

Characterizing the Lipidomic Profiling of Mitochondrial Mutant Nematodes

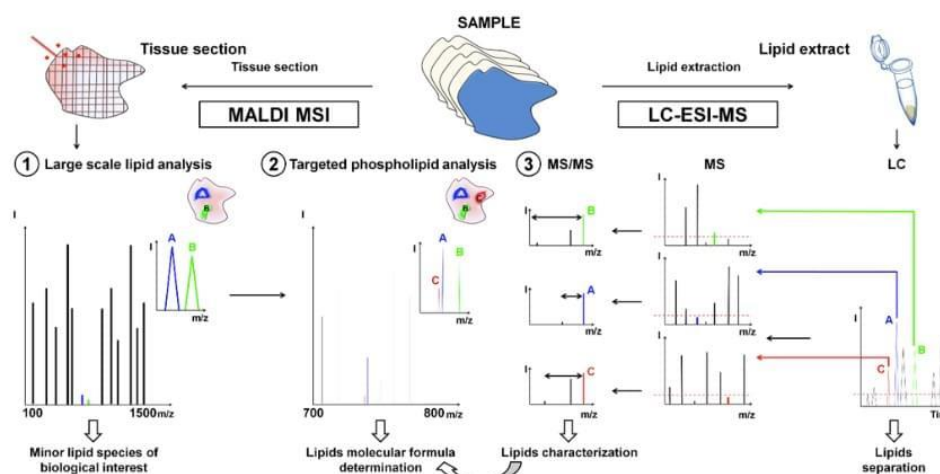
Lipids are not only the framework components of biofilms and energy suppliers of organisms, but also participate in many life processes and have important physiological functions. Creative Proteomics provides reliable, fast and cost-effective lipidomics services to accelerate your research progress.

Lipidomic Profiling

Targeted Lipidomics

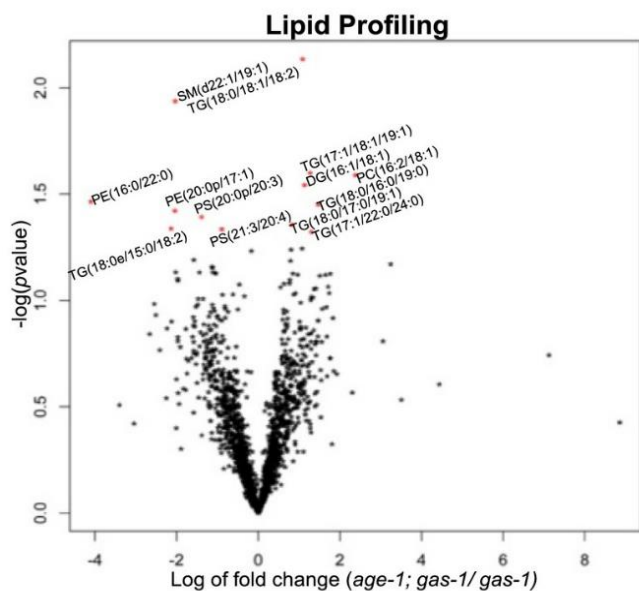
Lipids are not only the framework components of biofilms and energy suppliers of organisms, but also participate in many life processes and have important physiological functions. With an integrated set of separation, characterization, identification and quantification system, featured with excellent robustness, reproducibility and ultra-sensitivity, Creative Proteomics provides reliable, fast and cost-effective lipidomics services to accelerate your research progress.

ASSAY OVERVIEW



Nematodes were synchronized, and 4,000-8,000 young adults were sorted with a COPAS Biosort System, collected in pellets, flash-frozen in liquid N₂, and stored at -80°C. A total of five biological replicates per condition were collected. Creative Proteomics Inc. (USA) performed an ultra-performance liquid chromatography and mass spectrometry (UPLC-MS) analysis to determine the lipids presenting in wild-type, *age-1*, *gas-1*, and *age-1; gas-1* mutant nematodes.

DATA OVERVIEW



All profiles were normalized to the number of nematodes per sample. Cutoff for significance was 5% FDR. Red stars in the volcano plot of lipidomic profiling indicated significant altered lipids in *age-1; gas-1* versus *gas-1* (5% FDR; $n = 5$).

Features

- Ultra-high-performance liquid chromatography (UHPLC) combined with MS has high separation efficiency and fast analysis speed.
- Constantly optimized protocol and analytical software are provided.
- Professional experiment is designed.
- To ensure quick turnaround time.

Applications

- Lipid Biomarkers Discovery
- Disease Related Research
- Cellular Processes Research in Plants
- Regulation and Biological Function Research of Lipid Metabolism in Cell or Organism

Reference

Gioran A, Piazzesi A, Bertan F, *et al.* Multi-omics identify xanthine as a pro-survival metabolite for nematodes with mitochondrial dysfunction. *The EMBO journal*, 2019, 38(6).

WHAT WE DO

Untargeted Lipidomics:

- Plant Untargeted Lipidomics
- Yeast Untargeted Lipidomics
- Mammals Untargeted Lipidomics

Targeted Lipidomics:

- Fatty Acids Analysis Service
- Fatty Acids Derivatives Analysis Service
- Fatty Acids Metabolism Analysis Service
- Glycerolipids Analysis Service
- Glycerophospholipids Analysis Service