

HDHL-INTIMIC non cofunded
Joint Action: **METADIS**
**“Impact of Diet, Food Components
and Food Processing on Body
Weight Regulation and Related
Metabolic Diseases”**
funded projects

The **METADIS call**, is the second non-cofunded action launched under the ERA-NET HDHL-INTIMIC in 2019. The main objective of the METADIS call for joint transnational research proposals was to understand how food components, diets and food processing could influence overweight and related metabolic diseases. Training of the Early Career Scientists (PhD students, Post-docs) was particularly encouraged.

In total, 13 funding agencies from 11 countries participate in this call. This Joint Action funded six projects for a total amount of about 6.5 M€.



CARBHEALTH

Carbohydrate staple foods-facing the challenge to improve their quality for a better metabolic health.

WHAT

The CARBHEALTH project aims to better characterize the glycemic effects of bread, and the effects of whole grain consumption on body weight and diabetes risk in adults and in children.

WHO

The consortium includes 8 partners from 3 countries (Germany, Norway, Sweden).

HOW

A specific bread enriched in beta-glucan will be specifically produced for this study in order to assess the glycemic effects of bread in a randomized multicenter study. In addition, biomarkers for whole grain consumption and the association between whole grain consumption and overweight/ diabetes will be investigated using two complementary cohorts (one composed of adults, and one composed of children).

FUNDING

CARBHEALTH receives approximately 1.78 M€.

Project coordinator: **Jutta Dierkes** (University of Bergen, Norway)

CARB-Q-4-HEALTH

Tailored Carbohydrate Quality for Personalized Weight Management and Metabolic Health.

WHAT

The CARB-Q-4-HEALTH project aims to better understand the role of carbohydrate quality on weight, appetite and cardiometabolic health in humans.

WHO

The consortium includes 8 partners from 4 countries (Germany, Italy, Spain, Sweden).

HOW

The effect of a high fibre vs refined fibre diet on weight, satiety, gut microbiota, and cardiometabolic risk profiles will be assessed using human cohorts. Additional experiments will be performed in rats to better characterize the adverse effects of refined carbohydrates at organ/tissue level and the potential beneficial effects of supplementation with fermentable dietary fibre.

FUNDING

CARB-Q-4-HEALTH receives approximately 1.07 M€.

Project coordinator: **Rikard Landberg** (Chalmers University of Technology /Umeå University, Sweden)



ePIDEMic

The physiological impact of dietary methylglyoxal.

WHAT

The ePIDEMic project aims to better characterize the effect of a pro-inflammatory bioactive compound produced during cooking and processing (methylglyoxal) on weight gain, diabetes and other chronic inflammatory diseases including cardiovascular disease.

WHO

The consortium includes 4 partners from 3 countries (France, Germany, the Netherlands).

HOW

Dietary exposures of general consumers to methylglyoxal will be monitored. The effect of dietary methylglyoxal on the gastrointestinal tract, microbiota and on the onset of diabetes, vascular diseases and cognitive function will be then assessed both in mice and in humans using three large and deep-phenotyping prospective cohort studies.

FUNDING

ePIDEMic receives approximately 0.88 M€.

Project coordinator: **Casper Schalkwijk** (CARIM School for Cardiovascular Diseases, The Netherlands)

EURODIET

Dietary Patterns in the Ageing European Population: an Interdisciplinary Approach to combat Overweight-Related Metabolic Diseases.

WHAT

The EURODIET project aims to design healthy diets preventing obesity and metabolic diseases that can be well accepted and followed by middle-aged and older adults.

WHO

The consortium includes 6 partners from 4 countries (Italy, Spain, Sweden, The United-Kingdom).

HOW

Existing data collected by two cohorts (SHARE; NU-AGE) will be re-analyzed in order to assess how socio-demographic, biological and behavioral factors could contribute to the observed effect of a specific diet on the metabolic and inflammation status. Facilitators and barriers for adherence to healthy dietary diets will then be determined. Finally, the effects of adherence to a healthy whole-diet will be assessed in adults suffering or not from a metabolic disease.

FUNDING

EURODIET receives approximately 0.46 M€.

Project coordinator: **Fawzi Kadi** (Örebro University, Sweden)



FOODPHYT

Food phytochemicals matter for cardiometabolic health

WHAT

The FOODPHYT project aims at raising awareness and understanding of the potential of food phytochemicals to support the global fight against obesity and associated cardiometabolic diseases.

WHO

The consortium includes 7 partners from 7 countries (Canada, France, Germany, Italy, Spain, Sweden, the United-Kingdom).

HOW

Biomarkers reflecting the consumption of all major plant foods will be identified and validated by metabolomics. Associations between plant food intake biomarkers/-specific food phytochemical metabolites and body weight/cardiometabolic outcomes will be investigating. In addition, scientific data regarding the effect of food phytochemicals and already available thanks to previous studies/ontology will be compiled in an open-access database that can be consulted by both health professionals and general audiences.

FUNDING

FOODPHYT receives approximately 1.07 M€.

Project coordinator: **Claudine Manach** (INRAE Research Center Auvergne-Rhône-Alpes, France)

STAY

Sulfur amino acids, energy metabolism and obesity.

WHAT

The STAY project aims to understand the role of methionine and cysteine in human obesity, and to what extent their restriction in the diet can facilitate weight loss and improve metabolic health.

WHO

The consortium includes 5 partners from 4 countries (Norway, Czech Republic, the Netherlands, the United-Kingdom).

HOW

A dietary intervention will be carried out to study the effects of a plant-based diet low in methionine and cysteine on body weight, body composition, and energy balance, as well as obesity-related blood markers and gene expression patterns. In addition, association between dietary, circulating and urinary methionine and cysteine with body fat and chronic disease will be assessed in a large Dutch population.

FUNDING

STAY receives approximately 1.26 M€.

Project coordinator: **Kjetil Retterstøl** (University of Oslo, Norway)



More information:

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