

Frontiers in Metabolism

Mechanisms of Metabolic Disease

September 17-19, 2018

Welcome

to the 2018 Frontiers in Metabolism meeting at the Morgridge Institute
for Research in Madison, Wisconsin.

In recent years, science has experienced a resurgence of interest in basic metabolism and its central role in diverse cellular processes and human diseases. As with any burgeoning field, this renaissance has led to the formation of various subfields (e.g., cancer metabolism, metabolic syndrome and obesity, mitochondrial function, etc.) whose participants might rarely interact. This meeting was founded with the intent to assemble a group of leading scientists from across the metabolism space to discuss topics of broad interest. These include advances in our understanding of the basic mechanistic underpinnings of diverse metabolic disorders and the development of new approaches for probing and quantifying metabolic processes.

The Frontiers meeting is part of a larger Metabolism Initiative within the Morgridge Institute and the University of Wisconsin–Madison that aims to build upon our campus's rich history in this field, and is conducted in partnership with the Lausanne Integrative Metabolism and Nutrition Alliance (LIMNA). We intend for the Frontiers meetings to be a frequent forum for the open exchange of ideas and a platform for launching the independent careers of younger scientists.

We look forward to your participation!

Dave Pagliarini

Jenelle Gierhart-Sutter

Traveling to Meeting Venue

TAXI SERVICE

The city of Madison has taxi services.

Green Cab: 608-255-1234

Union Cab: 608-242-2000

RIDESHARE SERVICES

Lyft and Uber operate in Madison.

Download the respective apps in your mobile app store for pricing and availability.

Map

See page 4

Registration

Registration will start at 1:30 pm on Monday, September 17th. The registration table will be located outside of the H.F. DeLuca Forum on the 1st floor of the Discovery Building (330 N. Orchard Street, Madison, WI).

Your meeting registration gives you entry to a range of programming activities, including:

- Talks and Poster Sessions
- Program Book
- Welcome Reception
- Lunches
- Breaks
- Banquet

Meeting Sessions and Location

All meeting sessions will take place in the H.F. DeLuca Forum located on the 1st floor of the Discovery Building (330 N. Orchard Street, Madison, WI).

SPECIAL NOTE: On Tuesday, September 18th following the poster session, there will be an informal gathering at the Memorial Union Terrace located at 800 Langdon Street, Madison, WI 53706. Come, grab a chair and enjoy the atmosphere at the historic Memorial Union Terrace with fellow meeting attendees. The Terrace is among the most iconic locations on the UW-Madison campus for relaxing and taking in a fall evening. Please join us!

Badges

For catering purposes, please ensure that you wear your conference badge throughout the conference. Replacement badges are available at the registration desk.

Speakers

Oral presenters are reminded to be in the H.F. DeLuca Forum no later than 5 minutes before the start of the session in order to preload presentation. An A/V specialist will be available to assist with the transition.

Poster Sessions

Poster sessions will take place in the Main Court. Poster presenters should bring their poster with them to registration to be hung. Poster should remain hung for the duration of the meeting.

Poster Session 1

Odd Numbered Posters

Tuesday, September 18

11:45 am – 2:00 pm

Poster Session 2

All Poster Presenters

Tuesday, September 18

5:05 pm – 7:00 pm

Poster Session 3

Even Numbered Posters

Wednesday, September 19

11:45 am – 1:30 pm

Twitter

The official meeting #Hashtag is:

#FrontiersinMetabolism

Please use this #Hashtag when tweeting about the conference.

Wi-fi

Wi-Fi is available free of charge through the conference venue during the conference.

Go to **Settings** and select:

Discovery-Guest or **Towncenter**

Open a browser - Enter the following address in the search bar:

<http://discovery.wisc.edu>

You will be redirected to a wireless authentication page – Scroll to the bottom of the page and click **Accept**.

Map

 **Discovery Building**

330 N. Orchard Street
Madison, WI 53715

 **Camp Randall Stadium**

1440 Monroe Street
Madison, WI 53711

 **State Street**

 **Memorial Union Terrace**

800 Langdon Street
Madison, WI 53706

 **Hampton Inn & Suites Madison/Downtown**

440 W. Johnson Street
Madison, WI 53703

 **HotelRed**

1501 Monroe Street
Madison, WI 53711

 **Wisconsin Union Hotel**

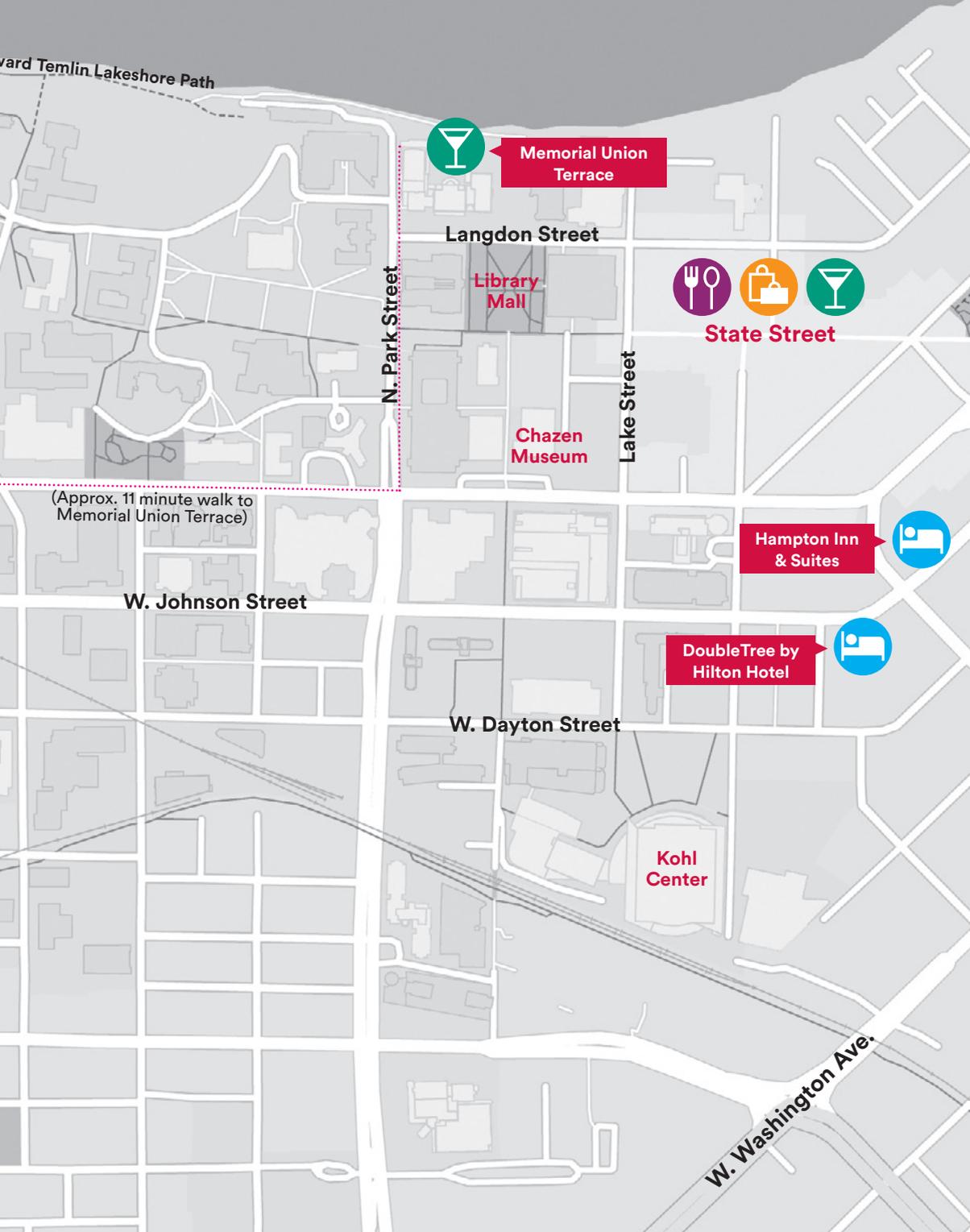
1308 W. Dayton Street
Madison, WI 53715

 **Doubletree by Hilton Hotel Madison**

525 W. Johnson Street
Madison, WI 53703



Lake Mendota





Exhibition

Agilent

Agilent is a leader in life sciences, diagnostics, and applied chemical markets. Agilent's innovative instruments and solutions provide trusted answers to customers' most challenging questions.

<https://www.agilent.com/>

Refreshment Sponsor

Nature Metabolism

Nature Metabolism will publish work from across all fields of metabolism research that significantly advances our understanding of metabolic and homeostatic processes in a cellular or broader physiological context, from fundamental cell biology to basic biomedical and translational research. At its core, the research published in Nature Metabolism will shed light on how cellular metabolism informs cellular function, on the physiology and homeostasis of organs and tissues, on the regulation of organismal energy homeostasis, and on the molecular pathophysiology of metabolic diseases, such as diabetes and obesity, or their treatment. For more information, including a detailed description of the aims and scope of the journal, visit:

[nature.com/natmetab](https://www.nature.com/natmetab)

Twitter: @NatMetabolism

<https://go.nature.com/2Lydn68>

2018 Conference Agenda

Sessions are held in the DeLuca Forum

■ = Event located in Main Court

Monday, September 17th

TIME	ACTIVITY	WHO
1:30 – 3:45 pm	Registration and Welcome	
3:45 – 4:00 pm	Welcome and official opening	Dave Pagliarini
4:00 – 5:15 pm	Session 1: Genetics and Metabolism	Chair: Dave Pagliarini
4:00 – 4:25 pm	Genetics and genomics of Type 2 Diabetes	Alan Attie
4:25 – 4:40 pm	Mapping molecules: Multi-omic mass spectrometry for diversity outbred mice	Vanessa Linke
4:40 – 4:55 pm	Genetics of severe childhood cardiomyopathies	Catalina Vasilescu
4:55 – 5:20 pm	Mitochondrial behavior	Jodi Nunnari
5:20 – 5:45 pm	Refreshment Break	Everyone
5:45 – 6:15 pm	Special Session: Mitochondria and Madison	Dave Nelson
6:15 – 6:30 pm	Closing Remarks	Morgridge Institute CEO – Brad Schwartz
6:30 – 8:30 pm	Welcome Reception (Heavy Hors d'oeuvres)	Everyone

Tuesday, September 18th

TIME	ACTIVITY	WHO
7:30 – 8:30 am	Breakfast	Everyone
8:30 – 10:00 am	Session 2: Signaling and Regulation in Metabolism 1	Chair: Luigi Puglielli
8:30 – 8:55 am	Metabolic control by protein modifications	Matthew Hirschey
8:55 – 9:20 am	A metabolic enzyme that acts like a transcription factor	Benjamin Tu
9:20 – 9:45 am	Mechanisms that link metabolism and chromatin dynamics	John Denu
9:45 – 10:00 am	Skeletal muscle AMPK activation as a therapeutic treatment for diabetes and the cardiometabolic syndrome	Russell Miller
10:00 – 10:30 am	Coffee Break	Everyone
10:30 – 11:45 am	Session 3 - Lipids in Metabolism 1	Chair: Rozalyn Anderson
10:30 – 10:55 am	Adipose precursor cell fate and function	Patrick Seale
10:55 – 11:20 am	Energy expenditure and thermogenic fat	Bruce Spiegelman
11:20 – 11:45 am	Beneficial effects of de novo lipogenesis in adipocytes on systemic insulin sensitivity	Barbara Kahn
11:45 – 2:00 pm	Lunch & Poster Session	Everyone
2:00 – 3:20 pm	Session 4 - Lipids in Metabolism 2	Chair: Caroline Alexander
2:00 – 2:25 pm	Adipose-liver crosstalk in adaptive thermogenesis	Claudio Villanueva
2:25 – 2:50 pm	Mechanisms and physiology of lipid storage in lipid droplets	Robert Farese
2:50 – 3:05 pm	Enzyme promiscuity drives monomethyl branched-chain fatty acid synthesis in adipose tissues	Martina Wallace
3:05 – 3:20 pm	Bhlhb9, a novel regulator of preadipocyte commitment	Judith Simcox
3:20 – 3:50 pm	Coffee Break	Everyone
3:50 – 5:05 pm	Session 5 - Chemical, Computational, and Analytical Approaches to Metabolism	Chair: Jing Fan
3:50 – 4:15 pm	Mass spectrometry for metabolism research	Joshua Coon
4:15 – 4:40 pm	Deciphering the human microbiota using chemistry	Emily Balskus
4:40 – 5:05 pm	Metabolomics of microbial biofuel production	Daniel Amador-Noguez
5:05 – 7:00 pm	Cocktails and Hors d'oeuvres, & Poster Session	Everyone
<i>Following the Poster Session</i>	<i>Optional: Informal Gathering - Memorial Union Terrace located at 800 Langdon Street, Madison, WI 53706. Come, grab a chair and enjoy the atmosphere at the historic Memorial Union Terrace with fellow meeting attendees. The Terrace is among the most iconic locations on the UW-Madison campus for relaxing and taking in a fall evening. Please join us!</i>	

Wednesday, September 19th

TIME	ACTIVITY	WHO
7:30 – 8:30 am	Breakfast	Everyone
8:30 – 10:00 am	Session 6 - Dysregulated Metabolism in Cancer	Chair: Jason Cantor
8:30 – 8:55 am	New roles for metabolic waste in cancer	Marcia Haigis
8:55 – 9:20 am	Relationship between metabolism and cancer	Matt Vander Heiden
9:20 – 9:45 am	Tracing the interplay between amino acid metabolism and lipid diversity in cancer	Christian Metallo
9:45 - 10:00 am	Use of physiologic media to explore genetic dependencies in cancer	Jason Cantor
10:00 – 10:30 am	Coffee Break	Everyone
10:30 – 11:45 am	Session 7 - Signaling and Regulation in Metabolism 2	Chair: Natalie Niemi
10:30 – 10:55 am	Mitochondria as signaling organelles	Navdeep Chandel
10:55 – 11:20 am	AMPK: guardian of metabolism and mitochondrial homeostasis	Reuben Shaw
11:20 – 11:45 am	Mitochondria, metabolism and cellular decisions: entwined in health and disease	Jared Rutter
11:45 – 1:30 pm	Lunch & Poster Session	Everyone
1:30 – 2:45 pm	Session 8 - Mitochondria in Metabolism 1	Chair: Dudley Lamming
1:30 – 1:55 pm	The UPR ^{mt} and the propagation of deleterious genomes	Cole Haynes
1:55 - 2:20 pm	A novel approach for NAD boosting	Johan Auwerx
2:20 - 2:35 pm	Disruption of the mitochondrial matrix phosphatase Pptc7 causes severe metabolic dysfunction and perinatal lethality	Natalie Niemi
2:35 - 2:50 pm	Mitochondrial fatty acid synthesis is a master regulator of oxidative phosphorylation	Sara Nowinski
2:50 – 3:20 pm	Refreshment Break	Everyone
3:20 - 4:35 pm	Session 9 - Mitochondria in Metabolism 2	Chair: Matt Merrins
3:20 – 3:45 pm	Mitochondrial disease and the problem with oxygen	Vamsi Mootha
3:45 – 4:10 pm	Control of peripheral mitochondrial function and metabolism by mitokine signaling	Andy Dillin
4:10 – 4:35 pm	The role of impaired mitochondrial gene expression in metabolic and cardiovascular disease	Aleksandra Filipovska
4:35 – 5:00 pm	Award Presentations and Closing Remarks	
4:35 – 4:50 pm	Awards Ceremony	Dave Pagliarini
4:50 – 5:00 pm	Closing remarks	Dave Pagliarini

Invited Speakers



Daniel Amador – Noguez, PhD

Assistant Professor of Bacteriology
University of Wisconsin – Madison

Metabolomics of microbial biofuel production

Tuesday, September 18th – 4:40 pm



Alan D. Attie, PhD

Jack Gorski Professor of Biochemistry
University of Wisconsin-Madison

Genetics and genomics of Type 2 Diabetes

Monday, September 17th - 4:00 pm



Johan Auwerx, MD, PhD

Professor
Ecole Polytechnique Federale de Lausanne, Switzerland

A novel approach for NAD boosting

Wednesday, September 19th – 1:55 pm



Emily P. Balskus, PhD

Morris Kahn Associate Professor
of Chemistry and Chemical Biology
Harvard University

Deciphering the human microbiota using chemistry

Tuesday, September 18th - 4:15 pm



Navdeep S. Chandel, PhD

David W. Cugell Professor of Medicine & Cell Biology
Feinberg School of Medicine,
Northwestern University

Mitochondria as signaling organelles

Wednesday, September 19th - 10:30 am



Joshua J. Coon

Thomas and Margaret Pyle Chair
at the Morgridge Institute for Research
Professor, Biomolecular Chemistry and Chemistry
University of Wisconsin, Madison

Mass spectrometry for metabolism research

Tuesday, September 18th - 3:50 pm



John M. Denu, PhD

Professor of Biomolecular Chemistry
School of Medicine and Public Health
Wisconsin Institute for Discovery
Morgridge Institute for Research
University of Wisconsin – Madison

Mechanisms that link metabolism and chromatin dynamics

Tuesday, September 18th - 9:20 am



Andy Dillin

UC Berkeley - MCB

Control of peripheral mitochondrial function and metabolism by mitokine signaling

Wednesday, September 19th - 3:45 pm



Robert V. Farese, Jr.

Professor of Genetics and Complex Diseases,
Harvard Chan School
Professor of Cell Biology, Harvard Medical School
Associate Member, Broad Institute

Mechanisms and physiology of lipid storage in lipid droplets

Tuesday, September 18th - 2:25 pm



Aleksandra Filipovska, PhD

Professor
University of Western Australia, Australia

The role of impaired mitochondrial gene expression in metabolic and cardiovascular disease

Wednesday, September 19th - 4:10 pm



Marcia Haigis

Associate Professor
Department of Cell Biology
Harvard Medical School

New roles for metabolic waste in cancer

Wednesday, September 19th - 8:30 am



Cole Haynes, PhD

Associate Professor Molecular, Cell and Cancer Biology
University of Massachusetts Medical School

The UPRmt and the propagation of deleterious genomes

Wednesday, September 19th - 1:30 pm



Matthew Hirsche, PhD

Associate Professor
Duke University

Metabolic control by protein modifications

Tuesday, September 18th - 8:30 am



Barbara B. Kahn, MD

George R. Minot Professor of Medicine
Harvard Medical School
Vice-Chair for Research Strategy
Department of Medicine
Beth Israel Deaconess Medical Center

Beneficial effects of de novo lipogenesis in adipocytes on systemic insulin sensitivity

Tuesday, September 18th - 11:20 am



Christian M. Metallo, PhD

Associate Professor of Bioengineering
University of California, San Diego

Tracing the interplay between amino acid metabolism and lipid diversity in cancer

Wednesday, September 19th - 9:20 am



Vamsi K. Mootha, MD

Investigator, HHMI
Massachusetts General Hospital

Mitochondrial disease and the problem with oxygen

Wednesday, September 19th - 3:20 pm



Jodi Nunnari, PhD

Distinguished Professor & Chair,
Molecular and Cellular Biology
University of California- Davis

Mitochondrial behavior

Monday, September 17th - 4:55 pm



Jared Rutter, PhD

Department of Biochemistry/HHMI
University of Utah

Mitochondria, metabolism and cellular decisions: entwined in health and disease

Wednesday, September 19th - 11:20 am



Patrick Seale, PhD

Associate Professor of Cell and Developmental Biology
Institute for Diabetes, Obesity and Metabolism,
University of Pennsylvania, Philadelphia

Adipose precursor cell fate and function

Tuesday, September 18th - 10:30 am



Reuben J. Shaw, PhD

Professor, Molecular and Cell Biology Laboratory
Salk Institute for Biological Studies

**AMPK: guardian of metabolism
and mitochondrial homeostasis**

Wednesday, September 19th - 10:55 am



Bruce M. Spiegelman, PhD

Stanley J. Korsmeyer Professor
of Cell Biology and Medicine
Dana-Farber Cancer Institute, Harvard Medical School

Energy expenditure and thermogenic fat

Tuesday, September 18th - 10:55 am



Benjamin P. Tu, PhD

Professor of Biochemistry
University of Texas Southwestern Medical Center

**A metabolic enzyme that acts like
a transcription factor**

Tuesday, September 18th - 8:55 am



Matthew G. Vander Heiden, MD/PhD

Associate Professor of Biology
Massachusetts Institute of Technology

**Relationship between metabolism
and cancer**

Wednesday, September 19th - 8:55 am



Claudio J Villanueva, PhD

Assistant Professor of Biochemistry
University of Utah

**Adipose-liver crosstalk in adaptive
thermogenesis**

Tuesday, September 18th - 2:00 pm

2018 Poster Guide

Odd Numbered Posters

Poster Session 1

Tuesday, September 18

11:45 am – 2:00 pm

All Poster Presenters

Poster Session 2

Tuesday, September 18

5:05 pm – 7:00 pm

Even Numbered Posters

Poster Session 3

Wednesday, September 19

11:45 am – 1:30 pm

POSTER # POSTER PRESENTATION

1 Multi-omic analysis of the human oral microbiome in health and disease

Katherine A. Overmyer, Timothy W. Rhoads, Michael S. Westphall, Amit Acharya, Sanjay K. Shukla, and Joshua J. Coon
Morgridge Institute for Research

2 Enhancing mitochondrial proteostasis reduces amyloid- β proteotoxicity

M. Romani, V. Sorrentino, L. Mouchiroud, J. S. Beck, H. Zhang, D. D'Amico, N. Moullan, F. Potenza, A. W. Schmid, S. Rietsch, S. E. Counts, J. Auwerx
Ecole Polytechnique Fédérale de Lausanne

3 Identification of Sestrin1 as a cholesterol sensing and regulating gene

Zhonggang Li, Sophia M. Ly, Sabrina L. Belisle, Fernanda B. Leyva Jaimes, Brian W. Parks
University of Wisconsin - Madison

4 You are what (your bacteria) eat: how bacteria affect host epigenetic states

Sydney P. Thomas, Kimberly A. Krautkramer, Kymberleigh A. Romano, Federico E. Rey, John M. Denu
University of Wisconsin - Madison

5 Mitochondrial biogenesis and mitophagy are coordinated by TORC1-mediated regulation of ATFS-1

Tomer Shpilka, Yunguang Du, Joshua Lavelle, Andrew Melber, Cole Haynes
University of Massachusetts Medical School

POSTER # POSTER PRESENTATION

6 Hypothalamic ER α gene silencing induces obesity in female rhesus monkeys

Levine, JE, Kraynak M, Willging MM, Flowers, MT, Colman RJ, and Abbott, DH
University of Wisconsin - Madison

7 ACMSD inhibition as a novel approach for NAD⁺ boosting via its de novo biosynthesis

Elena Katsyuba
Ecole Polytechnique Fédérale de Lausanne

8 Role of intestinal long-chain fatty acid oxidation in systemic energy balance

Mitchell Lavarias
University of Wisconsin - Madison

9 Mutation of NDUFAF8 disrupts complex I and causes lethal neonatal mitochondrial disease

Mike T. Veling, Charlotte L. Alston, Brendan J. Floyd, Emily M. Wilkerson, Catie E. Minogue, Russell L. Wrobel, Laura S. Kremer, Brendan K. Dolan, Kelly M. Werner, Adam Jochem, Michael S. Westpha, Jarred W. Rensvold, Jaclyn M. Mabry, Holger Prokisch, Joshua J. Coon, Robert W. Taylor, David J. Pagliarini
Morgridge Institute for Research

10 Evidence that endurance exercise stimulates the secretion of circulating factors that can reverse accelerated aging in POLG Mice

Thomas Prolla, Vivian Fu, Nuray Ugras, Blake Hill
Medical College of Wisconsin

11 PGC-1 α -mediated mitochondrial reprogramming in NK cell effector functions

Zachary Gerbec, Monica Thakar, MD, Subramaniam Malarkannan
Medical College of Wisconsin

12 An isoprene lipid binding protein promotes eukaryotic coenzyme Q biosynthesis

Danielle C. Lohman, Deniz Aydin, Helaina C. Von Bank, Robert Smith, Vanessa Linke, Erin Weisenhorn, Molly T. McDevitt, Paul Hutchins, Emily Wilkerson, Jason Russell, Matthew S. Stefely, Emily T. Beebe, Adam Jochem, Joshua J. Coon, Craig Bingman, Matteo Dal Peraro & David J. Pagliarini
Morgridge Institute for Research

13 Exploring a role for ancient mitochondrial ATPases in inter-organelle lipid distribution

Zachary Kemmerer, Brett Paulson, Paul Hutchins, Adam Jochem, Xiao Guo, Joshua Coon, and David Pagliarini
Morgridge Institute for Research

POSTER # POSTER PRESENTATION

14 Cellular metabolism assays for revealing links between metabolic changes and cell function

Donna Leippe
Promega Corporation

15 Loss of the Mitochondrial Pyruvate Carrier increases susceptibility to colon and intestinal tumor initiation through promotion of stemness and proliferation

Claire Bensard
University of Utah

16 RNA processing in the adipose tissue response to long-term caloric restriction in rhesus monkeys

Timothy W. Rhoads, Josef P. Clark, Sean J. McIlwain, Irene M. Ong,
Ricki J. Colman, Rozalyn M. Anderson
University of Wisconsin - Madison

17 Disruption of the mitochondrial matrix phosphatase Pptc7 causes severe metabolic dysfunction and perinatal lethality

Natalie M. Niemi, Gary Wilson, Kathryn A. Overmyer, F.-Nora Vögtle,
Danielle Lohman, Kathryn L. Schueler, Alan D. Attie, Chris Meisinger,
Joshua J. Coon, and David J. Pagliarini
Morgridge Institute for Research

18 Determining the mechanisms of insulin-independent glucose uptake in brown adipose tissue

Vanja Panic
University of Utah

19 Pharmacological Inhibition of Poly (ADP-Ribose) polymerase in a mouse model of mitochondrial myopathy

Nahid A Khan, Eija Pirinen, Ilse Paetau, Riikka Kivelä, Vidya Velagapudi,
Johan Auwerx and Anu Suomalainen
University of Helsinki

20 Identification of direct transcriptional targets of Nfatc2 in human islets

Shane Simonett, Rhonda Bacher, Sunyoung Shin, Mary Rabaglia, Jeea Choi, Jason Spaeth, Courtney Smith, Jacob Herring, Roland Stein, Jeff Tessem, Ivan Moskowitz, Christina Kendziorski, Sunduz Keles, Alan Attie, Mark Keller
University of Wisconsin - Madison

21 Ribosome profiling reveals translation-level regulation of peroxins in response to loss of peroxisomes

Jordan A. Berg, Esther Nuebel, Jared P. Rutter
University of Utah

POSTER # POSTER PRESENTATION

22 Role of cytochrome c phosphorylation in brain ischemia/reperfusion injury

Hasini Kalpage, Jenney Liu, Junmei Wan, Icksoo Lee, Asmita Vaishnav, Valerian E. Kagan, Arthur R. Salomon, Lawrence I. Grossman, Brian F.P. Edwards, Maik Hüttemann
Wayne State University School of Medicine

23 Methyl-metabolite depletion elicits coordinated response to support epigenetic persistence

Spencer A. Haws, Deyang Yu, Cunqi Ye, Benjamin P. Tu, Vincent L. Cryns, Dudley W. Lamming and John M. Denu
University of Wisconsin - Madison

24 Skeletal muscle AMPK activation as a therapeutic treatment for diabetes and the cardiometabolic syndrome

Ryan Esquejo, Bina Albuquerque, Matthew Peloquin, Kimberly O. Cameron, and Russell A. Miller
Pfizer

25 GSK3 β regulates brain energy metabolism

Dylan C. Souder, Stephen A. Martin, Karl N. Miller, Josef Clark, Michael A. Polewski, Ricki J. Colman, Kevin W. Eliceiri, T. Mark Beasley, Sterling C. Johnson, and Rozalyn M Anderson
University of Wisconsin - Madison

26 Validation of a Quantitative Trait Locus (QTL): identification and characterization of *Agpat5*

Samantha L. St. Clair, Sabrina L. Belisle, Fernanda Leyva-Jaimes, and Brian W. Parks
University of Wisconsin - Madison

27 Whole-body metabolic fate of branched chain amino acids in health and insulin resistance

Michael D. Neinast, Cholsoon Jang, Sheng Hui, Danielle S. Murashige, Qingwei Chu, Raphael J. Morscher, Xiaoxuan Li, Le Zhan, Eileen White, Tracy G. Anthony, Joshua D. Rabinowitz, Zoltan Arany
University of Pennsylvania

28 Mutation in Sortilin identified in an Amish population results in hyperinsulinemia and hypercholesterolemia in humans and mice

Kelly Mitok, Kathryn Schueler, Sarah King, Mary Rabaglia, Braxton Mitchell, Mark Keller, Alan Shuldiner, Hugh Barrett, Ronald Krauss, Alan Attie
University of Wisconsin - Madison

29 Adult obesity in C57BL/6J mice is dependent on Perinatal Gene Regulation, similarly directed by maternal diet, 6N genotype and CYP1B1

Michele Larsen and Colin Jefcoate
University of Wisconsin - Madison

POSTER # POSTER PRESENTATION

30 Effects of soy-based diets on neurological and metabolic phenotypes

Cara J. Westmark, Mikolaj J. Filon, Pamela R. Westmark, Patricia Maina, David W. Nelson, Brian C. Ray, Lauren I. Steinberg, Taralyn M. Wilmer, Chi-Liang Eric Yen and Chrysanthy Ikonomidou
University of Wisconsin - Madison

31 SIRT3 ameliorates mitochondrial dysfunction at old age but does not extend lifespan under caloric restriction

Rashpal S. Dhillon, Yiming Qin, Paul van Ginkel, Vivian Fu, Cara Green, Dudley Lamming, Tomas Prolla, and John Denu
University of Wisconsin - Madison

32 Genetics of multi-tissue MS metabolomics in Diversity Outbred mice

Edna A. Trujillo; Vanessa Linke; Elyse Freiburger; Ian Miller, Dain Brademan, Nicholas Kwiecien; Paul Hutchins; Alexander Hebert; Thiru Reddy; Jason Russell; Lauren Giurini, Brian Yandell; Julia Kemis; Lindsay Traeger; Eugenio Vivas; Kathryn Schueler; Donald Stapleton; Mary Rabaglia; Mark Keller; Karl Broman; Daniel Gatti; Greg Keele, Duy Pham, Gary Churchill; Federico Rey; Alan Attie; Joshua J. Coon
University of Wisconsin - Madison

33 RXR ChIP-seq on mouse liver profiles heterodimers activities modulation during circadian and nutrient response cycles

Khanh B. Trang
University of Lausanne

34 The interaction of MNRR1 and CHCHD10 with Cytochrome c Oxidase

Stephanie Gladysck, Akshata R. Naik, Bhanu P. Jena, Lawrence I. Grossman
Wayne State University School of Medicine

35 The genetic architecture of insulin and glucagon secretion

Mark Keller, Mary Rabaglia, Kathryn Schueler, Donnie Stapleton, Daniel Gatti, Matthew Vincent, Kelly Mitok, Ziyue Wang, Shane Simonett, Chenyang Dong, Takanao Ishimura, Rahul Das, Karl Broman, Brian Yandell, Christina Kendziorski, Sunduz Keles, Gary Churchill, Alan Attie
University of Wisconsin - Madison

36 Bioluminescent assays for investigating insulin action and steatosis

Mike Valley
Promega Corporation

37 Macrophage metabolism is differentially rewired in response to acute and prolonged stimulation

Gretchen Seim, Emily Britt, Aaron Johnson, Jing Fan
Morgridge Institute for Research

Dear Fellow Metabolism Researchers,

Thank you for attending the **2018 Frontiers in Metabolism – Mechanisms of Metabolic Disease** meeting at the Morgridge Institute for Research in Madison, Wisconsin.

We would like to thank everyone who has worked diligently to organize this symposium and to all of our participants and attendees, especially our speakers who have traveled from all over the world to participate in this meeting. We are also grateful to our generous meeting sponsors.

We look forward to hosting this meeting again next September 16-18, 2019.

We hope you will all consider joining us again.

Best wishes,

Dave Pagliarini

Jenelle Gierhart-Sutter



MORGRIDGE

INSTITUTE FOR RESEARCH

AT THE UNIVERSITY OF WISCONSIN-MADISON

THE DISCOVERY BUILDING
330 N. ORCHARD STREET, MADISON WI 53715
608.316.4100 / MORGRIDGE.ORG