

**UMDF Mitochondrial Medicine 2023  
Scientific/Clinical Agenda**

<b>TRACKS</b>	<b>Scientific Program</b>	<b>Clinical Program</b>
<b>Wednesday, June 28</b>	<b>Speaker &amp; Topic</b>	<b>Speaker &amp; Topic</b>
<b>Platform Session 1 - Mito Inflammation</b>		
8:00a-8:30a	<p align="center"><b>Non CME Welcome and Opening Remarks</b> <i>Non CME - Patient Story - Kendall's Journey</i></p>	
8:30a-9:00a	<p align="center"><b>Nucleic Acid-mediated Mitonuclear Signaling</b> <b>Gerald Shadel, PhD</b> <i>Salk Institute for Biological Studies LaJolla, CA</i></p>	
9:00a-9:30a	<p align="center"><b>PINK1- and Parkin-mediated Mitophagy and Links to Inflammation and Neurodegeneration</b> <b>Richard J. Youle, PhD</b> <i>National Institutes of Health Bethesda, MD</i></p>	
9:30a-10:00a	<p align="center"><b>Extracellular ATP Signaling, Inflammation, and Mitochondrial Dysfunction</b> <b>Robert Naviaux, MD, PhD</b> <i>University of California San Diego LaJolla, CA</i></p>	
10:00a-10:30a	<i>Break</i>	
10:30a-11:00a	<p align="center"><b>OxPhos Defects, Inflammation and Hypermetabolism</b> <b>Martin Picard, PhD</b> <i>Columbia University Irving Medical Center New York, NY</i></p>	
11:00a-11:30a	<p align="center"><b>NON CME - Abstract Presentation Short Talks</b> <b>Allison Hanaford, PhD</b> <i>Peripheral Macrophages Causally Contribute to Disease Onset And Progression in the Ndufs4(KO) Model of Leigh syndrome</i></p> <p align="center"><b>Emily Warren, PhD</b> <i>Inflammatory and Interferon Gene Expression Signatures in Patients with Mitochondrial Disease</i></p>	<p align="center"><b>Circulating, Cell-free Mitochondrial DNA in Critical Illness</b> <b>Mark Hepokoski, MD</b> <i>University of California San Diego LaJolla, CA</i></p>
11:30a-12:00p	<p align="center"><b>NON CME - Abstract Presentation Short Talks</b> <b>Temiakov Dmitry, PhD</b> <i>Molecular Basis for Maternal Inheritance of Human Mitochondrial DNA</i></p> <p align="center"><b>Jose Luis Marin Franco, PhD</b> <i>Single-cell Evaluation of Bioenergetics by Flow Cytometry (e-Flo)</i></p>	<p align="center"><b>Are Patients with Mitochondrial Diseases Hypermetabolic?</b> <b>Martin Picard, PhD</b> <i>Columbia University Irving Medical Center New York, NY</i></p>
12:00p-12:30p	<p align="center"><b>NON CME - Abstract Presentation Short Talks</b> <b>Sonal Sharma, MD</b> <i>Identifying Neuroimaging Patterns in Mitochondrial Leukoencephalopathies</i></p> <p align="center"><b>Ngoc Hoang, PhD</b> <i>Sex-specific Colonic Mitochondrial Dysfunction and Improvement with Mitochondrial Targeted Therapies in the Indomethacin-induced Inflammatory Bowel Disease Model in Rats</i></p>	<p align="center"><b>Neurometabolic Regression Risk with Infection in Primary Mitochondrial Disease</b> <b>Robert Naviaux, MD, PhD</b> <i>University of California San Diego LaJolla, CA</i></p>
12:30p-2:00p	<i>Lunch</i>	
<b>Platform Session 2 - Mysteries of mtDNA</b>		
2:00p-2:30p	<p align="center"><b>Mitochondrial-DNA Encoded Microproteins</b> <b>Pinchas Cohen, MD</b> <i>University of Southern California Davis Los Angeles, CA</i></p>	
2:30p-3:00p	<p align="center"><b>The Regulatory Interaction Between the Mitochondria and the Nucleus is Important for Health, Disease and Evolution</b> <b>Dan Mishmar, PhD</b> <i>Ben-Gurion University of the Negev Beer Sheva, Israel</i></p>	

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	<b>Speaker &amp; Topic</b>	<b>Speaker &amp; Topic</b>
3:00p-3:30p	<b>Stem Cells, Organoids, and Imaging Technologies to Delineate the Cellular and Molecular Changes in COVID-19</b> <b>Robert E. Schwartz, MD, PhD</b> Weill Cornell Medicine New York, NY	
3:30p-4:00p	<i>Break</i>	
4:00p-4:30p	<b>mtDNA Haplogroup Disease Associations</b> <b>Douglas Wallace, PhD</b> Children's Hospital of Philadelphia Research Institute Philadelphia, PA	
4:30p-5:00p	<b>NON CME - Abstract Presentation Short Talks</b> <b>Ryan Snyder, PhD</b> <i>Hemin Impairs Mitochondrial Gene Expression and Induces Guanine Quadruplexes in Human Renal Proximal Tubule Cells</i>  <b>Katherine Mitchell, MA</b> <i>Mitochondrial Dysfunction In Neuropsychiatric Disorders</i>	<b>Current Status of Biomarkers for Mitochondrial Disease</b> <b>Devin Oglesbee, PhD</b> Mayo Clinic Rochester, MN
5:00p-5:30p	<b>NON CME - Abstract Presentation Short Talks</b> <b>Suraiya Haroon, PhD</b> <i>Identification of Two Mitophagy Modulators that Rescue Mitochondrial Stress in a Heteroplasmic Single Large-scale mtDNA Deletion (SLSMD) C. elegans Animal Model</i>  <b>Mikhail Alexeyev, PhD</b> <i>TFAM's Contributions to mtDNA Replication and OXPHOS Biogenesis are Genetically Separable</i>	<b>Current Status of Biomarkers for Mitochondrial Disease</b> <b>Devin Oglesbee, PhD</b> Mayo Clinic Rochester, MN
5:30p-7:30p	<i>Break and Poster Sessions - Even Numbers Stay at Posters - NON CME</i>	
<b>Thursday, June 29</b>		
	<b>Speaker &amp; Topic</b>	<b>Speaker &amp; Topic</b>
<b>Platform Session 3 - Mitochondria/Viruses</b>		
8:00a-8:30a	<b>Mitochondrion and Immune System</b> <b>Wayne W. Hancock, MBBS, PhD, FRCPA</b> University of Pennsylvania Philadelphia, PA	
8:30a-9:00a	<b>Viral Exposures in Primary Mitochondrial Disease (PMD) Patients</b> <b>Peter J. McGuire, MS, MD</b> National Human Genome Research Institute (NIHGRI) Bethesda, MD	
9:00a-9:30a	<b>Mitochondrial Dysfunction Driven by Key microRNAs Contributing to Acute COVID-19 and Post-Acute Sequelae of COVID-19 (PASC)</b> <b>Afshin Beheshti, PhD</b> COVID-19 International Research Team (COV-IRT) Broad Institute of MIT and Harvard	
9:30a-10:00a	<b>Coronaviruses: Intersection of Innate Immune and Unfolded Protein Responses</b> <b>Susan R. Weiss, PhD</b> University of Pennsylvania Philadelphia, PA	
10:00a-10:30a	<i>Break</i>	

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10:30a-11:00a	<p align="center"><b>Flaviviruses and Integrated Stress Response</b>  <b>Sonja M. Best, PhD</b>  <i>National Institute of Allergy and Infectious Diseases, NIH  Bethesda, MD</i></p>	
<b>Thursday, June 29</b>		
<b>Speaker &amp; Topic</b>		
11:00a-11:30a	<p align="center"><b>NON CME - Abstract Presentation Short Talks</b>  <b>Amanda Fuchs, PhD</b>  <i>Systemic Cytokine Storm Exacerbates Acute Influenza A Infection in Ndufs4 KO Mouse</i></p> <p align="center"><b>Yentli Soto Albrecht, MD, PhD candidate</b>  <i>Non-pathogenic variation in mitochondrial DNA modulates murine SARS-CoV-2 pathogenesis</i></p>	<p align="center"><b>Mitochondrial Disease and the Viral Exosome</b>  <b>Peter J. McGuire, MS, MD</b>  <i>National Human Genome Research Institute (NIHGRI)  Bethesda, MD</i></p>
11:30a-12:00p	<p align="center"><b>NON CME - Abstract Presentation Short Talks</b>  <b>Nicole DeFoor, BS</b>  <i>Remdesivir Increases mtDNA Copy Number Causing Mild Alterations to Oxidative Phosphorylation</i></p> <p align="center"><b>Joseph Guarnieri, PhD</b>  <i>Targeted Down Regulation Of Core Mitochondrial Genes During Sars-Cov-2 Infection</i></p>	<p align="center"><b>Through the Looking Glass: Viral Mimics and the Discovery of Novel Mitochondrial Functions</b>  <b>Dustin C. Hancks, PhD</b>  <i>UT Southwestern Medical Center  Dallas, TX</i></p>
12:00p-12:30p	<p align="center"><b>NON CME - Abstract Presentation Short Talks</b>  <b>Hsin-Pin Lin/ Derek Narendra MD, PhD</b>  <i>The OMA1-DELE1 Mitochondrial Integrated Stress Response is Activated by Diverse Mitochondrial Stressors to Promote Growth and Survival in Mitochondrial Myopathy</i></p> <p align="center"><b>Ryan Morrow, PhD</b>  <i>Deficits in Mitochondrial Oxidative Phosphorylation Enhance SARS-CoV-2 Replication</i></p>	<p align="center"><b>Life and Death in Mitochondrial Disease: How Long Do We Have?</b>  <b>Sumit Parikh, MD</b>  <i>The Cleveland Clinic Foundation  Cleveland, OH</i></p>
12:30p-2:00p	<i>Lunch</i>	
<b>Platform Session 4 - Mitochondrial Signaling</b>		
2:00p-2:30p	<p align="center"><b>Mitochondrial and Cellular Metabolism</b>  <b>Jared Rutter, PhD</b>  <i>University of Utah  Salt Lake City, UT</i></p>	
2:30p-3:00p	<p align="center"><b>mtDNA Conformational Regulation</b>  <b>Brett Kaufman, PhD</b>  <i>University of Pittsburgh  Pittsburgh, PA</i></p>	
3:00p-3:30p	<p align="center"><b>MNRR1 Bicompartamental Mito Regulation</b>  <b>Lawrence L. Grossman, PhD</b>  <i>Wayne State School of Medicine  Detroit, MI</i></p>	
3:30p-4:00p	<i>Break</i>	
4:00p-4:30p	<p align="center"><b>MAT (Mitochondrial Augmentation Therapy) and MEPAN (Mitochondrial Enoyl CoA Reductase Protein-Associated Neurodegeneration)</b>  <b>Yair Anikster, MD, PhD</b>  <i>Sheba Medical Center Hospital - Tel Hashomer  Israel</i></p>	

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4:30p-5:00p	<p align="center"><b>NON CME - Abstract Presentation Short Talks</b> <i>Jie Yang, PhD</i> <i>DELE1 Oligomers Revealed by Cryo-EM Structure Promote the Integrated Stress Response Activation</i></p> <p align="center"><b>Hemangi Bhonsle PhD</b> <i>Neuron-specific CASK Loss in Mice Causes Epileptic Encephalopathy Associated with Impaired Cerebral Cortex Development and Mitochondrial Dysfunction</i></p>	<p align="center"><b>Facilitating Community-Based Genomic Data Analysis in Primary Mitochondrial Disease: Mitochondrial Disease Sequence Data Resource (Mseqdr) and Mitoshare Patient Registry Collaboration to Support Genomic Data Discoveries</b> <i>Emily Bogush, MS, LCGC</i> <i>Children's Hospital of Philadelphia</i></p> <p align="center"><b>Racial Disparity in the Diagnosis of Mitochondrial Disease</b> <b>Daniel McGinn, GC</b> <i>Perelman School of Medicine of the University of Pennsylvania</i></p>
<b>Thursday, June 29</b>		
5:00p-5:30p	<p align="center"><b>NON CME - Abstract Presentation Short Talks</b> <i>Natalie Niemi, PhD</i> <i>The Mitochondrial Phosphatase Pptc7 Maintains Mitochondrial Protein Content by Suppressing Receptor-mediated Mitophagy</i></p> <p align="center"><b>Nam Chul Kim, PhD</b> <i>FDA-approved PDE4 Inhibitors Reduce the Dominant Toxicity of ALS-FTD-associated CHCHD10S59L in Drosophila and Human Cells</i></p>	<p align="center"><b>Cardiac Manifestations Of Mitochondrial Disease: A Single Center Experience</b> <b>Divakar Mithal, MD, PhD</b> <i>Northwestern University Feinberg School of Medicine</i></p> <p align="center"><b>Mitochondrial Medicine Society (MMS) Updates</b> <i>Mary Kay Koenig, MD, MMS President</i></p>
6:00p-8:00p	<p align="center"><i>Poster Sessions - Odd Numbers Stay at Posters - Reception</i> <i>Note: Poster Sessions are NON CME</i></p>	
<b>Friday, June 30</b>		
<b>Platform Session 5 - Combined Sessions/Clinical Trial Updates - NON CME</b>		
8:00a-10:00a	<p align="center"><b><u>Combined Sessions for All Attendees - NON CME:</u></b></p> <p align="center"><b>UMDF Welcome and Mito Medicine Community</b></p> <p align="center"><b>UMDF Research Impact</b></p>	
10:00a-10:30a	<p align="center"><i>Break</i></p>	
10:30a-11:00a	<p align="center"><b>Mitochondrial Myopathy Symptoms Over Time – Sharing New Natural History Data</b> <i>Zuela Zolkipli-Cunningham, MD, Children's Hospital of Philadelphia, PA</i></p>	
11:00a-11:30a		
11:30a-12:00p	<p align="center"><b><u>Clinical Trial Updates - NON CME:</u></b> <i>Details and speakers are posted in the Mobile App.</i></p>	
12:00p-12:30p		
12:30p-2:00p	<p align="center"><i>Lunch - Networking by Geographic (for those interested in connecting with attendees in their regions)</i></p>	
<b>Platform Session 6 - Mito Genetic Therapy</b>		
2:00p-2:30p	<p align="center"><b>AAV-mediated Transduction of the Nuclear-coded Mitochondrial ANT1 Gene can Ameliorate Mouse Ant1-/- Pathology: a Step Toward the Treatment of Mitochondrial Cardiomyopathy</b> <b>Alessia Angelin, PhD</b> <i>Children's Hospital of Philadelphia Philadelphia, PA</i></p>	

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2:30p-3:00p	<b>Promises and Perils of mtDNA Gene Editing</b> <i>Carlos T. Moraes, PhD</i> University of Miami Miami, FL	
3:00p-3:30p	<b>mtDNA &amp; Deaminases</b> <i>Stephen C. Ekker, PhD</i> Mayo Clinic Rochester, MN	
3:30p-4:00p	<i>Break</i>	

<b>Friday, June 30</b>	<b>Speaker &amp; Topic</b>	<b>Speaker &amp; Topic</b>
4:00p-4:30p	<b>Nuclear Transplantation</b> <i>Shoukhrat Mitalipov, PhD</i> Oregon Health & Science University Portland, OR	
4:30p-5:00p	<b>NON CME - Abstract Presentation Short Talks</b> <i>Noa Sher, PhD</i> Characterization of Mitochondrial Augmentation at the Single Cell Level  <i>Santiago Castillo</i> Unconstrained Mitochondrial Dna Base Editing For Disease Modeling And Gene Therapy Applications	
5:00p-5:30p	<b>NON CME - Abstract Presentation Short Talks</b> <i>Chenxu Li, MS/Marcia Terluk, PhD</i> Targeting Mitochondrial Metabolism using Nervonic Acid in Adrenoleukodystrophy  <i>Stella Varnum, BS</i> Mitochondria Transfer Reduces the Morbidity and Mortality of Leigh Syndrome	
5:30p-9:30p	<b>UMDF Evening of Energy Reception and Banquet Celebration for ALL Attendees</b> <b>The Big Pitch: UMDF accelerators Research Grant Program Presentations</b>	

<b>Saturday, July 1</b>	<b>Speaker &amp; Topic</b>	<b>Speaker &amp; Topic</b>
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**Platform Session 7 - Mito Transfer/Fatty Acid Synthesis**

8:00a-8:30a	<b>Vesicular Transfer</b> <i>Heidi McBride, PhD</i> Montreal Neurological Institute Quebec, Canada	
8:30a-9:00a	<b>Nanotube Transfer</b> <i>Shiladitya Sengupta, PhD</i> Harvard Medical School Cambridge, MA	
9:00a-9:30a	<b>Mitochondria Transfer and Leigh Syndrome</b> <i>Jonathan R. Brestoff, MD, PhD, MPH</i> Washington University School of Medicine St. Louis, MO	

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9:30a-10:00a	<b>Mitochondrial Transplantation: Clinical Application and Use</b> <b>James D. McCully, PhD</b> <i>Harvard Medical School Cambridge, MA</i>	
10:00a-10:30a	<i>Break</i>	
10:30a-11:00a	<b>mtFASII Pathway &amp; Mouse Model</b> <b>Deborah Murdock, PhD</b> <i>Children's Hospital of Philadelphia Research Institute Philadelphia, PA</i>	
11:00a-11:30a	<b>Mito FASII in OXPHOS Biochemistry</b> <b>Sara Nowinski, PhD</b> <i>Van Andel Institute Grand Rapids, MI</i>	
<b>Saturday, July 1</b>	<b>Speaker &amp; Topic</b>	<b>Speaker &amp; Topic</b>
<b>Platform Session 7 - Mito Transfer/Fatty Acid Synthesis</b>		
11:30a-12:00p	<b>Small Molecule Therapeutics</b> <b>Ethan Perlstein, PhD</b> <i>Perlara PBC Berkeley, CA</i>	
12:00p-12:30p	<b>Non CME Abstract Presentation</b> <b>Kaylee Steiner, PhD</b> <i>Mitochondrial Trans-2-Enoyl Coenzyme A Reductase (Mecr) Regulates CD4+ T Cell Function</i>  <b>Non CME Closing Remarks</b> <i>Douglas Wallace, PhD</i>	
12:30p-2:00p	<i>Lunch - Stay and Network or Grab n Go</i>	
2:00pm	<b>UMDF Mito Medicine Scientific/Clinical Sessions Adjourn</b>	

**Accreditation and Designation Statements and Disclosure Report**  
UMDF Mitochondrial Medicine 2023

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of PeerPoint Medical Education Institute and the United Mitochondrial Disease Foundation. PeerPoint Medical Education Institute is accredited by the ACCME to provide continuing medical education for physicians.

PeerPoint Medical Education Institute designates the live and enduring formats for this educational activity for a maximum of *19.50 AMA PRA Category 1 Credits™*. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Live activity dates: June 28, 2023 – July 1, 2023  
Enduring activity dates: October 2, 2023 – October 2, 2026

**The following planners, speakers, reviewers or staff have relevant financial relationships to disclose:**

To View Full Statement with Disclosure Report -  
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Information.