Rutgers Center for Lipid Research
School of Environmental and Biological Sciences

Presents the Symposium

Lipids in Physiology: From Membranes to Metabolism

Friday, November 6, 2026
New Brunswick, NJ

Rutgers Center for Lipid Research

School of Environmental and Biological Sciences



Website: rclr.rutgers.edu

Lipids in Physiology: From Membranes to Metabolism

Rutgers Center for Lipid Research Symposium
November 6, 2026



Dear Colleagues: We are pleased to welcome you to the 11th annual symposium of the Rutgers Center for Lipid Research (RCLR) entitled *"**Lipids in Physiology: From Membranes to Metabolism**"*. We have brought together scientists outside the RCLR family who will share their knowledge, results, and insights into lipids. Additionally, a trainee flash talk and poster session will highlight the research of students and postdocs. We are certain that you will find the presentations, which are designed to facilitate your interaction with other scientists, stimulating, informative, and enjoyable.

The RCLR promotes multidisciplinary research on the biochemical, biophysical, cellular, and molecular mechanisms involved in lipid metabolism, and extension of these endeavors to elucidate the underpinnings of lipid-based diseases such as obesity, lipodystrophy, diabetes, and heart disease. Our research utilizes model organisms, cells, tissues, and state-of-the-art instrumentation.

The center fosters interaction among faculty, postdoctoral associates, and students by holding monthly research meetings where postdoctoral associates and students have the opportunity to present their research and receive constructive feedback in a warm and friendly atmosphere. We hold an annual symposium and a monthly seminar series that brings renowned scientists to Rutgers. The RCLR founded the Big Ten Academic Alliance Lipid Symposium; this meeting brings lipid researchers at Big Ten schools to interact on a regular basis. In the end, we extend our research findings to address lipid-based diseases, thereby promoting optimum health.

In closing, we convey our appreciation to the Cellular Health Foundation, Journal of Cell Biology, Research Diets, and the School of Environmental and Biological Sciences (SEBS) for their support in bringing this symposium to fruition.

Sincerely,

George M. Carman

George M. Carman

Organizing Committee



Enver Cagri Izgu

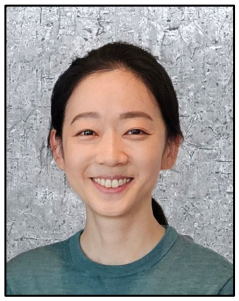


George Carman



Laura Amador (Administrative Assistant)

Session Chairs



Youn-kyung Kim



Natalie Burchat

Poster Judges



Igor Shmarakov



Christy Gliniak



Alvaro Toledo



Loredana Quadro



Gil-Soo Han

Supporters









School of Environmental and Biological Sciences

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Program

9:30 a.m.	Registration and poster set up
9:50 a.m.	George M. Carman (Director, RCLR) *Welcome and introductions*
Session I Chair:	Youn-kyung Kim (Department of Food Science, SEBS)
10:00 a.m.	G. Ekin Atilla-Gokcumen (University at Buffalo-SUNY) *Real estate of lipids: location, location, location!*
10:40 a.m.	Christopher Burd (Yale University) *Lipid metabolism and trafficking in cells*
11:20 a.m.	Trainee Flash talks – 3 minutes each Moderator: Enver Cagri Izgu (Department of Chemistry and Chemical Biology, SAS)
11:50 a.m.	RCLR Annual Picture – IFNH Lobby
12 noon	Lunch and posters
Session II Chair:	Natalie Burchat (Department of Nutritional Sciences, SEBS)
2:00 p.m.	Nada Abumrad (Washington University Saint Louis) *The Nutrient Transceptor Paradigm: Rethinking Cellular Perception*
2:40 p.m.	Robert V. Stahelin (Purdue University) *Lipid-dependent assembly and budding of SARS-CoV-2*
3:20 p.m.	Enver C. Izgu and George M. Carman *Awards and conclusion*

Speaker Biographies



G. Ekin Atilla-Gokcumen, PhD, is the Dr. Marjorie E. Winkler Distinguished Professor of Chemistry at the University at Buffalo. Dr. Atilla-Gokcumen earned her B.S. in Chemistry from Koç University in Istanbul, Turkiye, in 2003, followed by a Ph.D. in Biological Chemistry from the University of Pennsylvania in 2008. She subsequently conducted postdoctoral research at Dana-Farber Cancer Institute and Harvard Medical School from 2009 to 2013, specializing in cancer biology and biological chemistry.

Dr. Atilla-Gokcumen is a chemical biologist whose research focuses on understanding how lipids regulate cellular function and how alterations in lipid metabolism contribute to cellular stress and disease. Her laboratory integrates chemical biology, lipidomics, molecular and cell biology, and systems-level approaches to investigate the roles of lipids in processes including cell death, cellular senescence, and membrane-associated signaling.

A major focus of her research is understanding how the abundance, localization, and metabolism of specific lipid species influence cellular fate. Her group also extends these approaches to lipid-like environmental contaminants, investigating how their cellular uptake and accumulation perturb lipid homeostasis and cellular function. Through this work, the Atilla laboratory seeks to uncover fundamental connections between lipid metabolism, membrane biology, and cellular physiology.



Christopher Burd, MS, PhD, received a PhD from Northwestern University for research with Professor Gideon Dreyfuss investigating pre-mRNA processing. In 1998, after postdoctoral studies with Professor Scott Emr of the Howard Hughes Medical Institute at the University of California, San Diego, he started his independent research program at the University of Pennsylvania School of Medicine, investigating inter-organelle trafficking. In 2011 be moved to the Department of Cell Biology at Yale School of Medicine. Dr. Burd received a MERIT award from the US National Institutes of Health in 2017, and he was elected Fellow of the American Association for the Advancement of Science (AAAS) in 2018 for his contributions toward understanding organelle biogenesis pathways.



Nada A. Abumrad, PhD, completed her undergraduate studies at the Faculté des Sciences and the American University of Beirut in Lebanon, and earned her Ph.D. in Pharmacology from the State University of New York (SUNY) Medical Center. Following research experience at Syracuse University, she joined Vanderbilt University as an associate professor of molecular physiology and biophysics. In 1992, she moved to SUNY Stony Brook before joining Washington University in St. Louis in 2005.

Dr. Abumrad's work focuses on fatty acid transport and its role in obesity, diabetes, and atherosclerosis. Her research investigates the cellular mechanisms underlying fatty acid uptake and utilization, energy balance, and susceptibility to metabolic diseases. Her work has contributed to understanding the fundamental cellular processes linking obesity with metabolic disorders, supporting research into improved approaches to obesity and its associated diseases.

At Washington University, Dr. Abumrad was appointed the inaugural Dr. Robert C. Atkins Professor of Medicine and Obesity Research, a professorship established to advance scientific investigation into obesity.



Robert Stahelin, PhD, is the Retter Professor of Pharmacy and Professor of Medicinal Chemistry and Molecular Pharmacology at Purdue University, where he also serves as Head of the Purdue University Life Science (PULSe) Ph.D. Program. He is a recognized leader in membrane biology and viral assembly, with research focused on understanding how lipid–protein interactions regulate the replication and spread of medically important viruses, including Ebola virus, Marburg virus, SARS-CoV-2, and emerging bunyaviruses. His laboratory integrates biochemistry, structural biology, biophysics, lipidomics, and computational modeling to define fundamental mechanisms of viral assembly and identify new therapeutic targets.

Dr. Stahelin received his B.S. in Biochemistry and Ph.D. in Chemistry from the University of Illinois Chicago before completing postdoctoral training there. He joined Indiana University School of Medicine and the University of Notre Dame in 2006 and moved to Purdue University in 2017.

He currently directs multiple NIH-funded research programs and has served as Principal Investigator of Purdue's NIAID-funded T32 Drug Discovery in Infectious Disease Training Program. He is an Associate Editor for the *Journal of Lipid Research* and on the Board of Editors of *Microbiology Spectrum*.

His contributions to the field have been recognized through election as a Fellow of the American Society for Biochemistry and Molecular Biology (ASBMB) and several foundation research awards. Rob has authored more than 170 peer-reviewed publications and book chapters and has mentored dozens of graduate students, postdoctoral fellows, and early-career scientists.

Carman Prize in Lipids

The George M. and Maureen D. Carman Prize in Lipids is an endowed prize established to encourage research and to provide financial assistance to graduate students and postdoctoral fellows/associates at Rutgers University. The prize is awarded for outstanding research achievement in the area of lipid metabolism. You can contribute to the endowment via the Rutgers Foundation web site and earmark the funds for the Carman Prize in Lipids.

Recipients

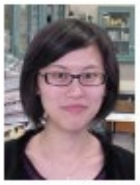

Hyeon-Son Choi (2007)


Anibal Soto-Cardalda (2008)


Younkyung Kim (2009)


Lesley Wassef (2011)


Stylianos Fakas (2011)


Wen-Min Su (2012)


John D. Douglass (2013)


Yixuan Qiu (2014)


Marc Tuazon (2014)


Lu-Sheng Hsieh (2015)


Yeonhee Park (2016)


Inna Nikonorova (2017)


Prabuddha Dey (2018)


Joanna Kwiatek (2019)


Kevin M. Tveter (2020)


William Jonsson (2021)


Natalie Burchat (2021)


Priyanka Sharma (2022)


Shoily Khondker (2022)


Ruta Jog (2023)


Geordan J. Stukey (2023)


Huyen Le (2024)


Matthew L. Selby (2025)


Tanisha Dhakephalk (2026)

Flash Talk List

1. **Matthew Selby;** *Role of Intestinal Stearoyl-CoA Desaturase in Mediating Dietary Fat Assimilation and Secretion*

2. **Dativo Sanchez-Gonzalez;** *Disruptions in lipid metabolism in alveolar type 2 cells and pulmonary surfactant during pulmonary fibrosis in mice*

3. **Elisabetta Madonna;** *β-carotene oxygenase 2 deficiency impairs early postnatal cardiac growth through altered retinoic acid signaling and cardiomyocyte cell cycle regulation*

4. **Tanisha Dhakephalkar;** *Synthesis of a Novel Anionic Bacterial Sphingolipid*

5. **Elvin Seethakunnan;** *Expression of Lipid Regulators Nem1, Spo7 and Ice2 in Saccharomyces cerevisiae*

6. **Dalmia Anupam;** *Regulation of Sphingolipid Synthesis in UPEC CFT073*

7. **Han Zhang;** *Live-cell Imaging of Endogenous STING with Small-Molecule Probes*

8. **Rebecca Androwski;** *Neuronal extrusion of enlarged Lysosomes*

9. **Jacques Roberge;** *Comprehensive Medicinal Chemistry and Synthetic Support: Bridging Academic Research and Drug Discovery*

10. **Florence Sipitca;** *Biofilm Formation in Yeast Saccharomyces cerevisiae is mediated by the Nem1-Spo7/Pah1 Phosphatase Cascade*

11. **Souhail Hajjam;** *Retinol Binding Protein 4: A Macrophage Story*

12. **David Lobiondo;** *All-trans-retinoic acid signaling in lung macrophage differentiation and polarization*

Poster List

Entry	Last name	First name	Poster title
1	Adeboye	Oluwamayomikun	Characterization of Drosophila gut commensal Acetobacter
2	Amos	Ayomide	Aquaporins in Mouse intestine
3	Androwski	Rebecca	Lysosomal stress promotes selective endolysosomal cargo loading into neuronal exophers
4	Anupam	Dalmia	Regulation of Sphingolipid Synthesis in UPEC CFT073
5	Asante Ampadu	Gertrude	Cholesterol and PE influence PIP Dynamics in Model Membranes containing PC and PS
6	Seethakunnan	Elvin	Expression of Lipid Regulators Nem1, Spo7 and Ice2 in Saccharomyces cerevisiae
7	Burchat	Natalie	The impact of colonic lipid metabolism on colitis-associated colorectal cancer
8	Caviglia	Jorge	ABHD5-deficient cells accumulate multiple neutral lipids
9	Cho	Sarah	A Versatile Benzylic Caging Platform for Activity-Based Sensing and Fluorogenic Aptamer Applications
10	Dalmia	Anupam	Regulation of Sphingolipid synthesis in UPEC CFT073
11	Dhakephalkar	Tanisha	Synthesis of a Novel Anionic Bacterial Sphingolipid
12	Ebrahimi	Dorsa	Spatiotemporal Imaging of Endogenous Proteins in Live Cells
13	Giordano	Gabriela	Uncovering the role of retinoids in alveolar type 2 cells
14	Glazer	Alexandros	Establishing an in vitro human cardiomyocyte model to investigate retinoic acid signaling in maternal cardiac remodeling
15	Goodwin	Molly	Cardiomyocyte Specific Inhibition of Retinoic Acid Signaling Disrupts Cardiac Fuel Flexibility
16	Govindaraju	Gayathri	TBD
17	Hajjam	Souhail	Retinol Binding Protein 4: A Macrophage Story

Entry	Last name	First name	Poster title
18	Kim	Youn-Kyung	Vitamin A controls maternal cardiac remodeling via cell-specific retinoic acid metabolism and signaling
19	Lenis	Margie	FABP1 Function in Enteroendocrine Cells
20	Li	Boxuan	Interplay Between Membrane-Proximal F-Actin and Ca2+ Regulates the Lateral Mobility of Membrane Proteins
21	Lin	Nancy	Genetic screen to identify inverse regulators of LBPA/BMP and cholesterol as potential NPC therapeutics
22	LoBiondo	David	All-trans-retinoic acid signaling in lung macrophage differentiation and polarization
23	Madonna	Elisabetta	β-carotene oxygenase 2 deficiency impairs early postnatal cardiac growth through altered retinoic acid signaling and cardiomyocyte cell cycle regulation
24	McLaughlin	John	Chemical genetics expands the signaling network of the chloroplast unfolded protein response
25	Miao	Xinyi	Programmable Ribozyme Systems for FTO Sensing and Selective Gene Regulation
26	Oyedokun	Tomiwa	Cannabidiol may reduce intestinal inflammation in ovariectomized mice by lowering triglycerides: an integrated -omics approach
27	Pantula	Lakshmi Gayathri	Studying the Impact of Intestinal Desaturase Activity on Colonic Lipids
28	Roberge	Jacques	Comprehensive Medicinal Chemistry and Synthetic Support: Bridging Academic Research and Drug Discovery
29	Rodriguez-Polanco	Flavio	Hepatic Activating Transcription Factor 5 and the Metabolic Response to Dietary Protein Restriction
30	Sanchez-Gonzalez	Dativo	Disruptions in lipid metabolism in alveolar type 2 cells and pulmonary surfactant during pulmonary fibrosis in mice
31	Selby	Matthew	Role of Intestinal Stearoyl-CoA Desaturase in Mediating Dietary Fat Assimilation and Secretion
32	Sipitca	Florence	Biofilm Formation in Yeast *Saccharomyces cerevisiae* is mediated by the Nem1-Spo7/Pah1 Phosphatase Cascade

Entry	Last name	First name	Poster title
33	Siram	Neev	Lung Retinoid Metabolism in Sexually Dimorphic Lung Responses
34	Vu	Linh	Investigating Hepatic Responses to Sucrose Feeding in Mice with Deletion of Intestinal Delta-9 Desaturases
35	Zhang	Xuesong	Gut microbiota phospholipids regulate intestinal gene expression and can counteract the effects of antibiotics

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