



**High-Precision
Metabolomics**

since 2003

BEVITAL

For Scientists from Scientists.

www.bevital.no
post@bevital.no

During the last 20 years Bevital has provided novel, high-quality metabolomics services translating metabolomics data from the laboratory to real-world settings, helping researchers to understand how metabolism impacts health and quality of life.

Bevital's scientists and technicians have specialized in targeted metabolomics and the group has a strong track record of providing high precision and reliable metabolomics data for research investigating nutrition, cardiovascular diseases, cancer and neurodegenerative conditions. Our analytical repertoire has been established carefully and strategically, targeting established biomarkers, specific metabolites, classes and important metabolic pathways related to processes ranging from energy homeostasis and cellular function, to inflammation, immune activation and the gut microbiome.

Bevital's scientific contribution to many international projects has demonstrated that assay precision, accuracy and reliability are crucial for achieving project outcomes. All our methods are developed using authentic isotope labeled internal standards for each analyte, providing absolute quantification of the highest quality on the market. Our targeted metabolomics panels have been designed to be analytically and biologically complementary and are established across dedicated GC- and LC-MS/MS platforms. Our approach allows quantification of diverse, but related classes of both high and low abundance metabolites.

We offer different analytical packages to meet changing research needs and demands. Ready-to-run panels allow customers to choose between pre-designed solutions at lower costs. Researchers requiring greater flexibility can mix different metabolites from Bevital's repertoire and compose individual panels specific to the demands of their project. Metabolites of interest not yet included may be incorporated into existing assays or established as customized targeted analyses.

Finally, Bevital offers full academic project support from writing of grant applications and study planning, to sample analysis, data interpretation and critical review of manuscripts.

Whether you are planning to run targeted metabolomics or looking for opportunities to validate your data from untargeted approaches, you should consider Bevital for your analyses.

Adrian McCann
Research Director, Bevital

Ready-to-Run

Cardiometabolic

65 biomarkers from 200ul sample volume

Amino acids

Alanine, Arginine, Asparagine, Aspartic acid, Glutamic acid, Glutamine, Glycine, Histidine, Isoleucine, Kynurenine, Leucine, Lysine, Methionine, Ornithine, Phenylalanine, Proline, Sarcosine, Serine, Threonine, Total cysteine, Tryptophan, Tyrosine, Valine

Amino acid catabolites

2-Hydroxybutyrate, 3-Hydroxyisobutyrate, Amino adipic acid, Phenylacetylglutamine, α -Hydroxyglutaric acid, β -Alanine, β -Aminoisobutyrate, β -Hydroxy β -methylbutyric acid

Acylcarnitines

BB, C0, C2, C3, C3-DC, C4, C4-OH, C4-DC, ic5, C5-DC, C5:1, C6, C8, C10, C12, C14, C14-OH, C16, C16-OH, C18, C18-OH, C18:1, C18:2

TCA metabolites

Citrate, Fumarate, Isocitrate, Lactate, Malate, Pyruvate, α -Ketoglutarate

Ketone bodies

3-Hydroxybutyrate, Acetoacetate

AGEs

Carboxyethyllysine, Carboxymethyllysine

Ready-to-Run

Inflammation & Immune Activation

19 biomarkers from 150ul sample volume

Kynurenines

3-hydroxykynurenine, 3-hydroxyanthranilic acid, Anthranilic acid, Kynurenine, Kynurenic acid, Nicotinic acid, Nicotinamide, NI-methylnicotinamide, Picolinic acid, Quinaldic acid, Quinolinic acid, Xanthurenic acid

Ratio-derived metabolites

Kynurenine/Tryptophan ratio, PAr index (PLP, PL, PA)

Neopterin

Proteins

C-Reactive protein, Calprotectin, Serum Amyloid A and their proteoforms

Ready-to-Run

Nutrition Status & Lifestyle

41 biomarkers from 300ul sample volume

B-vitamins, functional markers, and methyl donors

4-Pyridoxic acid, Betaine, Choline, Cobalamin, Flavin mononucleotide, Folate, Methylmalonic acid, NI-methylnicotinamide, Nicotinamide, Nicotinic acid, Pyridoxal, Pyridoxal 5-phosphate, Pyridoxine, Riboflavin, Thiamine, Thiamine monophosphate, Total homocysteine

Fat-soluble vitamins

25-hydroxy vitamin D2, 25-hydroxy vitamin D3, α -Tocopherol (Vit. E), All-trans retinol (Vit. A), Phylloquinone (Vit. K1), γ -Tocopherol (Vit. E)

Essential amino acids

Histidine, Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Threonine, Tryptophan, Valine

Meat & fish intake

1-Methylhistidine, 3-Methylhistidine, Creatine, Creatinine, TMAO, β -Alanine

Tobacco use & coffee intake

Cotinine, Trans-3-hydroxycotinine, Trigonelline

Ready-to-Run

Microbiome

20 biomarkers from 250ul sample volume

Short-chain fatty acids (SCFAs)

Acetate, Butyrate, Formate, Isobutyrate, Isovalerate, Propionate, Valerate, α -Methylbutyrate

Indoles

3-Indoxyl sulfate, Imidazole propionate, Indole-3-acetamide, Indole-3-acetate, Indole-3-aldehyde, Indole-3-lactate, Indole-3-propionate

Choline oxidation

Choline, Betaine, DMG, TMAO

Amino acid derived metabolites

Phenylacetylglutamine

Mix-and-Match

Full Flexibility

Bevital offers to combine any biomarker of the analytical repertoire to give our customers the flexibility required for their projects.

Vitamins & lifestyle

B-vitamins, fat-soluble vitamins, folate & cobalamin, meat & fish intake, tobacco & coffee

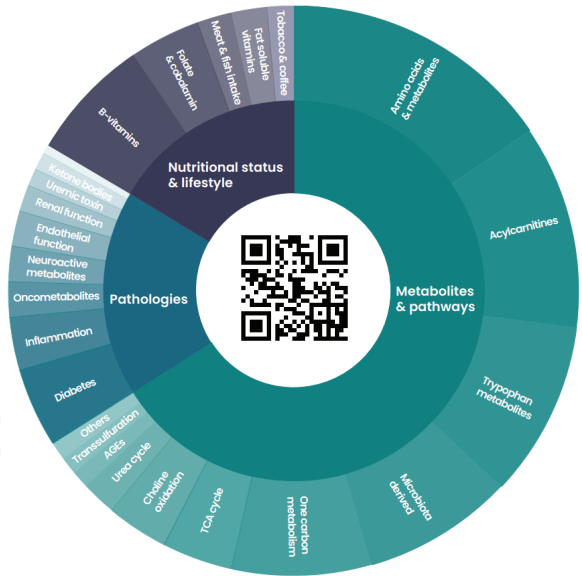
Metabolites & pathways

Amino acids & metabolites, acylcarnitines, tryptophan metabolites, microbiota derived, one-carbon metabolism, tricarboxylic acid cycle, choline oxidation, urea cycle, AGEs, transsulfuration, and others

Pathologies

Diabetes, inflammation, onco-metabolites, neuroactive metabolites, endothelial function, renal function, uremic toxins, ketone bodies, and liver disease

For more information about actual biomarkers offered, please visit our website at www.bevital.no or scan the QR code.



Not found what you are looking for?

Customized Analyses

Biomarkers not listed in Bevital's analytical repertoire may be included into existing panels and be analysed by customized assays. Contact our experts at post@bevital.no to discuss your needs and the strategies to realize your project. Project evaluation requires information regarding:

- Classes and types of compounds
- Number of samples
- Sample matrix
- Time frame
- Published analytical methods

Analyte

1-Methylhistidine
 2-Aminoadipic acid
 2-Hydroxybutyrate
 3-Hydroxyanthranilic acid
 3-Hydroxybutyrate
 3-Hydroxyisobutyrate
 3-Hydroxykynurenine
 3-Indoxyl sulfate
 3-Methylhistidine
 4-Alpha-hydroxy-5-methyl-THF
 4-Pyridoxic acid
 5-Formyl-tetrahydrofolate
 5-Methyl-tetrahydrofolate
 25-hydroxy vitamin D2
 25-hydroxy vitamin D3
 Acetamidobenzoylglutamate
 Acetate
 Acetoacetate
 Acetylcarnitine
 Alanine
 All-trans retinol
 Alpha-tocopherol
 Anthranilic acid
 Arginine
 Asparagine
 Aspartic acid
 Asymmetric dimethylarginine
 Betaine
 Butyrate
 Butyrobetaine
 Butyrylcarnitine
 C-reactive protein
 Calprotectin and variants
 Carboxyethyllysine
 Carboxymethyllysine
 Carnitine, total
 Carnitine
 Choline
 Citrate
 Citrulline
 Cotinine
 Creatine
 Creatinine
 Cystathionine
 Cystatin C and variants
 Decanoylcarnitine
 Dimethylglycine
 Dodecanoylcarnitine
 Erythrocyte folate
 Flavin mononucleotide
 Folic acid
 Formate
 Fumarate
 Gamma-tocopherol
 Glutamic acid
 Glutamine
 Glutaryl carnitine
 Glycine
 HbA1c
 Hexadecanoylcarnitine
 Hexanoylcarnitine
 Histidine
 Hydroxybutyrylcarnitine
 Hydroxyoctadecanoylcarnitine
 Hydroxytetradecanoylcarnitine
 Imidazole propionate
 Indole-3-acetaldehyde
 Indole-3-acetamide
 Indole-3-acetate
 Indole-3-lactate
 Indole-3-propionate
 Isobutyrate
 Isocitrate
 Isoleucine

Category

Amino acid
 Lys metabolite
 Alfa hydroxy acid
 Trp metabolite
 Ketone body
 Val metabolite
 Trp metabolite
 Indole, Trp metabolite
 Amino acid
 Oxidized folate
 B6 vitamer
 Folate
 Folate
 D vitamer
 D vitamer
 Folate catabolite
 Short-chain fatty acid
 Ketone body
 Acylcarnitine
 Hydrophobic amino acid
 A vitamer
 E vitamer
 Trp metabolite
 Charged amino acid
 Polar amino acid
 Charged amino acid
 Guanidinated amino acid
 Methylated amino acid
 Short-chain fatty acid
 Quarternary ammonium
 Acylcarnitine
 Protein
 Protein
 AGE
 AGE
 Carnitine
 Carnitines
 Quarternary ammonium
 Tricarboxylic acid
 Amino acid
 Nicotine metabolite
 Alpha amino acid
 Alpha amino acid
 Thioether
 Protein
 Acylcarnitine
 Methylated amino acid
 Acylcarnitine
 B-vitamin
 B2 vitamer
 Folate
 Short-chain fatty acid
 Dicarboxylic acid
 E vitamer
 Charged amino acid
 Polar amino acid
 Acylcarnitine
 Hydrophobic amino acid
 Protein
 Acylcarnitine
 Acylcarnitine
 Essential amino acid
 Acylcarnitine
 Acylcarnitine
 Acylcarnitine
 His metabolite
 His metabolite
 Indole, Trp metabolite
 Indole, Trp metabolite
 Indole, Trp metabolite
 Indole, Trp metabolite
 Indole, Trp metabolite
 Indole, Trp metabolite
 Short-chain fatty acid
 Tricarboxylic acid
 Essential BCAA

Analyte

Isovalerate
 Isovalerylcarnitine
 Kynurenic acid
 Kynurenine
 Lactate
 Leucine
 Linoleylcarnitine
 Lysine
 Malate
 Malonylcarnitine
 Menaquinone-4
 Methionine
 Methionine sulfoxide
 Methylmalonic acid
 Myristoylcarnitine
 NI-methylnicotinamide
 Neopterin
 Nicotinamide
 Nicotinic acid
 Octanoylcarnitine
 Oleoylcarnitine
 Ornithine
 Palmitoylcarnitine
 Para-aminobenzoylglutamate
 Phenylacetylglutamine
 Phenylalanine
 Phyloquinone
 Picolinic acid
 Proline
 Propionate
 Propionylcarnitine
 Pyridoxal
 Pyridoxal 5-phosphate
 Pyridoxine
 Pyruvate
 Quinaldic acid
 Quinolinic acid
 RBC folate as pABG equivalents
 Riboflavin
 Sarcosine
 Serine
 Serum amyloid A and variants
 Serum cobalamin
 Serum folate
 Serum folate as pABG equivalents
 Stearoylcarnitine
 Succinate
 Succinylcarnitine
 Symmetric dimethylarginine
 Thiamine
 Thiamine monophosphate
 Threonine
 Tiglylcarnitine
 Total choline
 Total cysteine
 Total homocysteine
 Trans-3'-hydroxycotinine
 Trigonelline
 Trimethylamine N-oxide
 Trimethyllysine
 Tryptophan
 Tyrosine
 Valerate
 Valine
 Xanthurenic acid
 α -Hydroxyglutaric acid
 α -Ketoglutaric acid
 α -Methylbutyrate
 β -Alanine
 β -Aminoisobutyrate
 β -Hydroxy β -methylbutyrate

Category

Short-chain fatty acid
 Acylcarnitine
 Trp metabolite
 Trp metabolite
 Alpha-Hydroxy acid
 Essential BCAA
 Acylcarnitine
 Essential charged aa.
 Alpha-Hydroxy acid
 Acylcarnitine
 K vitamer
 Essential amino acid
 Polar amino acid
 Carboxylic acid
 Acylcarnitine
 B3 vitamer
 B3 vitamer
 B3 vitamer
 Acylcarnitine
 Acylcarnitine
 Charged amino acid
 Acylcarnitine
 Folate catabolite
 n-acyl-alpha amino acid
 Essential aromatic aa.
 K vitamer
 Trp metabolite
 Hydrophobic amino acid
 Short-chain fatty acid
 Acylcarnitine
 B6 vitamer
 B6 vitamer
 B6 vitamer
 Alpha-Keto acid
 Trp metabolite
 Trp metabolite
 Folate
 B2 vitamer
 Methylated amino acid
 Polar amino acid
 Protein
 B-vitamin
 B-vitamin
 Folate
 Acylcarnitine
 Dicarboxylic acid
 Acylcarnitine
 Guanidinated amino acid
 B1 vitamer
 B1 vitamer
 Essential amino acid
 Acylcarnitine
 Choline esters
 Sulfur amino acid
 Sulfur amino acid
 Nicotine metabolite
 Alkaloid
 Amine oxide
 Methylated amino acid
 Essential aromatic aa.
 Aromatic amino acid
 Short-chain fatty acid
 Essential BCAA
 Trp metabolite
 Alpha hydroxy acid
 Keto acid
 Short-chain fatty acid
 Beta amino acid
 Val metabolite
 Leu catabolite

Are You Ready for Omics?

Olink® Proteomics

Bevital is a service provider of Olink and offers Target 96&48 panels using Olink's Proximity Extension Assay (PEA) technology for targeted protein biomarker discovery. Our customers have now the opportunity to obtain both metabolomic and proteomic data from the same sample aliquots.

Olink® **Target 96** panels include 92 markers each and provide relative quantification related to a particular disease or biological function. 15 different panels are available.

Cardiometabolic	Immune Response
Cardiovascular II	Neurology
Cardiovascular III	Neuro Exploratory
Inflammation	Organ Damage
Immuno-Oncology	Metabolism
Oncology II	Development
Oncology III	Cell Regulation
Mouse Exploratory	

Olink® **Target 48** panels consist of 45 (43 mouse) cytokines and provide both relative and absolute quantification (pg/ml) from 1µl sample volume.

Olink® **Flex** panels allow to mix 15 to 21 markers from a library of about 200 proteins. Each kit has a capacity of 40 samples and provides both relative and absolute quantification (pg/ml) from 1µl sample volume.

Biogenity

Bevital is a service partner of Biogenity, a Contract Research Organisation specializing in omics research and discovery. Biogenity offers a vast number of different types of data analyses as:

Data cleaning and visualization	AI powered data analysis
Statistical analysis	Peptide and protein annotation
Bioinformatical analysis	

**For questions regarding
Olink and Biogenity services
please contact us at
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