



**Sustainable exploitation of bioactive components from the  
Black Sea Area traditional foods (BaSeFood).  
Utilising experiences and procedures from EuroFIR**

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# BaSeFood Consortium



**Red: EuroFIR partners**

1. Alma Mater Studiorum - Università di Bologna (UNIBO), Italy - Coordinator
2. Institute of Food Research (IFR), United Kingdom
3. Hellenic Health Foundation (HHF), Greece
4. Instituto Nacional de Saúde Doutor Ricardo Jorge (INSA), Portugal
5. Odessa National Academy of Food Technologies (ONAFT), Ukraine
6. Uzhhorod National University (UZHNU), Ukraine
7. Moscow State University of Food Productions (MSUFP), Russian Federation
8. Spread European Safety - European Economic Interest Grouping (SPES – GEIE), Italy
9. Bucharest University of Economics (ASE), Romania
10. Biological Farming Association – Elkana (ELKANA), Georgia
11. Institute for Medical Research (IMR), Serbia
12. University of Food Technologies (UFT), Bulgaria
13. TC Yeditepe University (YEDITEPE), Turkey



## BaSeFood information



- **Nature: Small cooperation program**
- **Duration: 36 months**
- **Launched: April 1, 2009**

## Objectives

- **To investigate the knowledge base of traditional foods of the BSR in order to: a) prioritise a subset of 30 foods; b) enhance general knowledge and interest**  
*(WP1. Surveying, recording and describing traditional foods. leader: HHF)*
- **To collect nutrient data for a subset of about 30 prioritised traditional foods, and bioactive data of these an/or other foods and ingredients, by means of appropriate analyses**  
*(WP2. Bioactive components, nutritional and microbiological characterisation of traditional foods. leader: INSA)*
- **To carry out case human intervention studies, supported by intensive in vitro and in vivo laboratory tests, to address the requirement for supporting evidence in nutrition and health claims**  
*(WP 3. Health-promoting properties, absorption and bioactivity of target components. leader: IFR)*

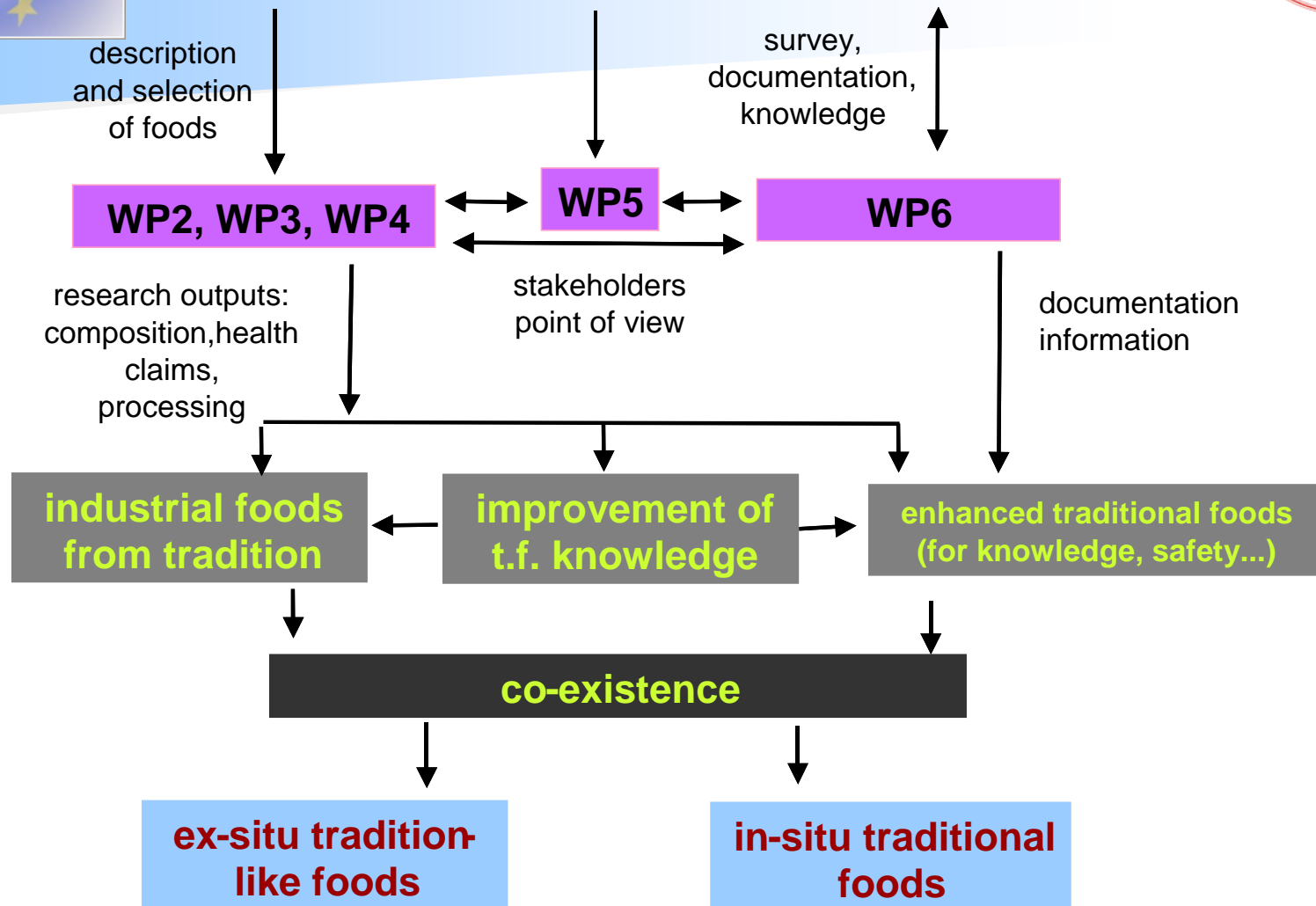


## Objectives

- To map and describe the flow charts of BSR traditional foods preparation and processing, and determine bioactive retention at both laboratory and pilot plant scale  
*(WP4. Technological-chain effects on bioactives in traditional foods. leader: ONAFT)*
- To evaluate attitudes and perceptions of processors and consumers in order to optimise and enhance the whole food chain for improved availability and health benefits of BSR traditional foods  
*(WP5. Chain development and consumer issues in health-promoting traditional foods. leader: ASE)*
- To widely disseminate results and findings in order to enhance awareness and sustainable development of traditional foods of the BSR for improved health  
*(WP6. Dissemination. leader: UNIBO)*



## WP1 Traditional food surveying, documenting, sampling





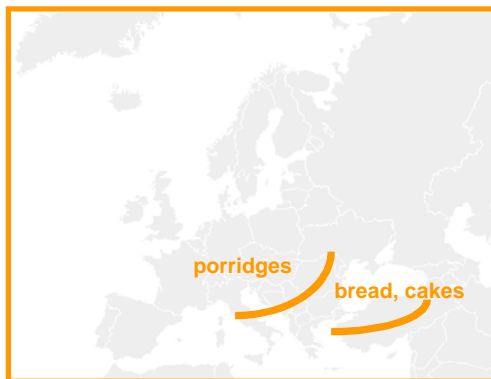
## The concepts of traditional foods and healthy foods

originally do not belong to the same sphere of perception.

- We are trying to combine them in a consistent project with scientific and applied impact
- Adopting a unifying approach, finally putting all activities in a common context
- Food grouped for common characters: raw material (kind of plant), kind of product, ethnic group



## Just an example: a possible corn study



- Corn foods
- the transect of porridges
- the other products
- the complex of corn foods
- the prioritised food

- Traditional flow charts
- enhanced flow charts
- scaling up
- new products

- Corn history
- reason of uses
- ethnic, social facts

- Local plant resources: landraces
- used raw materials (landraces, hybrids)
- quality and technological characters

- Bioactives and health issues
- analytical data
- experiments for bioactivity
- retention

### Conclusions

- perspectives in the health sector
- perspectives in the traditional food sector



EuroFir Stakeholder event, Brussels, 25th March, 2010



## **EuroFIR RESULTS INCLUDED IN BASEFOOD BACKGROUND**

### **Instituto Nacional De Saude Doutor Ricardo Jorge (INSA)**

- 1. The EuroFIR definition of “Traditional foods”**
- 2. The EuroFIR guidelines for the documentation of traditional foods**
- 3. The EuroFIR guidelines for the prioritisation of traditional foods**
- 4. The EuroFIR guidelines for the recording of traditional recipes and the collection, preparation and distribution of laboratory samples**

### **Institute of Food Research (IFR)**

- 5. EuroFIR Basis bioactive databases (excluding toxic composition and effects)**
- 6. EuroFIR eSearch Prototype for nutrient food composition data**
- 7. EuroFIR procedures for traditional foods (identification, prioritization and analysis) and analytical/calculated nutrient data.**

## **OTHER RELEVANT CONCEPTS / METHODS FROM EuroFIR**

- 8. Recipe calculation**
- 9. Food indexing (LanguaL)**
- 10. Retention factors**



## 1. The EuroFIR definition of “Traditional foods”

This has been adopted as primary criterion for the choice of foods to be included in the traditional food documented files (WP1)

## 2. The EuroFIR guidelines for the documentation of traditional foods

The format to register data about: a) consumption, b) composition, was adopted (WP1)

### Variations

- a field to indicate main bioactive substance was added
- Foods divided in 5 categories, according to the nature of main plant ingredient, + 1: a) cereals; b) vegetables; c) fruits; d) oilseeds; e) herbs and spices; f) fermented foods of plant origin

### Status

- 189 foods included, from all Black Sea area Countries, but one

### Comments

- Templates comprehensive and potentially informative. Maybe to be used with a well defined target (define the boundaries, see next point)
- Maybe their complete use more profitable once preliminary explorations have been carried out



### 3. The EuroFIR guidelines for the prioritisation of traditional foods

Tentatively adopted for the prioritisation of about 30 foods (WP1)

#### Constraints

- The EuroFIR prioritisation guidelines are a semi-quantitative model
- Data required for the two fields: “consumption” and “composition” are at least categorical
- If no data available, no prioritisation possible
- Estimated consumption is too broad to work with ample and heterogeneous set of data
- It seems that the procedure can work properly only with detailed information available
- Boundaries of the systems must be very well defined

#### Status

- 33 foods prioritised, but with ample use of rules of thumbs, and complementary criteria (results more adherent to reality !)



EuroFir Stakeholder event, Brussels, 25th March, 2010



## 4. The EuroFIR guidelines for the recording of traditional recipes and the collection, preparation and distribution of laboratory samples (WP1, WP2)

### Status

- Guidelines for recipe recording and documentation were distributed to beneficiaries
- Additionally, a format for the quantitative recording of ingredients and to keep trace of food preparation procedure and sample handling (preparation, fractioning, freezing, shipping) has been prepared and released
- Black Sea area partners are now starting recipe recording, and food preparation and sampling

### Strategy

- A standard recipe chosen
- Prepared in minimum 3 different situations (space / time), with 2 replications

### Constraints

- Household preparation difficult for remote places in big countries



## 5. EuroFIR Basis bioactive databases (excluding toxic composition and effects)

### Status

- eBasis is being used (WP3) to prioritise foods / plant ingredients to be entered in the bioactivity and intervention studies
- BaSeFood participants were introduced to eBasis during a training course held in Belgrade, 9-11 November, 2009
- The concepts adopted for the selection of references will be adopted during the analytical activities (WP2, WP3, WP4), in order to produce data of suitable quality to be included in the database.

### Perspectives

- Hopefully, BaSeFood will produce suitable analytical data to be introduced in eBasis



6. EuroFIR eSearch Prototype for nutrient food composition data
  7. EuroFIR procedures for analytical/calculated nutrient data
  8. Recipe calculation
- **Belgrade training course: BaSeFood beneficiaries introduced to recipe calculation**
  - **A proposal activity not presently in the Description of work**
  - **To apply recipe calculation procedures to the 33 foods subject to proximate and nutrient analyses**
  - **Compare the results**

### **Status**

- **To be started**

### **Constraints**

- **Check the available resources (exchange of PhD, thesis work ?)**



## 9. Food indexing (LanguaL)

### Status

- Belgrade training course: BaSeFood beneficiaries introduced to food indexing according to LanguaL

### Activities

- The 33 selected foods will be indexed according to LanguaL (WP1)
- Beneficiaries will be free to extend indexing to an open number of foods

### Perspectives

- To index traditional foods of the Black Sea Area according to international standards, in order to be more easily retrieved and known, also in relation to food databases and nutritional studies



## 10. Yield and retention factors

### Background

- Presently retention and yield factors are available almost exclusively for nutrients

### Perspectives

- BaSeFood is planning some experiments (WP4, WP2), aimed at determining retention factors of key bioactive substances in plant materials, following basic preparation procedures

### Status

- 7-8 combinations plant raw materials / preparation and / or final product

### Proposals

- Brassica (glucosinolates) / boiling (soup preparation) - retention
- Primitive wheats (phenolics, lipid associated bioactives) / kernel fractionation (bulgur type products) – yield / retention
- Oilseeds (lipid associated bioactives) / related traditional products - retention
- Fruits (phenolics) / drying - retention



## Conclusions

- In the BaSeFood background there were many points in common with EuroFIR
- EuroFIR methodologies have potential to develop relevant BaSeFood parts
- BaSeFood offers the opportunity of combining traditional food and health promoting food concepts
- BaSeFood can be an occasion for the calibration of some procedures
- BaSeFood partners can take advantage from the integration in the EuroFIR context

