

# Metabolomics Biomarker research

## CONTACT

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Forschungsgesellschaft mbH

**HEALTH**  
Institute for  
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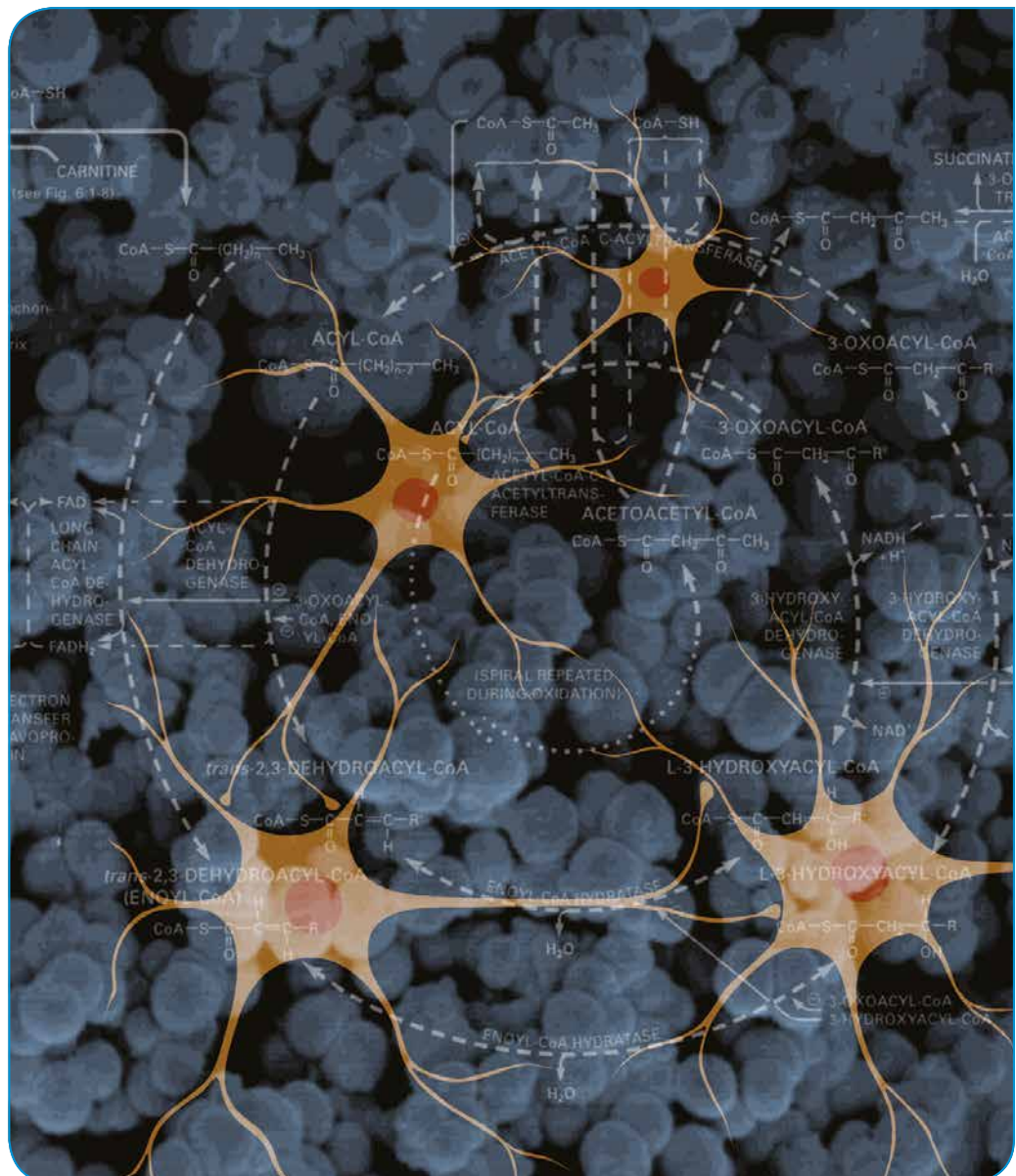
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The application and optimization of innovative analytical methods for the study of metabolic processes is one of our priorities. Because we combine bioanalytical, statistical, medical, biological and biochemical expertise with advanced information technology, we can provide a wide range of customer-oriented services in metabolomics and metabolism research.

## Our analytical services

### ■ quantification of metabolites

absolute quantification of metabolites by using isotopically labeled internal standards

### ■ profiling of metabolite classes

- ▶ coenzyme A-activated substances from tissue, cell culture, yeast
- ▶ polyamines from serum/plasma/tissue (human/animal)
- ▶ steroids
- ▶ phospholipids, triglycerides

### ■ metabolite fingerprinting

measurement of small-molecule profiles from biological samples with high-resolution mass spectrometry (Orbitrap) coupled with chromatography. Search for changes to the molecular fingerprint using sophisticated statistical methods developed for finding biomarkers

### ■ metabolite fingerprinting in combination with quantification/profiling classes of metabolites (targeted/untargeted metabolomics)

High-resolution mass spectrometry based on Orbitrap technology coupled with liquid chromatography allows the identification of metabolite fingerprints according to exact molecular mass and retention time. We can thus target specific classes of substances in parallel to determining the small-molecule profile.

Applications: hypothesis-driven biomarker discovery, characterization of natural pharmaceutical products (tea, plant extracts), metabolism research

### ■ improved methods for metabolic quenching

## Data analysis

■ peak detection, peak integration, retention-time correction, peak grouping

■ identification of metabolites

■ univariate and multivariate statistical methods

■ data visualization

■ data filtering and data correction procedures

## Quality standards

We set high quality standards for our services and products. As our partner, you can rely on the application of international quality standards right from placing your orders up to delivery of the final product/service. We operate and are certified according to the following guidelines:

■ EN ISO 9001:2008

■ EN ISO 13485:2012

■ GLP – Good Laboratory Practice

## Our partnerships for your benefit

We enjoy a synergistic partnership with the Medical University of Graz. Because of our collaboration with the Evidence-Based Medicine Review Center and with the Center for Medical Research (with its first-class laboratories, equipment and trained technical staff), we can provide excellent research services for your benefit.