$ Enantiomers*

Abstract	Presenting Author	Abstract Title
149	**Anna-Karin E. Johnsson**	*Targeting human Prostaglandin D Synthase (hPGDS) in human lung mast cells and mast cell models*
150	**Bokkyoo Jun**	*AdipoR1 Conditional KOs Retina and RPE Show Cell-Specific Changes in PC and PE Species Containing VLC-PUFAs for Elovanoid Synthesis.*
151	**Astrid S. Kahnt**	*Persistent toll-like receptor stimulation induces a pro-resolving phenotype in human monocyte-derived macrophages*
152	**Patricia Kane**	*Membrane Lipid Disturbance, Epigenetic Insult, Unfolded Proteins and Ceramides in Neuroinflammatory Disease Attenuated by Chaperones, Phospholipids and Bioactive Lipids*
153	**Duco S. Koenis**	*$RvD5_{n\text{-}3\ DPA}$ engages GPR101 to promote the resolution of inflammatory arthritis and Escherichia coli infections*
154	**Toko Maehara**	*Prostaglandin $F_2\alpha$ regulates the progression of LPS-induced sepsis*
155	**Kirk M. Maxey**	*Novel oxidized membrane phospholipids from a COX-1 catalyzed reaction in the human platelet*
156	**Pranab K. Mukherjee**	*Elovanoids (ELVs) target downregulation of erastin-mediated phosphorylation of the scaffold phosphatidylethanolamine binding protein-1 (PEBP-1) against ferroptosis a form of progra*
157	**Robert Nshimiyimana**	*Stereocontrolled Total Synthesis of Pro-resolving Lipid Mediators: Resolvin D4 (RvD4) and Aspirin-Triggered Resolvin D4 (AT-RvD4)*
158	**Anandita Pal**	*Eicosapentaenoic acid prevents hyperinsulinemia and hyperglycemia in obese mice through the host-genetic dependent effects of resolvin E1*
159	**Andreas Patsalos**	*Dynamic lipid mediator changes support infiltrating macrophage subtype transitions during skeletal muscle injury and dystrophy*
160	**Hong Yong Peh**	*Resolvin D2 Promotes the Resolution of Allergen-Induced Lung Inflammation*
161	**Janet L. Rossi**	*Eicosanoid upregulation occurs before Docosanoid upregulation in pediatric TBI*
162	**Takao Sanaki**	*Protectin DX suppresses the inflammatory responses in human PBMCs, THP-1 cells and Jurkat cells*
163	**Carlos A. Sorgi**	*Induction of Trained-Innate Immunity in alveolar macrophage by pulmonary surfactant lipids*
164	**Haruka Takahashi**	*Endogenous high n-3 polyunsaturated fatty acids suppressed ceramide-induced neuroinflammation after TBI*
165	**Luciana Tavares**	*Maresin conjugates in tissue regeneration (MCTRs) regulate post-influenza macrophage phenotype and attenuate secondary pneumococcal pneumonia*
166	**Arzu Ulu**	*Role of IL-22 in Maresin-1-mediated resolution of lung inflammation caused by agricultural dust exposure*
167	**Anders Vik**	*Biosynthetic Studies of RvT1-4: A Novel Class of Specialized Pro-resolving and Anti-inflammatory Mediators*
168	**Ken Yasukawa**	*The effects of dietary supplementation of ω-3 fatty acid EPA on pruritus in murine atopic dermatitis and psoriasis models*

Abstract	Presenting Author	Abstract Title
169	**Shamroop Kumar Mallela**	*Role of Sphingomyelin phosphodiesterase acid-like 3B (SMPDL3b) in fatty acid uptake and in progression of Podocyte damage*
170	**Alla Mitrofanova**	*Role of SMPDL3b in Proteinuria Control in Experimental Alport Syndrome*
171	**Fumie Nakashima**	*The 5-LOX/COX-2 cross-over eicosanoid, HKE2, is a novel regulator of endothelial cell angiogenesis*
172	**Tayleur White**	*Contribution of Immune cell-iPLA2β and Soluble Epoxide Hydrolase to Type 1 Diabetes Development*
173	**Nicole Brace**	*Multi-Omic Approaches to Investigate the Dynamics of Eicosanoid Metabolism*
174	**Lucia H. Faccioli**	*Organ-wide metabolomic signatures of infection with Achromobacter xylosoxidans*

Poster Session II-B: ***Posters 175-203*** **Discussion Time: 5:00-6:00 PM**

Abstract	Presenting Author	Abstract Title
175	**Claire Huguenard**	*Plasma lipidomic analyses in mild TBI and PTSD implicates changes in lipid metabolism and bioactive lipids at a chronic timepoint.*
176	**Giorgis Isaac**	*Lipidomic Quantitation of Respiratory Disease: A Rapid and Comprehensive HILIC-Based Targeted Approach*
177	**Cristina Lopez-Vicario**	*Increased omega-3-derived SPM content leads to enhanced oxidative phosphorylation, fatty acid β-oxidation and metabolic efficiency of liver mitochondria*
178	**Daisuke Mikami**	*Long-chain base absorption and metabolite analysis using Caco-2 cells as a model of intestinal epithelium*
179	**Nhien Nguyen**	*How does food intake affect fatty acid profile in anorexia nervosa and healthy controls?*
180	**Aurore Nkiliza**	*Pharmacokinetic and pharmacodynamic study of OEA for the treatment of Gulf War Illness.*
181	**Hernando Olivos**	*Data Independent Analysis of lipidomic samples combining a scanning quadrupole with a multipurpose LC solvent system*
182	**Veronika Paluchovà**	*A novel class of bioactive lipids as possible precursors of FAHFA lipids mediators*
183	**James Turnbull**	*Targeted lipidomic profiling of plasma in a murine model of osteoarthritis pain.*
184	**Mackenzie J. Pearson**	*SWATH® Acquisition for High Resolution Analysis of Lipid Mediators*
185	**Adam Cseresznye**	*Targeted analysis of microglia eicosanoid species by LC/MS/MS using high-resolution parallel reaction monitoring*
186	**Kuniyuki Kano**	*On-Tissue Derivatization of Sphingosine-1-phosphate and Lysophosphatidic acid for MALDI- MS Imaging*
187	**Jorgelina M. Calandria**	*NPD1 regulates Wnt5a/Frizzled 5 receptor-mediated inflammatory response via cREL and clathrin-mediated endocytosis.*

Abstract	Presenting Author	Abstract Title
188	**Aruna Gorusupudi**	*Supplementation of synthetic VLC-PUFAs improve visual function and may provide plausible protection against retinal degeneration.*
189	**Marie-Audrey I. Kautzmann**	*Assessing the cell-specific conditional inactivation of Adipor1 for the synthesis of elovanoids and the sorting of DHA in the mouse eye*
190	**Alexander Ledet**	*Elovanoids reduce microtubule-associated protein tau (MAPT) missorting in a cellular model of Alzheimer's disease*
191	**Jean Aymard N. Mandouckou**	*Characterization of Get3 with Get1, Get2, and a TA protein*
192	**Maroua Mbarik**	*Phenolic acid phenethylesters and their corresponding ketones: inhibition of 5-lipoxygenase and stability in human blood and HepaRG hepatocytes*
193	**Scott B. Hansen**	*A molecular basis for membrane mediated inhaled anesthesia.*
194	**Juliana Barrios**	*Deletion of lung epithelial expressed iPLA$_2\beta$ alters cell morphology and renders epithelial barriers more sensitive to injury*
195	**Jonah E. Zarrow**	*Hexachlorophene analogs are potent NAPE-PLD inhibitors*
196	**Gulsev Ozen**	*The effects of TxA$_2$ pathway on vascular tone regulation in human coronary bypass grafts.*
197	**Yuta Murai**	*Creation of a sphingosine-1-phosphate mimic by chemical modification of a naturally occurring sphingomyelin synthase inhibitor*
198	**Muhamad Aqmal Othman**	*Natural sphingomyelin synthase inhibitor against diet-induced obesity and its lipid metabolism*
199	**Maftuna Shamshiddinova**	*Composition changes of ceramides in atopic mice skin by MC903*
200	**Yusuke Tsuchimi**	*Rational design and synthesis of selective sphingomyelin synthase 2 inhibitors based on ceramide moiety*
201	**Qian Pan**	*Post-squalene cholesterol synthesis pathway analysis in multiple sclerosis by high-performance liquid chromatography coupled with atmospheric-pressure chemical ionization-tandem mass spectrometry*
202	**S. Kiran Koya**	*Identification of Serum Biomarker Signature for Mild and Repetitive Mild Traumatic Brain Injury in Mice using Raman Spectroscopy*
203	**Iryna Khasabova**	*Resolvins inhibit sensitization of nociceptors evoked by cancer cell exosomes*

Meet the Exhibitors Reception
Grand Bay / St. Petersburg Lobby intersection
3:30 – 5:30 PM

Tuesday, October 22, 2019 program continues on next page

GALA DINNER

Venue: St. Petersburg Yacht Club

(Trollies Depart from the Hotel starting at 6:15 PM)

Cocktails:
6:30 – 7:30 PM
Dinner and Awards Ceremony:
7:30 – 10:30 PM
(*return transportation from the Yacht Club: Every 15 min starting at 10:30 PM)*

Presentation of
ERF Outstanding Achievement Awards to:

Junken Aoki, Ph.D.
Jesper Z. Haeggström, M.D., Ph.D.
Sarah Spiegel, Ph.D.
Sponsored by Avanti Polar Lipids

Presentation of
Travel Awards
Sponsored by:
BBA-Molecular and Cell Biology of Lipids
Christopher C. Harris Memorial Fund
DeSeranno Family Foundation
Eicosanoid Research Foundation
Journal of Prostaglandins and Other Lipid Mediators
ONO Pharmaceutical Company
Springer Nature

Presentation of
ERF Young Investigator Awards
Sponsored by Cayman Chemical Company

Presentation of
Santosh Nigam Memorial Outstanding Young Scientist Awards
Sponsored by Santosh Nigam Memorial Fund

Wednesday, October 23, 2019

PLENARY SESSION 3

Venue: **Grand Bay Ballroom**

Session Chairs: Edward A. Dennis & Lawrence J. Marnett

8:00 AM	*Bioactive Lipids and TRP Channels: Probing Structural and Regulatory Interactions* (Abstract 53)	**David Julius** *University of California at San Francisco* *San Francisco, CA*
8:50 AM	*Ligand directed signaling at GPCRs as a means to refine therapeutics* (Abstract 54)	**Laura M. Bohn** *The Scripps Research Institute, Jupiter, FL*

Session ends at 9:40 PM

Coffee break: 9:40 AM (20 min) (Grand Bay Lobby)

Time	**Session 9:** **Cancer Biology of Lipid Mediators** **(*sponsored by* Solutex)** **Chairs: Dipak Panigrahy & Yutaka Yatomi** *(Grand Bay Ballroom-South)*	**Session 10:** **Biology of Cannabinoids and Leukotrienes** **Chairs: Takehiko Yokomizo & Sergei Atamas** *(Grand Bay Ballroom-North)*
10:00 AM	**Dipak Panigrahy:** *Stimulation of resolution of inflammation eradicates micrometastases and inhibits primary tumor growth* (Abstract 55)	**Takehiko Yokomizo:** *The roles of leukotriene B4 receptor in macrophage and dendritic cell* (Abstract 60)
10:30 AM	**Yutaka Yatomi:** *Involvement of dysregulation of apolipoprotein M, a sphingosine 1-phosphate carrier, in human diseases* (Abstract 56)	**Sergei Atamas:** *Harnessing the Diverse Pharmacological Potential of Endocannabinoid System Modulators to Target Inflammatory, Fibrotic, and Metabolic Diseases* (Abstract 61)
11:00 AM	**Gregory W. Auner:** *Raman Spectroscopy for Delineating Brain Tumor Margins* (Abstract 57)	**Heather B. Bradshaw:** *GPR55 activity regulates CNS prostaglandins: mounting evidence for the interplay between cannabinoids and prostaglandins* (Abstract 62)
11:20 AM	**Joan Bestard-Escalas:** *Changes in lipid molecular species for aggressive astrocytoma and its evolution after temozolomide treatment revealed by MALDI-imaging* (Abstract 58)	**Sean S. Davies:** *Feeding-induced increases in intestinal N-acyl-ethanolamides critically regulate energy balance in zebrafish* (Abstract 63)
11:40 AM	**Ginger L. Milne:** *Urinary Tetranor-Prostaglandin E1 as a Biomarker of Endogenous Prostaglandin E2 Production* (Abstract 59)	**Scott B. Hansen:** *Ethanol-lipid metabolites alters threshold of anesthesia and analgesia* (Abstract 64)

Sessions end at 12 Noon

Lunch Break: 12:00 to 1:00 PM

(*complimentary boxed lunch provided by Eicosanoid Research Foundation*)

Grand Bay Lobby

Wednesday, October 23, 2019 program continues on the next page

Wednesday, October 23, 2019 *continued…*

Time	**Session 11: Lipid Mediators and Airway Inflammation** **Chairs: Patricia J. Sime & Bruce D. Levy** *(Grand Bay Ballroom-South)*	**Session 12: LPA in Cancer and LOX Enzymology** **Chairs: Mohit Jain & Gábor J. Tigyi** *(Grand Bay Ballroom-North)*
1:00 PM	***JLR Investigator Awardee Lecture*** **Patricia J. Sime:** *Specialized Pro-Resolving Lipid Mediators Have Potential as Novel Therapeutic Agents in COPD* (Abstract 65)	**Mohit Jain:** *High Resolution Mass Spectrometry and Chemical Networking for Discovery of Eicosanoids and Related Oxylipins* (Abstract 70)
1:30 PM	**Bruce D. Levy:** *Neutrophil Cytoplasts: A Surprising Mechanism for Non-T2 Inflammation in Asthma and Regulation by SPMs* (Abstract 66)	**Gábor J. Tigyi:** *The LPA-Autotaxin Axis in the Regulates of Anti-tumor Immunity in the Tumor Microenvironment* (Abstract 71)
2:00 PM	**Jun Miyata:** *Dysregulated fatty acid metabolism in eosinophils from patients with severe asthma and eosinophilic chronic rhinosinusitis* (Abstract 67)	**Alan R. Brash:** *A new enzyme in the 12R-lipoxygenase pathway, vital for the role of EFA in skin barrier function* (Abstract 72)
2:20 PM	**Md Abdul H. Khan:** *Dual Acting Farnesoid X Receptor Agonist and Soluble Epoxide Hydrolase Inhibitor Mitigates Kidney Fibrosis in a Mouse Model* (Abstract 68)	**Ernst H. Oliw:** *Lipoxygenases, fatty acid dioxygenases, and down-stream enzymes of the top twelve fungal pathogens in molecular plant pathology* (Abstract 73)
2:40 PM	**Khosrow Kashfi:** *Hydrogen sulfide potentiates the favorable metabolic profile of inorganic nitrite in type 2 diabetes* (Abstract 69)	**Andres Trostchansky:** *Kinetic and mechanistic analysis of nitroarachidonic acid (NO_2-AA) inhibition of 12/15-lipoxygenase* (Abstract 74)

Sessions end at 3:00 PM

Time	**Session 13: Cardiovascular Physiology of Lipid Mediators** **Chairs: Gabrielle Fredman & Michael Holinstat** *(Grand Bay Ballroom-South)*	**Session 14: Lipidomics** ***(sponsored by* SCIEX)** **Chairs: Makoto Arita & Mathew Spite** *(Grand Bay Ballroom-North)*
3:00 PM	**Gabrielle Fredman:** *Dysregulation of Resolution Pathways in Atherosclerosis* (Abstract 75)	**Makoto Arita:** *Biology of LipoQuality: Omega-3 fatty acid cascade that controls inflammation and tissue homeostasis* (Abstract 80)
3:30 PM	**Michael Holinstat:** *Lipid regulators of platelet function, hemostasis and thrombosis* (Abstract 76)	**Mathew Spite:** *Lipid mediators at the interface of resolution of inflammation and tissue repair* (Abstract 81)
4:00 PM	**Reheman Adili:** *ω-6 DPA and its 12-LOX derived metabolites regulate platelet function and thrombus formation through PPARα: a potential novel therapy in atherothrombosis* (Abstract 77)	**Sasanka Ramanadham:** *Lipidomics Analyses Reveal that Reduced Production of iPLA2β-Derived Lipids (iDLs) by Macrophages and Reduced Plasma Abundances of iDLs are Associated with a Lower Type I Diabetes Incidence* (Abstract 82)
4:20 PM	**Charles R. Brown:** *PGE_2 and LTB_4 are critical mediators of apoptotic cell clearance and resolution of experimental Lyme arthritis* (Abstract 78)	**Paula Luis:** *Novel pathways of prostaglandin metabolism: Testing the transformation of PGD_2 to 11dehydro-TxB_2* (Abstract 83)
4:40 PM	**Sven-Christian Pawelzik:** *Urinary prostaglandin D_2 and E_2 metabolites associate with abdominal obesity, glucose metabolism, and triglycerides in obese subjects* (Abstract 79)	**Guodong Zhang:** *Soluble epoxide hydrolase is an endogenous regulator of obesity-induced intestinal barrier dysfunction and bacterial translocation* (Abstract 84)

Sessions end at 5:00 PM

Conference Adjourns at 5:00 PM Wednesday, October 23, 2019