

# BIOACTIVE LIPIDS

From Chemistry to Biology and Medicine

March 29-31, 2018, Athens, Greece

THURSDAY 29 MARCH 2018

12.00–13.15	Registration
13.15-13.30	Welcome address
<b>Chairs:</b> Anna Nicolaou (University of Manchester, UK) Gabor J. Tigyi (University of Tennessee, USA)	
13.30-14.00	<i>Membrane allostery and unique hydrophobic sites promote phospholipase A<sub>2</sub> substrate specificity</i> <b>Edward A. Dennis</b> University of California San Diego, USA
14.00-14.30	<i>Updating the PLA<sub>2</sub> knockout studies: Immunity, metabolic disease, and beyond</i> <b>Makoto Murakami</b> The University of Tokyo, Japan
14.30-15.00	<i>From venom PLA<sub>2</sub>s to medical applications</i> <b>Gerard Lambeau</b> CNRS Sophia Antipolis, France
15.00-15.20	<i>A plasmalogen-lysophosphatidylethanolamine produced by epidermal sPLA<sub>2</sub> (PLA2G2F) is a novel regulator and drug target for epidermal-hyperplastic diseases</i> <b>Kei Yamamoto</b> Tokushima University, Japan
15.20-15.35	<i>PLA<sub>2</sub> inhibition enhances neuronal survival by promoting the proteasomal degradation of <math>\alpha</math>-synuclein</i> <b>Evangelia Emmanoulidou</b> Biomedical Research Foundation Academy of Athens, Greece
15.35-16.00	Coffee break
<b>Chairs:</b> Jesus Balsinde (University of Valladolid, Spain) Nicos A. Petasis (University of Southern California, USA)	
16.00-16.30	<i>Regulation of the cancer stem cell tumor microenvironment interaction by the autotaxin-LPA receptor axis</i> <b>Gabor J. Tigyi</b> University of Tennessee, USA
16.30-17.00	<i>Targeting the autotaxin-lysophosphatidate-inflammatory axis to improve the treatments of cancers</i> <b>David N. Brindley</b> University of Alberta, Canada
17.00-17.30	<i>Autotaxin is a novel player and a promising therapeutic target in chronic inflammatory disorders</i> <b>Vassilis Aidinis</b> Biomedical Sciences Research Center "Alexander Fleming", Greece
17.30-18.00	<i>Targeting Autotaxin: Structure, function, inhibitors, interactions</i> <b>Anastassis Perrakis</b> The Netherlands Cancer Institute, The Netherlands

18.00-18.20	<i>Emerging roles of autotaxin and other phospholipases in the tumor microenvironment</i> <b>Wouter H. Moolenaar</b> The Netherlands Cancer Institute, The Netherlands
18.20-18.40	<i>Hydroxamic acids as a novel class of autotaxin inhibitors that exhibit in vivo efficacy in a pulmonary fibrosis model</i> <b>George Kokotos</b> National and Kapodistrian University of Athens, Greece
18.40-20.30	<i>Poster Session and Cocktail</i>

### FRIDAY 30 MARCH 2018

**Chairs:** *Nicolas G. Bazan (Louisiana State University, USA)*  
*Sasanka Ramanadham (University of Alabama Birmingham, USA)*

9.00-9.30	<i>Bioactive fatty acids and phospholipids of monocytes and macrophages</i> <b>Jesus Balsinde</b> University of Valladolid, Spain
9.30-10.00	<i>Bioactive lipid mediators in wound healing and tissue regeneration</i> <b>Charles E. Chalfant</b> University of South Florida, USA
10.00-10.20	<i>Sphingolipids in diabetic cardiomyopathy: A tale of two ceramides</i> <b>Ashley Cowart</b> Virginia Commonwealth University, USA
10.20-10.40	<i>Immunomodulatory effect of novel butterfly derivatives of fingolimod in experimental autoimmune encephalomyelitis in mice</i> <b>Andrea Huwiler</b> University of Bern, Switzerland
10.40-11.00	<i><math>\omega</math>3 Fatty acid epoxides are autocrine mediators that control the magnitude of IgE-mediated mast cell activation</i> <b>Yuta Shimanaka</b> Graduate School of Pharmaceutical Sciences, Japan
11.00-11.30	Coffee break

**Chairs:** *Charles E. Chalfant (University of South Florida, USA)*  
*Edward A. Dennis (University of California San Diego, USA)*

11.30-12.00	<i>The eovanoids: Novel pro-homeostatic lipid mediators</i> <b>Nicolas G. Bazan</b> Louisiana State University, USA
12.00-12.30	<i>Omega-3 lipid mediators that promote resolution of inflammation and tissue regeneration</i> <b>Nicos A. Petasis</b> University of Southern California, USA
12.30-13.00	<i>Human macrophages differentially produce specific resolvin or leukotriene signals in response to pathogenic bacteria</i> <b>Oliver Werz</b> Friedrich-Schiller-University Jena, Germany
13.00-14.15	Lunch break

**Chairs:** *Ashley Cowart (Virginia Commonwealth University, USA)*  
*Andrea Huwiler (University of Bern, Switzerland)*

14.15-14.45	<i>Impact of (Group VIA) iPLA<sub>2</sub>β expression on T1D development</i> <b>Sasanka Ramanadham</b> University of Alabama Birmingham, USA
14.45-15.05	<i>Phenotypic properties of mice that do not express Group VIA PLA<sub>2</sub> globally or in selected tissues</i> <b>John Turk</b> Washington University, USA
15.05-15.25	<i>Role of calcium-independent phospholipase A<sub>2</sub>β in IL-1β-induced chemokine expression</i> <b>Shuntaro Hara</b> Showa University, Japan
15.25-15.45	<i>Novel function of iPLA<sub>2</sub> in the regulation of endocytic trafficking</i> <b>Chang Chung</b> Tianjin University, China
15.45-16.00	<i>Novel lactones as highly potent inhibitors of GVIA iPLA<sub>2</sub></i> <b>Victoria Magrioti</b> National and Kapodistrian University of Athens, Greece
16.00-16.30	<i>Coffee break</i>

**Chairs:** Makoto Murakami (The University of Tokyo, Japan)  
Berit Johansen (Norwegian University of Science and Technology, Norway)

16.30-16.50	<i>Lysophosphatidylacyltransferase1 (LPIAT1) deficiency causes steatosis</i> <b>Hiroyuki Arai</b> University of Tokyo, Japan
16.50-17.05	<i>sPLA<sub>2</sub>-IIA regulates osteoclast differentiation and function</i> <b>Maria Mangini</b> National Research Council, Naples, Italy
17.05-17.20	<i>Anti-Plasmodium activity of human group IIA phospholipase A<sub>2</sub> in a transgenic mouse model of malaria</i> <b>Melanie Dacheux</b> UMR7245 CNRS/MNHN, France
17.20-17.35	<i>Enalos cheminformatics tools for drug discovery: Towards the identification of selective inhibitors</i> <b>Antreas Afantitis</b> Novamechanics, Cyprus
17.35-17.40	<b>Anastassis Perrakis</b> <i>iNEXT: Access to structural biology infrastructure and expertise for everybody</i>
17.40-18.30	<i>Poster Session</i>

### SATURDAY 31 MARCH 2018

**Chairs:** Maria Balboa (University of Valladolid, Spain)  
Gerard Lambeau (CNRS Sophia Antipolis, France)

9.00-9.20	<i>Group IVA Phospholipase A<sub>2</sub>, a potent regulator of tissue fibrosis</i> <b>Berit Johansen</b> Norwegian University of Science and Technology, Norway
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9.20-9.40	<p><i>Sequestration of polyunsaturated fatty acids in lipid droplets by secreted phospholipase A<sub>2</sub> protects aggressive breast cancer cells from lipotoxicity</i></p> <p><b>Toni Petan</b> Jožef Stefan Institute, Slovenia</p>
9.40-10.00	<p><i>Effect of lipoprotein-associated apoE isoforms and carboxyl-terminal truncated forms on amyloid-beta peptide pathology and transporter-mediated cholesterol efflux in neuronal cells</i></p> <p><b>Angeliki Chroni</b> National Center for Scientific Research "Demokritos", Greece</p>
10.00-10.15	<p><i>Synthesis of deuterio-labeled phospholipids and ESI mass spectrometry: Application to tracing their chemical changes in complex biological systems</i></p> <p><b>Naomichi Baba</b> Okayama University, Japan</p>
10.15-10.30	<p><i>Biosynthetic pathways of specialized pro-resolving mediators (SPM) require vacuolar (H<sup>+</sup>)-ATPase activity in human M2 macrophages</i></p> <p><b>Zhigang Rao</b> Friedrich-Schiller-University Jena, Germany</p>
10.30-10.45	<p><i>Pathogenic bacteria and their pore-forming toxins induce 5-lipoxygenase activation via elevation of [Ca<sup>2+</sup>]<sub>i</sub> in human cells</i></p> <p><b>Erik Romp</b> Friedrich-Schiller-University Jena, Germany</p>
10.45-11.15	<i>Coffee break</i>
<p><b>Chairs:</b> <i>Victoria Magrioti (National and Kapodistrian University of Athens, Greece)</i> <i>Oliver Werz (Friedrich-Schiller-University Jena, Germany)</i></p>	
11.15-11.45	<p><i>Bioactive lipid mediators of cutaneous inflammation</i></p> <p><b>Anna Nicolaou</b> University of Manchester, UK</p>
11.45-12.05	<p><i>Inflammasome activation is controlled by the phosphatidic acid phosphatase lipin-2: Insights from a rare disease</i></p> <p><b>Maria Balboa</b> University of Valladolid, Spain</p>
12.05-12.20	<p><i>Clearing epigenetic insults, unfolded proteins and ceramides in neurological disorders with bioactive lipids</i></p> <p><b>Patricia Kane</b> NeuroLipid Research Foundation, USA</p>
12.20-12.35	<p><i>Pharmacological modulation of pro-inflammatory and pro-resolving lipid mediator pathways in human macrophage phenotypes</i></p> <p><b>Jana Gerstmeier</b> Friedrich-Schiller-University Jena, Germany</p>
12.35-12.50	<p><i>Sex differences in eicosanoid biology contribute to the sex bias in inflammation and related pharmacotherapy</i></p> <p><b>Simona Pace</b> Friedrich-Schiller-University Jena, Germany</p>
12.50-13.00	Closing Ceremony