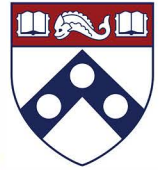


## 22nd Annual NIH Center for Molecular Studies in Digestive and Liver Diseases Symposium

### “High Dimensional Analytics in Digestive and Liver Disease: From Single Cell to the Whole Human”



Monday, October 31, 2022 | 8:00 AM – 2:30 PM  
Smilow Rubenstein Auditorium & Commons  
[To Register Click Here](#)

The rapid expansion of technologies designed to acquire and analyze high dimensional molecular as well as phenotypic information has had a transformative impact on our understanding of human biology based on research ranging from the single cell and tissue level to population scale. The presentations in this symposium are designed to demonstrate how these technologies can be used to provide a more systems wide view of biology related to intestinal and liver development and disease.

#### 8:05am – 9:55am – Session 1 – Single cell level analyses

**Moderator: Gary D. Wu, MD**

**Keynote 1:** Pamela Hoodless, PhD, University of British Columbia, Canada - “Single-Cell Transcriptomics Reveals Early Emergence of Liver Parenchymal and Nonparenchymal Cell Lineages” \*

- Sydney Shaffer, MD, PhD, University of Pennsylvania - “Unraveling single-cell clonal dynamics in Barrett's esophagus”
- Chris Lengner, PhD, University of Pennsylvania – “Single cell lineage tracing”
- Kathryn Hamilton, PhD, University of Pennsylvania – “Crohn's Disease Gut Cell Atlas: Pediatric to Adult Continuum”

#### 9:55am – 10:15am – Break

#### 10:15am – 11:40am – Session 2 – Tissue spatial level analyses

**Moderator: Hongzhe Li, PhD**

**Keynote 2:** Boone Prentice, PhD, University of Florida | Joseph Zackular, PhD, University of Pennsylvania – “Spatial metabolomics in the gut enabled by imaging mass spectrometry”

- Kyong-Mi Chang, MD, University of Pennsylvania – “2-D Mass Cytometry Approach to Study Viral Immune Pathogenesis in the Liver”
- Mingyao Li, PhD, University of Pennsylvania – “Statistical approaches to model high dimensional datasets with spatial resolution”

#### 11:40am – 12:00pm – Flash Talks from Trainees

#### 12:00pm – 1:00pm – Lunch and Posters

#### 1:00pm – 2:25pm – Session 3 – Human population level analyses

**Moderator: Nicole Belle, MD, PhD**

**Keynote 3:** Judy Cho, MD, Icahn School of Medicine at Mount Sinai – “Genetics & Genomics of IBD: inference across people, cells and genes”

- Marylyn Ritchie, PhD, University of Pennsylvania – “Using the electronic health record to advance translational research”
- Walter Witschey, PhD, University of Pennsylvania – “Artificial Intelligence and multimodal imaging derived phenotypes for digestive and liver disease”

#### 2:25pm – 2:30pm – Closing Comments