SPARK ME | The Future of ME/CFS Research

Symposium for Promoting the Advancement of Research Knowledge in ME/CFS Early Career Researchers

December 11, 2023

Clinical Center (Building 10), FAES Classrooms 6 & 7 and Terrace, NIH Campus, Bethesda, MD

9:00 – 9:05 am	Welcome – Vicky Whittemore, PhD, NINDS
9:05 – 9:15 am	Introduction and Welcome – Walter Koroshetz, MD – Director, NINDS
9:15 – 10:00 am	Building Your ME/CFS Research Career Moderator: Jessica Maya, PhD – Cornell University • Perspective from Brent Williams, PhD – Columbia University • Perspective from Xiang Xu, PhD – Mt. Sinai
10:00 – 10:30 am	Overview of Grant Writing for Young/Early Career Investigators Moderator: Brent Williams, PhD • Vicky Whittemore, PhD – NIH/NINDS • Joe Breen, PhD – NIH/NIAID
10:30 – 10:45 am	Break
10:45 – 11:30 am	Panel of ME/CFS Non- Profit Partners Moderator: Agostina Casamento-Moran, PhD – Johns Hopkins University • H. Timothy Hsiao, PhD – Solve ME/CFS Initiative • Jamie Seltzer – #MEAction • Richard Simpson – Invest in ME Research • Linda Tannenbaum – Open Medicine Foundation
11:30 – 12:15 pm	Networking Breakout Groups
12:15 – 1:15 pm	Lunch (Sponsored by Nova Southeastern University) and Poster Session
1:15 – 3:00 pm	Short Research Presentations by Young/Early Career Investigator Participants Moderator: Chloe Jones, University of Alabama, Birmingham
1:15 – 1:30 pm	Developing a mouse model of myalgic encephalomyelitis Madeleine Uys – North-West University (Presenting via Zoom)
1:30 – 1:45 pm	Antibody Reactivity to the Intestinal Microbiome in Severe Myalgic Encephalomyelitis Patients Katharine Seton, PhD – Quadrum Research Institute (Presenting via Zoom)

1:45 – 2:00 pm	Identification of biomarkers for ME/CFS from metabolites and proteins in blood Katie Glass, PhD – Cornell University
2:00 – 2:15 pm	Effect of Physical Exertion on CNS Oxidative Stress and Metabolism in ME/CFS Nicholas Hampilos, MD – Weill Cornell Medicine
2: 15 – 2:30 pm	Epigenetic Reprogramming of CD8+ T cell Populations Drives Exhaustion in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) David Iu – Cornell University
2:30 – 2:45 pm	UpTime: A Digital Biomarker for ME/CFS Bella Rond – Bateman Horne Center
2:45 – 3:00 pm	ME/CFS Pathophysiology Investigated by Invasive Cardiopulmonary Exercise Test (iCPET) and Autonomic Function Testing Johanna Woodward Squires – Brigham & Women's Hospital
3:00 – 3:15 pm	Break
3:15 – 4:30 pm	Short Research Presentations by Young/Early Career Investigator Participants Moderator: Katie Glass, PhD – Cornell University
3:15 – 3:30 pm	Augmentation of Anaerobic Pentose Phosphate Pathway Triggers Tetrahydrobiopterin Biosynthesis in Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome (ME/CFS) patients with Orthostatic Intolerance: A Pilot Study Sarojini Bulbule – Simmaron Research Institute
3:30 – 3:45 pm	Tracking Peripheral Immune Cell Infiltration of the Brain in ME/CFS Chloe Jones – University of Alabama, Birmingham
3:45 – 4:00 pm	Evidence for the contribution of hemolysis to post-exertional malaise pathophysiology in myalgic encephalomyelitis Atefah Moezzi – University of Montreal (Presenting via Zoom)
4:00 – 4:15 pm	Exercise capacity in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) treated with long-term pyridostigmine Sarra Maan Al-Zayer – Brigham & Women's Hospital
4:15 – 4:30 pm	Single-cell transcriptomics of ME/CFS circulating immune system before and after symptom provocation Tien Luyen Vu – Cornell University
4:30 – 5:00 pm	Young/Early Career Investigator Network – discussion of ways the young investigators can network, collaborate across labs, countries and continents Co-Moderators: Agostina Casamento-Moran, PhD – Johns Hopkins University and Karen Karen Giménez-Orenga, Universidad Católica de Valencia San Vicente Mártir/EMERG
5:00 pm	Adjourn

SPARK ME Workshop and ME/CFS Conference Poster Presentations

1. Exercise capacity in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) treated with long-term pyridostigmine
   Sarra Al-Zayer; Brigham & Women's Hospital
2. Circulating FGF-21 levels are associated with Myalgic Encephalomyelitis disease severity
   Ghazaleh Azimi; University of Montreal
3. Role of soluble sphingomyelin phosphodiesterase acid-like 3B (SMPDL3B) in myalgic encephalomyelitis
   Rostami-Afshari Bita; University of Montreal
4. Using [11C]PBR28 positron emission tomography to assess neuroinflammation in ME/CFS and PASC
   Hannah Bues; Massachusetts General Hospital
5. Augmentation of Anaerobic Pentose Phosphate Pathway Triggers Tetrahydrobiopterin Biosynthesis in Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome (ME/CFS) patients with Orthostatic Intolerance: A Pilot Study
   Sarojini Bulbule; Simmaron Research Institute
6. Understanding the Behavioral Features of Fatigue in Long COVID
   Agostina Casamento-Moran; Johns Hopkins University
7. Comprehensive plasma metabolomic analysis in ME/CFS with exercise tolerance test
   Xiaoyu (Jason) Che; Columbia University
8. Participant Recruitment for ME/CFS Research
   Luke Collings; Bateman Horne Center
9. Comparison of T-cell Receptor Diversity of People with Myalgic Encephalomyelitis versus Controls
   Joshua Dibble; Harvard University
10. Cell-free RNA signatures of myalgic encephalomyelitis/ chronic fatigue syndrome
    Anne Gardella; Cornell University
11. Proteomic adjustments following induction of post-exertional malaise
    Arnaud Germain, Cornell University
12. Extracellular vesicle protein cargo in ME/CFS cases and controls following maximal exercise
    Ludovic Giloteaux; Cornell University
13. HERV activation segregates ME/CFS from fibromyalgia and patients fulfilling both clinical criteria
    Karen Giménez-Orenga, Universidad Católica de Valencia San Vicente Mártir
14. Identification of four clinical subgroups of ME/CFS patients using model-based clustering
    Katherine (Katie) Glass, Cornell University
15. Epigenetic Reprogramming of CD8+ T cell Populations Drives Exhaustion in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS)
    David Iu, Cornell University
16. Post-Exertional Malaise Provocation Induces Different Profiles of Cognitive Impairment in ME/CFS
    Corrine Leveau; University of Montreal
17. Blood brain barrier permeability is increased in ME/CFS: an MRI study
    Sheryl Liu, Mt. Sinai
18. Tracking Peripheral Immune Cell Infiltration of the Brain in ME/CFS
    Chloe Jones; University of Alabama, Birmingham
19. Investigating T cell populations for immune cell dysfunction in ME/CFS
    Jessica Maya; Cornell University
20. Investigating the role of iNOS in endothelial dysfunction in ME/CFS
    Claire McNally; Cornell University
21. Predicting Trajectories and Long-Term Sequelae in Long COVID: An Exploratory Pilot Study
    Diana Petre; University of Montreal

22. Impact of age and sex on microbial susceptibility and immune activation in ME/CFS
    Amit Ranjan; Columbia University
23. UpTime: A Digital Biomarker for ME/CFS
    Bella Rond; Bateman Horne Center
24. Objective sleep and pupillometry measurements in participants with ME/CFS and controls
    Deena Saadi; Massachusetts General Hospital
25. The Role of Irisin in the Pathogenesis of Myalgic Encephalomyelitis
    Bernard Souma; University of Montreal
26. High circulating miR-29a-3p and miR-150-5p levels are associated with vascular instabilities in myalgic encephalomyelitis
    Yasaman Vahdani, University of Montreal
27. Single-cell transcriptomics of ME/CFS circulating immune system before and after symptom provocation
    Tien Vu; Cornell University
28. ME/CFS Pathophysiology Investigated by Invasive Cardiopulmonary Exercise Test (iCPET) and Autonomic Function Testing
    Johanna Woodward Squires; Brigham & Women's Hospital
29. 7T MRI showed hippocampal Subfield Volume differences in ME/CFS and Long COVID
    Kiran Thapaliya; Griffith University
30. A Software for Integrating Multiple Methylation Studies: Feature Selection and Classification
    Tao Xu; Texas Tech University
31. Structural and Oxygen Metabolic Magnetic Resonance Imaging of long-COVID and ME/CFS
    Xiang Xu; Mt. Sinai