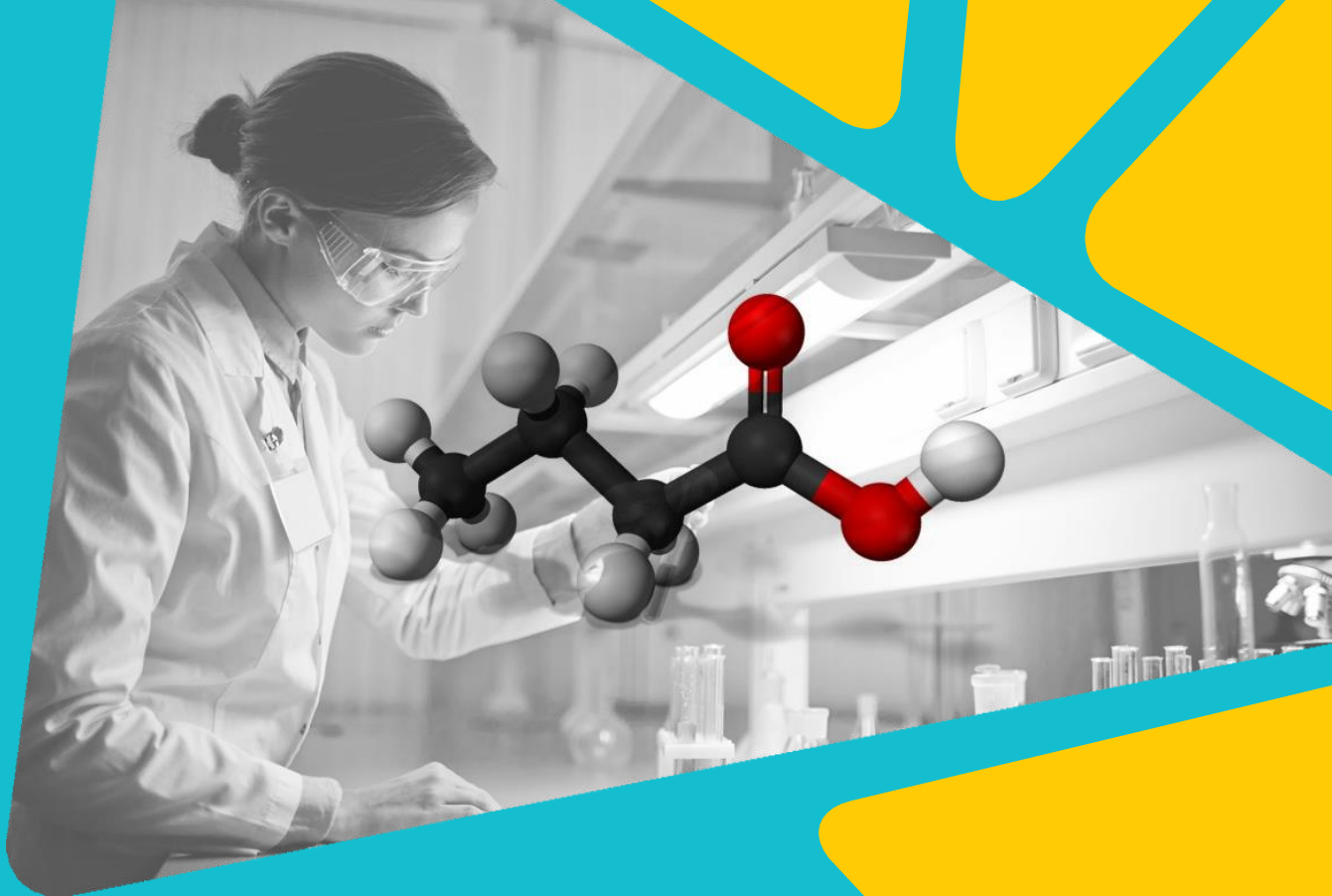




Analysis of short-chain fatty acids in healthy and vancomycin treated rhesus monkeys

Targeted Lipidomics Short-chain Fatty Acids

Short-chain fatty acids (SCFA) are the final products of fermentation of insoluble fibers from diet by the bacteria in the gut. These fatty acids play an important role in the prevention and treatment of a series of metabolic syndromes and some cancers, and have been closely associated with Crohn's disease, ulcerative colitis and other conditions. Creative Proteomics provides an GC-MS based, unbiased assay for SCFA identification and quantification to monitor intestinal health and inflammation.

Features

- Absolute quantification
- High sensitivity
- High repeatability
- Can be used for trace analysis

Applications

- Pathological mechanism study, such as hepatobiliary diseases, gastrointestinal diseases and metabolic diseases mechanism study
- Auxiliary diagnosis of diseases, indicator for the diagnosis of diseases such as liver and gallbladder diseases, gastrointestinal diseases, *etc.*
- Drug development and treatment effect monitoring

Expertise

- Advanced GC-LS assays for metabolomics research with decades of experience.

Technology

- State-of-the-art GC-LS instruments that are suitable for the identification and quantification of various short-chain fatty acids.

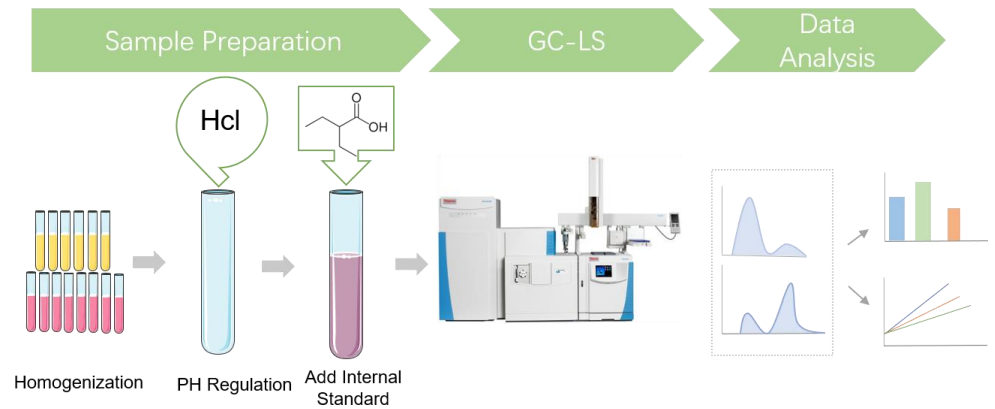
Innovation

- Constantly explore better research methods and advanced experimental techniques.

Contact Us

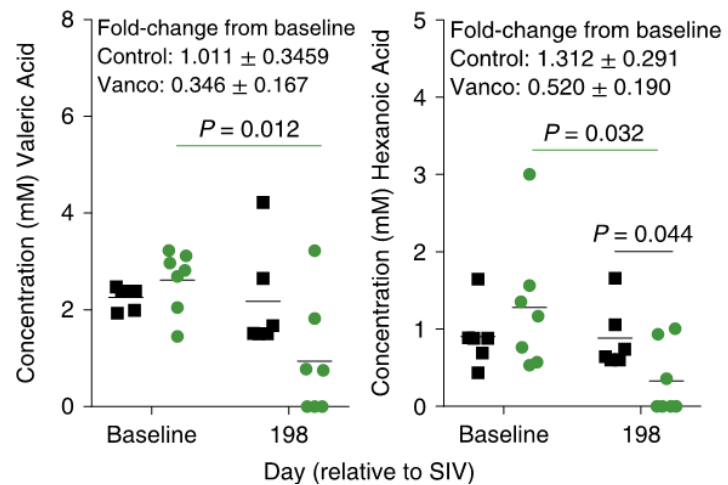
www.creative-proteomics.com

Assay Overview



Fecal pellets of 13 samples were homogenized in 17% (wt/wt) water suspension, and titrated to pH 2.0 using 5 M HCl. Fecal debris was pelleted and removed by centrifugation. The remaining supernatant was spiked with internal standard 2-Ethylbutyric acid. Into the GC flame ionization detector and calibrated against a cocktail of standardized SCFAs sodium propionate and acetic, butyric, isobutyric, valeric, isovaleric, hexanoic, and heptanoic acids. Peaks were assigned using the Chromeleon 7.2 software based on retention times of Individual SCFA components.

Data overview



Short-chain fatty acids, including valeric acid and hexanoic acid, from fecal pellets of healthy rhesus macaques and vancomycin treatment group were determined by gas chromatography. SCFA were perturbed in Vanco monkeys with significant disruptions from baseline observed for fecal valeric and hexanoic acids at d198 p.i compared with healthy group.