



BOISE STATE UNIVERSITY

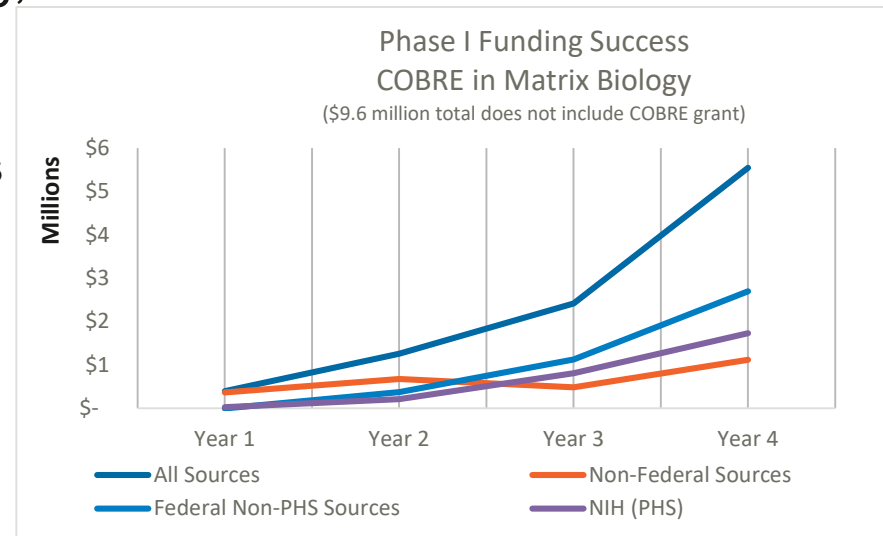
# Mass Spectrometry Core Facility at Boise State University

Matthew Turner, PhD



## Biomolecular Research Center (BRC)

- Collaborative research center
- Summer 2013 BRC opened facility
  - Facilities
    - Imaging core
    - Histology core
    - Mass Spectrometry core
    - Protein core
- Provide instrument analysis, training, seminars, workshops, statistical assistance, networking
- Establish a critical mass of investigators
- Increase research funding
- Collaboration:
  - Across the campus
  - Nearby institutions
  - Institutions outside of Idaho





## ➤ **Grant Support**

- NIH COBRE in Matrix Biology, Idaho INBRE III, NASA, NIH Mountain West CTRIN, ITHS, Murdock Foundation, NSF MRI

## ➤ **Support continued growth of investigators sharing the Matrix Biology thematic focus**

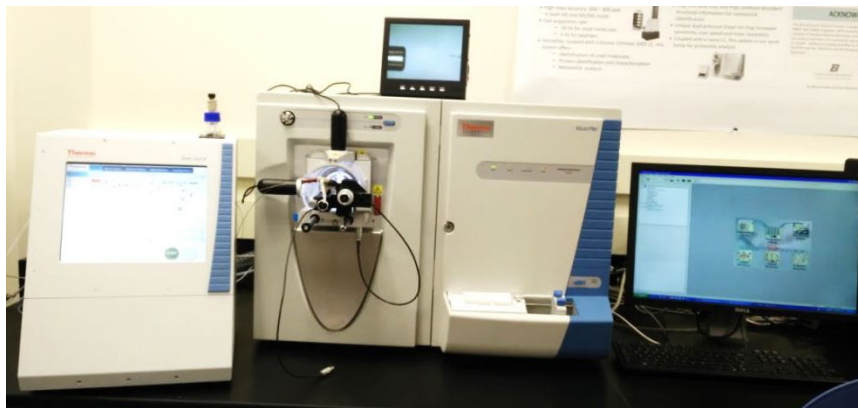
- Mechanisms for matrix-dependent BBB dysfunction
- Characterization and Simulation of Failure Mechanisms in Soft Fibrous Tissue
- Structure-function relationship of LARP6-mediated collagen mRNA transport

## ➤ **Personnel**

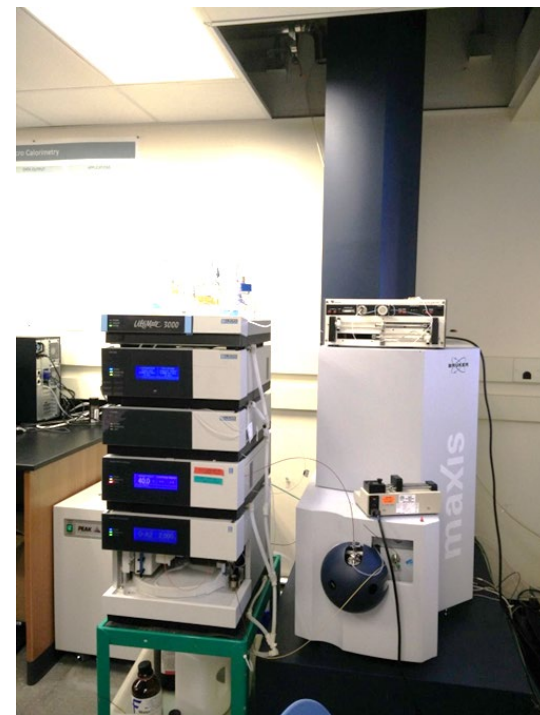
- Core director/manager
- Postdoctoral Fellows
- Graduate student assistant

## Mass spectrometry facility

- Metabolomics
- Proteomics
  - Protein identification
  - Quantitative proteomics
  - Post-translational modifications
- Small molecule analysis
- Molecular tissue imaging



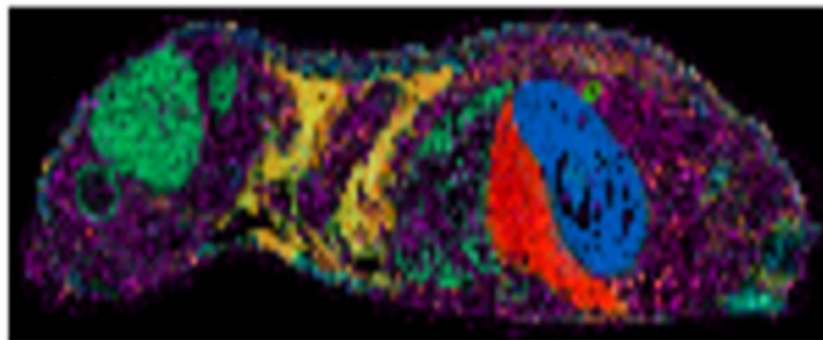
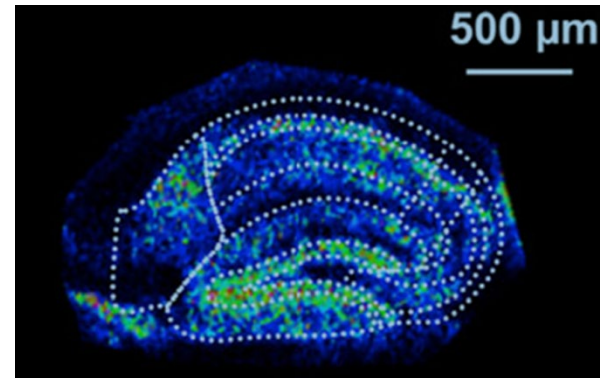
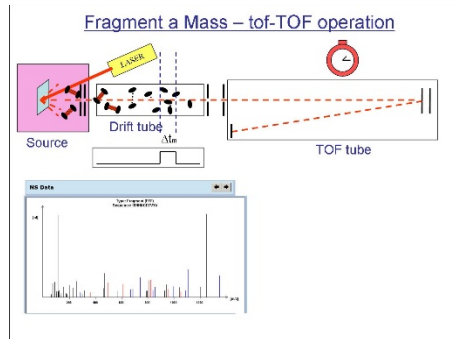
Thermo Scientific Velos Pro Linear Ion Trap Mass Spectrometer



Bruker Daltonics maXis Q-TOF Mass Spectrometer

# Mass spectrometry facility

- Molecular tissue imaging



- $m/z$  691.04
- $m/z$  770.53
- $m/z$  787.63
- $m/z$  810.60
- $m/z$  822.51
- $m/z$  844.51

Bruker Autoflex MALDI TOF/TOF