

A Metabolomics Approach to Understanding Aging



Metabolites are a fingerprint of phenotype. A metabolic profile can describe how exercise, sex, environment, BMI, health conditions, diet, and race and ethnicity play a role in the aging process.

Metabolomics is the study of the unique chemical fingerprints that specific cellular processes leave behind, known as metabolites. These metabolites can provide insight into an organism's physiological state, including changes that occur during aging. Researchers can utilize metabolomics to analyze blood, urine, or other bodily fluids and tissues and identify key changes in the levels of various metabolites that may be associated with aging. This has been done in humans as well as model organisms such as mice, rats, and drosophila. Resulting studies have shown that aging is associated with changes in the levels of certain amino acids, lipids, and sugars, and that these changes may be linked to age-related declines in health. Additionally, some studies have used metabolomics to identify potential biomarkers of aging, which could be used to track changes in health over time. All of this information can then be used to better understand the underlying mechanisms of aging and potentially develop new therapies to slow or reverse age-related declines in health. Panome Bio can help you with your aging studies by providing a global profile of metabolites and biomarkers with our Next-Generation Metabolomics capabilities, and you receive clear results in our personalized data analysis reports.

Panome Bio's Advantages

Next-Generation Metabolomics™

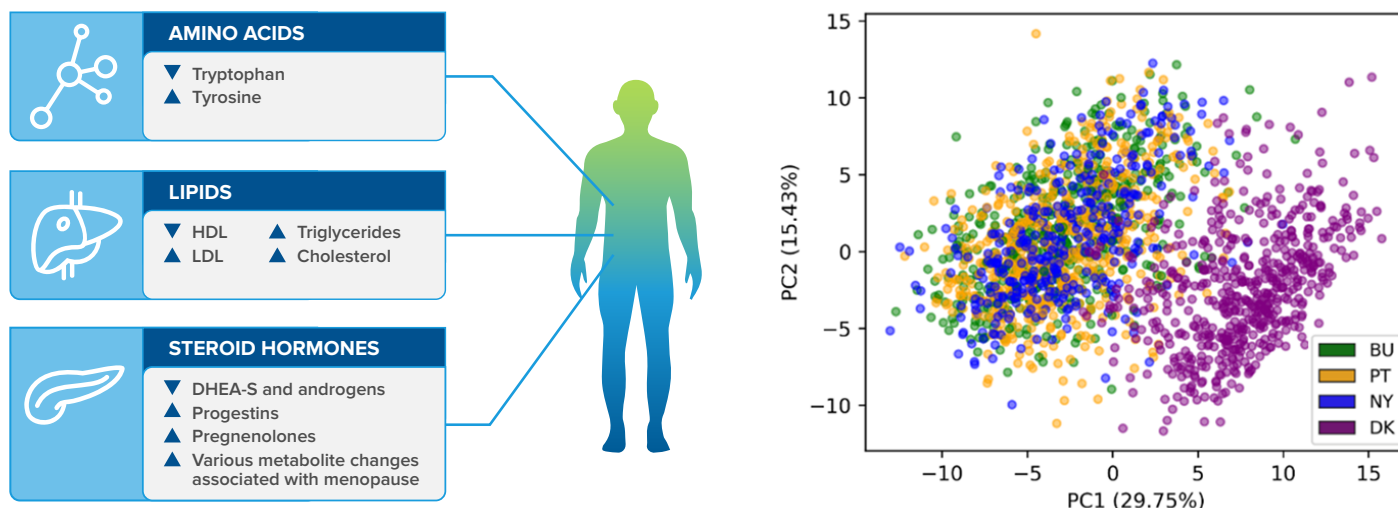
Through an untargeted analysis and robust computational methods we provide an unbiased and global view of metabolism. We then use next-generation methods to decrease the complexity of datasets, allowing more impactful experimental designs than previously possible, including multi-omic integration, longitudinal 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.



Commonly observed metabolic changes associated with aging. Metabolites are seen either increasing or decreasing with age.

Longevity studies with large cohorts can be used to discover links between metabolism and aging. Our next-generation methods can analyze the complex data to provide valuable insights.

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



Panome Bio can help you profile and discover biomarkers with Next-Generation Metabolomics while saving time and resources. Our next-generation methods can take your research beyond A versus B studies and into more complex experiments such as large cohort studies and longitudinal analysis. 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 start a project!

Read more:

Panyard, *Sci. Adv.*, 2022, **8**.

Srivasta, *Metabolites* 2019, **9**, 301.

Standcliffe, *Analytical Chemistry* 2022 **94** (50).

Contact Us



www.panomebio.com
info@panomebio.com



4340 Duncan Avenue, St. Louis, MO 63110