Horizon 2020:
The EU Framework Programme for Research and Innovation (2014-2020)

Research opportunities in the food sector for a safe and healthy diet

Note: for non-commercial purposes only
• FP7 and KBBE

• Outlook to Horizon2020
"Fork to farm"
Food (including seafood), health and well-being

Consumers
Nutrition
Processing
Safety
Environment

From Fork to Farm

Health and well-being of consumers
Nutritional value / digestion / health impacts
Organoleptic impact
Safe, high-quality foods

Preparation
Storage / transport / retail
Processing

Production systems:
Agriculture / Fisheries / Aquaculture

This presentation shall neither be binding nor construed as constituting commitment by the European Commission.
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

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.

EARLY NUTRITION - FP7 (9 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€)
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

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

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

LIPIDIDIET - FP7
Therapeutic and preventive impact of nutritional lipids on neuronal and cognitive performance in ageing, Alzheimer’s disease and vascular dementia (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€)
Mission: to develop & implement the European Research Area & Innovation Policy

achieving the goals of **Europe 2020** & the Innovation Union
tackling societal challenges

---

**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.
Horizon 2020
Content of 1st call
Food research

Key challenge: stabilise the financial and economic system while taking measures to create economic opportunities

1. Smart & inclusive growth (€451bn)

2. Sustainable growth, natural resources (€373bn)

3. Security and citizenship (€16bn)

4. Global Europe (€58bn)

5. Administration (€61.6bn)

Total: €960bn
What is Horizon 2020

• Initial Commission proposal for a 80 billion euro research and innovation funding programme (2014-2020); now just over 72 billion euro.

• 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
New approach to work programmes and calls

• **More strategic**

• **Two year work programmes**
  (2014-2015: > € 15 billion)

• **Less prescriptive calls**
  (64 calls in 2014)
  ✓ Broader and fewer topics
  ✓ First call deadlines as from March 2014
Major Simplification for the benefit of applicants

1. A single set of rules for all funding under Horizon 2020
   ✓ Fewer, more flexible, funding instruments

2. Simpler reimbursement:
   1 project = 1 funding rate
   ✓ 100% of the total eligible costs
      (70% for innovation actions)
   ✓ Non-profit legal entities can also receive 100% in innovation actions
   ✓ Single flat rate for indirect costs
      (25% of eligible costs)

3. Faster time to grant
   ✓ Within 8 months of call deadline
Major Simplification for the benefit of applicants

4. Fewer, better targeted controls and audits

5. Coherent implementation
   - Through dedicated agencies
   - Single IT system

6. Simplification in grant agreements

7. Improved rules on intellectual property

8. International participation
Simpler access through the Participant Portal (1)

- **Single entry point** from calls to electronic submission of proposals
- **New tools for smart searches** for the benefit of users, including newcomers to the programme.
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'
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 - VISION

In 2030 all Europeans will have the motivation, ability and opportunity to consume a healthy diet from a variety of foods, have healthy levels of physical activity and the incidence of diet-related diseases will have decreased significantly
A healthy diet for a healthy life

Diet and Food Production

Determinants of diet and physical activity

Diet-related Chronic Diseases

https://www.healthydietforhealthylife.eu/
## Horizon 2020: Three Priorities

<table>
<thead>
<tr>
<th>Priority</th>
<th>Budget 2014-2020</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Food security, sustainable agriculture and forestry, marine and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>maritime and inland water research, and the bioeconomy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Secure, clean and efficient energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Smart, green and integrated transport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Climate action, resource efficiency and raw materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Inclusive, innovative and reflective societies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Secure societies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total: € 72 billion

- Excellent science: € 24 billion
- Industrial leadership: € 17 billion
- Societal challenges: € 31 billion

+ 20% LEIT/Challenges
Proposed Funding: 3,851 million euro

**Sustainability**

2.1 Sustainable Agriculture and Forestry

2.2 Sustainable and competitive agri-food sector for safe and healthy diets

2.3 Unlocking the potential of aquatic living resources

2.4 Sustainable and competitive bio-based industries

**Security**

**Consumption**

**Food Chain**

**Production**
Sustainable and competitive agri-food sector for a safe and healthy diet

Complex challenges:

- Consumer needs for safe, healthy and affordable food
- Impacts of food consumption behaviour and food and feed production on human health and the total ecosystem
Informed Consumer Choices

Communication between consumers and the food chain research community and its operators

Preferences, attitudes, needs, behaviour, lifestyle and education

Social Innovation
Innovative models and methodologies

Impact on diet related diseases

Sustainable eating behaviour

2.2 Sustainable and competitive agri-food sector for safe and healthy diets
H2020 Specific programme
Societal Challenge 2

2.2 Sustainable and competitive agri-food sector for safe and healthy diets

Healthy and safe foods and diets for all

- Impacts of food on physical and mental performance
- Links between diet, ageing, chronic diseases and disorders, and dietary patterns
- Dietary solutions and innovations leading to improvements in health and wellbeing

This presentation shall neither be binding nor construed as constituting commitment by the European Commission

Research and Innovation
2.2 Sustainable and competitive agri-food sector for safe and healthy diets

Address critical issues:
Affordable and high quality foods
Traceability
Logistics and services
Socio-economic factors
Resilience against environmental and climate risks
Limitation of negative impacts on the environment

Address the sustainability concerns:
Coping with social, environmental, and economic change

Include all stages:
Food design
Packaging
Process design and control
Waste reduction and by-product valorisation

Agri-food industry
### Safe food and healthy diets (1)

<table>
<thead>
<tr>
<th>Topics</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFS-12-2014: Assessing the health risks of combined human exposure to multiple food-related toxic substances (R&amp;I Action; € 8 million)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>SFS-13-2015: Biological contamination of crops and the food chain (R&amp;I Action; € 3-5 million)</strong></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>SFS-14-2014/2015: Authentication of food products</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A: Authentication of olive oil (R&amp;I Action; € 5 million)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>B: Authentication of food products (CSA; € 0.5 million)</strong></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Topics</td>
<td>2014</td>
<td>2015</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>SFS-15-2014: Proteins of the future (R&amp;I Action; € 9 million)</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>SFS-16-2015: Tackling malnutrition in the elderly</strong> <em>(R&amp;I Action; € 9 million)</em></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>SFS-17-2014: Innovative solutions for sustainable novel food processing (Innovation Action; € 2 million)</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**Safe food and healthy diets (2)**
For further information

- **Participant Portal**

- **Helpdesk**
  http://ec.europa.eu/research/enquiries

- **Expert evaluators needed!**

- **Learn more about Horizon 2020**
  http://ec.europa.eu/horizon2020

Thank you for your attention!
Thank you for your attention

Find out more:

www.ec.europa.eu/research/horizon2020
Tips & Tricks (3)

STANDARD AWARD CRITERIA

EXCELLENCE  IMPACT  QUALITY & EFFICIENCY OF THE ACTION

✓ Innovation actions (IA) ➞ higher weighting for "IMPACT"

Proposal evaluated by the experts “as it is” and not as “what could be” = no need for negotiation