BIOmarkers of Robustness of Metabolic Homeostasis for Nutrigenomics-derived Health CLAIMS Made on Food

From 2010-03-01 to 2015-02-28, closed project | BIOCLAIMS Website

Project details

| Total cost: |
| EUR 7 818 711,20 |
| EU contribution: |
| EUR 5 999 211 |
| Coordinated in: |
| Spain |

| Topic(s): |
| KBBE-2009-2-2-03 - Development of biomarkers for health-promoting functions |
| Call for proposal: |
| FP7-KBBE-2009-3 See other projects for this call |
| Funding scheme: |
| CP-IP - Large-scale integrating project |

Objective

The food and health relationship focuses on maintenance of optimal health, both in terms of physiology and new European legislation. Yet, most accepted biomarkers quantify (intermediate) disease endpoints or damage. This has led to major problems in demonstrating health benefits and establishing health claims, and blocks competitive economic and health developments in the food sector. BIOCLAIMS develops new biomarkers by exploiting the new concept of “health biomarkers” through quantification of the robustness of the homeostatic mechanisms involved in maintaining optimal health, based on the assumption that the ability to maintain homeostasis in a continuously challenged environment and changing physiology is key for healthy ageing. Mechanisms involved will be investigated during a series of food interventions in animal models and humans using “predisposed” conditions. Human models of presumed impaired robustness in maintaining metabolic and vascular health will be employed to study the responses of established and novel biomarkers to the challenging of homeostasis and to selected food interventions. Both advanced analytical methodology including nutrigenomics tools (transcriptomics, metabolomics, fatty acid composition, adipokine profile, macromolecule damage) and “whole body” physiological assessments will be exploited to derive a series of new biomarkers. Gender differences will be addressed. BIOCLAIMS thus delivers a series of robust biomarkers predictive of a healthy metabolic phenotype during ageing, based on stressors of homeostasis. These biomarkers will be fully characterized and evaluated for practical application in human nutrition, and compared to traditional ones. The consortium consists of 11 teams, balanced in gender and geographical distribution, with track records in animal physiology, human studies in the relevant health areas, nutrigenomics and new analytical approaches, and scientific assessment of health claims in the EU.

Related information

| Result In Brief |
| Biomarkers for healthy food |
| Report Summaries |
| Final Report Summary - BIOCLAIMS (BIOmarkers of Robustness of Metabolic Homeostasis for Nutrigenomics-derived Health CLAIMS Made on Food) |
| News |
| Promoting the positive effects of nutrition on health |
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