Targeted delivery of dietary flavanols for optimal human cell function: Effect on cardiovascular health

From 2009-09-01 to 2013-02-28, closed project | FLAVIOLA Website

Project details

<table>
<thead>
<tr>
<th>Total cost:</th>
<th>Topic(s):</th>
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<tr>
<td>EUR 3 989 169,60</td>
<td>KBBE-2008-2-2-01 - Optimal human cell function and nutrition</td>
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<tr>
<td>EU contribution:</td>
<td>Funding scheme:</td>
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<tr>
<td>EUR 2 999 195</td>
<td>CP-FP - Small or medium-scale focused research project</td>
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<td>Coordinated in:</td>
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<td>Germany</td>
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Objective

Nutrition, i.e. our daily diet, is a major life style factor, greatly impacting on human health and disease. Epidemiological evidence suggests that diets rich in plant-based foods and beverages decrease the risk for cardiovascular morbidity and mortality. Various phytochemical constituents, in particular a class of compounds called flavanols, have been avidly investigated in recent years. Current dietary interventions in humans using flavanol-containing foods have substantiated epidemiological data indicating various potential dietary flavanol-mediated bioactivities, including improved vascular function, decreased blood pressure, attenuated platelet clotting, and improved immune responses. Latest innovations in flavanol analytics, chemistry, food processing technology, and cardiovascular function analysis make the elucidation of underlying mechanisms of flavanol bioactivity not just possible, but also impactful with regard to dietary advice and public health. Thus, a practical application of novel findings emanating from flavanol research in terms of a science/evidence-based development represents a worthwhile endeavour. This entails development of novel food ingredients, and innovative nutrient-delivery matrices. Such novel, nutritionally responsible food formulations hold the potential to open novel avenues in the prevention and amelioration of cardiovascular diseases in Europe. FLAVIOLA aims at: (i) illuminating the cellular and sub-cellular effects of flavanols and their main human metabolites; (ii) investigating key parameters of dietary flavanol absorption, clearance and efficacy towards surrogate markers of cardiovascular function in humans; (iii) developing innovative, functional, and nutritionally responsible food matrices for optimised dietary flavanol delivery; and finally (iv) demonstrating cardiovascular benefits and safety for a newly developed prototype food product.

Related information

Report Summaries

Final Report Summary - FLAVIOLA (Targeted delivery of dietary flavanols for optimal human cell function: Effect on cardiovascular health)
Coordinator

HEINRICI-HEINE-UNIVERSITAET DUESSELDORF
UNIVERSITAETSSTRASSE 1
40225 DUSSELDORF

Germany

See on map

Activity type: Higher or Secondary Education Establishments

Administrative contact: Doris Neubert
Tel.: +49 211 8119586
Fax: +49 211 8118576

Contact the organisation

Participants

Mars Belgium
Kleine Kloosterstraat 8
1932 SINT STEVENS WOLUWE
Belgium

EU contribution: EUR 311 460

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

Administrative contact: Ellen Verhoeven
Tel.: +31 413 383308
Fax: +31 413 383308

Contact the organisation

THE UNIVERSITY OF READING
WHITEKNIGHTS CAMPUS WHITEKNIGHTS HOUSE
RG6 6AH READING
United Kingdom

EU contribution: EUR 589 410

Activity type: Higher or Secondary Education Establishments

Administrative contact: Sarah Page
Tel.: +44 11837888321
Fax: +44 118378 8979

Contact the organisation
UNIVERSITEIT MAASTRICHT
Minderbroedersberg 4-6
6200 MD MAASTRICHT
Netherlands
See on map

**Activity type:** Higher or Secondary Education Establishments

**Administrative contact:** Joseph Ih Janssen
Tel.: +31 433881961
Fax: +31 433670286

Contact the organisation

EU contribution: EUR 450 012

INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE
Rue De L'Universite 147
75338 PARIS CEDEX 07
France
See on map

**Activity type:** Research Organisations

**Administrative contact:** Charles Mathiaux
Tel.: +33 4 73 62 44 33
Fax: +33 4 73 62 44 51

Contact the organisation

EU contribution: EUR 299 842

KAROLINSKA INSTITUTET
Nobels Vag 5
17177 STOCKHOLM
Sweden
See on map

**Activity type:** Higher or Secondary Education Establishments

**Administrative contact:** Jon Lundberg
Tel.: +46852487952
Fax: +468332278

Contact the organisation

EU contribution: EUR 299 840

UNIVERSITEIT GENT
SINT PIETERSNIEUWSTRAAT 25
9000 GENT
Belgium
See on map

**Activity type:** Higher or Secondary Education Establishments

**Administrative contact:** Nathalie Vandepitte
Tel.: +32 9 264 3029
Fax: +32 9 264 3583

Contact the organisation

EU contribution: EUR 300 591
Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)

Administrative contact: Kirsten Leufgen
Tel.: +41 21 694 04 10
Contact the organisation

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