Tissue Imaging, Metabolomics and Proteomics Laboratory (TIMPL)

Institute of Biological Chemistry
College of Agricultural, Human and Natural Resource Sciences,
Washington State University

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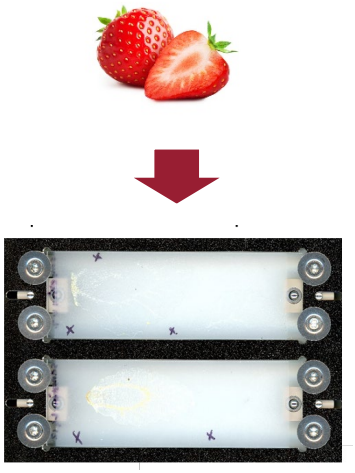
Our Mission

- To PROVIDE high quality analytical support to research projects using contemporary mass spectrometry techniques (GC-TOFMS, LC-MS/MS and MALDI-MS analyses).
- To DEVELOP advanced methods and scientific applications – research rather than routine.
- To provide TRAINING support for students, post-docs and other researchers

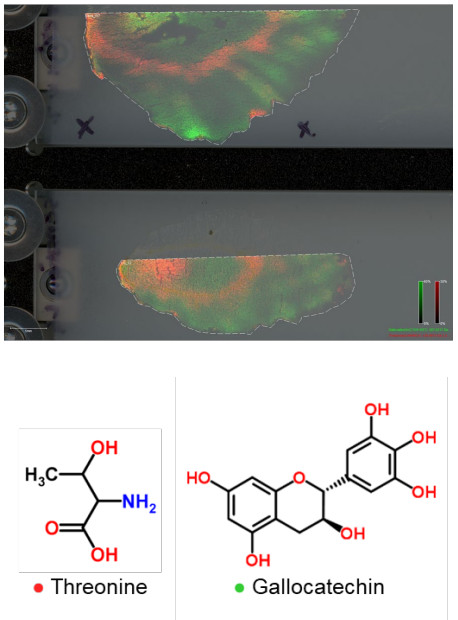
Partnerships across the WSU campuses and abroad, working on all kinds of organisms and projects (animals, plants, bacteria, insects, algae, fungi, etc.).

Analytical Services of TIMPL

- Imaging Mass Spectrometry
  - Measure localization of bio-molecules in tissues (tissue resolution)
  - Animals, plants, microbes, soil/root interface, biofilms/tissue interface
  - Proteins, peptides, lipids, drugs and metabolites, etc.

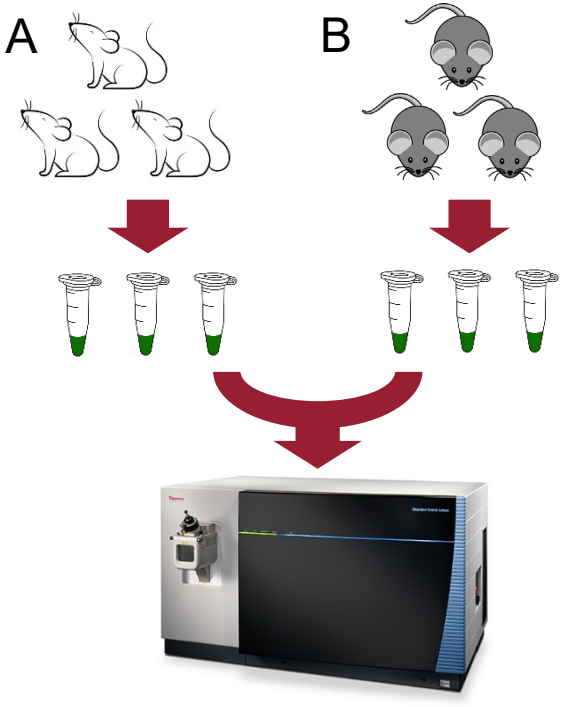


Bruker SolariX FT-ICRMS,
Ultrahigh resolution for
small molecules, lipids, peptides and
proteins

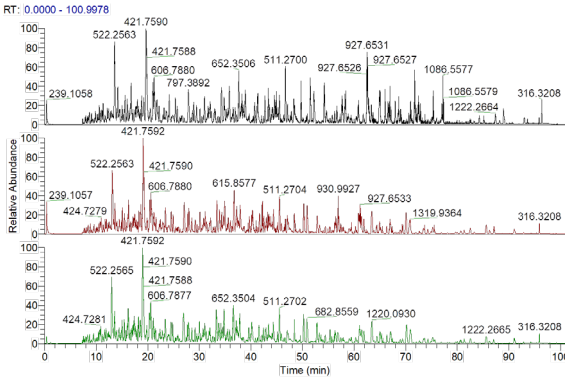


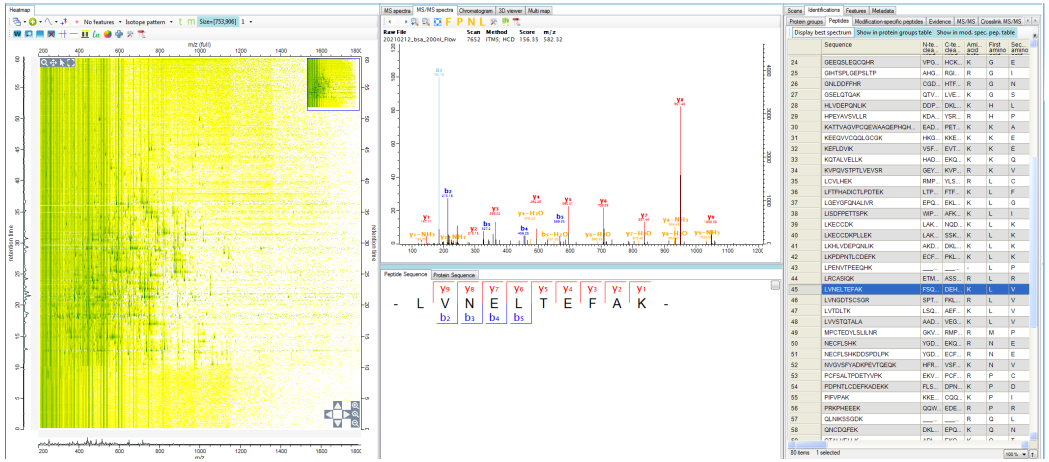
Analytical Services of TIMPL

- Proteomics
  - Targeted protein analysis, top-down proteomics, shotgun (bottom-up) proteomics, LC-MS/MS, mudPIT, post-translational modification identification and quantitation, etc.



Thermo Orbitrap Fusion





Analytical Services of TIMPL

- Metabolomics
  - Primary metabolite analysis, drug metabolism, secondary/specialized metabolites, etc.

Waters Synapt G2-S
- Metabolomics
- Lipidomics
- Plant hormone analysis

LECO Pegasus IV GCxGC-TOFMS
- Volatile compound analysis

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