Past UMDF Bench-to-Bedside Topics and Speakers

Tuesday, April 19, 2022

Topic & Presenter:

- Immune Mediated Disease Pathogenesis in Leigh Syndrome, *Simon Johnson, PhD, University of Washington, Seattle, WA*

Tuesday, March 15, 2022

Topics & Presenters:

- Development and Translational Steps in Gene Therapy of Leber Hereditary Optic Neuropathy, *Jose-Alain Sahel, MD, University of Pittsburgh Medical Center, Pittsburgh, PA*
- Novel Gene and Drug Therapies for the Treatment of Leber Hereditary Optic Neuropathy, *Catherine Tsilfidis, PhD, The Ottawa Hospital Research Institute, Canada*

Tuesday, February 15, 2022

Topics & Presenters:

- Mitochondrial Disease Research and Funding Opportunities at the NIH and NICHD, *Mollie Minear, PhD, NIH, Health Scientist Administrator-Program Officer*
- Congressionally Directed Medical Research Programs – Department of Defense Peer-Reviewed Medical Research Program (PRMRP): Funding Opportunities in Congressionally Directed Topic Areas, *Cecelia Dupecher, PhD, DOD, Program Manager*

Tuesday, January 18, 2022

Topics & Presenters:

- Clinical Characterization and Brain 1H-MRS Imaging Refine the Picture of m.3243A>G Disease, *Michio Hirano, MD, Columbia University, New York, NY*
- Circulating Markers of Reductive Stress in Mitochondrial Disease, *Rohit Sharma, MD, PhD, Harvard Medical School, Boston, MA*

Tuesday, December 14, 2021

Topics & Presenters

- Mitochondrial Metabolic Shift in ALS, *Delfina Larrea, PhD, Columbia University, New York, NY*
- Markers of Energy and Oxidative Metabolism Alterations in ALS Patient-derived Cells, *Giovanni Manfredi, MD, PhD, Weill Cornell Medicine, New York, NY*

Tuesday, November 17, 2021

Topics & Presenters

- Tetracyclines Promote Survival and Fitness in Mitochondrial Disease Models, *Pere Puigserver, PhD, Professor of Cell Biology, Harvard University, Boston, Massachusetts, USA*
- Phenotypic Assays for Developing Mitotherapeutics, *Ronald L. Davis, PhD, Professor of Neurology, Scripps Research Institute Florida, Juniper, Florida, US*

Tuesday, October 19, 2021

Topic & Presenter

- The Viral Exposome in Children with Mitochondrial Disease, *Peter J. McGuire MS, MD, National Human Genome Research Institute (NHGRI), Washington, DC*

Tuesday, September 21, 2021

Topics & Presenters:

- Mitochondrial Transplantation - Basics and Clinical Application, *James D. McCully, PhD, Boston Children's Hospital, Boston, MA*
- Mitochondrial Transplantation Strategies for the Injured Spinal Cord, *Alexander G. Rabchevsky, PhD, University of Kentucky, Lexington, KY*

Friday, April 16, 2021

Topics & Presenters

- New Developments in Mitochondrial DNA Transfer, *Michael Teitell, MD, PhD, UCLA*
- Mitochondrial DNA Intercellular Traveling, *Jose Antonio Enriquez, PhD, Spanish National Center for Cardiovascular Research*

Thursday, March 18, 2021

Topics & Presenters:

- Cell-type Specific Mitochondrial Phenotypes in Circulating Human Leukocytes, *Martin Picard, PhD, Columbia University, New York, NY*
- Dual Genome 'Omics: the Heteroplasmy Problem, *Melissa Walker, MD, PhD, Harvard Medical School, Boston, MA*

Thursday, February 18, 2021

Topics & Presenters:

- Molecular Connectivity of Mitochondrial Gene Expression and OXPHOS Biogenesis, *Martin Ott, PhD, Stockholm University, Stockholm, Sweden*
- A High-Density Human Mitochondrial Proximity Interaction Network, *Hana Antonicka, MSc, PhD, The Neuro & McGill University, Montreal, Quebec, Canada*

Friday, January 15, 2021

- Novel aspects of mitochondrial NAD+ Biology

Presenters:

- *Joseph A. Baur, PhD, University of Pennsylvania, Philadelphia, PA*
- *Anu Suomalainen-Wartiovaara, MD, PhD, University of Helsinki, Helsinki, Finland*

Friday, December 11, 2020

- Nuclear Genome-wide Associations with Mitochondrial Heteroplasmy

Presenters:

- *Priyanka Nandakumar, PhD, 23andMe, California*
- *Neal Sondheimer, MD, PhD, The Hospital for Sick Children, Toronto, ON, Canada*

Friday, November 20, 2020

- Clinical and Cellular Phenotypes of m.3243A>G

Topics & Presenters:

- Clinical Manifestations and Natural History of m.3243A>G, *Michio Hirano, MD, Columbia University, New York, NY*
- m.3243A>G-Induced Mitochondrial Dysfunction Impairs Human Neuronal Development and Reduces Neuronal Network Activity and Synchronicity, *Tamas Kozicz, MD, PhD, Mayo Clinic, Rochester, MN*

Friday, October 9, 2020

Topic & Presenters:

- Mitochondrial Targets and Defenses in the Time of COVID, *Robert K. Naviaux, PhD, University of California San Diego, San Diego, CA and Keshav Singh, PhD, University of Birmingham, Birmingham, AL*

Monday, September 21, 2020

Topics & Presenters

- Discovery and Implications of Interbacterial Deaminase Toxins, *Joseph Mougous, PhD, University of Washington, Seattle, WA*
- A Bacterial Cytidine Deaminase Toxin Enables CRISPR-Free Mitochondrial Base Editing, *David R. Liu, PhD, Harvard University, Cambridge, MA*

Friday, August 28, 2020

UMDF Funded Projects:

- Investigating intrinsic and extrinsic factors influencing mitochondrial heteroplasmy in mt-tRNA mutation-linked disease - *Dr. Kinsley Belle, Postdoctoral Fellow, Stanford University*
- Mechanisms of protein assembly underlying mitochondrial DNA maintenance but altered in early-onset neurodegenerative disorders - *Dr. Breann Brown, Assistant Professor, Vanderbilt University*
- Implementation of the CRISPR gene editing technology – Edit Plasmids - toward the curing of mitochondrial diseases caused by mutations in mitochondrial DNA - *Dr. Hajime Sakai, CEO, NAPIGEN*

Friday, June 19, 2020

Topics & Presenters

- Mitochondrial Control of Innate Immune Responses in Disease and Aging, *A. Phillip West, PhD, Assistant Professor, Department of Microbial Pathogenesis & Immunology, Texas A&M University*
- A Quantitative Tissue-Specific Landscape of Protein Redox Regulation During Aging, *Ed Chouchani, PhD, Assistant Professor of Cancer Biology and Cell Biology, Dana Farber Cancer Institute and Harvard University*

Friday, June 5, 2020

Topics & Presenters

- Mouse Models of Mitochondrial DNA Disease, *James Stewart, PhD, Research Group Leader, Max Planck Institute for Biology of Ageing*
- Mitochondrial DNA Heteroplasmy in Disease and Targeted Nuclease-Based Therapeutic Approaches, *Carlos Moraes, PhD, Lichtenstein Professor of Neurology, Department of Neurology, University of Miami Miller School of Medicine*

Friday, May 22, 2020

Topic & Presenters

- Translational and Clinical Perspectives on Mitochondrial DNA Deletions During Normal Aging and POLG Disease, *Bruce H. Cohen, MD, Akron Children's Hospital and William Copeland, PhD, NIEHS*