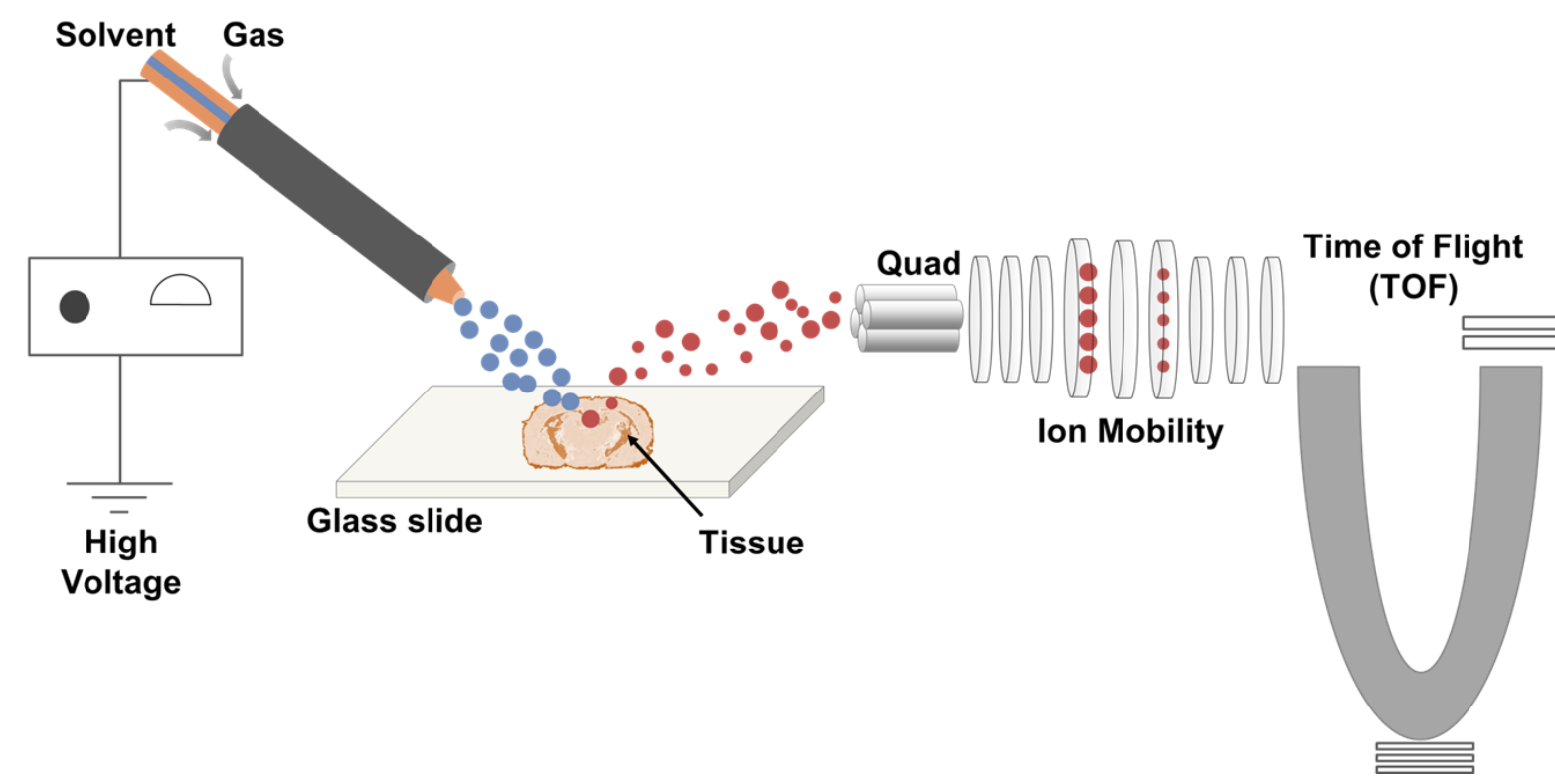


IMAGING MASS SPECTROMETRY USING SYNAPT XS

Bindesh Shrestha and Roy Martin
Waters Corporation, Beverly, MA, USA

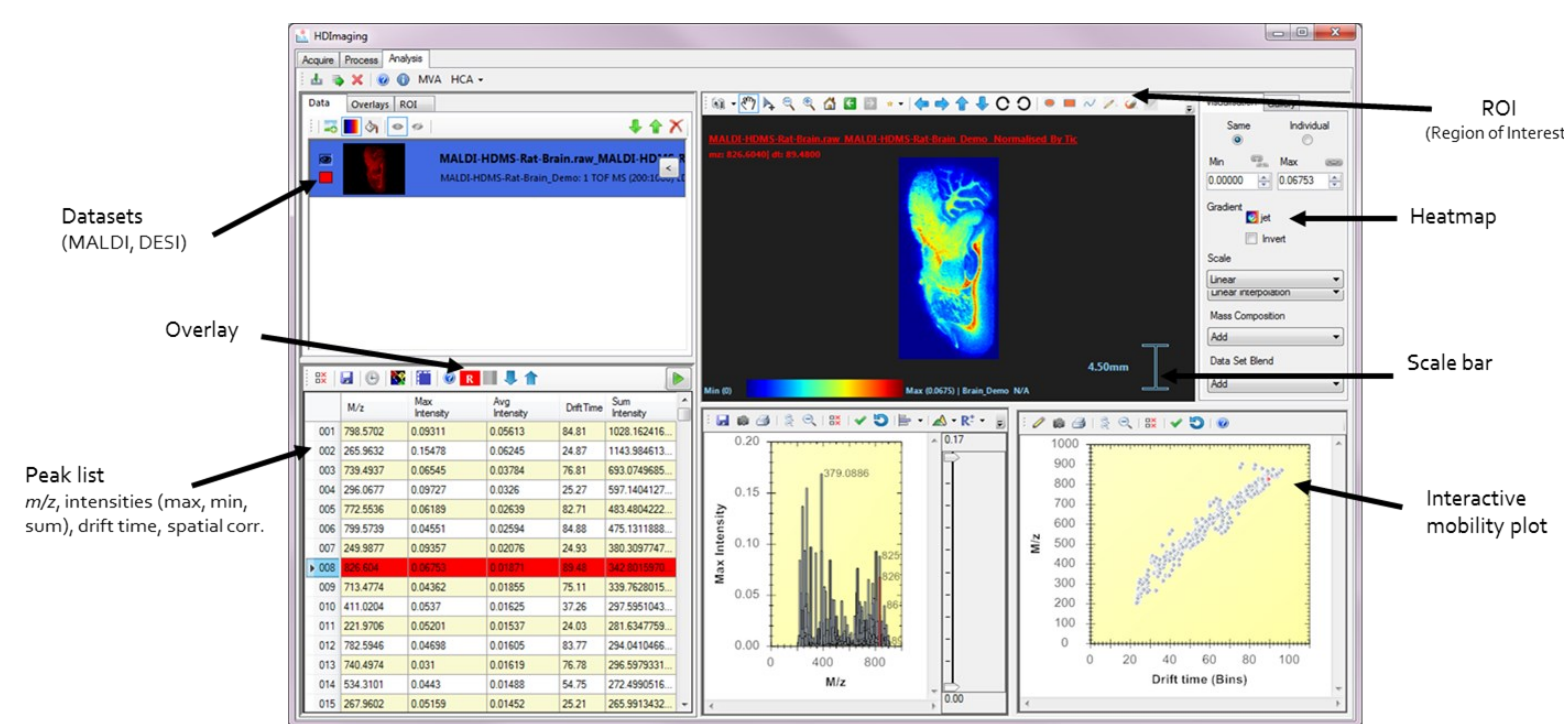
INTRODUCTION



DESI IMAGING

- ◆ Minimal sample preparation
- ◆ Excels at lipid and small molecule imaging
- ◆ Complementary molecular profile to MALDI
- ◆ Ambient ionization source

INFORMATICS



HDI IMAGING SOFTWARE

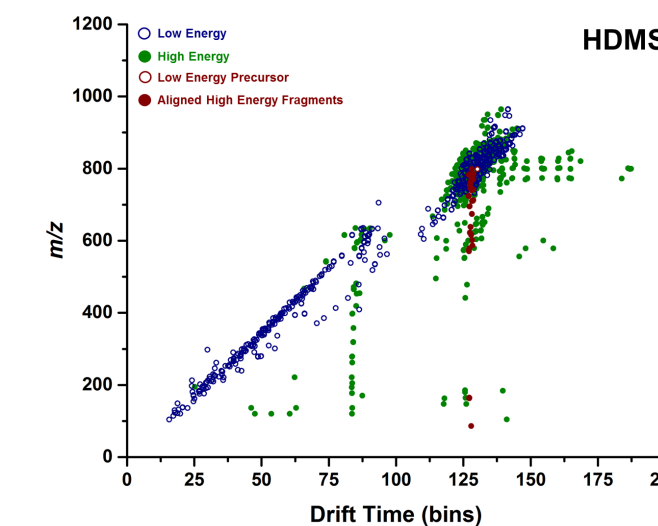
- ◆ Intuitive, integrated software suite covering the full MS imaging workflow
- ◆ Makes effective use of both mass spectral and ion mobility data
- ◆ Compatible with SONAR and HDMS^E workflows
- ◆ Optical image overlay to merge molecular and morphological info

DESI-MS SYSTEM



MULTIDIMENSIONAL IMAGING

- ◆ SONAR (scanning quad isolation) DIA
- ◆ HDMS^E (ion mobility isolation) DIA
- ◆ collision cross-section (CCS) measurement
- ◆ Matrix and charge-state ion separation



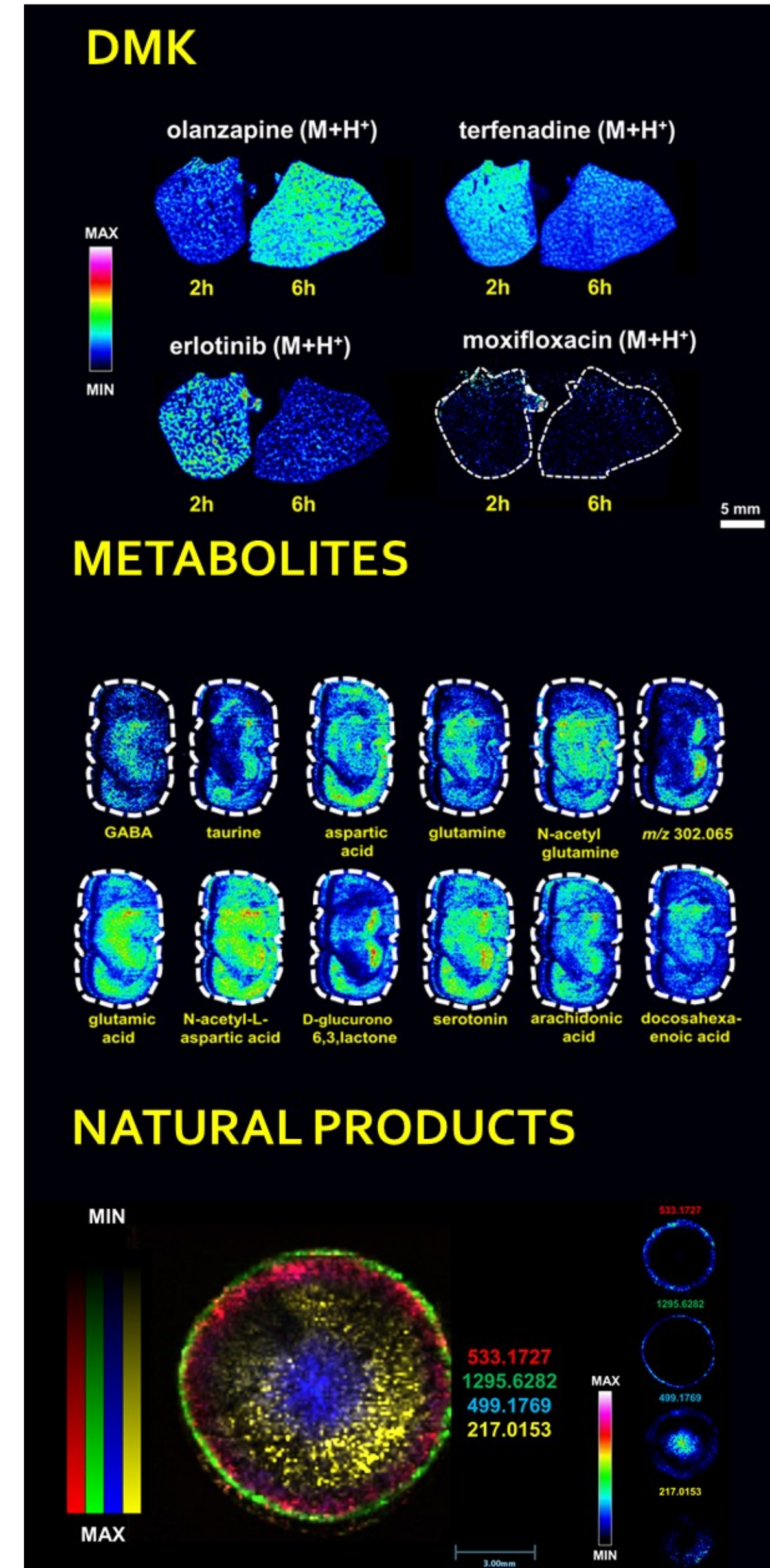
SYNAPT XS

- ◆ Enhanced selectivity with unique ion mobility separation
- ◆ Proven robustness and reliability
- ◆ Superior performance improvement for low molecular weight compounds
- ◆ Highly efficient fragmentation by low energy collision induced dissociation (CID)
- ◆ Performance unaffected by variations in sample topography

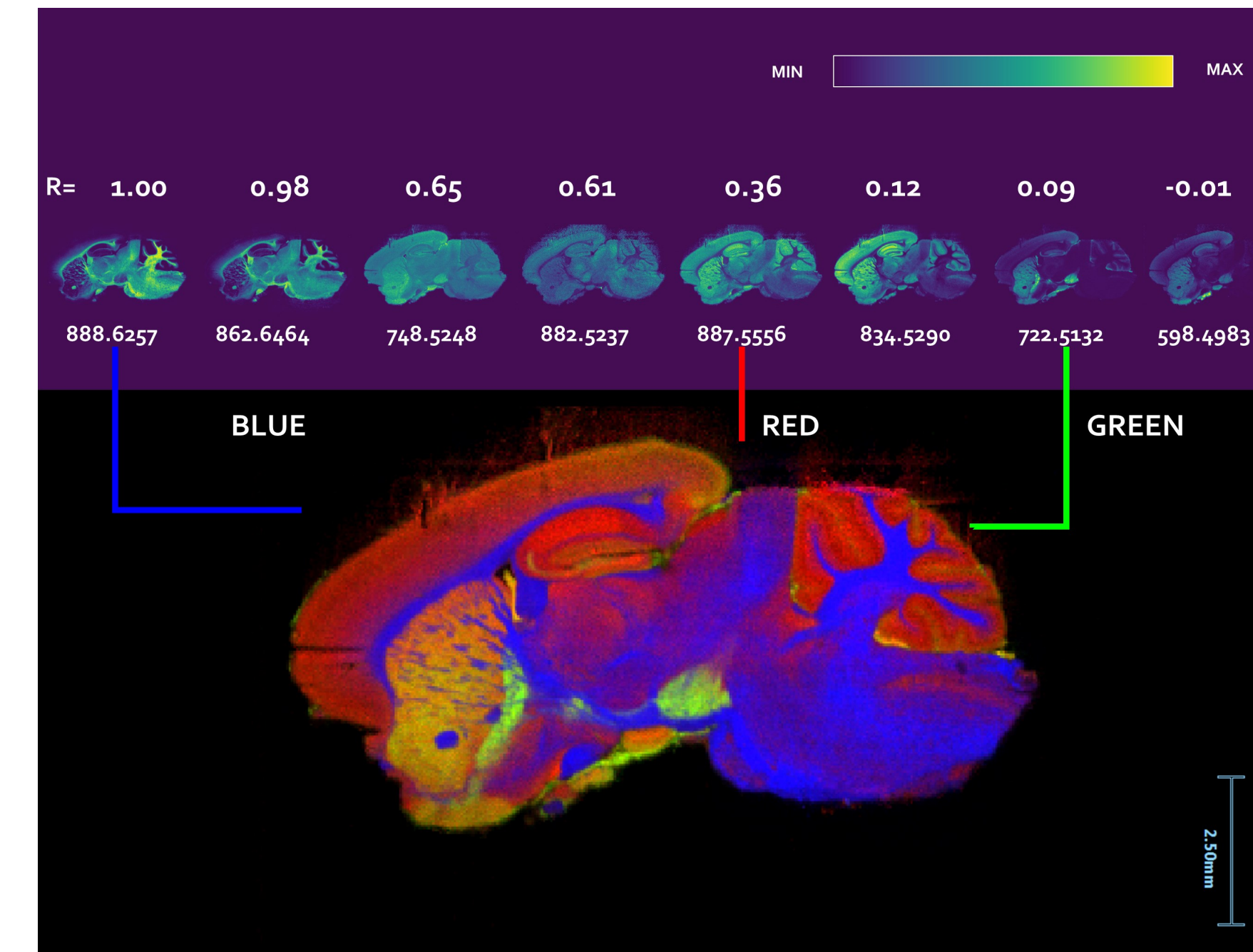
DESI & MALDI COMPLEMENTARY MOLECULAR IMAGING

- ◆ Discover, identify, and map a broad range of molecules using one system
- ◆ Obtain comprehensive information than any one imaging technique
- ◆ Extract the maximum information from minimal sample prep
- ◆ Definitively and objectively interpret molecular distribution information
- ◆ Flexibility to adapt to changing priorities and future needs
- ◆ Single vendor for total system support

DESI-MS IMAGES



DESI IMAGE OVERLAY



SPATIAL CORRELATION

