



11th INTERNATIONAL CERAMIDE CONFERENCE

19 - 22 April 2021

In marking the 20th anniversary since the founding of the conference, the plan for the 11th iCC was to go back to where it all started in Charleston, South Carolina. We had also wanted to use the occasion of us all being together to mark the passing of Lina Obeid - one of the giants of the sphingolipid field whom we lost in late 2019. Of course, as we are all aware, nature and the COVID pandemic had other plans. However, the iCC committee recognizes the impact that these disruptions can have on the community and on the careers of junior scientists at all stages of the career – specifically depriving students and postdocs the opportunities to present on a larger stage, to network with established investigators, and for labs to scout out collaborations. With this in mind, we chose to hold the iCC 11 in a virtual format. We've done our best to reflect a typical conference schedule of presentations while also providing 'short talk' alternatives for poster presenters and some 'Meet the Experts' networking chances for graduate students and postdocs. We hope that everyone is able to get something out of this iCC and are looking forward to hosting the an in-person iCC 12 in Charleston in 2023.

SCHEDULE OVERVIEW

US Eastern	Monday 4/19/21	Tuesday 4/20/21	Wednesday 4/21/21	Thursday 4/22/21	
9h00	Welcome	Session 2. Trafficking, & metabolism Chair: Kentaro Hanada Co-chair: Erhard Bieberich	Session 4. Cancer and Immunomodulation Chair: Sarah Spiegel Co-chairs: Xue-Zhong Yu	Session 6. Sphingolipids in Disease Chair: Ashley Cowart Co-chair: Xian C. Jiang	
9h15	Keynote 1. Tim Hla				
9h30	Keynote 2. Julie Saba	Session 3. Signaling Chair: Richard Kolesnick Co-chair: Mariana N.-Karakashian	Special Session 5. Lina Obeid tribute Chair: Myles Cabot Co-chair: Leah Siskind	Poster Session	
9h45				Break	Break
10h00	Session 1. Novel tools, Structure & Biophysics Chair: Mike Airola Co-chair: Liana Silva	Session 3. Signaling Chair: Richard Kolesnick Co-chair: Mariana N.-Karakashian		Break	Break
10h15				Break	Poster Session
10h30	Poster Session 1	Poster Session 2		Break	Awards & Lina Obeid's tribute
10h45			End of day 1	Meet the experts	Concluding remarks
11h00	End of day 1	End of day 2	End of day 3	End	
11h15				End of day 1	End of day 2
11h30	End of day 1	End of day 2	End of day 3	End of day 3	
11h45	End of day 1	End of day 2	End of day 3	End of day 3	
12h00	End of day 1	End of day 2	End of day 3	End of day 3	
12h15	End of day 1	End of day 2	End of day 3	End of day 3	
12h30	End of day 1	End of day 2	End of day 3	End of day 3	

PROGRAM

MONDAY 19th APRIL

US EST	WEST	
9:00 - 9:10 AM	14:00 - 14:10 PM	<u>Welcome by Conference Chair</u> <i>Besim Ogretmen, Medical University of South Carolina</i>
9:10 - 9:45 AM	14:10 - 14:45 PM	<u>Keynote Seminar</u> "Sphingosine 1-phosphate: The well-tempered bioactive lipid" <i>Tim Hla, Harvard Medical School</i>
9:45 - 10:20 AM	14:45 - 15:20 PM	<u>Keynote Seminar</u> "Sphingosine phosphate lyase: from gene discovery to gene therapy." <i>Julie Saba, UCSF</i>
10:20 - 10:35 AM	15:20 - 15:35 PM	Break
10:35 - 11:35 AM	15:35 - 16:35 PM	<u>Session 1: Novel tools, Structure, and Biophysics</u> <i>Chair: Mike Airola, Stony Brook University</i> <i>Co-chair: Liana Silva, Universidade de Lisboa</i>
10:35 - 10:45 AM	15:35 - 15:45 PM	Introduction by Chair
		"Discovery of small molecule ACER3 inhibitors using FRETceramides" <i>Robert Healey, IGF, University of Montpellier</i>
		"Lipid domain formation and membrane shaping by C24-ceramide" <i>Ana Ester Ventura, Universidade de Lisboa</i>
		"Traffic Jam at the lysosome: Novel organelle-targeted lipid probes reveal known cholesterol transporters as sphingosine interactors" <i>Janathan Michael Juarez Altuzar, University of Heidelberg</i>

“Interactions of ceramides of varying acyl chain length in model membrane systems.”

Emilio José Gonzalez Ramirez, *University of the Basque Country*

“Characterization of human apolipoprotein M protein variants with impaired S1P binding capacities”

Stefan Hajny, *University of Copenhagen*

“Ceramide transfer protein participates in the biogenesis and sphingolipid composition of extracellular vesicles”

Simone Crivelli, *University of Kentucky*

“Perturbation of sphingomyelin asymmetry and subcellular sterol distribution by pathogenic SMS2 variants”

Tolulope Sokoya, *University of Osnabrück*

TUESDAY 20th APRIL

US EST

WEST

Session 2: Trafficking and metabolism

9:00 - 10:00 AM

14:00 - 15:00 PM

Chair: Kentaro Hanada, National Institute of Infectious Disease, Japan
Co-chair: Erhard Bieberich, University of Kentucky

9:00 - 9:10 AM

14:00 - 14:10 PM

Introduction by Chair

“Detailed mechanism of the ORMDL function”

Usha Mahawar, Virginia Commonwealth University

“De novo mutations in ceramide transfer protein (CERT) short-circuit sphingolipid homeostasis and impair human neurodevelopment”

Charlotte Gehin, EPFL

“Regulation of ER membrane contacts with late endocytic organelles by sphingosine kinases mediates cholesterol trafficking”

Elisa Palladino, Virginia Commonwealth University

Session 3: Signaling

10:00 - 11:15 AM

15:00 - 16:15 PM

Chair: Richard Kolesnick, Memorial Sloan Kettering
Co-chair: Mariana Nikolova-Karakashian, University of Kentucky

10:00 - 10:10 AM

15:00 - 15:10 PM

Introduction by Chair

“A role for acid ceramidase in hematopoietic stem and progenitor cell mobilization”

Eyad Naser, University Hospital Essen

10:30 - 10:45 AM

15:30 - 15:45 PM

Break

10:45 - 11:00 AM

15:45 - 16:00 PM

“Role of Porphyromonas gingivalis in mediating ceramide-dependent mitophagy in oral squamous cell carcinoma”

Megan Sheridan, Medical University of South Carolina

“S1P decreases bcl2-beclin1 dimerization and promotes completion of autophagy in human lung endothelial cells”

Khushboo Goel, *University of Colorado*

11:15 - 12:15 PM 16:15 - 17:15 PM Short Talks Session 2

“Biallelic KDSR mutations mitigate the formation of novel keto-type ceramides in human stratum corneum.”

Robert Pilz, *University of Heidelberg*

“Treatment with a remyelination promoting antibody induced remodelling of sphingolipid patterns in a microglia cell line”

Chiara D’Aprile, *University of Milan*

“Role of SPTSSB-Regulated de Novo Sphingolipid Synthesis in Prostate Cancer Depends on Androgen Receptor Signaling”

Pedro Costa-Pinheiro, *University of Virginia*

“Network Medicine-Based Investigation of the Sphingolipid Metabolism Toward Biomarker Discovery for Pancreatic Cancer”

Safak Kiliç, *Bogazici University*

“Using glycolipids drugs to activate lysosomes in neurodegenerative diseases”

Meenakshi Bhardwaj, *De Monfort University*

“Identifying Gdf1 as a Tumor Suppressor and Regulator of Ceramide Metabolism Targeted by Devil's Club Extracts in Acute Myeloid Leukemia”

Vasiliki Papakotsi, *University of New Hampshire*

WEDNESDAY 21st APRIL

US EST

WEST

Session 4: Sphingolipids in Cancer, Immunity, and Infection

9:00 - 10:00 AM

14:00 - 15:00 PM

Chair: Sarah Spiegel, Virginia Commonwealth University

Co-chair: Xue-Zhong Yu, Medical University of South Carolina

9:00 - 9:10 AM

14:00 - 14:10 PM

Introduction by Chair

“CerS5 deficiency worsens DSS induced colitis and impairs T-cell function”

Khadija El-Hindi, University of Frankfurt

“Roles of Ceramide in allergic asthma exacerbation”

Briana James, Virginia Commonwealth University

“Induction of Trained Innate Immunity by Natural Compound B-Glucan to Control Cancer Metastasis in the Lungs”

Rejeena Shrestha, University of Louisville

Special Session 5: Tribute to Lina Obeid

10:00 - 11:30 AM

15:00 - 16:30 PM

Chair: Myles Cabot, East Carolina University

Co-chair: Leah Siskind, University of Louisville

10:00 - 10:10 AM

15:00 - 15:10 PM

Introduction by Chair

Cungui Mao

Leah Siskind

Ashley Snider

Can Senkal

Magali Trayssac

Fabiola Velazquez

11:30 - 11:45 AM

16:30 - 16:45 PM

Break

11:45 - 12:30 PM

16:45 - 17:30 PM

Meet the Experts

“Meet the Experts” sessions (occurring concurrently):

Imaging with MS

Rick Drake and Giovanni D’Angelo

Clinical applications of SPL research, where do we stand?

Mark Kester, Scott Summers, Shikhar Mehrotra

Approaches for the identification of direct SPLs targets

Gemma Fabrias, Christoph Arenz, Daniel Canals

Outstanding questions in the quest for SPL-mediated biology

Yusuf Hannun and Tony Futerman

Sphingolipidomics-combination with other methodologies and future perspectives

Al Merrill and Howard Riezman

THURSDAY 22nd APRIL

US EST

WEST

Session 6: Sphingolipids in Disease

9:00 - 10:00 AM

14:00 - 15:00 PM

Chair: Ashley Cowart, Virginia Commonwealth University

Co-chair: Xian C. Jiang, SUNY Downstate

9:00 - 9:10 AM

14:00 - 14:10 PM

Introduction by Chair

“Inhibition of ceramide synthesis reduces α -synuclein proteinopathy in a cellular model of Parkinson’s Disease”

Francesca Pivari, University of Milan

“Role of Neutral Sphingomyelinase 2 in Doxorubicin induced cardiotoxicity”

Samia Mohammed, Stony Brook University

“Serine restriction drives peripheral neuropathy independently of glucose intolerance”

Michal Handzlik, UC San Diego

10:00 - 11:15 AM

15:00 - 16:15 PM

Short Talks Session 3

“Possible involvement of ceramides in the activation of mixed lineage kinase domain-like (MLKL), an executioner of necroptosis.”

Masahide Hiro, Setsunan University

“Dihydroceramide desaturase regulates the compartmentalization of Rac1 for neuronal oxidative stress”

Fei-Yang Tzou, National Taiwan University

“Modulation of TRPC5 Channel Activity via a Novel Sphingolipids Related Mechanism”

Junliang Wan, Nanchang University

10:30 - 10:45 AM

15:30 - 15:45 PM

Break

“Comprehensive lipidomics analysis of the Sphingosine-1-phosphate lyase insufficiency syndrome (SPLIS)”

Adam Majcher, *University Hospital Zurich*

“Consistent alteration of chain length-specific ceramides in human and mouse fibrotic kidneys”

Timon Eckes, *University of Frankfurt*

“Targeting Acid Ceramidase and Bcl-2 Family Proteins in Acute Myeloid Leukemia”

Johnson Ung, *University of Virginia*

11:15 - 11:50 AM **16:15 - 16:50 PM** **Awards**

Concluding Remarks

11:50 - 12:00 PM **16:50 - 17:00 PM** *Besim Ogretmen, Medical University of South Carolina*
Yusuf Hannun, Stony Brook University
