



# MULTIMODAL IMAGING MASS SPECTROMETRY

## Advanced Technologies for Highly Multiplexed Molecular Imaging

PI: Jeff Spraggins, Ph.D.

Departments of Cell & Developmental Biology, Biochemistry, and Chemistry  
Mass Spectrometry Research Center  
Current Funding: U54EY032442, U54DK120058, R01AI145992, R01AI138581, NSF1828299

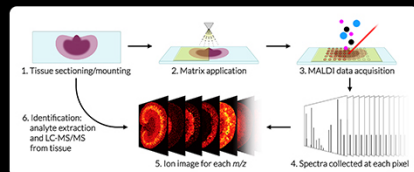
**RESEARCH FOCUS:** Development of next-generation imaging mass spectrometry technologies to elucidate the molecular basis of health and disease.

- Developing novel MS technologies that maximize sensitivity, specificity, and spatial resolution for imaging applications.
- Combining imaging MS with a variety of other biomedical imaging technologies to provide a systems biology view of tissue at cellular resolution.

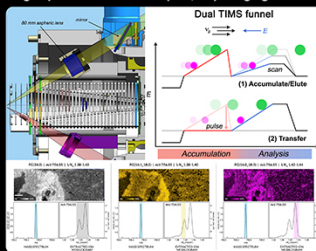
**CURRENT & FUTURE RESEARCH PROJECTS:** IMS Instrumentation, Spatial Proteomics, Spatial Transcriptomics, MxIF Microscopy, Ion Mobility IMS, Data Integration & Mining, Host-Pathogen Interactions, Gut Microbiome, Osteomyelitis, Human Molecular Tissue Atlases, Diabetes, Kidney Disease

### TECHNOLOGY DEVELOPMENT

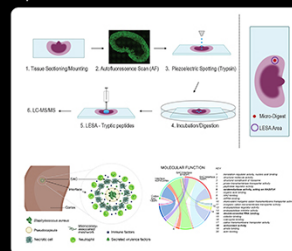
#### Imaging Mass Spectrometry



#### High Spatial Resolution & Specificity Imaging



#### Spatial Proteomics



#### MxIF & Spatial Transcriptomics

