2026 ASMS Imaging Working Group Workshop Organization

Location: Workshop held Wednesday, June 3th, 5:45pm-7:00pm in Room 6CF at the ASMS Annual Conference in San Diego, CA

Topic: MS Imaging: Multiplexing and Multimodal Integration for Deeper Insight

Moderators: Stefania Maneta Stavrakaki, Angela R.S. Kruse, Katerina V. Djambazova

Session Description and Goals: Mass spectrometry imaging encompasses a wide range of technologies, amenable to integration with other tissue interrogation workflows, such as microscopy (histology, immunohistochemistry), transcriptomics, spectroscopy, single-cell analyses, and bulk omics. Combining MSI with other modalities can produce uniquely rich datasets, offering a deeper and more comprehensive insight into biological processes. However, there are still key challenges in workflow development, integration of datasets spanning spatial resolutions, data mining, and interpretation. In this workshop we will cover established and new modalities integrated with MSI to provide orthological measurements, strategies for data integration/mining, data interpretation, and translational work. With these topics in mind, we are interested in discussing challenges and opportunities that arise when developing multimodal workflows. Here, presenters are encouraged to share both positive, negative results, and failed experiments to encourage lively discussions among the workshop presenters and the audience.

Session Organization: Similar to previous years, this workshop will comprise two parts. First, multiple invited speakers will briefly describe their methodologies in a series of flash talks. Second, the speakers will serve as a panel for a general discussion with the audience on the challenges that exist within the field, where they will identify opportunities and discuss future strategies. The audience is encouraged to come prepared with questions and ideas. An online tool will be used to ensure direct participation of the audience.

Speakers & Panelists:

- Erin Seeley (MD Anderson)
- Nico Verbeeck (Aspect Analytics)
- Trevor Godfrey (Eberlin group, Baylor College)
- Lukasz Migas (TU Delft)
- Julia Laskin (Purdue University)

Discussion: The moderators gave a brief welcome and overview presentation. The five speakers then gave short (7-10 min) on-time presentations on the topic, providing a thorough overview for discussion. During the panel discussion, the audience showed high interest and

contributed with many and diverse questions to the panel. Key discussion points included integration of datasets across pixel sizes, the use of open access compared to paid software, and strategies to better collaborate across sites to avoid duplication of efforts, quality control and assessment of co-registration accuracy. The panel respondents were clear and explanatory, demonstrating technical expertise in their research areas. Broadly, the adoption of multimodal workflows, options for sample preparation, and software approaches for data integration have significantly increased over the past several years. Attendee feedback was positive overall, with primary suggestions being more time for discussion and audience engagement, and integration of new formats and fresh perspectives on this topic. These points can be used to inform future workshops.

Participants: Room attendance was estimated at ~125 attendees.