

R&D SOLUTIONS TO VALIDATE THE EFFICACY AND FUNCTIONALITY OF NEW FUNCTIONAL FOOD AND NUTRACEUTICAL PRODUCTS

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Nutritional complements and novel foods hold the promise of a healthy life style. These food complements help our cells to remove harmful metabolites (free radicals, lactic acid, etc), increase energy, promote immunoprotection, reduce bioactive molecules to healthy levels (such as cholesterol, glucose, triglycerides, etc.), stimulate the replacement of electrolytes after sport practice or maintain a balanced gut microbiome.

Legal regulation of commercial claims prevents misinformation, helps customers to make the right choice, and ensures protection of the R&D investment by manufacturers. Thus, one of the current trends in the food biotechnology field is the development of new differentiated and specific functional products, which can alleviate certain deficiencies and / or physiological disorders, as well as ensuring healthy aging.

The aim of Bionos Biotech is to help producers and manufacturers to develop the best assays to test the efficacy and functionality of the food-nutraceutical ingredients in order to support market claims.

RESEARCH APPROACHES



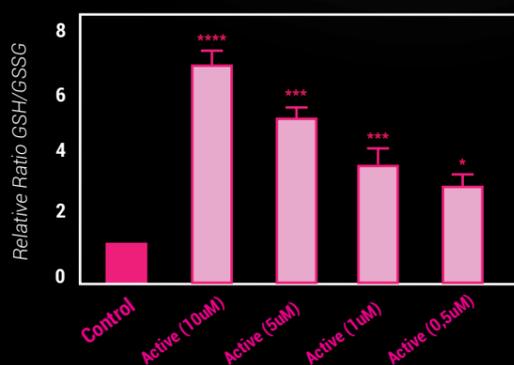
IN VITRO STUDIES

Antioxidant capacity
Antiinflammatory capacity
Fat Metabolism
Energy metabolism
Detoxification

Analysis of the functional effect of a product or ingredient in human cell lines processes (Oxidation, metabolism, inflammation, etc.)

We analyse both gene expression and protein levels in fatty acid synthesis, fatty acid degradation or glucose metabolism.

ANTIOXIDANT CAPACITY



CLINICAL STUDIES

Biavailability

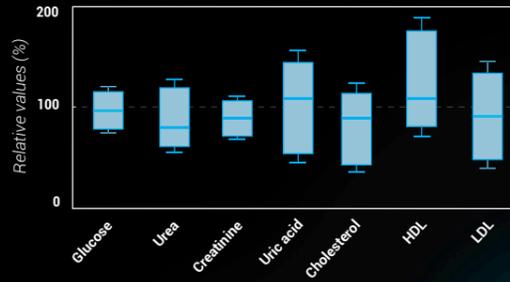
Bioavailability analysis of 1 compound intake through quantification using HPLC-MS/MS from blood samples obtained by fingerstick (non-invasive), after oral intake in human volunteers.

Measurements to be determined (recommended at 0h, 1h, 3h and 8h).

Functional Food (Blood analysis)

Analysis of the functional effects of a food or nutraceutical treatment, through quantification by blood analysis (hemogram, glucose, urea, creatinine, uric acid, triglycerides, cholesterol, HDL, LDL, urine analysis, etc.)

BIOCHEMICAL BLOOD PARAMETERS



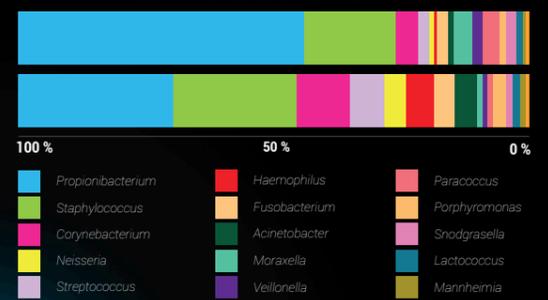
MICROBIOME ANALYSIS

Analysis of the functional effects of 1 treatment on human microbiome, through 16S rRNA Sequencing, after isolation using swabs (genomic DNA isolation, PCR amplification, library preparation, microbiome profile, diversity analysis, Blast alignment, etc.)

It is included Use Test (Self-Assessment questionnaire) for all of the volunteers.



RELATIVE GENERA ABUNDANCE



APPLICATIONS

NEW BUSINESS DEVELOPMENT

Bionos Biotech can help your company to develop new food product lines or nutritional complements by performing the relevant studies that validates their efficacy and functionality.

MARKETING STRATEGIES

Bionos Biotech offers a wide variety of assays that study the properties of functional food or nutritional complements, as well as their nutritional profile and potential physiologic health benefits.

This can contribute to the marketing strategies and market positioning.



NUTRITION AND HEALTH CLAIMS

Bionos Biotech offers an R&D Partnership and helps you in the journey to present nutritional and health claims.

We study the existing bibliography in order to develop an assay that supports the claim of interest.