



METABOLOMICS CORE

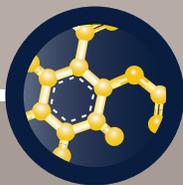
UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

The Metabolomics Core measures concentrations of small molecules in biological samples on a recharge basis. We strive to provide GLP-quality analytical services at competitive prices, and regularly customize assays to fit our clients' needs.

Services include initial consultation, method development, data collection, interpretation, and presentation. Core competencies include both targeted assays for many analyte classes as well as untargeted assays to evaluate the entire metabolome in biofluids and tissues, measurement of flux through various pathways using ^{13}C -isotopomer analyses, and structural identification of isolated unknowns and potential biomarkers.

Services include:

- **Pre-award support:** Assist researchers with analytical needs, experimental design, and budgeting for grant proposals.
- **Targeted Assays:** Measure multiple analytes in biofluids, tissues, cultured cells, or stools
 - *amino acids*
 - *acyl-carnitines, acyl-CoAs, nucleotide or nucleoside pools*
 - *glycolysis/TCA/nucleotides involved in central metabolism*
 - *fatty acids, phospholipids, ceramides, steroids, bile acids, or other lipid classes*
 - *other assays developed upon request for any analyte*
- **Untargeted Assays:** Develop analytical methods and advanced statistical analyses to evaluate the entire metabolome in biological samples. State of the art LC and GC chromatography coupled to mass spectrometers delivering high mass resolution and accuracy are used to survey the entire metabolome to generate novel hypotheses, provide a deeper understanding of physiology, and indicate how organisms adapt to stress.
- **Cellular Bioenergetics:** Measure aerobic respiration and glycolysis in cultured cells using a Seahorse XCF instrument
- **Statistical and Bioinformatics Analysis:** Perform statistical analyses and provide tools to accurately quantify relative levels of metabolites for untargeted metabolomics. Provide data visualization, pathway tools, and services to interpret and integrate metabolomics data

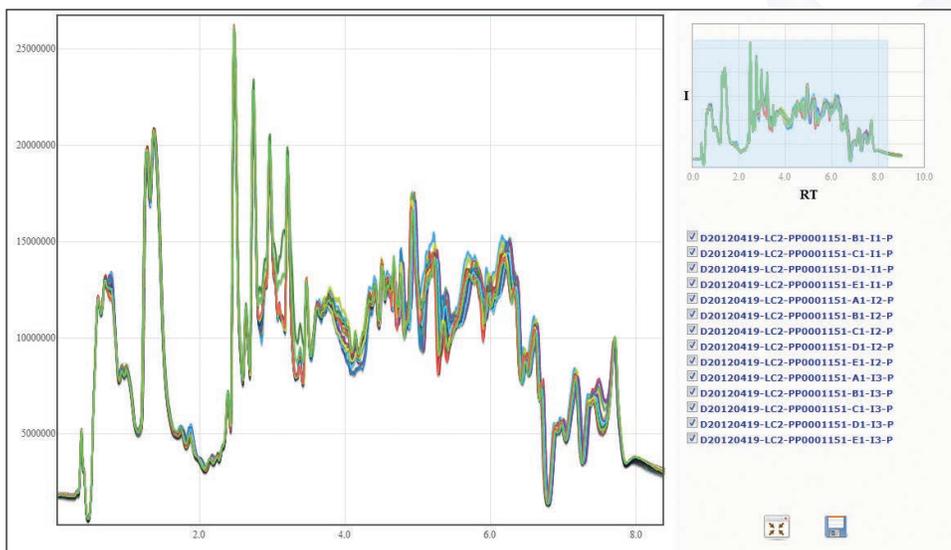


Metabolomics Core
Biomedical Research Core Facilities
2900 Huron Parkway
Suite 100 Traverwood IV
Ann Arbor, MI 48105



Cost Estimates and Fees

Costs vary widely depending on many details. Please contact the Core Director or a staff member to evaluate your needs and provide cost estimates.



This image depicts an overlay of total ion chromatograms of 14 individually prepared pooled plasma samples. This analysis is part of our standard procedure for evaluation of method stability and reproducibility.

Connect with Us

Stephen C. Brown, Ph.D., Core Director
Metabolomics Core
2900 Huron Parkway
Suite 100 Traverwood IV
Ann Arbor, MI 48105

Phone: 734-232-0842

Email: stephecb@umich.edu

Website: medicine.umich.edu/metabolomicscore

About the BRCF

The Metabolomics Core joined the Biomedical Research Core Facilities (BRCF) in 2012. The BRCF, part of the University of Michigan Medical School Office of Research, is a collection of centralized labs and services offering state-of-the-art instruments, resources and expertise to biomedical researchers, investigators and educators.

For more information on the BRCF, visit medicine.umich.edu/brcf

Biomedical Research Core Facilities

2570 MSRB II
1150 W. Medical Center Drive
Ann Arbor, MI 48109-0674
(734) 647-4776

brcf-umms@umich.edu