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# Leopoldina Symposium on Lipid Signalling



**4<sup>th</sup> to 7<sup>th</sup> September, 2008**

Paul Ehrlich-Lecture Hall, Building 22  
Klinikum der Johann Wolfgang Goethe-Universität  
Frankfurt am Main  
Germany

## Accepted Poster Presentations

## Sphingolipids

**Dr. Bernd Moosmann**, Gutenberg Universität, Mainz

Sphingosylphosphorylcholine blockade of NMDA receptors inducing neurodegeneration in Niemann-Pick disease Type A

**Dr. Sven-Christian Sensken**, Medizinische Hochschule Hannover

Intracellular accumulation of FTY720 contributes to prolonged efficacy of immune modulation

**Dr. Shuyu Ren**, Universität Bern

The regulation of sphingosine kinase 1 by TGF $\beta$  and its role in the regulation of connective tissue growth factor in human podocytes

**Dr. Sangeeta Banerji**, Dalhousie University

Activation of sphingomyelin synthesis by oxysterol binding protein involves phosphatidylinositol 4-phosphate kinase activation at the Golgi

**Dr. Susanne Grether-Beck**, Heinrich-Heine Universität, Düsseldorf

Ceramide and raft signaling are linked with each other in UVA radiation-induced gene expression

**Dr. Roland Klingenberg**, Karolinska University Hospital, Stockholm, Sweden

The sphingolipid analogue FTY720 (fingolimod) interferes with cholesterol metabolism and lymphocyte homeostasis in apolipoprotein E-deficient mice

**Christoph Tabeling**, Charité, Berlin

Role of Sphingosine-Kinase 1 in Allergen-Induced Pulmonary Vascular remodelling and Hyperresponsiveness

**Ilona Chwalla**, Ludwig Maximilian-Universität, München

S1P receptor couples to Rac and Rho and is sufficient for sphingosine-1-phosphate-induced migration of endothelial cells

**Ankathrin Förster**, Klinikum der Goethe-Universität, Frankfurt, Frankfurt

Effects of glucocorticoids on the regulation of sphingolipid metabolizing enzymes in renal mesangial cells

**Prof. Dagmar Meyer-zu Heringdorf**, Klinikum der Goethe-Universität, Frankfurt, Frankfurt

Plasma membrane translocation of sphingosine kinase-1 and cross activation of S1P receptors induced by Gq-coupled receptors and G $\alpha_q$

**Dr. Ralf Claus**, Universitätsklinikum Jena

Effects of ceramide generation in septic mice

**Dr. Susanne Schiffmann**, Klinikum der Goethe-Universität, Frankfurt

The selective COX-2-inhibitor celecoxib modulates sphingolipid synthesis

**Prof. Dr. Holger Stark**, Goethe-Universität, Frankfurt

Design and Synthesis of Novel Modulators of Sphingosine Signalling

**Nicole Weis**, Goethe-Universität, Frankfurt

The induction of an alternatively activated macrophage phenotype by apoptotic cell-derived sphingosine-1-phosphate partly depends on Heme Oxygenase 1

**Constantin Bode**, Medizinische Hochschule Hannover

Requirements for sphingosine-1-phosphate (S1P) release from erythrocytes

**Dr. Andreas Weigert**, Goethe-Universität, Frankfurt

Macrophage polarization by S1P from apoptotic tumor cells

**Dr. Irfan Tamboli**, Universitätsklinikum Bonn

Accumulation of Sphingolipids increases secretion of the amyloid  $\beta$ -peptide by stabilisation of the  $\beta$ -amyloid precursor protein

**Dr. Sabrina Sonda**, Universität Zürich

Inhibition of glucosylceramide synthesis induces a cytokinesis arrest and blocks stage differentiation in *Giardia lamblia*

**Dr. Yang Zhang**, Universität Duisburg-Essen

Essential role of acid sphingomyelinase in amplifying redox signalling via lipid raft platforms during *Pseudomonas aeruginosa* induced macrophage apoptosis

**Stephanie Schwalm**, Klinikum der Goethe-Universität, Frankfurt

Sphingosine kinase-1 is a hypoxia-regulated gene that stimulates migration of human endothelial cells

**Dr. Alexander Carpinteiro**, Universität Duisburg-Essen

The role of the acid sphingomyelinase in tumor metastasis

**Dr. Klaus Scholich**, Klinikum der Goethe-Universität, Frankfurt

Sphingosine-1-phosphate modulates spinal nociceptive processing

**Dr. Vincenta Llorente Cortes**, Hospital de la Santa Creu I Sant Pau, Barcelona

Tissue factor is induced by membrane sphingomyelin enrichment derived from aggregated LDL uptake in human vascular smooth muscle cells

**Prof. Dr. Oliver Werz**, Universität Tübingen

High leukotriene biosynthesis in female blood, implications for sex differences in inflammation and asthma

**Dr. Alexander Koch**, Klinikum der Goethe-Universität, Frankfurt

Effects of thiozolidinediones on S1P receptor expression in renal mesangial cells

**Dr. Elias Scherer**, Technische Universität München

TNF $\alpha$  mediated activation of sphingosine kinase 1 in the inner ear microcirculation and its implication for the treatment of sudden hearing loss: from bench to bedside

## **Eicosanoids**

**Cosima Schmidt**, Max-Delbrück-Zentrum, Berlin

CYP-dependent generation of bioactive metabolites from omega-3 fatty acids

**Sara Chiblak**, DKFZ, Heidelberg

Role of COX-2 and Ras activation in pancreatic adenocarcinogenesis

**Michael Kacik**, Philipps-Universität, Marburg

Structural requirements for the modulation of KCa3.1 channels by arachidonic and epoxyeicosatrienoic acids

**Silvia de Juanes**, DKFZ, Heidelberg

Knockout mouse models for the exploration of the role of epidermal lipoxygenases in epidermal barrier formation and terminal differentiation in skin

**Timo Kehl**, DKFZ, Heidelberg

Growth suppressive effects of 15-Lipoxygenase Isoforms

**Dr. Anne Marowsky**, Universität Zürich

EETs act as potential neuroprotective agents in mouse hippocampus

**Dr. Annette Cronin**, Universität Zürich

Mammalian Soluble Epoxide Hydrolase Efficiently Hydrolyses Hepoxilin A3 and B3

**Timo Frömel**, Goethe-Universität, Frankfurt

Regulation of the soluble epoxide hydrolase by peroxynitrite

**Martina Decker**, Universität Zürich

Characterisation of a novel human epoxide hydrolase (EH3) capable of converting Epoxyeicosatrienoic acids (EETs)

**Dr. Eduardo Barbosa Sicard**, Goethe-Universität, Frankfurt  
Metabolism of nitrolipids by cytochrome P450 enzymes: a new class of CYP-derived cellular mediators?

**Dr. Mikhail Strokin**, Otto-von-Guericke-Universität Magdeburg  
Prostaglandin synthesis in rat brain astrocytes is under the control of the n-3 docosahexaenoic acid, released by group VIB calcium independent phospholipase A(2)

**Benjamin Keserü**, Klinikum der Goethe-Universität, Frankfurt  
Epoxyeicosatrienoic acids and the soluble epoxide hydrolase are determinants of pulmonary artery pressure and the acute hypoxic pulmonary vasoconstrictor response

**Dr. Oliver Jung**, Klinikum der Goethe-Universität, Frankfurt  
Inhibition of sEH promotes preprogressive renal insufficiency in mice

**Dr. Christian Brenneis**, Klinikum der Goethe-Universität, Frankfurt  
Consequences of mPGES-1 deletion on spinal microglia during endotoxemia

**Dr. Oliver Rau**, Goethe-Universität, Frankfurt  
Influence of the nuclear factor of activated T-cells on the regulation of 5-lipoxygenase

**Sabine Lindner**, Klinikum der Goethe-Universität, Frankfurt  
Ligands of toll-like receptor 2 enhance calcium-induced leukotriene release in mono MAC 6 cells

**Alwena Morgan**, Cardiff University, England  
Physical and biological characterization of 15-Hydroxyeicosatetraenoic acid-phosphatidylethanolamine generated by activated human monocytes

**Dr. Klaus Höcherl**, Universität Regensburg  
Activation of the PGI<sub>2</sub>- IP system contributes to the development of circulatory failure in a rat model of endotoxemia

**Dr. Christopher Thomas**, Cardiff University, England  
Thrombin stimulates formation of four hydroxy-phosphatidylethanolamines in human platelets by 12-lipoxygenase

**Linda Kortz**, Universitätsklinikum Leipzig  
Eicosanoid profiling by liquid chromatography/quadrupole linear ion trap mass spectrometry for metabolomics studies in human plasma

**Dr. Marc Revermann**, Goethe-Universität, Frankfurt  
The soluble epoxide hydrolase (sEH) influences vascular remodeling in several animal models of vascular disease

**Dr. Marc Revermann**, Goethe-Universität, Frankfurt  
Inhibition of the soluble epoxide hydrolase attenuates monocrotaline-induced pulmonary hypertension in rats

## **Cannabinoids, other lipids and lipid analysis**

**Dr. Helmut Schmidt**, Klinikum der Goethe-Universität, Frankfurt  
Determination of lipids in biological matrices using tandem mass spectrometry

**Dr. Diane Butz**, Biocrates Life Sciences, Innsbruck  
Targeted phospholipidomics: the mass spectrometric analysis of phospholipid metabolites in biological samples

**Dr. Marco Koch**, Goethe-Universität, Frankfurt  
Cannabinoids and Neuroprotection

**Dr. Marco Koch**, Goethe-Universität, Frankfurt  
An endocannabinoid system is present in the rat pineal gland

**Dr. Stephan Fichtlscherer**, Klinikum der Goethe-Universität, Frankfurt  
Elevated serum levels of platelet reactivity enhancing oxidized choline glycerophospholipids in patients with acute coronary syndromes and reduction by high dose statin therapy

**Jessica Hommes**, Universitätsklinikum Bonn  
Role of g-secretase in the cellular membrane lipid composition

**Dr. Ralf Claus**, Universitätsklinikum Jena  
Enantioselective Effects of Oxazol-Ceramide Analogues on Gene Expression

**Dr. Ralf Claus**, Universitätsklinikum Jena  
Targeted Metabolomic on Age-dependent and Stroke-induced Lipids

**Daniel Koller**, Technische Universität Graz  
Apoptotic signaling of oxidized phospholipids in vascular cells

**Dr. Robert Rahmer**, Universitätsklinikum Rostock  
Cannabinoids inhibit cancer cell invasion via tissue inhibitor of matrix metalloproteinases-1

**Dr. Robert Ringseis**, Martin-Luther-Universität Halle-Wittenberg  
Conjugated linoleic acid isomers mediate antiatherogenic actions in vascular smooth muscle cells by PPARgamma-mediated inhibition of NF-kappaB signalling

**Poornima Mahavadi**, Justus Liebig Universität, Gießen  
Extensive intracellular accumulation of surfactant phospholipids and proteins underlies development of epithelial stress, apoptosis and lung fibrosis in murine Hermansky Pudlak Syndrome 1/2

**Dr. Shinobu Yasuo**, Goethe-Universität, Frankfurt  
Expression of Faah in the ependymal cell layer of the infundibular recess is regulated by the photoperiod

**Charlotte Böttger**, Goethe-Universität, Frankfurt  
Neuroprotective effects of 2-arachidonoylglycerol on excitotoxically lesioned dentate gyrus granule cells are elicited via abnormal-cannabidiol-sensitive receptors on microglial cells

**Dr. Friedrich Dünschede**, Johannes Gutenberg-Universität, Mainz  
Lipoic acid in ischemia/reperfusion injury of the liver

**Herr Dr. Konrad Weller**, FAU Erlangen  
Methanandamide modulates TRPV1-mediated CGRP release from isolated rat and mouse vagus nerves