Next-Generation Metabolomics™: Defining the Unknown

A global and unbiased approach to profiling the metabolome with cutting-edge metabolomics technology

Untargeted metabolomics is a strategy to screen all small molecules in a sample, which returns thousands of metabolite signals in a single experiment. Metabolomics data analysis is often the barrier to gaining insight to phenotype, as 90% of a metabolomics dataset is noise. Next-Generation Metabolomics™ is making major advancements in the metabolism field by going beyond pairwise comparisons and making complex experiments with large and complicated datasets possible. Cutting-edge technology and computational methods are used to extract only the biologically-relevant chemical compounds to give you a clearer view of phenotype. Panome Bio™ provides a global and unbiased view of the metabolome through a suite of complementary LC/MS assays that captures the breadth of diverse metabolites in biological systems. Panome Bio can help you profile and discover biomarkers with our Next Generation Metabolomics capabilities, comprehensive workflows and personalized data analysis reports.

Highlights

Next-Generation Metabolomics™
Through an untargeted analysis and robust computational methods we provide an unbiased and global view of metabolism. We then use next—generation methods to decrease the complexity of datasets, allowing more impactful experimental designs than previously possible, including multi-omic integration, longitudinal analysis, large cohorts <1k, and more.
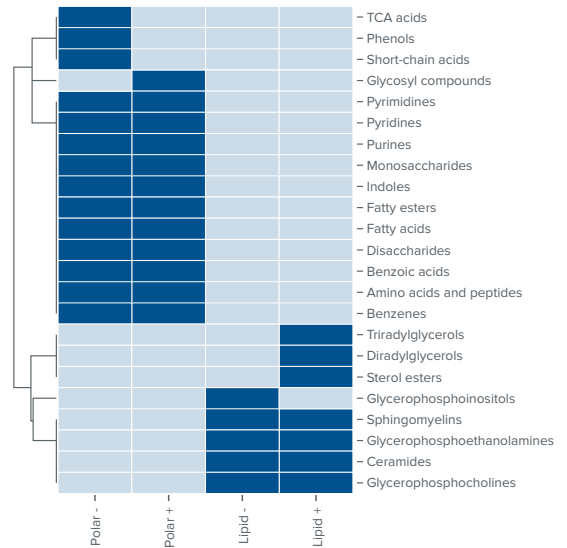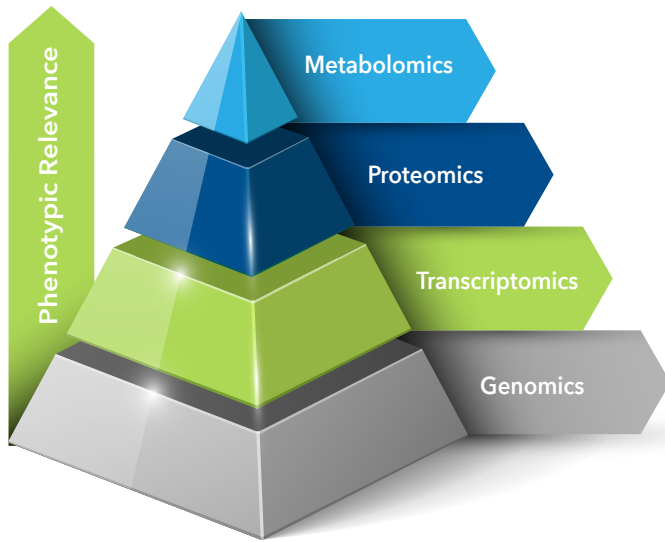
Comprehensive Workflow
Starting from sample preparation, to experimental design and data analysis, we handle all aspects of your metabolomics screen.

Personalized Data Analysis Report
Metabolomics data is complex, personalized data analysis reports provide a straightforward interpretation of your results. We work with you to define an analysis plan that will meet your needs.
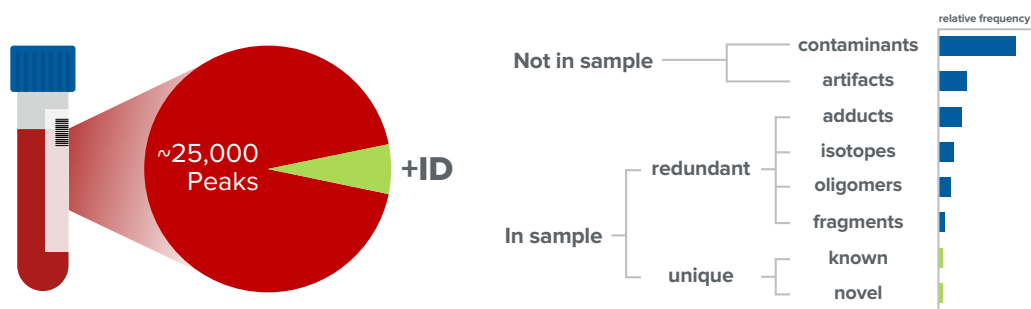
Identifying unique biological features among the many components in a metabolomics dataset is often the bottleneck metabolomics research. Using Next-Generation Metabolomics, the unique features are resolved for biomarker discovery and analysis.

Learn more: Mahieu et al., Anal Chem. 2017 Oct 3;89(19):10397-10406. Sindelar et al. J Am Chem Soc. 2020;142(20):9097-9105.
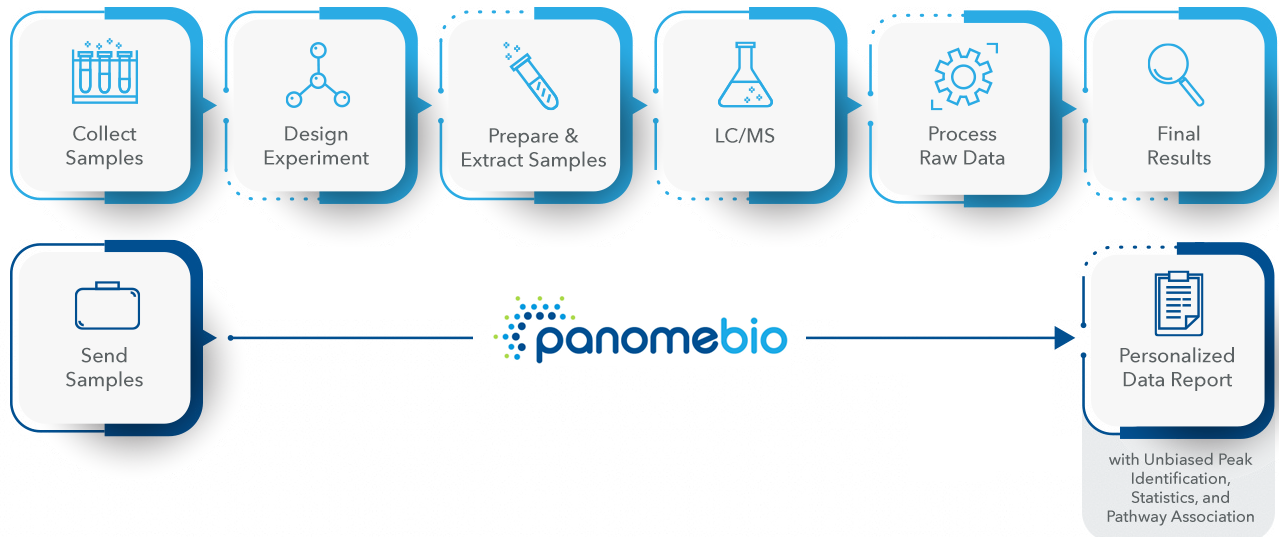
Metabolomics is a way to quantify metabolites in a biological system. Changes in metabolite concentrations provide insight to phenotype.

A summary of major chemical classes that can be measured with Panome Bio's suite of LC/MS assays.

Where can Next-Generation Metabolomics take your research?

- Longitudinal Analysis
- Drug-Target Mapping
- Metabolic Kinetics
- Multi-Group/ Multi-Condition Study

- Untargeted Metabolomics
- Biomarker Validation
- Population-based Studies
- Multi-omics

- Isotope Tracing
- Lipid Analysis
- Precision Medicine
- Your Custom Experiment

Panome Bio™ - Biomarker Discovery with Next-Generation Metabolomics™

Collect Samples → Design Experiment → Prepare & Extract Samples → LC/MS → Process Raw Data → Final Results

Send Samples → panomebio → Personalized Data Report

with Unbiased Peak Identification, Statistics, and Pathway Association

Panome Bio can help you profile and discover biomarkers with Next-Generation Metabolomics while saving you time and resources. Our next-generation methods make complex experiments possible. Our technology provides you with a global and unbiased view of metabolism with quantitative accuracy while our computational methods provide a clear view of your complex metabolomics data. Contact us to be your partner in research!