The *JOINT PROGRAMING INITIATIVE*

A healthy diet for a healthy life

National consultation workshop

Rome, February 24, 2012

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Scientific Advisory Board

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Scientific Advisory Board

From the vision paper to the priority list!

Discussions within the „pillar groups“

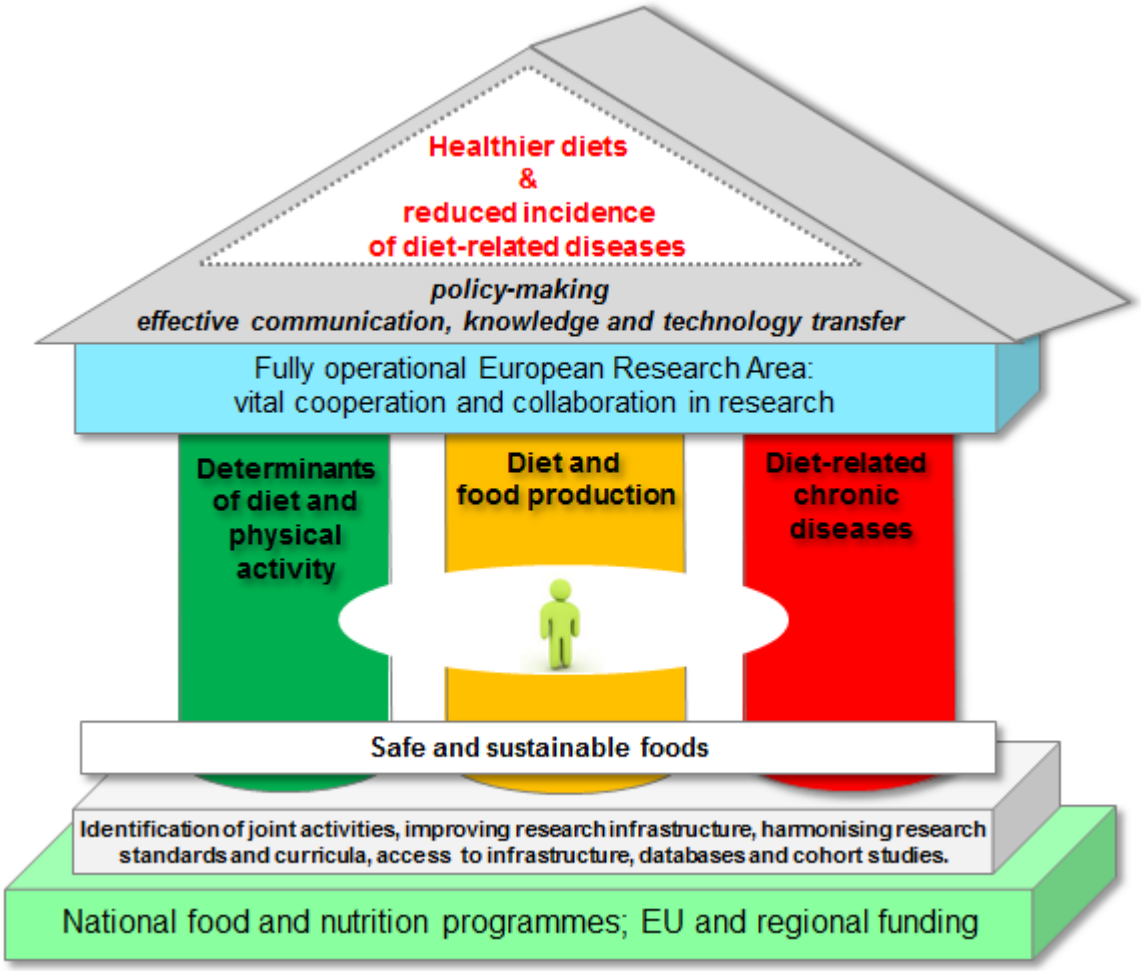
Discussion in the SAB of the themes/areas identified

Consultation and feed back on themes/areas from SAB

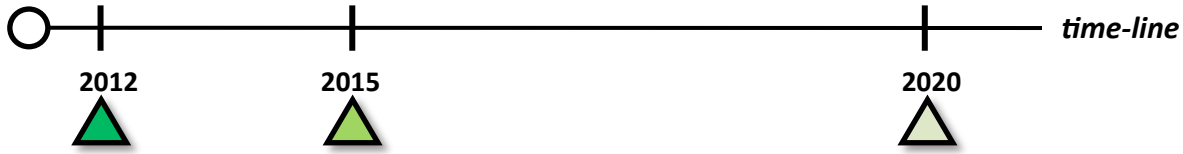
Discussion of all themes in SAB and first priorisation

Preliminary document (net yet approaved by SAB)

The SRA in its current state



Strategic Research Agenda: *priority list*



- **Establish a European transdisciplinary research network on the determinants of diet and physical activity. The prime goal is to have all relevant experts needed for the improvement of the understanding of how individual, social, economic, cultural, gender and environmental factors affect dietary and physical activity behaviours and for translational strategies to improve consumer health.**

- **Establish a pan-european program that utilizes real life conditions for research on the influence of changes in diet and physical activity. Conduct feasibility studies with different levels of complexity in intervention and establish causal relationships for success in prospective studies on lifestyle responses to changes.**

Strategic Research Agenda: *priority list*

Research Challenges

Foster methodological harmonisation and development of standard operating procedures in all relevant disciplines, including the social and geographic sciences with the goal to obtain *all* relevant data in the most harmonized manner.

Establish a joint and standardised monitoring system of dietary intake and physical activity patterns across countries. Much information can be gained from pooling existing prospective cohort studies and regular food consumption measurements.

Establish and maintain an integrated trans-disciplinary database, with potential for secondary analysis by interested researchers with specific research hypothesis, assuming the initial data are collected according to best practice in biological, behavioural, socio-economic and environmental science traditions.

Implement systematic foresight activities and initiate scenario building processes, which include relevant expertise from all EU countries, for example, through application of Delphi surveys or systems analysis approaches involving multiple sources of expertise. The goal of such activities would be the generation of a common research agenda focused on integrating the social, environmental and biological determinants of food, physical activity, sedentariness and health relevant to European research needs.

Research Challenges II

Promote science in analysis of cost-effectiveness of policies and interventions and evaluating these against quality of life indicators and well-being measures. Validated predictive models of consumer food-related behaviour need to be developed and tested against health-related quality of life and economic functioning including targeted interventions.

Incorporate better standardised and innovative measures of behaviours and of social/built environments into on-going large multi-centre longitudinal studies, such as EPIC, or in newly established or designed cohorts with a large number of participants in different age groups. As part of this, it is important to extend existing cohort studies by including Member States not yet part of any of these programmes.

Examine implications of social inequality and minority health challenges require much more research and knowledge related to the needs of specific target groups (SES and minority groups), and in particular the impact and effects of policies and interventions on these various groups. Develop a theoretical framework for the design of studies assessing behavioural changes in real life conditions.

Carry out systematic reviews, meta-analyses, and mediation and moderation analyses of intervention and policy programmes across Europe to identify the policies and interventions that had an effect. These results could be translated into large scale demonstration projects.

Research challenges

Establish a health claim related biomarker expert platform for defining organ-specific health (gut, brain, immune system, cardiovascular system, bone, muscle, skin, respiratory and endocrine systems) in the general population as well as for defined subgroups.

Promote large scale biomarker assessment programmes employing biobank samples (omics-based) and other disease register sample collections in which clinical endpoints can be tested against the putative biomarkers of health with an emphasis on identification of dietary components effects (if covered) as an input variable.

Develop and validate biomarkers of health and food intake using novel approaches including functional genomics, food metabolomics, microbiomics, epigenetics and exploring markers in human studies based on foods (not solely individual ingredients).

Initiate new programmes in which shared concepts and joint research efforts for SMEs in the food and drink industry (with IP sharing) allow product development and launching (distribution of financial risks).

Implement better educational programmes on progress in science in the nutrition and food science areas and on needs for scientific proof of dietary interventions and the effects of ingredients.

Discuss, evaluate and decide on price policy and nutrition profiling

Research challenges I

Research challenges II

Research Challenges III

Compile on European scale food spoilage (in production and households) and develop strategies for reduction of food spoilage (on consumer level, awareness) and by improving agricultural and food production systems and packaging.

Develop smart sensor systems that allow safety of foods and quality to be monitored.

Improve food production systems in view of sustainability including agronomic traits, transgenic technologies, optimisation of fermentation processes, separation and processing technologies

Develop proper products for the elderly that target dietary and sensory needs and assess routes of placement and target-group specific marketing.

Develop proper products for pregnant women and children and assess routes of placement and target-group specific marketing.

Develop packages targeted for specific populations such as ‘easy to open’ for the elderly or for single person households. Design should as well satisfy the need on information & motivation for use.

Strategic Research Agenda: *priority list*

Research challenges

Organise a series of training workshops on the use of the NuGO Nutritional Phenotype Database.

Launch scouting exercise for existing databases and the requirements for merging those.

Organise a joint meeting between JPI and EFSA on the area of harmonising the collection of national and large regional dietary data, in close cooperation with the EU nutrition infrastructure call consortium.

Define the minimal standards for data collection and phenotypic measures (SOPs), in close collaboration with the ECRIN initiative.

Develop an agreed methodology to incorporate data from different omics-technlogies with standard phenotype data.

Create an initiative for a pan-European genotype-phenotype database on food-health relationships.

Provide a basis for assessment of the nutritional phenotype by integration of genetic and ‘omics’ as well as functional parameters and behavioural measures that better define the human nutritional status.

Strategic Research Agenda: *priority list*

Research challenges I

Research Challenges II

Better understand the early environmental exposure for development of obesity and diabetes (pregnant women) for optimising foetal and early postnatal development. Of special concern is the increasing incidence of childhood obesity and the role of life style ('electronic life', computer games, other common new technologies) on disease risks as well as on brain functions.

Identify the mechanisms by which different diets and dietary components influence food-reward, appetite, body weight and metabolic homeostasis. These studies should be carried out in experimental animal models and in humans (using functional NMR or PET).

Examine the organ-specific causes and consequences of subclinical chronic low-grade inflammation in view of the predisposition to developing diabetes type 2 and other chronic diseases, exploring the origin of the variability amongst individuals and how dietary food ingredients and physical activity can prevent it.

Strategic Research Agenda: *priority list*

Actions

Formulate a vision paper with goals, structure, content and governing for such an institution.

Establish a promotion group that takes the concept into various stakeholder circles and organisations for discussions (JPI, ETP, national funding agencies) and onto the political level of the European parliament and the commission.

Analyse critical infrastructure needed and develop strategies for research pooling.

Standardise study procedures and study designs for a harmonised data collection in all relevant disciplines.

Establish processes for secondary analysis of open-access data.

TO BE DISCUSSED TODAY

Major discussion points as raised in the online questionnaire

Research area Determinants of diet and physical activity

- What aspects of Physical Activity fit in this JPI? Should we concentrate on physical activity in relation to diet/nutrition?
- Research challenges: which questions logically follow from the main challenge?
- What type of research is needed (intervention, longitudinal studies?)

Research area Diet and food production

- Is there too much focus on biomarker research? Should the focus be on hard health end-points rather than on biomarkers?
- Should there be less emphasis on health claims and more focus on characterisation of meals and combination of foods?
- Should food processing goals be included?
- Should research on socio-economic issues be included?
- Research challenges: which questions logically follow from the main challenge?
- What type of research is needed (intervention, longitudinal studies?)

Research area Diet-related chronic diseases

- Should there be more emphasis on hypothesis testing studies (metabolic profiling)?
- Is there a need to distinguish between the effect of the human diet on chronic diseases for different age groups?
- Research challenges: which questions logically follow from the main challenge?
- What type of research is needed (intervention, longitudinal studies)?

Goal 2020

- There should be some clear political goals. Do they need to be formulated in this SRA?
- Do we need to include barriers to further cooperation in Europe, e.g. in the area of legislation, finances, intellectual property?

TO BE DISCUSSED TODAY

General points for discussion

Is there enough synergy between JPI A healthy diet for a healthy life and other European initiatives such as ETP Food for Life and other ETPs? And how can we stimulate this?

Do we need to include a chapter on (anticipated) barriers to further cooperation in Europe, e.g. in the area of legislation, finances, intellectual property?

Is the timeline as proposed feasible or is it too ambitious? In the SRA when for example 2012 is mentioned, it is the proposed starting date for the activity. What can we do to make the proposed aims more feasible?

Should foresight activities and other horizontal activities be included in the SRA?