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TRACKS	Scientific Program	Clinical Program	Family Program Track 1	Family Program Track 2	LHON Program	Teen Sessions	Doc Is In (1: sessions)
Tuesday, June 27	Speaker & Topic	Speaker & Topic					
12:00p-5:00p	NAMDC Closed Session - NON CME	NAMDC Closed Session - NON CME		Patient/Family S	essions are NON CME		
Wednesday, June 28	Speaker & Topic	Speaker & Topic					
Platform Session 1 - Mito Infla	ammation						
8:00a-8:30a	Welcome and Opening Remarks Patient Story - Kendall's Journey						
8:30a-9:00a	Nucleic Acid-mediated Mitonuclear Signaling Gerald Shadel, PhD Salk Institute for Biological Studies LaJolla, CA						
9:00a-9:30a	PINK1- and Parkin-mediated Mitophagy and Links to Inflammation and Neurodegeneration <i>Richard J. Youle, PhD</i> <i>National Institutes of Health</i> <i>Bethesda, MD</i>						
9:30a-10:00a	Extracellular ATP Signaling, Inflammation, and Mitochondrial Dysfunction Robert Naviaux, MD, PhD University of California San Diego LaJolla, CA						
10:00a-10:30a	Brea	k					
10:30a-11:00a	OxPhos Defects, Inflammation and Hypermetabolism Martin Picard, PhD Columbia University Irving Medical Center New York, NY		NOTE: Patient-Family Programming does not begin until Thursday				
11:00a-11:30a	NON CME - Abstract Presentation Short Talks Allison Hanaford, PhD Peripheral Macrophages Causally Contribute to Disease Onset And Progression in the Ndufs4(KO) Model of Leigh syndrome Emily Warren, PhD Inflammatory and Interferon Gene Expression Signatures in Patients with Mitochondrial Disease	Circulating, Cell-free Mitochondrial DNA in Critical Illness Mark Hepokoski, MD University of California San Diego LaJolla, CA		afterno June 2			



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ACKS	Scientific Program	Clinical Program	Family Program Track 1	Family Program Track 2	LHON Program	Teen Sessions	Doc Is In (1:1 sessions)
11:30a-12:00p	NON CME - Abstract Presentation Short Talks Temiakov Dmitry, PhD Molecular Basis for Maternal Inheritance of Human Mitochondrial DNA Jose Luis Marin Franco, PhD Single-cell Evaluation of Bioenergetics by Flow Cytometry (e-Flo)	Are Patients with Mitochondrial Diseases Hypermetabolic? Martin Picard, PhD Columbia University Irving Medical Center New York, NY					
12:00p-12:30p	NON CME - Abstract Presentation Short Talks Sonal Sharma, MD Identifying Neuroimaging Patterns in Mitochondrial Leukoencephalopathies Ngoc Hoang, PhD Sex-specific Colonic Mitochondrial Dysfunction and Improvement with Mitochondrial Targeted Therapies in the Indomethacin-induced Inflammatory Bowel Disease Model in Rats	Neurometabolic Regression Risk with Infection in Primary Mitochondrial Disease Robert Naviaux, MD, PhD University of California San Diego LaJolla, CA					
12:30p-2:00p	Lunc	h					
rm Session 2 - Mysteri	es of mtDNA						
2:00p-2:30p	Mitochondrial-DNA Encoded Microproteins Pinchas Cohen, MD University of Southern California Davis Los Angeles, CA						
2:30p-3:00p	The Regulatory Interaction Between the Mitochondria and the Nucleus is Important for Health, Disease and Evolution Dan Mishmar, PhD Ben-Gurion University of the Negev Beer Sheva, Israel						
	Stem Cells, Organoids, and Imaging Technologies to Delineate the Cellular and Molecular Changes in COVID-19 <i>Robert E. Schwartz, MD, PhD</i> <i>Weill Cornell Medicine</i> <i>New York, NY</i>			NOTE: Patient-Fam does not begin afterno	until Thursday on on		
3:30p-4:00p	Brea	k		June 2	29th.		
4:00p-4:30p	mtDNA Haplogroup Disease Associations Douglas Wallace, PhD Children's Hospital of Philadelphia Research Institute Philadelphia, PA						



UMDF Mitochondrial Medicine 2023 Agenda							
RACKS	Scientific Program	Clinical Program	Family Program Track 1	Family Program Track 2	LHON Program	Teen Sessions	Doc Is In session
4:30p-5:00p	NON CME - Abstract Presentation Short Talks Ryan Snyder, PhD Hemin Impairs Mitochondrial Gene Expression and Induces Guanine Quadruplexes in Human Renal Proximal Tubule Cells Katherine Mitchell, MA Mitochondrial Dysfunction In Neuropsychiatric Disorders	Current Status of Biomarkers for Mitochondrial Disease					
5:00p-5:30p	NON CME - Abstract Presentation Short Talks Suraiya Haroon, PhD Identification of Two Mitophagy Modulators that Rescue Mitochondrial Stress in a Heteroplasmic Single Large-scale mtDNA Deletion (SLSMD) C. elegans Animal Model Mikhail Alexeyev, PhD TFAM's Contributions to mtDNA Replication and OXPHOS Biogenesis are Genetically Separable	Devin Oglesbee, PhD Mayo Clinic Rochester, MN					
5:30p-7:30p	Break and Poster Sessions - Even Nu	mbers Stay at Posters - NON CME					
ursday, June 29	Speaker & Topic	Speaker & Topic					
atform Session 3 - Mitocho	ondria/Viruses						
8:00a-8:30a	Mitochondrion and Immune System Wayne W. Hancock, MBBS, PhD, FRCPA University of Pennsylvania Philadelphia, PA						
8:30a-9:00a	Viral Exposures in Primary Mitochondrial Disease (PMD) Patients Peter J. McGuire, MS, MD National Human Genome Research Institute (NIHGRI) Bethesda, MD			NOTE: Patient-Fam			
9:00a-9:30a	Mitochondrial Dysfunction Driven by Key microRNAs Contributing to Acute COVID-19 and Post-Acute Sequelae of COVID-19 (PASC) Afshin Beheshti, PhD COVID-19 International Research Team (COV-IRT) Broad Institute of MIT and Harvard		does not begin until Thursday afternoon on June 29th.				
9:30a-10:00a	Coronaviruses: Intersection of Innate Immune and Unfolded Protein Responses Susan R. Weiss, PhD University of Pennsylvania Philadelphia, PA						
10:00a-10:30a	Bre	ak					



TRACKS	Scientific Program	Clinical Program	Family Program Track 1	Family Program Track 2	LHON
10:30a-11:00a	Flaviviruses and Integrated Stress Response Sonja M. Best, PhD National Institute of Allergy and Infectious Diseases, NIH Bethesda, MD				
11:00a-11:30a	NON CME - Abstract Presentation Short Talks Amanda Fuchs, PhD Systemic Cytokine Storm Exacerbates Acute Influenza A Infection in Ndufs4 KO Mouse Yentli Soto Albrecht, MD, PhD candidate Non-pathogenic Variation in Mitochondrial DNA Modulates murine SARS-CoV-2 Aathogenesis	Mitochondrial Disease and the Viral Exposome Peter J. McGuire, MS, MD National Human Genome Research Institute (NIHGRI) Bethesda, MD			
11:30a-12:00p		Through the Looking Glass: Viral Mimics and the Discovery of Novel Mitochondrial Functions <i>Dustin C. Hancks, PhD</i> UT Southwestern Medical Center Dallas, TX	·	NOTE: Patient-Fam does not begin u afternoo June 2	until Th on on
12:00p-12:30p	NON CME - Abstract Presentation Short Talks Hsin-Pin Lin/ Derek Narendra MD, PhD The OMA1-DELE1 Mitochondrial Integrated Stress Response is Activated by Diverse Mitochondrial Stressors to Promote Growth and Survival in Mitochondrial Myopathy Ryan Morrow, PhD Deficits in Mitochondrial Oxidative Phosphorylation Enhance SARS-CoV-2 Replication	Life and Death in Mitochondrial Disease: How Long Do We Have? Sumit Parikh, MD The Cleveland Clinic Foundation Cleveland, OH			
12:30p-2:00p	Lun	ch			
Platform Session 4 - Mitocho	ondrial Signaling				
2:00p-2:30p	Mitochondrial and Cellular Metabolism Jared Rutter, PhD University of Utah Salt Lake City, UT				





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TRACKS	Scientific Program	Clinical Program	Family Program Track 1	Family Program Track 2	LHON Program	Teen Sessions	Doc Is In (1:1 sessions)
2:30p-3:00p	mtDNA Conformational Regulation Brett Kaufman, PhD University of Pittsburgh Pittsburgh, PA						
Thursday, June 29	Speaker & Topic	- Speaker & Topic					
3:00р-3:30р	MNRR 1 Bicompartmental Mito Regulation Lawrence L. Grossman, PhD Wayne State School of Medicine Detroit, Ml		• UMDF Updates and • What to Expect Friday-Sa	IDF Kick-off for Patient Family Attendees I Friday Events - Brian T. Harman, UMDF P aturday – Kara Strittmatter, Margaret Moo	re and Maria Johnson		
3:30p-4:00p	Bre	ak	• Inforn	national Booths to Check out - Nicole Wils	on		
4:00p-4:30p	MAT (Mitochondrial Augmentation Therapy) and MEPAN (Mitochondrial Enoyl CoA Reductase Protein-Associated Neurodegeneration) Yair Anikster, MD, PhD Sheba Medical Center Hospital - Tel Hashomer Israel		UM	DF Kick-off for Patient Family Attendees			
4:30p-5:00p	NON CME - Abstract Presentation Short Talks Jie Yang, PhD DELE1 Oligomers Revealed by Cryo-EM Structure Promote the Integrated Stress Response Activation Hemangi Bhonsle PhD Neuron-specific CASK Loss in Mice Causes Epileptic Encephalopathy Associated with Impaired Cerebral Cortex Development and Mitochondrial Dysfunction	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 <i>Emily Bogush, MS, LCGC</i> <i>Children's Hospital of Philadelphia</i> Racial Disparity in the Diagnosis of Mitochondrial Disease Daniel McGinn, GC Perelman School of Medicine of the University of Pennsylvania	• UMDF Updates and • What to Expect Friday-Sa •	I Friday Events - Brian T. Harman, UMDF P aturday – Kara Strittmatter, Margaret Moo FUNdraising with Tania and the Team national Booths to Check out - Nicole Wils	re and Maria Johnson		4p-6p Doc is In Registration Opens
5:00p-5:30p	NON CME - Abstract Presentation Short Talks Natalie Niemi, PhD The Mitochondrial Phosphatase Pptc7 Maintains Mitochondrial Protein Content by Suppressing Receptor-mediated Mitophagy Nam Chul Kim, PhD FDA-approved PDE4 Inhibitors Reduce the Dominant Toxicity of ALS–FTD-associated CHCHD10S59L in Drosophila and Human Cells	Cardiac Manifestations Of Mitochondrial Disease: A Single Center Experience Divakar Mithal, MD, PhD Northwestern University Feinberg School of Medicine Mitochondrial Medicine Society (MMS) Updates	Mobile App Workshop for A	Attendees - Staff and Volunteers to Provide	e Mobile App Guidance		



RACKS	Scientific Program	Clinical Program	Family Program Track 1	Family Program Track 2	LHON Program	Teen Sessions	Doc Is In (1:1 sessions)
6:00p-8:00p	Poster Sessions - Odd Numbers Note: Poster Session			Symposium Mitoc	hondrial Patient-Family Mixer		
iday, June 30	Speaker & Topic ed Sessions/Clinical Trial Updates - NON	Speaker & Topic	Speaker & Topic	Speaker & Topic	Speaker & Topic	Speaker & Topic	
8:00a-10:00a			ions for All Attendees - NON Cl	<u>ЛЕ:</u>		9:15am-9:45am COVID & Safety Protocols	
8:00a-10:00a			e and Mito Medicine Communi IDF Research Impact	ty		9:15am-9:45am COVID & Safety Protocols	
10:00a-10:30a			Break			9:45am-10:45am	
10:30a-11:00a		mptoms Over Time – Sharing New ngham, MD, Children's Hospital of Phi			LHON Welcome Session Maria Johnson and Jessica Loomer	Chat with Dr. Amy Goldstein (possible virtual er option)	Doc Is In Slots Schedule Availabl
11:00a-11:30a 11:30a-12:00p		cal Trial Updates - NON CME:		Living with LHON Panel #1 Moderator: Maria Johnson Panelists: TBD		11:00am to Noon Dance with Wendy	Mobile App
12:00p-12:30p	Mor	e Trial Speakers To Be Announced Soon				Noon to 1:30pm Lunch	
12:30p-2:00p		Lunch - Networking	by Geographic (for those intereste	d in connecting with attendees	in their regions)		
atform Session 6 - Mito Gei	netic Therapy			Patient/Family	Sessions are NON CME		
2:00p-2:30p	AAV nDNA Gene Therapy Alessia Angelin, PhD Children's Hospital of Philadelphia Philadelphia, PA		Genetic Testing Landscape Speaker: Elizabeth McCormick, MS, CGC	Therapy Sessions Moderator/Speaker:	LHON Science Moderator: Lissa Poincenot Speakers: Mays Dairi, MD and and	1:30pm to 2:30pm STEM Activity with Discovery Place	
2:30p-3:00p	Promises and Perils of mtDNA Gene Editing Carlos T. Moraes, PhD University of Miami Miami, FL		Disease Specific Breakout Sessions Leigh Syndrome - Mary Kay Koenig, MD, Amy Goldstein, MD	Jennifer Poirier, DPT Speakers (see below)	Mark Tarnopolsky, MD, PhD, BPE	2:30pm to 3:30pm Music Therapy with Miriam Tart, MMT, MT-BC	



TRACKS	Scientific Program	Clinical Program	Family Program Track 1	Family Program Track 2	LHON
3:00p-3:30p	mtDNA & Deaminases Stephen C. Ekker, PhD Mayo Clinic Rochester, MN		Pyruvate Dehydrogenase Complex Deficiency (PDCD) - Jirair K. Bedoyan, MD, PhD, FACMG, James Peterson, MS, LCGC, Peter Stacpoole, PhD, MD İPOLG/CPEO/KSS - Zuela Zolkipli Cunningham, MD, Bruce Cohen, MD MELAS/Mito Myopathy - Fernando Scaglia, MD, Andrea Gropman, MD TK2D - Michio Hirano, MD	Speakers: Jenna Lowrey, OT Brenda Sorrells, Orthotist Kelvin Jones, Orthotist Scott Staley, ATP Cassandra Stolting, SLP Katie Parsons, OT Student	LHOI Moderator: Speakers: May Mark Tarnopol
3:30p-4:00p	Brea	k		Break	
4:00p-4:30p	Nuclear Transplantation Shoukhrat Mitalipov, PhD Oregon Health & Science University Portland, OR			Therapy Sessions continue with the addition of Jean Flickinger, PT, DPT PCS	LHON Cor
4:30p-5:00p	NON CME - Abstract Presentation Short Talks Noa Sher, PhD Characterization of Mitochondrial Augmentation at the Single Cell Level Santiago Castillo Unconstrained Mitochondrial Dna Base Editing For Disease Modeling And Gene Therapy Applications				
5:00p-5:30p	NON CME - Abstract Presentation Short Talks Chenxu Li, MS/Marcia Terluk, PhD Targeting Mitochondrial Metabolism using Nervonic Acid in Adrenoleukodystrophy Stella Varnum, BS Mitochondria Transfer Reduces the Morbidity and Mortality of Leigh Syndrome			Families to break to give ti	ne between s
5:30р-9:30р		UMDF Evening of Energy Recept The Big Pitch: UMDF accelera			



ON Program	Teen Sessions	Doc Is In (1:1 sessions)
HON Science or: Lissa Poincenot Mays Dairi, MD and and opolsky, MD, PhD, BPE	1:30pm to 2:30pm STEM Activity with Discovery Place 2:30pm to 3:30pm Music Therapy with Miriam Tart, MMT, MT-BC	Doc Is In Slots - Schedule Available on Mobile App
Community Update	3:30pm to 4:30pm Free Time	
n sessions and ban	quet.	
	6:30pm - Evening of Energy Banquet/Dance	

TRACKS	Scientific Program	Clinical Program	Family Program Track 1	Family Program Track 2	LHON Program	Teen Sessions	Doc Is In (1:1
Saturday, July 1	Speaker & Topic	Speaker & Topic			aker & Topic		sessions)
	Platform Session 7 - Mito Transfer/Fatty Acid Synthesis				Sessions are NON CME		
8:00a-8:30a	Vesicular Transfer Heidi McBride, PhD Montreal Neurological Institute Quebec, Canada		The UMDF and our Ambassadors invit time. We will have table signs set-up for	Conversation te you to join us for casual networking or family groups to assist in networking haring.	Coffee and Conversation Tentative tables set up for networking and conversation		
8:30a-9:00a	Nanotube Transfer Shiladitya Sengupta, PhD Harvard Medical School Cambridge, MA		The UMDF and our Ambassadors invite you to join us for casual networking time. We will have table signs set-up for family groups to assist in networking and sharing.		with Metrolina Association for the Blind/Low Vision Optometrist, LHON DCP, and Resources/support for mental well-being and disabilities)		
9:00a-9:30a	Mitochondria Transfer and Leigh Syndrome Jonathan R. Brestoff, MD, PhD, MPH Washington University School of Medicine St. Louis, MO				The Top Five Questions I Get Asked About Assistive Technology Speaker: Sara Nappi	9:00am to 10:00am Healthy Mind and Body Speaker: Jamie Peterson, MS, LCGC	
9:30a-10:00a	Mitochondrial Transplantation: Clinical Application and Use James D. McCully, PhD Harvard Medical School Cambridge, MA		Coffee and Conve	ersation Continues	The Top Five Questions I Get Asked About Assistive Technology Speaker: Sara Nappi	9:00am to 10:00am Healthy Mind and Body Speaker: Jamie Peterson, MS, LCGC	Doc Is In Slots - Schedule Available on Mobile App
10:00a-10:30a	Brea	k		Break		10:00am to 11:00am Positive Mindset with Lu	Doc Is In Slots - Schedule Available on Mobile App
10:30a-11:00a	mtFASII Pathway & Mouse Model Deborah Murdock, PhD Children's Hospital of Philadelphia Research Institute Philadelphia, PA		Family Planning Track	Ask the Mito Doc Panel Session Moderator: Margaret Moore Clinician Panelists - Austin Larson, MD, Eva Morava-Kozicz,MD, Jaya		10:00am to 11:00am Positive Mindset with Lu	Doc Is In Slots - Schedule Available on
11:00a-11:30a	Mito FASII in OXPHOS Biochemistry Sara Nowinski, PhD Van Andel Institute Grand Rapids, MI		 Reproductive Planning, Marni Falk, MD Financial Planning, Hampton Hodge, Planning Associate Ganesh, MD, Abdulrazak (Abdu) Alali, MD, Mary Kay Koenig, MD, Muge Gucsavas Calikoglu, MD, MPH, and Russell Saneto, DO, PhD 	Living with LHON Panel #2 Moderator: Jessica Knight Panelists: TBD	11:00am to 11:15am Break	Mobile App	
11:30a-12:00p	Small Molecule Therapeutics Ethan PerIstein, PhD Perlara PBC Berkeley, CA					11:30am to 12:30pm Yoga with Cristy	Doc Is In Slots - Schedule Available on Mobile App



TRACKS	Scientific Program	Clinical Program	Family Program Track 1	Family Program Track 2	LHON Program	Teen Sessions	Doc Is In (1:1 sessions)
12:00p-12:30	Non CME Abstract Presentation Kaylee Steiner, PhD Mitochondrial Trans-2-Enoyl Coenzyme A Reductase (Mecr) Regulates CD4+ T Cell Function Closing Remarks Douglas Wallace, PhD		 Family Planning Track Continues Housing Transitioning, Margaret Gaffney, Transition & Government Benefit Specialist Grief - Loss of a Loved One, Brooke Yates, Kindermourn 	Positive Mind Speaker: Ludi LHON Group Ph	vine Tandazo	11:30am to 12:30pm Yoga with Cristy	Doc Is In Slots - Schedule Available Mobile App
12:30p-2:00j	p 12:30p-2: Lunch - Stay and Netw		Special Breakou	1. Its with morning speakers to Continue	2:45p-2:00p Lunch the Conversation will be available to a	II Patient-Family Attendees	
2:00p-2:30		essions are NON CME	Family Planning Track Continues • Govt Programs (Medicaid waivers) - Jenny Hobbs and Stacy Taylor • Loss of Mobility, Lauren Falduti and Brooke Yates, Kindermourn • Positive Mindset for Parent/Caregivers, Ludivine Tandazo	1:30pm to 2:30pm Are you Out of Breath? Speaker: Zarazuela Zolkipli Cunningham, MD	2:00pm to 3:00pm Navigating Employment with LHON <i>Moderator: Jessica Loomer</i> <i>Panelists: TBD</i>	2:15pm-3:00pm Art Project	
2:30p-3:15	p						
3:15p-3:30	-			Break			
	p		Closing		LHON Closing Session Maria Johnson and Jessica Loomer		



Opm to 3:00pm Employment with LHON tor: Jessica Loomer anelists: TBD	2:15pm-3:00pm Art Project	
l Closing Session son and Jessica Loomer		