**Advanced Mass Spectrometry Imaging and Proteomics**

**for Basic and Clinical Research**

**June 2nd, 2022 9 am – 5 pm**

Johns Hopkins School of Medicine, E. Baltimore Campus – [Mountcastle Auditorium, P](https://www.google.com/maps/@39.2990179,-76.5905487,18.58z)[CTB](https://www.google.com/maps/@39.2990179,-76.5905487,18.58z)

***Session I* Molecular Tissue Imaging**

**9:00-9:05 am** Welcome and introduction of the keynote speaker

**9:05-9:50 am** **Keynote Lecture: Dr. Ron M.A. Heeren** (M4I, Maastricht University) *– Molecules, cells and tissues in context: translational imaging mass spectrometry*

**10:00-10:25 am Dr. Erin Seeley** (University of Texas, Austin) *– Mass spectrometry imaging: enabling a deeper view of tissue histology*

*15 min Coffee Break*

**10:45-11:10 am** **Dr. Alison Scott** (University of Maryland, Baltimore) *– Mapping the host-pathogen interface in pulmonary infection models to identify therapeutic targets*

# 11:15-11:40 am Dr. Peggi Angel (Medical University of South Carolina) *– Deciphering the extracellular matrix proteome in the era of single cell ‘omics*

**11:45-12:05 am Dr. Caitlin Tressler** (Johns Hopkins) *– Mass spectrometry imaging of postmortem COVID patient lungs and fluids*

**12:10-1:30 pm Lunch Poster Session** (All labs using mass spectrometry are encouraged to participate), box lunch for registered participants

***Session II* New Developments in Omics of Proteins, Lipids and Metabolites**

**1:30-1:35 pm** Thank you to sponsors and introduction of the keynote speaker

**1:35-2:20 pm Keynote Lecture*:* Dr. Ryan T. Kelly** (Brigham Young University) – *In-depth single-cell and spatial proteomics*

**2:25-2:50 pm** **Dr. Peter Nemes** (University of Maryland) *– Live single-cell MS enables discoveries in the vertebrate (frog) embryo and the (mouse) brain*

**2:55-3:20 pm Dr. Marian Kalocsay** (Harvard Medical School) *– Proximity proteomics in systems pharmacology*

*15 min Coffee Break*

**3:40-4:05 pm Dr. Norman Haughey** (Johns Hopkins) – *Proteomics interrogation of extracellular vesicles identifies mechanisms for spreading neurodegeneration and Alzheimer’s*

**4.10-4:25 pm Dr. Brian Foster** (Johns Hopkins) – *Targeted quantification of cytokines and retinoids metabolizing enzymes using internal standard triggered parallel reaction monitoring (SureQuantTM)*

**4.30-4:45 pm Dr. Ben Orsburn** (Johns Hopkins) – *Single cell proteomics reveals cell to cell heterogeneity in post-translational modifications and drug response*

**4.50-5.00 pm** **Closing Remarks** (Cole, Glunde, Lutsenko)

**Hopkins Organizers:** Dr. Robert Cole, Dr. Kristine Glunde, Dr. Svetlana Lutsenko, Felicia McGowan