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4TH JHMI MASS SPECTROMETRY DAY FOR BASIC AND CLINICAL RESEARCH

MAY 30TH, 2025, 9 AM – 5:30 PM

JOHNS HOPKINS SCHOOL OF MEDICINE, E. BALTIMORE CAMPUS – [MOUNTCASTLE AUDITORIUM, PTCB](#)

Session I

“Structural Proteomics” Dr. Stephen Fried, Chair

- 9:00-9:05 am Welcome (Dr. Svetlana Lutsenko)
- 9:05-9:25 am Dr. Francis O’Reilly (NIH, CDI) – Architecture of protein complexes in situ by structural proteomics
- 9:30-9:50 am Dr. Mike Fitzgerald (Duke University) – Characterization disease phenotypes using mass spectrometry-based methods for protein folding stability profiling
- 9:55-10:15 am Dr. Hugo Amedei (Johns Hopkins) – Serially integrated and mutually validated De Novo protein networks (SIMUV) by crosslinking mass spectrometry and complexome profiling
- 20 min Coffee Break

Session II

“Mass Spectrometry in Cancer Biology and Drug Development” Dr. Jan Beumer, Chair

- 10:35-10:55 am Dr. Thomas P. Conrads (DOD) – TBD
- 11:00-11:20 am Dr. Beth Kelly (Johns Hopkins) – Sulfur metabolism controls T cell immunity
- 11:25-11:45 am Dr. Matt MacDonald (University of Pittsburgh) – Synaptic Proteome alterations in human cortex
- 11:45-1:30pm Lunch Poster Session (All labs using mass spectrometry are encouraged to participate)

Session III

“New Mass Spectrometry Instrumentation/ Method Development” Dr. Kristine Glunde, Chair

- 1:30-1:35 pm Thank you to sponsors (Dr. Svetlana Lutsenko)
- 1:40-2:00 pm Dr. Asher Newsome (Smithsonian Institute) – Hand held probe with position sensor feedback for real-time minimally-invasion, high resolution analysis of complex objects in situ
- 2:05-2:25 pm Dr. Bindesh Shethra (Waters) – Advancements in desorption electrospray ionization (DESI) imaging from tissues towards cells
- 2:30-2:50 pm Dr. Klaus Dreisewerd (University of Münster) – MALDI-2 and correlative t-MALDI-2 mass spectrometry imaging molecular insights into tissues and cell cultures at the micrometer scale
- 20 min Coffee Break

Session IV

“Mass Spectrometry in Cardiology” Dr. Brian Foster, Chair

- 3:10-3:30 pm Dr. Jennifer Van Eyk (Cedars-Sinai) – Proteomics: solving clinical challenges in diseases
- 3:35-3:55 pm Dr. Ying Ge (University of Wisconsin, Madison) – Unveiling cardiovascular proteoform through proteomics for precision medicine
- 4:00-4:20 pm Dr. Mark Kohr (JHSPH) – Protecting the heart from ischemic injury: what does SNO have to do with it?
- 4:25-4:45 pm Keynote Lecture: Dr. John Yates (Scripps) – Unraveling the effects of a single mutation on the Cystic Fibrosis ion transport regulator’s protein interactions, PTMs, and structure
- 4:45-5:30 pm Reception

Hopkins Organizers: Dr. Jan Beumer, Dr. Brian Foster, Dr. Stephen Fried, Dr. Kristine Glunde, Dr. Svetlana Lutsenko, Dr. Chan-Hyun Na, Dr. Ana Rule and Felicia McGowan