Research priorities for the future

Horizon 2020
The EU Framework Programme for Research and Innovation

Diet, Physical activity and Health
A European Platform for Action
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This presentation shall neither be binding nor construed as constituting commitment by the European Commission.

Mission: to develop & implement the European Research Area & innovation policy achieving the goals of Europe 2020 & the Innovation Union.

Smart growth: developing an economy based on knowledge and innovation.

Sustainable growth: promoting a more resource efficient, greener and more competitive economy.

Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.

DG for Research & Innovation

tackling the challenges

Climate

Health

Ageing

Energy

Food
The 7th EU Framework Programme (2007-2013)

Total 53 billion € for 7 years
Cooperation Programme
10 themes

Theme 2
Food, Agriculture and Fisheries and Biotechnology
€ 1935M
Build a competitive European Knowledge-Based Bio-Economy (KBBE) to respond to social, economic and GLOBAL challenges such as food security, high quality food and sustainable production.

Activity 2.1
Sustainable production and management of biological resources from land, forest and aquatic environments.

Activity 2.2
“Fork to farm”: Food (including sea-food), health and well-being.

Activity 2.3
Life sciences, biotechnology and biochemistry for sustainable non-food products and processes.
"Fork to farm": Food (including sea-food), health and well being

- Consumer: perception and attitudes towards food, understanding societal and cultural trends, determinants of food choice

- Nutrition, diet related diseases, interaction between nutrition, physiological and psychological functions, new food dev.

- Innovative food and feed processing, packaging, smart control, waste management

- Improved quality and safety of food and feed, detection methods, risk governance

- Total food chain concept, environmental impact of/on food chain
Ageing and functional decline is unavoidable

Challenge: Enable healthy ageing

*Increase healthy life years*

*Improve quality-of-life and well-being*

*Prevent mental and physical impairment*

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**LIPIDIDIET - FP7**
The therapeutic and preventive impact of nutritional lipids on neuronal and cognitive performance in aging, Alzheimer’s disease and vascular dementia (6 m€)

**NUAGE – FP7**
Diet and prevention of functional decline of the elderly (9 m€)

**PERFORMANCE – FP7**
Personalised Food using rapid manufacturing for the nutrition of elderly consumers (3M€)
Obesity prevalence is rising to epidemic proportions in both developed and developing countries worldwide.

Increase in overweight and obesity is particularly severe for children and adolescents.

**IDEFICS – FP6**
Improving knowledge of dietary factors, social environment and lifestyle affecting European child health (13 m€)

**HELENA – FP6**
Healthy lifestyle in Europe by nutrition in adolescence (5 m€)

**TOYBOX – FP7**
Behavioural models for prevention of obesity, with particular focus on children (3 M€)

**OBELIX – FP7**
Obesogenic Endocrine disrupting chemicals: Linking prenatal exposure to the development of obesity later in life (3 m€)

**PREVIEW – FP7**
Prevention of diabetes through lifestyle intervention and population studies in Europe and around the world (9 M€)

**EARLY NUTRITION – FP7**
Largest cause of death in EU (40% of deaths) and the financial burden for EU health care systems is high

Leading causes of long term sickness => loss to labour market

CVD are very strongly associated with social conditions => linked to behaviours and lifestyles

**LYCOCARD – FP6 project**
Role of lycopene for the prevention of CVD (5.2 m€)

**ATHENA – FP7 project**
Anthocyanin and polyphenols for health enhancement through nutritional advancement (6 m€)

**FLAVIOLA – FP7 project**
Target delivery of dietary flavonols for optimal human cell functions: effect on cardiovascular health (3 m€)
Challenges
11% of population experience mental disorders every year
1 out of 4 people experiencing mental health problems at least once in their lives
Increased health care costs
Reduced productivity: absenteism, reduced workplace performance, early retirement

LIPIDIDIET - FP7
Therapeutic and preventive impact of nutritional lipids on neuronal and cognitive performance in ageing, Alzheimer’s disease and vascular dementia (6 M€)

NUTRIMENTHE – FP7
The effect of diet on the mental performance of children (6 M€)

NEUROFAST- FP7
Stress, addiction and eating behaviour (6 m€)
Challenges

Consumers trends: taste, pleasure, health and convenience

Diversity of consumers, targeted populations

Consumer protection => Better informed the consumer to make the healthy choice the easy choice

**EATWELL- FP7**
Measures aimed at promoting healthy eating habits (3M€)

**HABEAT - FP7**
Determinants of food habit formation/breaking (3 M€)

**I-FAMILY - FP7**
Determinants of food choice and eating habits (9 M€)

**FLABEL - FP7**
How nutrition information on food labels affects consumer behaviour and dietary intake (3M€)

**FULL4HEALTH – FP7**
Understanding Food-Gut-Brain mechanisms across the lifespan in the regulation of hunger and satiety for health (9M€)
**TERIFIQ – FP7 (3 M€)**

Aim: to achieve significant binary reductions in sodium-fat and fat-sugar content of the most frequently consumed food products around Europe whilst at the same time ensuring the products’ **nutritional** and **sensorial** qualities, **safety** and **affordability** for both industry and consumers.

**PLEASURE – FP7 (3M€)**

Aim: to develop **innovative processes and/or implement novel technologies** to allow for the development and production of food products with **low content of fat (saturated and trans-fatty acids)**, as well as salt and sugar.

**SATIN – FP7 (9M€)**

Aim: to develop food products that help **regulate food intake** by accelerating satiation during a meal, **enhancing satiety** and/or **reducing appetite**
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Currently faced with:

- Demographic changes (↑ world population, aging)
- ↑ food-related health problems
- ↑ environmental pressures
We need to:

- Understand nutritional needs, choices and effects
- Find ways to reduce food wastage
- Find ways to reduce energy and water consumption
- Reduce negative impacts on the environment and develop sustainable food production systems for the long term
- Enhance the competitiveness of the European food industry and promote innovation
- Ensure the uptake of research results
Proposed topics:

- Depression, food and nutritional behaviour
- Technologies to study brain functions and eating behaviour
- Gut microbiome, dietary diseases, brain development
- Vitamin D deficiency
- Sensors for food processing
- Knowledge transfer on traditional foods to SMEs
- Quality and authenticity in the food chain
- Global drivers of change and EU food security
- Saving water and energy in food processing
- Exploitation of FP research results by SMEs
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<tr>
<th><strong>Publication date:</strong></th>
<th>10 July 2012</th>
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<tbody>
<tr>
<td><strong>Indicative budget:</strong></td>
<td>EUR 341.35 million</td>
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<tr>
<td><strong>Deadline for submission:</strong></td>
<td>5 February 2013 (at 17h, Brussels local time)</td>
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<td><strong>Evaluation:</strong></td>
<td>April/Mai 2013</td>
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<td>→ Mai..... 2013</td>
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<td><strong>First contract signatures:</strong></td>
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http://ec.europa.eu/research/participants/portal/  
- Calls, Practical Guide to EU funding opportunities... Etc.
What is Horizon 2020?

- Commission proposal for a 80 billion euro research and innovation funding programme (2014-2020)

Objectives

As a core part of Europe 2020, Innovation Union & European Research Area:

- **Responding to the economic crisis** to invest in future jobs and growth
- **Addressing people’s concerns** about their livelihoods, safety and environment
- **Strengthening the EU’s global position** in research, innovation and technology
Three priorities:

Excellent science
Industrial leadership
Societal challenges
Horizon 2020

Europe 2020 priorities

Shared objectives and principles
Common rules, toolkit of funding schemes

Tackling Societal Challenges
- Health, demographic change and wellbeing
- Food security, sustainable agriculture and the bio-economy
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action & Resource Efficiency including Raw Materials
- Inclusive, innovative and secure societies

Industrial Leadership and Competitive Frameworks
- Leadership in enabling and industrial technologies (ICT, nano, materials, bio, manufacturing, space)
- Access to risk finance
- Innovation in SMEs

Excellent Science Base
- European Research Council
- Future and Emerging Technologies
- Marie Curie actions on skills, training and career development
- Research infrastructures

Supporting the objectives:
European Institute for Innovation and Technology
Joint Research Centre

International cooperation

European Research Area

Simplified access

Dissemination & knowledge transfer
Horizon 2020 and the Food Security Challenge

The agri-food sector
Contribute through research and innovation for:

- Safe – Healthy – Affordable Food for All
- A more sustainable food and feed processing sector

The **activities** shall focus on:
- Healthy and safe foods for all
- Informed Consumer Choices
- Competitive food processing methods that
  - use less resources
  - produce less by-products, wastes and greenhouse gases
Horizon 2020 implementation

- **Collaborative Projects (CP) & Coordination & Support Actions (CSA)**

- **European Institute of Innovation & Technology (EIT)**, theme planned in 2014: Food4future (sustainable food supply chain, from farm to fork)

- **European Technology Platform (ETP)**: Food for Life

- **Public-Private Partnerships**, e.g. Joint Technology Initiatives (JTIs)

- **Public-Public Partnerships**, e.g. Joint research Programme Initiatives (JPI) 'A Healthy Diet for a Healthy Life' and 'Agriculture, Food Security and Climate Change'
Public-Public Partnerships

Clear financial commitments of the participating countries including prior commitments to pool national and/or regional investments for transnational research and innovation.

Setting up of networking structures, design, implementation and coordination of joint activities as well as topping up of individual joint calls and of actions of a transnational nature.
JPIs have many common features

- Address a Grand Challenge
- Develop a Vision
- Set up a Governance Structure
- Develop Strategic Research Agenda
- Launch Pilot Actions
- Towards Implementation
Challenge
- to change dietary patterns, lifestyle and food supply based on developments in food, nutritional, social and health sciences
- to have a major impact on improving public health, increasing quality of life and prolong productive life

HDHL - Aim
- to contribute significantly to the construction of a fully operational European Research Area on prevention of diet-related diseases => Increased efficiency and impact of public R&D
- to strength leadership and competitiveness in the research activities in this field
HDHL – Strategic Research Agenda

Diet and Food Production

A healthy diet for a healthy life

Determinants of diet and physical activity

Diet-related Chronic Diseases

https://www.healthydietforhealthylife.eu/
22 countries are involved: AU, BE, CY, CZ, DK, FI, FR, DE, IR, IT, MT, NL, NO, PL, RO, SK, SL, ES, SE, CH, TR and UK

Chair – Prof. Dr. Wim Saris

Management Board - MB – each country represented

Coordination office = secretariat - NL

Scientific Advisory Board – SAB

Stakeholder Advisory Board - SHAB
Tomorrow's healthy society – research priorities for foods and diets

Foresight study

To support the implementation of the Horizon 2020
To identify future research and innovation priorities that support the provision and consumption of foods and diets for health and well-being

Start April 2012 – End December 2013
Total budget: 744.600 Euro

• Call WP2013

http://ec.europa.eu/research/participants/portal/page/home

→ FP7 Calls  → Cooperation

KBBE Call7 INFO-DAY (16-July 2012): Web cast:

• List of Scientific Officers per topic:

• More information on the bioeconomy:
http://ec.europa.eu/research/bioeconomy

• More info on EU2020 and Horizon 2020:
http://ec.europa.eu/europe2020/index_en.htm
http://ec.europa.eu/research/horizon2020/index_en.cfm