

# Metabolomics profiling assays and services

Standardized, quality-controlled, quantitative metabolomics profiling solutions

[biocrates.com](https://biocrates.com)

## Mass spectrometry-based metabolomics assays



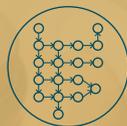
Comprehensive analytical portfolio



Project management



Data analysis and biostatistics



Interpretation and pathway analysis

# Biological discoveries with metabolomics

Explore the metabolic phenotype with a standardized technology designed for longitudinal cohort studies.

biocrates integrates quantitative, targeted profiling assays with pathway-specific solutions.



## More information



Visit our website to find out more about metabolomics and our products [biocrates.com](https://biocrates.com)



# Expert support from study design to actionable results



## Comprehensive analytical portfolio

- ▶ Best fit for every research question
- ▶ Quality-controlled analysis in an ISO certified laboratory
- ▶ Customized assay development



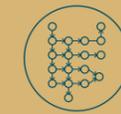
## Data analysis and biostatistics

- ▶ Expert analysis of targeted metabolomics data
- ▶ Profound expertise in biostatistics
- ▶ Identification of key results



## Project management

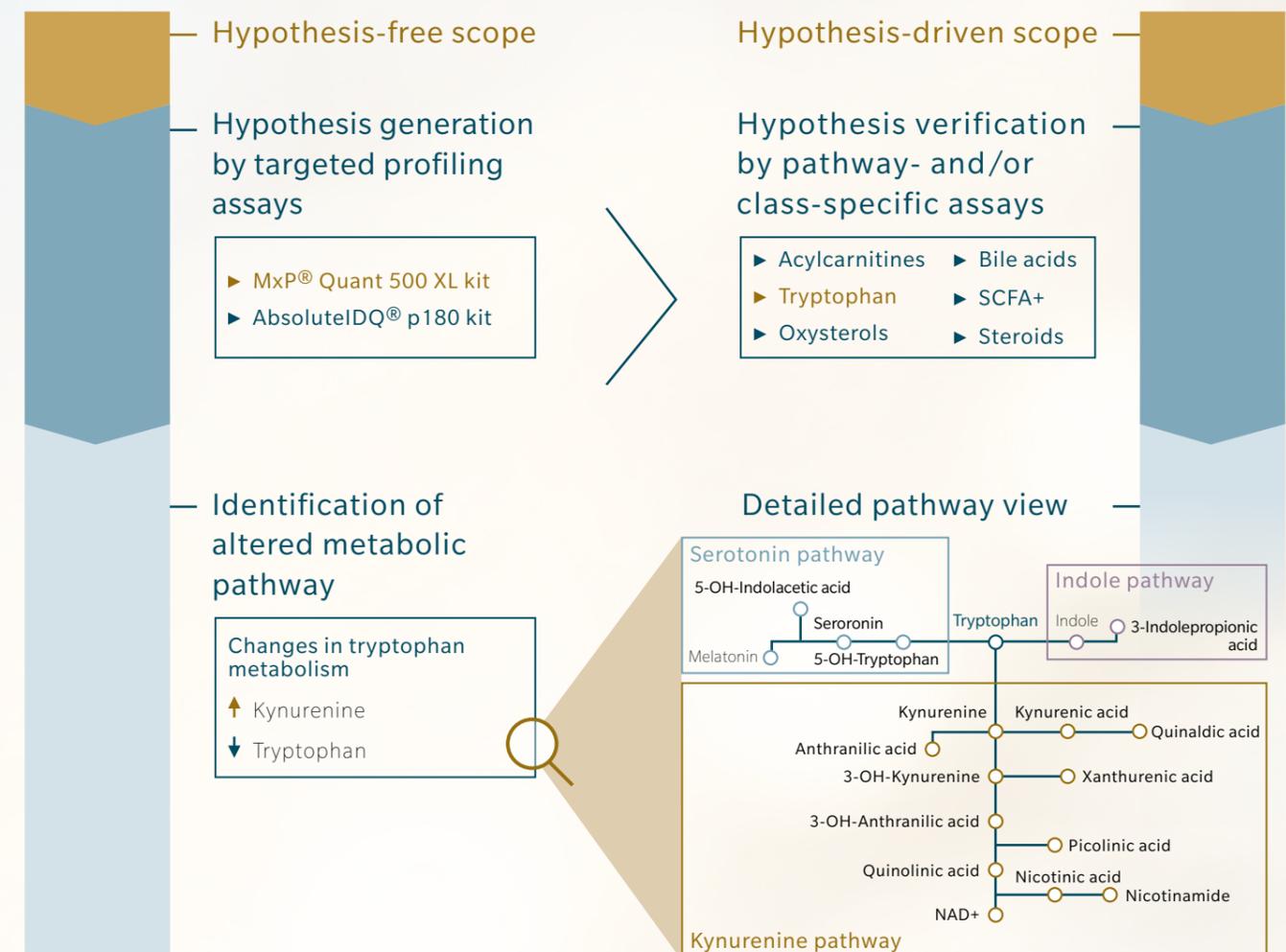
- ▶ Expert support from study design to actionable results
- ▶ Recommendations for sample preparation, storage, and shipment
- ▶ Turn-around time is typically 12 weeks after samples are received



## Interpretation and pathway analysis

- ▶ Established institutional knowledge at your service
- ▶ State-of-the-art interpretation of results
- ▶ Metabolic pathway visualizations

# From vast explorations to deeper dives



# Illuminating the dynamics of health and disease

## Standardized, quantitative, targeted profiling assays

- ▶ MxP® Quant 500 XL
- ▶ AbsoluteIDQ® p180

### Neurology



- ▶ Acylcarnitine assay
- ▶ Tryptophan metabolism assay

### Cardiology

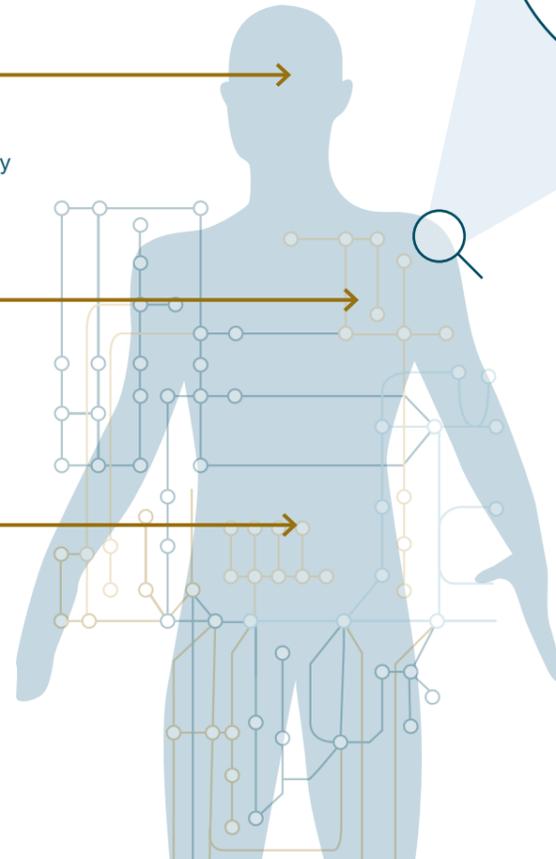


- ▶ Oxysterol assay
- ▶ Acylcarnitine assay

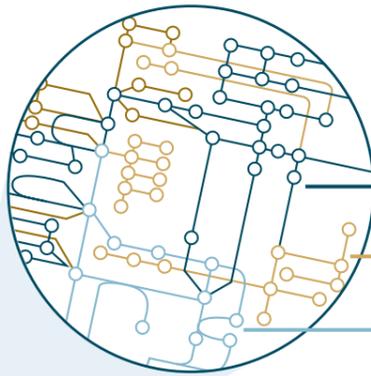
### Microbiome and nutrition



- ▶ Bile acids assay
- ▶ SCFA+ assay



# Actionable results through detailed pathway analysis



## Tryptophan metabolism assay

Most complete coverage of tryptophan metabolism (17 metabolites)

## SCFA+ assay

Comprehensive coverage of 19 short- and medium-chain (including branched-chain) fatty acids

## Acylcarnitine assay

Highly specific separation of 7 groups of isomers / isobars, enabling quantitation of 43 acylcarnitines + carnitine

# Comprehensive analytical portfolio

Covering > 1,000 metabolites

Approach	Assay name	Number & class of metabolites	Sample volume
Targeted profiling assays	MxP® Quant 500 XL assay	Up to 107 small molecules and 912 lipids from 39 analyte classes	30 µL
	MxP® Quant 500 assay	Up to 107 small molecules and 912 lipids from 39 analyte classes	20 µL
	AbsoluteIDQ® p180 assay	Up to 43 small molecules and 145 lipids from 7 analyte classes	20 µL
Pathway-and/or class-specific assays	AbsoluteIDQ® Stero17 assay	Up to 17 steroid hormones from all 5 major classes	250 – 550 µL
	AbsoluteIDQ® Bile acids assay	Up to 20 bile acids (10 primary, 10 secondary)	20 µL
	Short-chain fatty acid PLUS assay	Up to 19 fatty acids (11 short-, 8 medium-chain)	60 µL
	Oxysterol assay	Up to 18 free (oxy-) sterols	30 µL
	Tryptophan metabolism assay	Up to 17 tryptophan pathway metabolites	120 µL
	Acylcarnitine assay	Up to 43 acylcarnitines + free carnitine	30 µL

# Biological applications – The possibilities are endless



### Microbiome and nutrition

Metabolomics explains microbiome-host interactions on a functional level



### Cardiometabolic diseases

Metabolomics is a key technology that confirms how eating habits and lifestyle in general influence our well-being and health



### Aging and CNS disorders

Metabolomics elucidates the functional attributes of the brain, neurodegenerative diseases, and the gut-brain axis



### Infectious diseases

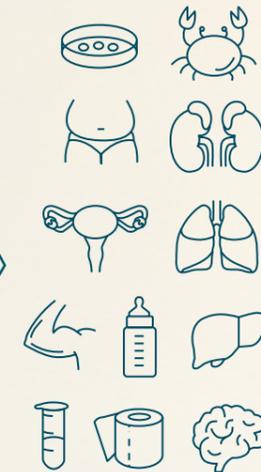
Metabolomics enables scientists to uncover the mechanisms of infectious diseases and treatments

# Experience with diverse samples

From various species and matrices

## Species

- ▶ Human
- ▶ Mouse
- ▶ Rat
- ▶ Monkey
- ▶ Cow
- ▶ Dog
- ▶ Zebrafish
- ▶ Cat
- ▶ Yeast
- ▶ C. elegans
- ▶ E. coli
- ▶ Many more

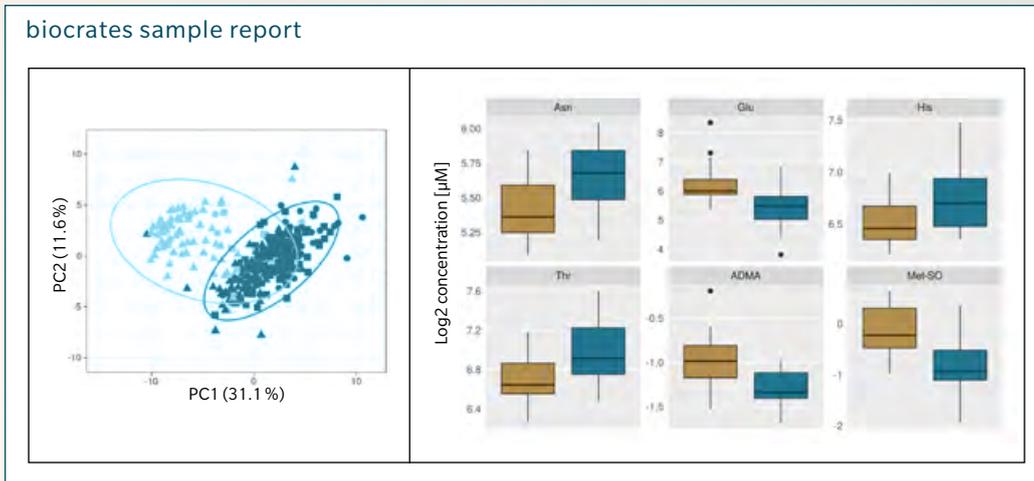


## Matrices

- ▶ Plasma, serum (only 10 µL)
- ▶ Dried blood spots
- ▶ Cells and culture medium
- ▶ Tissue
- ▶ Feces
- ▶ Follicular fluid
- ▶ Milk
- ▶ Urine
- ▶ CSF
- ▶ Many more

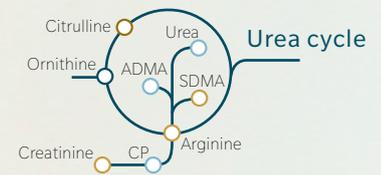
# Expert data analysis and biological interpretation services

Data only	Statistical package	Data interpretation
<ul style="list-style-type: none"> <li>▶ Raw data processing</li> <li>▶ Quality control</li> <li>▶ Data normalization</li> </ul>	<ul style="list-style-type: none"> <li>▶ Data processing</li> <li>▶ MetaboINDICATOR™</li> <li>▶ Descriptive statistics</li> <li>▶ Univariate statistics</li> </ul>	<ul style="list-style-type: none"> <li>▶ Significance testing</li> <li>▶ Fold changes</li> <li>▶ Multivariate statistics</li> <li>▶ Data visualization</li> </ul>
		<ul style="list-style-type: none"> <li>▶ Pathway analysis</li> <li>▶ Biochemical interpretation</li> <li>▶ Literature research</li> </ul>



## Data and interpretation services

biocrates makes metabolomics accessible to all. We offer comprehensive statistical analysis and data interpretation packages for your datasets, whether obtained from our services or from one of our standardized kits.



## Quantitative, reproducible, quality-controlled standardized workflow

biocrates' simplified workflow is built on years of scientific experience and cutting edge technology.



## Read more



biocrates  
list of metabolites

More than 1,000 metabolites accessible through targeted metabolomics

[biocrates.com/metabolites](https://biocrates.com/metabolites)



Applications  
of metabolomics

Understand how metabolomics is already changing lives today

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