

ILSI Europe

The European branch of the
International Life Sciences Institute

Partnership to Strengthen Public Health

4th ICA Rectors and Deans Forum 2014
23 October 2014

Prof. Diána Bánáti
Executive and Scientific Director



ILSI Europe's mission

Building a bridge between
science and today's public health challenges



Driven by Science



SCIENCE-DRIVEN organisation



- Scientific output:
 - **Peer-reviewed publications in high IF journals**
 - Workshops and symposia with best scientists
 - Sessions at key conferences
- Stringent scientific review of our portfolio and new activities (by SAC, BOD, external academic reviewers)
- At least 50% academics in EGs, SAC and BOD



- >375 publications
- More than 17,000 citations
- *h*-index 69

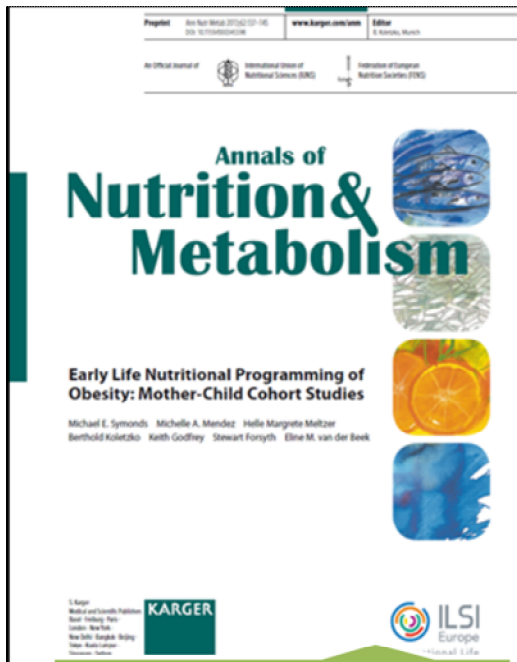
Driven by Science



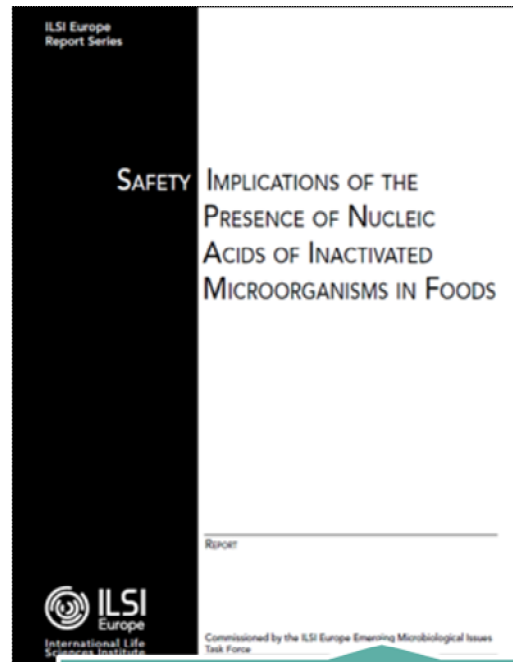
- > 375 publications
- > 17,000 citations
- *h*-index: 69

ILSI Europe's implication in education on life sciences

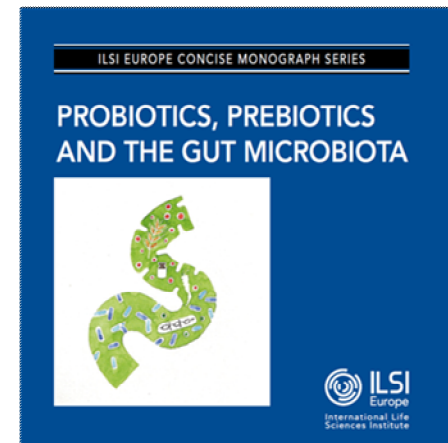
- ILSI Europe's **publications** used as training materials in universities



Articles in peer-reviewed journals



Black and White reports



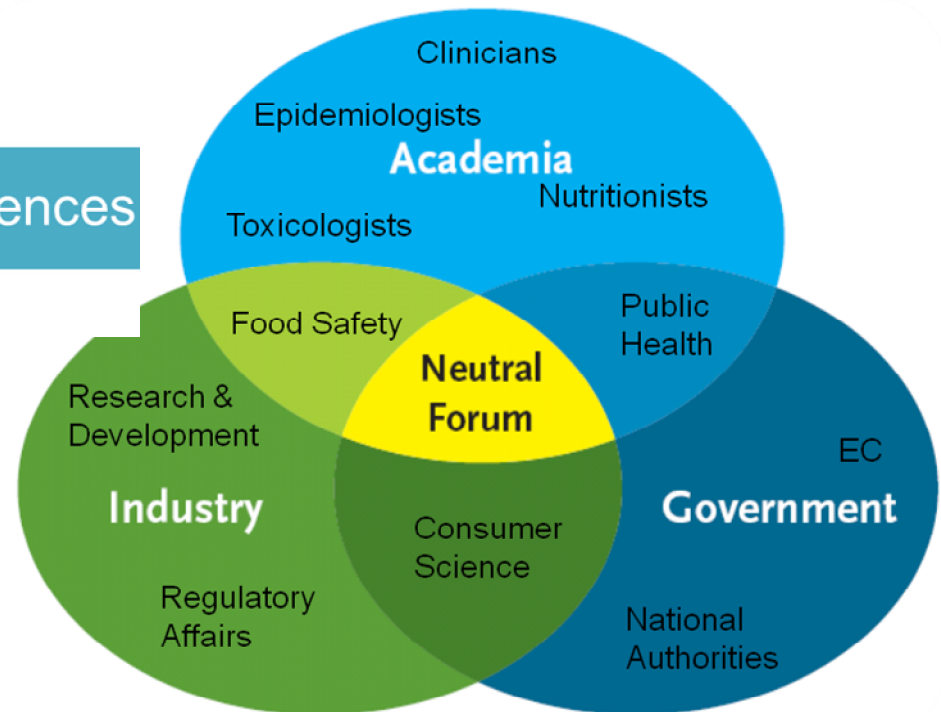
Concise Monographs

Tripartite Approach

Addressing **COMPLEX** scientific issues

Applying **state-of-the-art science** to topics of common concern, the collaboration between our experts provides **balanced, practical and high quality** contributions to public health science.

With **COMPLEMENTARY** experiences



ILSI key principles

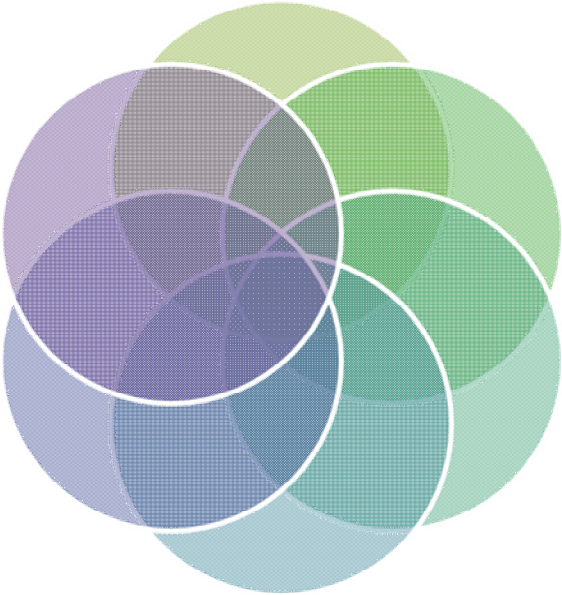
ILSI Europe is a **science-driven organisation**

Discussion are limited to **scientific matters**

Discussion of member companies' markets, prices, pricing policies, marketing, etc., is prohibited

transparency

The governance & protection of the **integrity** of the Institute is key



Anti-trust statement



ILSI Europe Membership in 2014

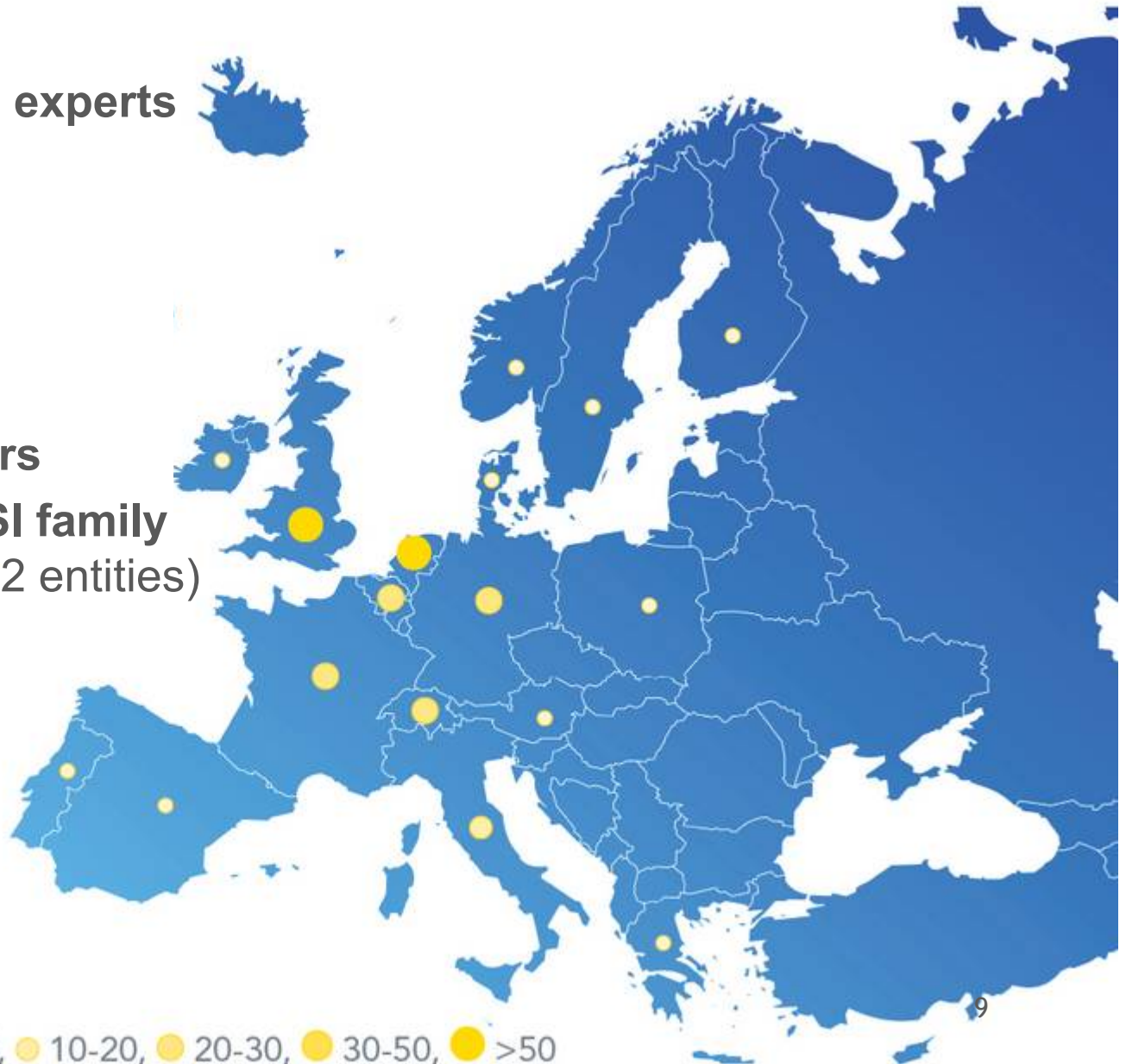
62 Members

Abbott Nutrition	Ingredion Incorporated	Premier Foods
Ajinomoto Europe	Institut Mérieux	Procter & Gamble
Arla Foods	International Nutrition Company	Puratos Group
Barilla G&R Fratelli	Johnson & Johnson EAME	Red Bull
BASF SE	Kao Corporation	Roquette Group
Bayer S.A.S.	Kellogg Europe	Royal Friesland Campina
Bunge Europe	Kikkoman Foods Europe	Rudolf Wild
Campbell Soup Company	Lonza	Sanofi-Aventis R&D
Cargill	Luigi Lavazza	Schwabegroup
Chr Hansen	Mars	Sensus
Coca-Cola Europe	McDonald's Europe	Soremartec Italia – Ferrero Group
Cosucra Groupe Warcoing	Mead Johnson Nutrition	Südzucker/BENEIO Group
Danone	Merck Consumer Healthcare	Swiss Quality Testing Services
Dow Europe	Mondelēz International	Syngenta Crop Protection
DSM	Monsanto Europe	Tate & Lyle Ingredients
DuPont de Nemours	Nestlé	Tereos Syral
Firmenich	Newtricious	Tetra Pak Research
General Mills	Nexira	Ülker Bisküvi
Givaudan International	PepsiCo International	Unilever
Indoor Biotechnologies	Pfizer Consumer Healthcare	Yakult Europe
	Pierre Fabre Dermo Cosmétique	WALA Heilmittel



A network of highly renowned experts

- Collaboration with **250 non-industry experts** from 27 countries worldwide
- Active network of **450 scientists**
- Communication to **9,000 stakeholders**
- Member of the **ILSI family** (15 branches and 2 entities)



Legend

Number of experts: ○ 1-10, ● 10-20, ● 20-30, ● 30-50, ● >50

The ILSI family: a worldwide network

15 branches, 3 entities



Events in 2014

Session
@ Eurotox 2014
10 September 2014

Presentation
@ 18th World Mycotoxins
Forum 2014
11 November 2014

@ ILSI Annual Meeting
17-22 January 2014

@ 32nd International
Symposium on Diabetes
and Nutrition
26 June 2014

ILSI Europe Workshop 'Hazard vs. Risk Based
Approaches in Food Safety Assessment'
2 December 2014

ILSI Europe Workshop
'Assessing and Reporting Uncertainties
in Dietary Exposure Analysis'
6 February 2014

ILSI Europe Annual Symposium
20-21 March 2014

ILSI Europe Workshop
'Non-Intentionally Added
Substances (NIAS)'
2-4 April 2014

Session @ IAFP
7-9 May 2014



ILSI Europe Workshop @ FENS Forum
'Nutrition for the Ageing Brain: Toward
Evidence for an Optimal Diet'
3-4 July 2014



Join us!

Collaboration through EU funded projects

- ILSI Europe collaborates with about **415 scientists** (mainly from academia) via its participation in EC-funded projects



New!! Mapping of scientific activities



ILSI Europe scientific portfolio New mapping of activities

www.ils.eu

FOOD SAFETY

Food Allergy

- Prioritisation of Allergens
- Allergenicity and Processing
- From Thresholds to Action Levels
- *EU project iFAAM*

Contaminants

- Mycotoxins, Decontamination and Food Processing

Microbiological Food Safety

- Nucleic Acids in Foods
- Industrial Microbiological Risk Assessment (MRA)
- Water and Fresh Produce
- *EU project EFFORT*

Low Dose Effect

- Cancer Potency Database
- *EU project COSMOS*

Packaging

- Non-intentionally Added Substances (NIAS)
- Nanotechnologies and Food Packaging

New Approaches for Food Safety

- Safety Assessment of Novel Foods
- Performance of HACCP Control Systems
- New Approaches to Chemical Risk Assessment (new task force)

NUTRITION, DEVELOPMENT & HEALTHY AGEING

Glycaemia & Inflammation

- Reduction of Post-Prandial Glycaemia
- Nutritional Management of Post-Prandial Glycaemia
- Low-Grade Inflammation
- Nutrition and Inflammation
- Metabolic Syndrome Studies

Healthy Ageing

- Nutrition for the Ageing Brain

Early Life Nutrition

- Early Growth Velocity
- Early Bacterial Colonisation and Potential Implications Later in Life

Nutrient Status of Population Groups

- Carbohydrate-based Dietary Guidelines

Energy Balance

- Use of Reduced-energy Sweeteners
- Physical-chemical Properties of Dietary Fibres and Human Satiety



RISK ASSESSMENT & RISK-BENEFIT ASSESSMENT

Food Intake Assessment Methodology

- Fluid and Water Intake at Population Level
- Uncertainties in Food Intake Assessments
- GUIDEA
- Preferred Approaches for Quantifying the Impact of Modifying Nutrient Intakes
- Effectiveness of Dietary Exposure Reduction Measures
- *EU project TDS-Exposure*

Food Intake Data

- Change in Intake of Vitamins, Minerals and Other Substances
- Adequacy of Dietary Fibre Intake
- Adequacies of n-3 and n-6 PUFAs Intakes
- Contribution of Dietary Supplements, Nutrient-dense Food and Food Fortification and the status of the Elderly



BIOMARKERS & FUNCTIONAL EFFECT MEASUREMENTS

Biochemical and Immunological Markers of Nutrition

- Marker Validation Initiative: Existing Criteria
- Markers of Immunomodulation
- Characterisation of and Criteria for Glycaemic Exposure Markers in the Non-diabetic Population

Central Nervous System

- Subjective Effects of Food on Mood and Mental Performance
- Brain Imaging for Early Detection of Nutrition Effects
- Test of Cognitive Function in Nutrition Interventions

- *EU project PATHWAY27*
- *EU project NutriTech*



CONSUMER BEHAVIOUR & SUSTAINABILITY

Consumers & Food Technologies

- Consumer Risk and Benefit Communication for Food Technologies



GUT MICROBIOTA & HEALTH

Prebiotics

- Health Benefits of Prebiotics, Looking at Microbial Fermentation and Metabolism
- Exploring the Role of the Major Gut Microbiota Cluster on Nutritional and Functional Benefits of Nutrients and Non-nutrients

Probiotics

- Probiotics: Interplay with the Intestinal Barrier Function



Food Allergy

About 5 % of the European citizens suffer from food allergy, and this trend continues to rise in both developed and developing countries, especially in children. Food allergy is a major public health issue, affecting consumers' quality of life and impacting health service resources.



Prioritisation of Allergens²

ILSI Europe works on the prioritisation of food allergens. A framework is being developed to help policy makers decide if a food allergen is a priority or not according to their importance in public health risk management. The severity and potency of the allergens are important parameters considered in the framework.

Status: Manuscript in preparation

Allergenicity and Processing²

ILSI Europe evaluates the effect of different processing conditions (e.g. heating) on allergenicity of proteins and/or foods. The most relevant allergens and/or allergenic foods in Europe will be identified from a prevalence, severity and potency points of view. The benefits and/or reverse effects of processing will be established.

Status: Manuscript in preparation

From Thresholds to Action Levels²

How much is too much, when speaking of food allergens? There are no generally agreed standards for deciding whether unintentionally present allergen presents a risk to health, or conversely can be considered safe. Operational management practices for food allergens still suffers from this lack of clear standards to the detriment of allergic consumers and the frustration of industry. ILSI Europe has worked over several years with the different stakeholders and proposes quantitative action levels for use in the management of allergens in manufactured food products.

Status: 3 manuscripts accepted for publication in Food and Chemical Technology

EU project iFAAM

ILSI Europe is one of the 38 partners of iFAAM, looking at integrated approaches to food allergen and allergy risk management. iFAAM is developing approaches and tools for new food allergy management plans and dietary advice.

Contaminants

Consumers are daily exposed to naturally occurring contaminants and process-related compounds, both potentially toxic. ILSI Europe designs and implements programmes that help understand how these compounds are formed, improve how we detect and measure them and assess their safety implications.

Mycotoxins and Food Processing⁵

Mycotoxins are toxic secondary metabolites produced by fungi that significantly affect the quality, safety and yield of important crops for food and feed worldwide. ILSI Europe will review options (list the options) to optimise food processing in order to reduce mycotoxin contamination of food and feed. The final goal will be to minimise food and feed losses while maximising the safe use of crops.

Status: First meeting in Spring 2014

Microbiological Food Safety

Foodborne diseases are a common, costly – yet preventable – public health problem. Despite all the measures implemented to reduce food safety risk, food-borne illnesses continue to pose serious health threats in Europe. Over 320,000 human cases are reported each year in the European Union, but the real number is likely to be much higher.



ILSI Europe participates in the EC-funded project EFFORT on Antimicrobial Resistance (AMR) throughout the food chain. EFFORT studies the complex epidemiology and ecology of AMR using newly developed molecular and bio-informatics technologies.

Nucleic Acids in Foods¹

Food manufacturing usually includes one or more processing steps to inactivate pathogens and spoilage microorganisms. However, many macromolecules (such as nucleic acids) are still largely intact and potentially harmful. ILSI Europe provided guidance on how to interpret the presence of nucleic acids from (living or inactivated) pathogenic microorganisms in raw materials and processed food products.

Status: Published as ILSI Europe Report Series. Submitted to a peer-review journal

Industrial Microbiological Risk Assessment (MRA)⁶

There is a lack of practical and applicable data and guidelines to perform practical Microbiological Risk Assessment (MRA). ILSI Europe aims to provide easy-to-follow and practical MRA recommendations specific to different industry sectors (e.g. fresh produce, ready-to-eat meat, meat, poultry, fish, seafood, and dairy) and guidance on implementation of risk assessment strategies within companies.

Status: Manuscript in preparation

Water and Fresh Produce⁷

Consumption of fresh products, including fruits and vegetables, has been increasing worldwide, which improves nutrient intake and reduces disease risk. However, fresh products are more likely to transmit waterborne and foodborne diseases. ILSI Europe assesses the role of water quality in the production of fresh produce and evaluates the associated microbial safety risks.

Status: Manuscript in preparation

Packaging

Can you imagine that European citizens waste on average 164 kg of packaging per person per year, of which more than 2/3 are food packaging? Packages play a key role in protecting its food content; sophisticated smart packages can also inform the consumer about the freshness or heat the product without external source of heat. However, a careful evaluation of food contact materials and their interactions with food is needed to ensure consumers' safety.



Non-intentionally Added Substances (NIAS)⁴

During the life cycle of food contact materials, unexpected and potentially harmful substances may migrate from packaging materials into food products. These newly defined products are called Non-Intentionally Added Substances (NIAS). ILSI Europe is producing guidelines to better understand and address how these could be assessed. For example, how to predict the formation of NIAS from the chemical composition of the food contact materials, from the technological processing and from the interaction with food matrices.

Status: Draft manuscript ready. Workshop to be held in April 2014

Nanotechnologies and Food Packaging⁴

Whilst most nanotechnology applications for the food sector are currently at R&D or near-market stages, the applications for food packaging are rapidly becoming a commercial reality. ILSI Europe drafted a guidance document on the new opportunities and safety considerations of nanotechnologies in food packaging. Consumer acceptance is also evaluated.

Status: Manuscript submitted

New Tools for Food Safety

Safety Assessment of Novel Foods³

Risk assessors tend to move away from the more traditional hazard characterisation approaches (typically using laboratory animals) not only to new cellular and molecular methodologies but also to a better understanding of human biological pathways and networks and how these are affected by exposure to chemicals. This activity is a unique opportunity to understand the strengths and weaknesses of new technologies as enablers of food safety assessment. It helps identifying the technologies that best fit with set requirements to perform safety assessments in the food industry.

Status: Manuscript in preparation

Performance of HACCP Control Systems⁶

Food safety control is going more and more from end-product testing to management and control. The use of longer term process control sampling with reduction of frequency is expected to contribute to cost savings, without compromising on the safety of products. This activity is meant to continue a long-term change in food safety management. It will provide approaches/procedures/tools that, based on past performance, demonstrate the effectiveness of prerequisite programmes and of the hazard control system at different steps of the food production process.

Status: Manuscript in preparation

Low Dose Effect

The concept of a Threshold of Toxicological Concern (TTC) states that, at sufficiently low enough exposure, the associated risk related to the consumption of substances used in food contact articles may be deemed negligible. This concept is particularly useful for regulators and industry to assess potential health risk from substances when specific toxicological data are lacking.



Cancer Potency Database²

Based on the Cancer Potency Database (CPDB) including information from carcinogenicity studies of over 700 chemicals, a TTC exposure limit of 0.15 µg/day was established for DNA-reactive substances. Is this limit still adequate in the light of more recent studies and new assumptions (which ones)? ILSI Europe aims to update and extend the CPDB, reanalyse the dataset and evaluate whether or not the TTC exposure limit should be reconsidered for DNA-reactive compounds. An updated version of the Cancer Potency Database would be a invaluable input to risk assessors.

Status: Data collection

EU project COSMOS

The COSMOS project is a unique collaboration addressing the safety assessment needs of the cosmetics industry, without the use of animals. The 'Threshold of Toxicological Concerns' (TTC) approach is one of the alternative risk assessment methods considered. COSMOS assesses on the one hand how the current TTC approach could be applied to cosmetic ingredients, and on the other hand how to extrapolate from the oral to dermal route exposure, which is particularly relevant for cosmetics. ILSI Europe contributes on the criteria to apply the TTC approach to cosmetic ingredients, and on the evaluation of oral-to-dermal extrapolation.

The activities mentioned on this poster have been commissioned by the 7 following task forces: ¹Emerging Microbiological Issues, ²Food Allergy, ³Novel Foods and Nanotechnology, ⁴Packaging Materials, ⁵Process-related Compounds and Natural Toxins, ⁶Risk Analysis in Food Microbiology, ⁷Threshold of Toxicological Concerns.



Overweight and obesity are major risk factors for a number of chronic diseases (e.g. diabetes, cardiovascular diseases and cancer). Once considered a problem only in high-income countries, overweight and obesity are now dramatically on the rise in low and middle-income countries, particularly in urban settings.

Glycaemia & Inflammation

Around 366 million people worldwide have diabetes and this is projected to reach 552 million by 2030. Dietary components can have significant effects on blood glucose modulation. More prevention, including nutritional advice, might limit this dramatic increase of diabetes and therefore its impact on health and longevity of the population.



Reduction of Post-prandial Glycaemia¹

There is a general consensus that reductions in post-prandial glycaemic (PPG) and relative insulinaemic (RFI) responses are likely to be beneficial for reducing the risks of several chronic diseases (e.g. diabetes or cardiovascular diseases). This activity will provide practical guidance on how to quantify effects of the food consumed on blood glucose and what is the impact on health.

Status: Data collection



Low-Grade Inflammation²

Low-grade inflammation (LGI) is characterised by levels of inflammatory markers slightly above "normal". LGI has been linked to several chronic adverse health conditions including obesity, metabolic syndrome and cardiovascular diseases. ILSI Europe aims to better understand the relationship between LGI and chronic diseases and how food components can modulate this relationship.

Status: Manuscript submitted

Nutritional Management of Post-Prandial Glycaemia³

Nutritional management of blood glucose levels is a strategic target in the prevention and management of diabetes. This activity showed that dietary components (e.g. carbohydrates, protein and fat, micronutrients, non-nutrient phytochemicals and low-calorie sweeteners, vinegar and alcohol) can have significant effects on blood glucose modulation. An integrated approach that includes reducing excess body weight, increased physical activity along with a dietary regime to regulate blood glucose levels will be beneficial in diabetes management.

Status: Published in *Critical Reviews in Food Science and Nutrition*

Currently 30-40% of the European population suffers from the metabolic syndrome which has a large impact on total cardiovascular disease and type-2 diabetes. Diabetes, obesity and cardio-metabolic dysfunction can be prevented and managed by dietary modulation and lifestyle habits.

Nutrition and inflammaging⁵

Low-grade inflammation (LGI) occurs as a natural consequence of ageing. What are the triggers of low grade inflammation? Why does low grade inflammation happen and how does it start? What are the benefits or drawbacks for health? ILSI Europe addresses all these questions and identifies biomarkers for studying the initiation of low grade inflammation.

Status: Manuscript in preparation

Metabolic Syndrome Studies⁷

This activity considers the impact of individual risks factors of metabolic syndrome (e.g. low HDL-cholesterol, high blood pressure, hyperglycaemia/insulin resistance, hypertriglyceridaemia and adiposity), their interactions and their potential cumulative effects. A model will be developed to measure the impact of foods/food extracts/supplements on the risk, presence or penetrance of the metabolic syndrome.

Status: First meeting in March 2014

Ageing Brain

Nutrition for the Ageing Brain⁶

Currently there are no preventative dietary recommendations for preserving brain health and cognition by any major health organisation. Regulatory agencies have given no positive opinions for nutrients that help maintain brain function during ageing. ILSI Europe reviews the evidence supporting how nutrients, food and diet influence brain health.

Status: Workshop to be held in July 2014



Early Life Nutrition

The next generation is expected to have a shorter life expectancy partly due to the obesity epidemic. Therefore, ILSI Europe is looking at obesity in the earliest stages of life (during pregnancy and infancy).



Early Growth Velocity⁴

Infants who have suffered a period of undernutrition tend to compensate and grow rapidly once their nutritional conditions improve. Rapid growth early in life may increase the risk of chronic diseases later in life. This activity evaluates the influence of growth patterns on the risk of disease later in life (e.g. obesity, metabolic syndrome, diabetes, cardiovascular diseases) in in pre-term infants and infants of small weight for gestational age.

Status: Manuscript in preparation



Gut Microbiota and Health³

The gut microbiota is involved in the modulation of the bio-availabilities and the functions of a large number of nutrients and non-nutrients. Therefore, the gut microbiota is a key variable to take into account when assessing the role of diet on health and diseases such as obesity, inflammation and metabolic syndrome. This activity aims at collecting and reviewing existing data on different gut microbiota clusters and at illustrating methodologies to correlate the composition of gut microbiota to some nutrition related non-communicable diseases.

Status: New activity proposal accepted

Early Bacterial Colonisation⁴

Early bacterial colonisation seems to impact metabolic, immunological and cognitive functions. ILSI Europe will evaluate the current body of evidence with regards to early colonization of bacteria in the gut, placenta and in breast milk and its influence later in life, especially related to inflammatory conditions. The second objective will be to establish how to influence colonisation during gestation and lactation through nutrition. This activity may provide insights for future innovation and development on feeding for gestating mothers and for infants.

Status: New activity proposal under review

Energy Balance

An adequate diet must satisfy human needs for energy and for all essential nutrients. If energy balance is positive over a period, the excess energy is deposited as fat in adipose tissue. A negative energy balance for long periods (insufficient food energy intake to meet requirements) is almost always accompanied by a deficiency in the intake of many nutrients.

Use of Reduced-energy Sweeteners²

There is continuing debate over the impact of reduced-energy sweeteners for energy intake and body weight, and apparent discrepancies between different sources of data. ILSI Europe is undertaking a systematic review of the relevant observational, animal, and acute and sustained human intervention trial data, to establish the current totality of evidence from each approach. The activity aims to build clarity on the nutritional impacts of reduced-energy sweeteners use, in particular what the current evidence is telling us, what the uncertainties are, and factors that may explain why contradictory views arise.

Status: Manuscript in preparation

Dietary Fibres and Human Satiety²

Dietary fibre actually consists of many different specific fibres from different sources, which have diverse and differing properties and health effects. Dietary fibre is often recommended for appetite control, but not all fibres are equally effective for this purpose. This activity focuses on specific fibre properties that could affect appetite. Once these properties are better understood, they can be used in developing new food products.

Status: New activity proposal under review



Sweet Taste Perception, Food Preference & Eating Behaviour¹

Sweetness is universally liked, but the attraction to sweetness is often seen as a potential risk for less healthy eating patterns. ILSI Europe aims to understand how exposure/restriction to sweetness, and sweet perception (e.g. parents using it as a reward) affects food liking and choices.

Status: New activity proposal under review

The activities mentioned on this poster have been commissioned by the 7 following task forces: ¹Dietary Carbohydrates, ²Eating Behaviour and Energy Balance, ³Functional Foods, ⁴Metabolic Imprinting, ⁵Nutrition and Immunity in Man, ⁶Nutrition and Mental Performance, ⁷Obesity and Diabetes.

As the burden of health costs within society increases due to a longer lifespan, overall balanced nutrition can play an important role in disease prevention. Targeted dietary modification can be a solution. It is crucial that both benefits and risks assessments are harmonised and aligned to enable the measurement of the net health impact of foods.

Food Intake Assessment Methodology

Do we really know the composition of our food and importantly, how much of it do we actually ingest? Assessing the exposure of individuals to the many different substances and agents in food is a key component of any risk-benefit assessment for ensuring safe food for the consumer.



GUIDEA³



ILSI Europe initiated GUIDEA (Guidance for Dietary Intake Exposure Assessment) to encourage harmonisation of exposure assessment practices. The GUIDEA website (www.ils.eu-guidea.org) aspires to be a single, interactive source of reference covering all aspects of the methods, principles and approaches to conduct and interpret dietary intake and exposure assessments on the complete range of components in the diet, such as migrates from packaging, pesticides, nutrients and food additives.

Status: Continuous project. New activity proposal in preparation for developing an e-learning tool

Uncertainties in Food Intake Assessments³

Building on the GUIDEA initiative, ILSI Europe will describe the uncertainties present in various intake assessments and classifies these uncertainties to support more accurate food intake and exposure assessments. A clear understanding of the uncertainties is important to get a realistic and clear picture both for day-to-day business and for policy decision-making by risk assessors. A methodology for clear and consistent communication of uncertainties will also be proposed.

Status: Workshop held on 06 February 2014. Manuscript in preparation



Fluid and Water Intake at Population Level³

Although a global issue, fluid intake has received very little attention in national food surveys. Food record methodologies are not adequate to accurately record fluids and water. As several authorities will soon review their methodologies and gather new data, it is a perfect timing for ILSI Europe to propose an harmonised approach to accurately assess water and fluid intake. This activity will propose investigations and guidelines for improving the fluid intake records in the future.

Status: Manuscript in preparation

Impact of Modifying Nutrient Intakes⁴

A range of dietary changes in nutrients and foods intake are recommended by various health authorities. To help consumers meet this guidance, food manufacturers and retailers have been encouraged to adapt the nutritional composition of their products. In order measure the potential effects of these changes in nutrient intakes on health, harmonised quantitative models are needed. ILSI Europe will assess different methods and recommend standardised approaches, improving the comparison and communication of the health impacts of changing food composition and intakes.

Status: New activity proposal accepted

Effectiveness of Dietary Exposure Reduction Measures⁴

Assessing the impact of risk management measures, if done correctly, can lead to more effective risk reduction by identifying measures that are having the biggest impact or no impact at all. The aim of this activity is to develop a science-based approach for determining the effectiveness of risk management measures on dietary exposure to chemical contaminants in food. The activity will examine how to determine mitigation effectiveness on dietary exposure, both retrospectively and prospectively.

Status: Manuscript in preparation

Food Intake Data

Understanding the extent to which Europeans have an adequate food intake is a major challenge. ILSI Europe evaluates population nutrient intakes and their sources and assesses how nutrient intakes affect nutrient status and related health outputs. It thereby contributes to a broader understanding of the setting of nutrient recommendations.



Change in Intake of Vitamins, Minerals and Other Substances¹

ILSI Europe wants to better understand how the implementation of the 2007 European regulation on voluntary food fortification has affected the diet of the EU population. A framework is proposed to monitor existing data on dietary exposure to micronutrients through voluntarily fortified foods at national level in the European Union. Case studies focusing on selected vitamins and minerals (e.g. vitamin A, vitamin C, vitamin D, folate) that are commonly used in fortified foods in 7 target European countries are in preparation.

Status: One manuscript submitted, a second one in preparation

Dietary Supplements, Nutrient-dense Food and Food Fortification and the Elderly¹

Europe is one of the regions where an increased number of countries face significant population ageing in the near future. Malnutrition and undernutrition are high both in institutionalised and non-institutionalised elderly. ILSI Europe will evaluate the type of foods, fortified foods or supplements that can best provide adequate nutrient intake to the elderly. This activity could support the preparation of dietary guidelines specific for elderly individuals to prevent micronutrient deficiencies.

Status: First meeting in April 2014

Adequacy of Dietary Fibre Intake⁵

The intake of total dietary fibre is not optimal in most European countries, in particular in vulnerable groups such as children. Total dietary fibre is important for the maintenance of good overall health and prevention of chronic diseases, whereas specific fibre types could be recommended for their specific health benefits. ILSI Europe reviewed and assessed existing data on recommended and actual intakes of fibre in Europe. This work can serve as basis for revising the current recommendations.

Status: Manuscript in preparation

Adequacies of n-3 and n-6 PUFAs Intakes⁵

Intake levels of adults are available, but information on intakes of specific n-3 and n-6 fatty acids by vulnerable target groups is limited or sometimes lacking. ILSI Europe will review the existing data on total and specific types of n-3 and n-6 PUFA intakes across Europe, and compare it with current recommendations. Emphasis will be put on vulnerable target groups, to mention infants, children and pregnant- and lactating women. Actions will be proposed in case of serious gaps between intake and recommendations.

Status: First meeting in April 2014

Nutrient Status of Population Groups

The nutritional status of an individual is often the result of many inter-related factors. It is influenced by food intake, quantity and quality, and physical health. Nutritional status ranges from obesity to severe malnutrition.



Carbohydrate-based Dietary Guidelines²

Various country-specific guidelines exist for dietary carbohydrates intake. Harmonisation in the methodology used to establish these guidelines is needed to avoid confusion. ILSI Europe will review the current status of these guidelines, their scientific bases and the processes by which they were developed. ILSI Europe will identify the consistencies and inconsistencies across processes to inform future guideline development.

Status: New activity proposal under review

The activities mentioned on this poster have been commissioned by the 5 following task forces: ¹Addition of Nutrients to Food, ²Dietary Carbohydrates, ³Food Intake Methodology, ⁴Functional Foods, ⁵Nutrient Requirements.



The primary role of diet is to provide sufficient nutrients to meet the metabolic requirements of an individual. In addition, diet can have an additional function: beneficial physiological and psychological effects beyond the widely accepted nutritional effects. Biomarkers are used to measure these effects.

Biochemical and immunological markers of nutrition

One of the main reasons why many health claim dossiers are rejected is the lack of supporting evidence based on validated markers to prove the potential health effect to be claimed.

Marker Validation Initiative²

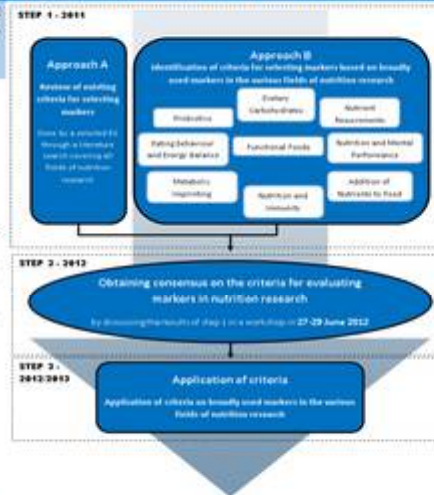
ILSI Europe aims to identify:

- Consensus criteria for validation of markers in nutrition research;
- Consensus markers to use in different fields of nutrition research.

Step 1 consisted in identifying criteria for validation of markers related to nutrition, health and disease, based on available literature and common use. The criteria were discussed in Step 2 with key stakeholders to come up with a consensus.

Currently, ILSI Europe has reached Step 3 where these consensus criteria are refined and applied in different areas of nutrition research, such as mental performance and immunity. In addition, an evidence-based grading system will be introduced which should enable weighing the relative importance of individual criteria, thanks to a quantitative score. This system would provide information about the usefulness/ validity of the current markers for a given experimental situation. The same set of information could be used as primary guidance for the development of new markers.

Status: First publication in European Journal of Nutrition.
Manuscript in preparation



Glycaemic Exposure Markers in the Non-diabetic Population¹

Foods or ingredients proven to reduce blood glucose levels would be beneficial for consumers, including those with impaired glucose tolerance (IGT), and this would also be suitable to claim on products. Experts and policymakers agree that one measure, haemoglobin A1c (HbA1c), is a good marker to evaluate blood glucose levels over a longer time period. HbA1c requires several months to be assessed and is only typical for diabetes patients, but in not non-diabetic persons. The aim of this project is to find markers of blood glucose levels that are more responsive (speed and sensitivity) to foods and diets, and are relevant for non-diabetic persons.

Status: First meeting in Spring 2014

Markers of Immunomodulation^{3&5}

An optimal immune system is crucial to human health. After vaccination, nutrition is one of the major factors which modulate immune function. Currently, there is uncertainty within the scientific community regarding what markers are available to reliably measure the impact of diet on the different aspects of immune function. ILSI Europe evaluated and prioritised more than 75 key immune markers.

Status: Published in British Journal of Nutrition

Central Nervous System

Food and nutrients can benefit brain functions. Great opportunities remain for innovation to optimise neurodevelopment and reduce risk of cognitive decline. In this developing field, ILSI Europe aims at increasing the awareness of the importance of nutrition for brain function across the lifespan.



Subjective Effects of Food on Mood and Mental Performance⁴

While subjective experience is a component of evaluations for health claims on psychological function, self-report (a subjective measure) is not considered as a substantial scientific measure for certain cognitive responses. ILSI Europe aims to evaluate if validating subjective measures (e.g. mood, alertness) are associated with a response of longer-term health relevance.

Status: Manuscript in preparation

Brain Imaging for Early Detection of Nutrition Effects⁴

What we eat, or do not eat, may have an important impact on our cognitive ability and mental performance. Changes in brain functions can be long-term events difficult to demonstrate by traditional means. Brain imaging offers the critical opportunity to study how nutrition affects brain functions. ILSI Europe explained how to use 8 types of brain imaging techniques for the detection of nutrient impacts on brain structure and function, during lifespan but especially during development and decline.

Status: Published in British Journal of Nutrition

Test of Cognitive Function in Nutrition Interventions⁴

There is increasing interest in the effects of nutrition on cognitive function. Experts in cognitive and nutrition sciences published guidelines for choosing the most suitable tests for measuring cognitive function in nutritional intervention studies.

Status: Published in Nutrition Review



Other Initiatives

EU project PATHWAY-27

PATHWAY-27 explores selected bioactive compounds as ingredients of foods that, within the common diet, could significantly benefit human health and wellbeing. Three model compounds (docosahexaenoic acid, beta-glucan and anthocyanins) and three model food matrices (bakery, dairy and egg products) are being studied to derive widely applicable conclusions. PATHWAY-27 will deliver a better understanding of the role and mechanism/s of action of specific bioactives as food ingredients. The project will also define a generic roadmap that can be followed while demonstrating the effects of all types of bioactives and foods enriched with them.

EU project NutriTech

Physiology maintains a well-orchestrated rhythm to adapt to the continuously changing environment of the body, of which diet takes a major share. This adaptive capacity called 'phenotypic flexibility' is key to maintain overall homeostasis and therefore, health and healthy ageing. The goal of NutriTech is to quantify the effect of diet on 'phenotypic flexibility'. In doing so, partners evaluate the use of cutting-edge analytical technologies (so called 'omics' technologies) and methods to study the diet-health relationship and critically assess their usefulness for the future of nutrition research and human wellbeing.

The activities mentioned on this poster have been commissioned by the 5 following task forces: ¹Dietary Carbohydrates, ²Functional Foods, ³Nutrition and Immunity in Man, ⁴Nutrition and Mental Performance, ⁵Probiotics.



Today, over 60% of functional food products are directed towards digestive health, with prebiotics and probiotics probably being the most common, worldwide. Probiotics and prebiotics target the host through the gut by distinct as well as complementary mechanisms of actions.

Probiotics

Probiotic bacteria may be defined as 'live micro-organisms which, when administered in adequate amounts, confer a health benefit on the host' (FAO/WHO 2001). Therefore, consumers, the scientific community and the food industry show an increasing interest in these microorganisms.

Probiotics: Interplay with the Intestinal Barrier Function³

The activity of the intestinal barrier and microbiota can be affected, for example, by acute infections, antibiotic use, stress or other dietary factors. However, a treatment with appropriate probiotic strains could help to restore the intestinal barrier function. ILSI Europe wanted to better understand the intestinal barrier function and its role in health and disease and to investigate the potential impact of probiotics (direct and indirect) on intestinal barrier function. The activity focused on

- Gut barrier defence and related biomarkers;
- Deficiencies in gut barrier defence and links to disease;
- Probiotics and prebiotics as interventions to enhance gut barrier function.

Status: Manuscripts in preparation



Prebiotics

A prebiotic is a food ingredient selectively stimulating growth of microbial species in the gut microbiota that confers health benefits to the host.

Health Benefits of Prebiotics, Looking at Microbial Fermentation and Metabolism²

So far prebiotics were mainly studied for their shifting effect of the microbial composition of the gut microbiota. This change in composition could also affect the microbial activity and type of fermentation products. An evaluation of the physiological effects of the microbial metabolites is in many cases lacking. This time, ILSI Europe studied whether prebiotic consumption can induce health benefits through changes in microbial fermentation and the related metabolites.

Status: Manuscript in preparation



Food choice is a dietary behaviour influenced by many different determinants, like hunger, appetite, taste, cost of food, education level, culture, mood, stress and attitudes, beliefs and knowledge about food.

Consumers & Food Technologies

Food choice and dietary behaviour are among the most important lifestyle factors determining human health and well-being. It is therefore of utmost importance to both the food industry and decision makers but also to consumer representatives to better understand the reasons behind consumers' food choices.

Consumer Risk and Benefit Communication for Food Technologies¹

ILSI Europe provided guidance for effective risk (and benefit) communication about food topics. The aim was to give scientific input to organisations responsible for or involved in assessing and managing (perceived) food risks. The review showed that research on food risk/benefit communication has been fragmented, and theoretical approaches infrequently applied. Both consumers' risk perceptions and risk-related behaviours need to be taken into account in relation to any potential food hazard, and recommendations for behavioural change need to be concrete and applicable.

Status: Manuscript accepted in Critical Reviews in Food Science and Nutrition



Under Discussion

ILSI Europe held a brainstorming meeting in November 2013 to explore new opportunities in the fields of consumer science and social science in its scientific portfolio. During this meeting, 3 main themes of interest were identified:

- Communication and trust;
- Socio-environmental influences on food choice (including obesogenic environment, risk ranking);
- Sustainable consumption (including conflict in food choice, food waste).

ILSI Europe is currently in touch with different collaborators and discuss how to contribute to the calls launched by the European Commission to prepare for Horizon 2020.

More information on the scientific activities of ILSI Europe in:

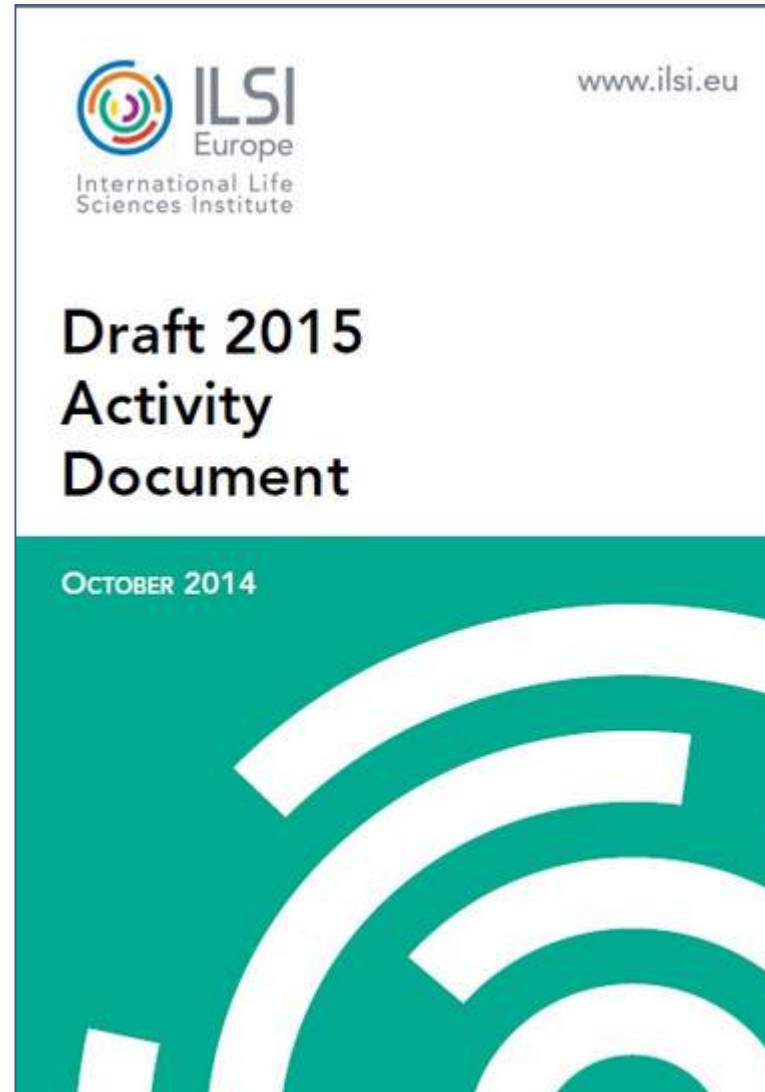


Visit also www.ils.eu



ILSI Europe Activity Document

just released



Scientific Credibility Reinforced

EU projects

Now

We are involved in **7 EC-funded projects** (as Work Package Leader / Partner, mainly in dissemination)



Mid-term

Being involved as **scientific partner**

Long-term

Being able to **coordinate** EU projects (capacities, expertise, resources)

Current EC Projects (FP7)



COSMOS (2007-2013): Partner
Integrated In Silico Models for the Prediction of Human Repeated Dose Toxicity of COSMetics to Optimise Safety
2 expert groups in WP Threshold of Toxicological Concern



TDS Exposure (2012-2016): Partner
Total Diet Studies Exposure
WP Dissemination



NutriTech (2012-2016): WP Leader
Application of New Technologies and Methods in Nutrition Research
WP on Harmonisation, Dissemination and Stakeholder Interaction

Current EC Projects (FP7)



EURO-DISH (2013-2016): Partner

Study on the Need for Food and Health Research Infrastructures in Europe
[WP on Methodological Support](#)



iFAAM (2013-2017): Partner

Integrated Approaches to Food Allergens and Allergy Risk Management
[WP Dissemination](#)



PATHWAY 27 (2013-2018): WP Leader

Pivotal Assessment of the Effects of Bioactives on the Health and Wellbeing, from Human Genome to Food Industry
[WP on Guidelines for Claims Substantiation](#)



EFFORT (2013-2018): Partner

Ecology of Drug Resistant Bacteria and Transfer of Antimicrobial Resistance Throughout the Food Chain
[WP Ecology and Transfer of Resistance Mechanisms and](#)
[WP Dissemination](#)

Past EC Projects: FP5

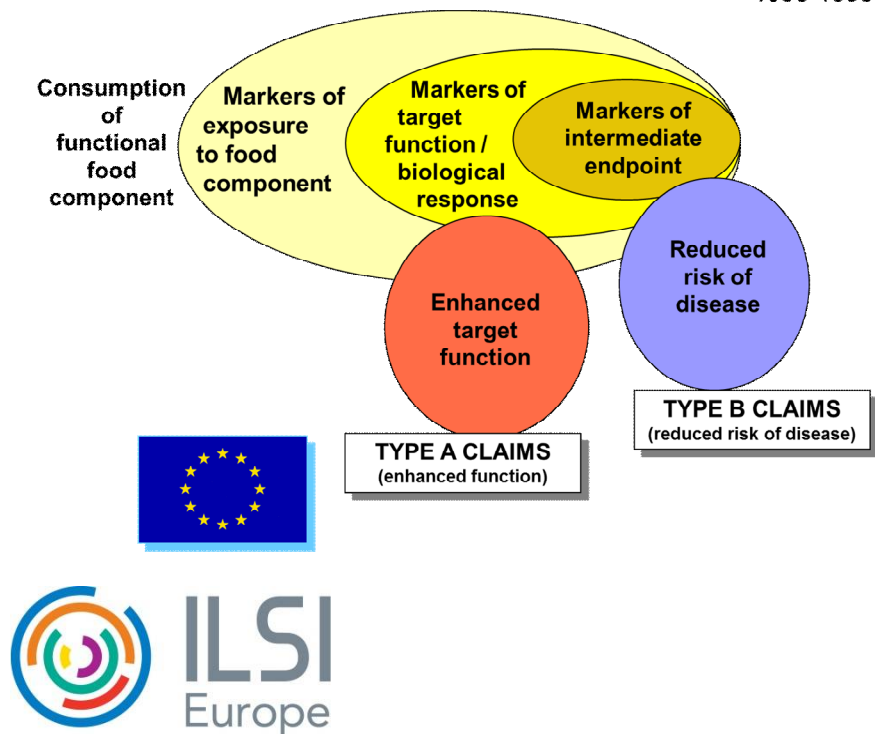
FUFOSE/PASSCLAIM:

Participating in EU projects also means **setting principles for EU regulations**

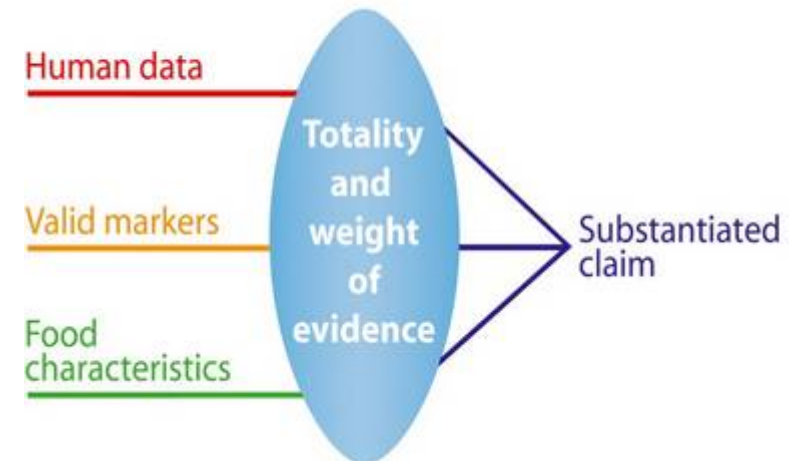


FUFOSE: from biomarkers to claims

1996-1998



PASSCLAIM



H2020-14 - EC Projects proposals

Several proposals have already been submitted for projects on:

- Safety of nanotechnologies
- Foodborne outbreaks
- Healthy ageing
- Big data and open data innovation and take-up
- Sustainable food security
- Responsible research and innovation in higher education curricula



H2020-15 - EC projects proposals

Several proposals and consortia are been prepared for projects on:

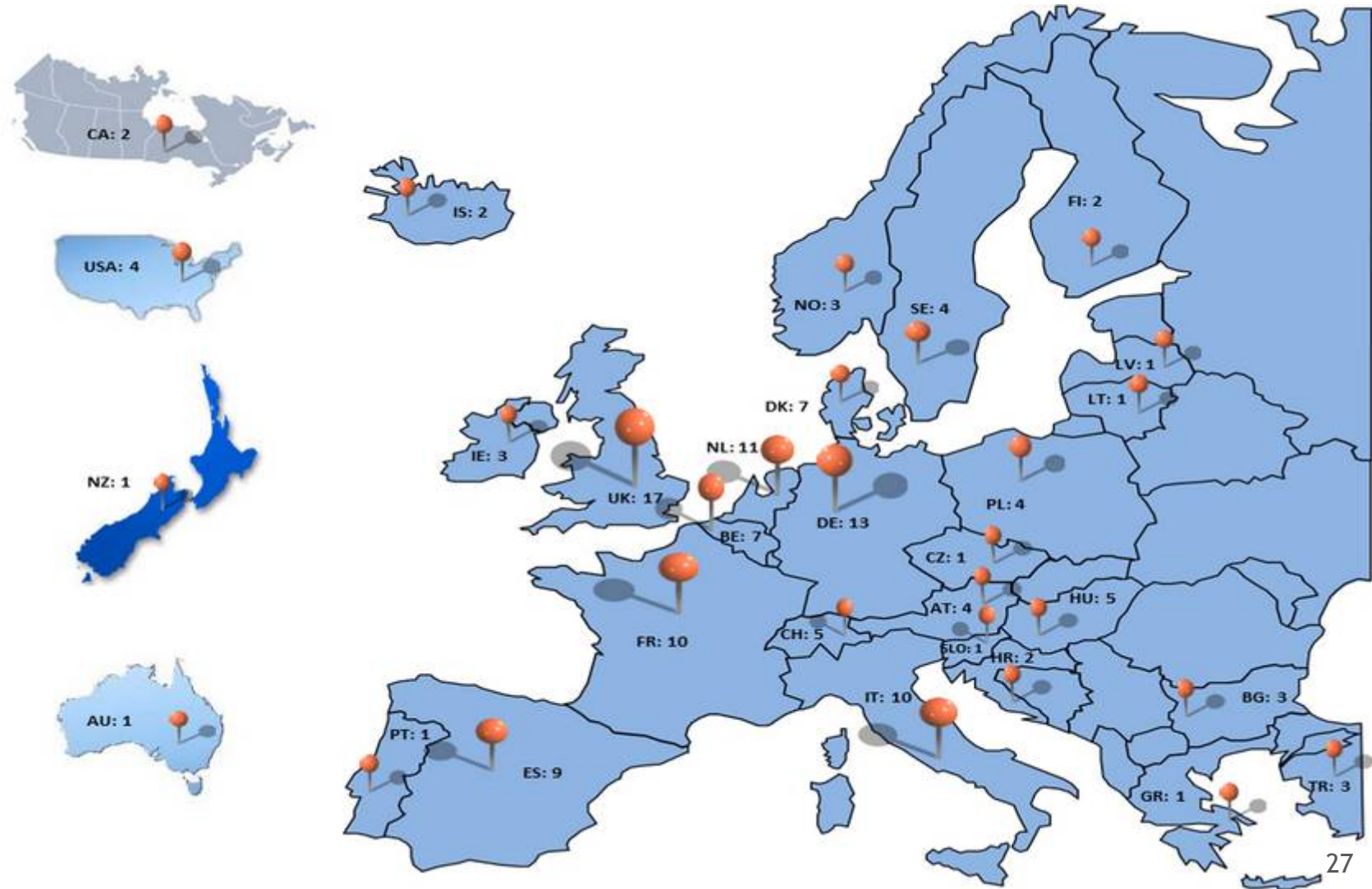
- Malnutrition in elderly
- Understanding common mechanisms of diseases and their relevance in co-morbidities
- New approaches to improve predictive human safety testing



Participating in EC projects means:

- Participating in **cutting edge scientific projects**
- Expanding your own **network of excellence**
- Closely **collaborating with the best scientists** from universities, institutes, organisations and companies around Europe through strong consortia

Number of institutes ILSI Europe collaborates with through EU projects



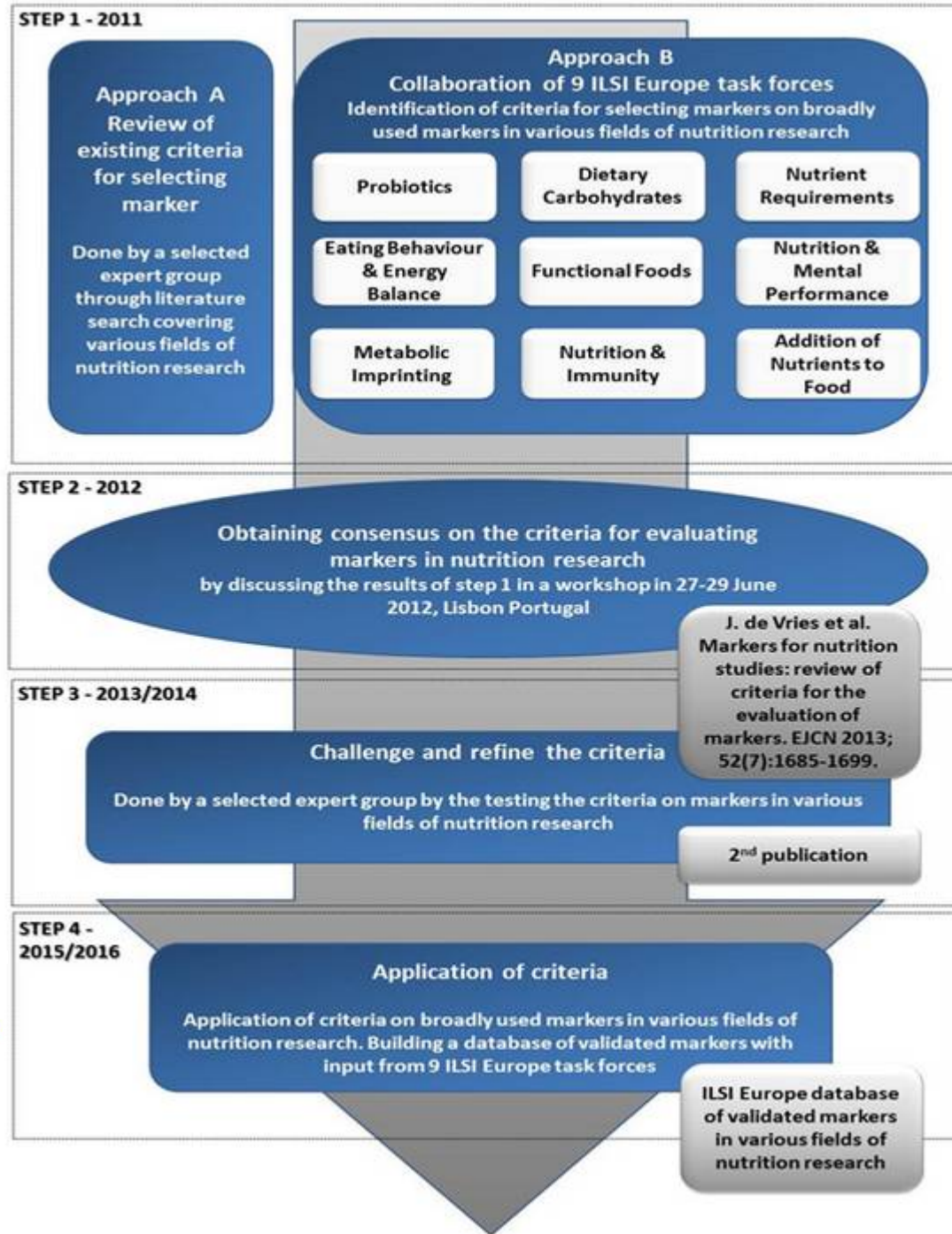
EU project events in 2014



ILSI Europe's implication in education on life sciences

- ILSI Europe's **publications** used as training materials in universities
- Contribution to the **exposure of young scientists** → traineeships at ILSI Europe
- Constant search of **new collaborations**

ILSI Europe's Biomarkers Initiative



ILSI Europe's contribution (1)

Looking at the future

- Contribution of dietary supplements, nutrient dense food and food fortification to the micronutrient intake and status of the elderly
Generate data in support of the optimisation of dietary guidelines specific for (healthy) elderly individuals
- Interactions of micronutrients with other food components (matrix) – what could be the consequences from a safety point of view?
Develop a methodology that could be used by the food industry and health authorities to assess food component interactions



ILSI Europe's contribution (2)

Looking at the future

- E-learning tool for dietary exposure assessment based on GUIDEA (GUIDance for Dietary intake Exposure Assessment)
- New technologies for gathering food consumption
 - Understand the relative merits of different approaches for measuring food consumption and to improve the interpretation and use of results coming from such tools
- Severity versus dose with respect to allergic reactions



ILSI Europe's contribution (3)

Looking at the future

- Reactions and potential mitigation of mycotoxins during food processing

Improve the knowledge on potential health risks/benefits associated with the food processes related to mycotoxins issue, better understanding mycotoxins fate during the application of the correspondent industrial technologies

- Epidemiology and ecology of antimicrobial resistance

Provide scientific evidence and high quality data that will inform decision-makers, the scientific community and other stakeholders about the consequences of AMR in the food chain, in relation to animal health and welfare, food safety and economic aspects (EFFORT)

ILSI Europe's contribution (4)

Looking at the future

- Nanotechnologies, advances materials and production –
Coordination of EU and international efforts in safety of
Nanotechnology

Coordinate and support efforts to join EU Member and Associated states and international efforts for risk assessment, management and governance by streamlining data acquisition, collection and management on regulatory orientated toxicology testing of nanomaterials, exposure monitoring, and disposal and treatment of waste nanomaterials

- ILSI Europe International Symposium on Food Packaging in conjunction with the 2016 EFFoST Annual Conference



ILSI Europe's contribution (5)

Looking at the future

- Reanalysis of the cancer potency database

Strengthen the scientific support for the cancer-based TTC tier, incorporating state-of-the-science approaches to cancer risk assessment and re-evaluate the cancer potency database to establish if this 0.15 µg/day threshold is still adequate

- New approaches to chemical risk assessment

Examine the scientific opportunities that novel approaches present for food chemical risk assessment and improve the application of these new technologies in risk assessment, for toxicity testing in food industry



Hazard vs Risk Based Approaches in Food Safety Assessment

How risk-based approaches could be used in the safety assessment of foods from a chemical, microbiological and food allergy perspective



Tuesday, 2 December 2014

PROGRAMME

HAZARD VS. RISK BASED APPROACHES IN FOOD SAFETY ASSESSMENT

Chair: Prof. Gerhard Eisenbrand

Rapporteurs: Dr Susan Barlow and Prof. Diána Bánáti

Moderator: Prof. Alan Boobis

Session 1: General Introduction

09.00	Welcome	<i>Prof. Gerhard Eisenbrand</i>
09.10	Introduction to ILSI Europe	<i>Prof. Diána Bánáti</i>
09.30	Introduction to Hazard vs. Risk Based Approaches	<i>Prof. Jim Bridges</i>
09.55	Introduction to the Regulatory Climate	<i>Dr Scott Samuels</i>

Session 2: Uncertainties

10.20	Uncertainties in Risk Assessment	<i>Prof. Jürgen König</i>
10.45	<i>Coffee Break</i>	

Session 3: Case Studies: Chemical Risk Assessment

11.15	Risk Assessment of Novel Foods	<i>Prof. Andrew Cockburn</i>
11.45	Risk Assessment of Chemical Contaminants	<i>Prof. Wolfgang Dekant</i>
12.05	Risk Assessment of Chemical Residues	<i>Prof. Alan Boobis</i>

Session 4: Case Study: Microbiological Risk Assessment

12.30	Microbiological Risk Assessment	<i>Dr Maarten Nauta</i>
12.55	<i>Lunch</i>	

Session 5: Case Study: Food Allergy Risk Assessment

14.00	Food Allergy Risk Assessment	<i>Dr Geert Houben</i>
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Session 6: Discussion

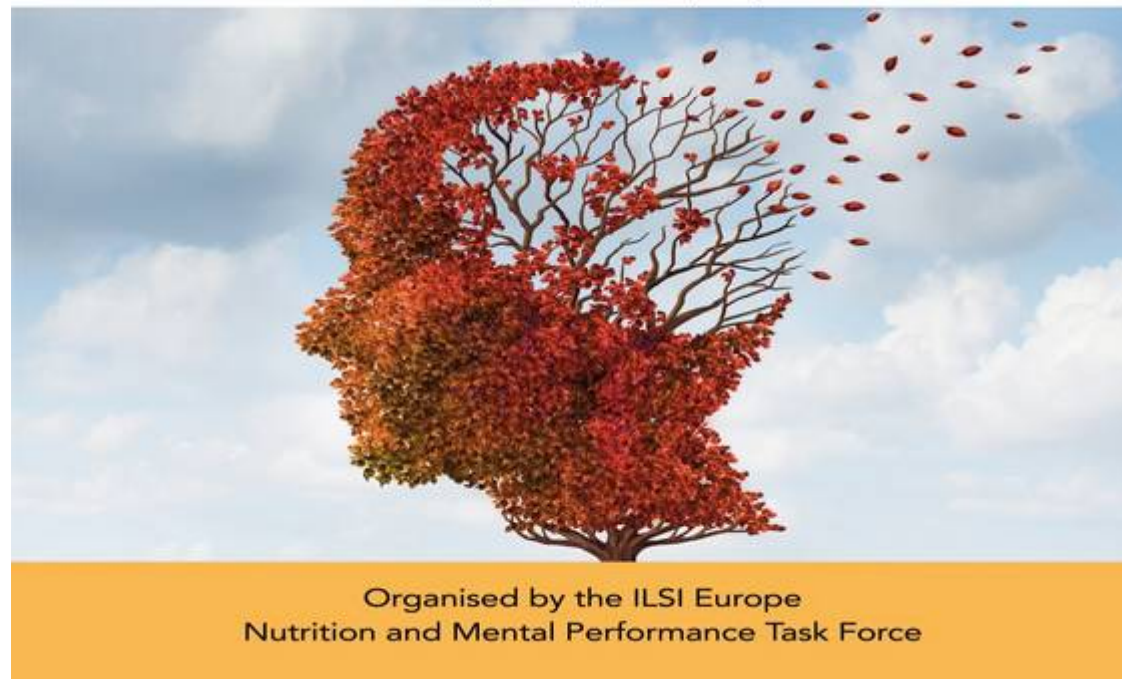
14.25	Round Table Discussion	<i>Moderator: Prof. Alan Boobis</i>
15.45	Summing-up and Closing Remarks	<i>Prof. Gerhard Eisenbrand</i>
16.00	<i>End</i>	

Nutrition for the Ageing Brain: Towards Evidence for an Optimal Diet



Nutrition for the Ageing Brain: Towards Evidence for an Optimal Diet

3-4 July 2014, Milan, Italy



Organised by the ILSI Europe
Nutrition and Mental Performance Task Force

PROGRAMME**Overall Chair:** Dr David Vauzour**Overall Co-Chair:** Dr Siobhan Mitchell**Overall Rapporteur:** Dr Siobhan Mitchell**9:00 Registration****Session 1: Introduction and Background**

- 10:30 Welcome, Introduction and Objectives of the Workshop *Prof. Diána Bánáti*
- 10:45 Understanding Normal and Pathological Declines in Cognitive Function and How they can be Influenced by Genetic and Dietary Factors *Prof. Keith Wesnes*

11:30 Lunch**Session 2: Mechanisms of Ageing and Neuroprotection via Nutrients***Chair: Prof. Hugh Perry; Co-Chair: Dr Sophie Kergoat; Rapporteur: Prof. Jeremy Spencer*

- 12:30 Oxidative Stress in the Ageing Brain: Potential Protecting Effects of Antioxidant Micronutrients and Polyphenols *Prof. Anne-Marie Roussel*
- 12:55 Neuro Inflammation (Inflammageing) *Prof. Hugh Perry*
- 13:20 Dietary Flavonoids as Regulators of APP Processing: A Risk Reduction Strategy for Dementia? *Prof. Robert Williams*
- 13:45 Neurodegeneration and Synaptic Dysfunction/Loss *Dr Laura Caberlotto*
- 14:10 Biomarkers of Cognitive Status *Dr Robert Perneckzy*
- 14:35 Anemia and Cognitive Function in Elderly Persons *Prof. Ugo Lucca*

15:00 Coffee break**Session 3: Can a Healthy Brain be Maintained and a Basic Balanced Diet — What is the Role of Individual Variation?***Chair: Prof. Claudio Franceschi; Co-Chair: Dr David Benton; Rapporteurs: Prof. Keith Wesnes and Dr Gene Bowman*

- 15:25 Healthy Cognitive Ageing: The Beneficial Effects of Polyphenol-rich Diet Intake The InCHIANTI Study *Prof. Cristina Andres-Lacueva*
- 15:50 Intervention Trials Investigating Nutritional Effects on Cognitive Ageing *Dr Ondine van de Rest*
- 16:15 Molecular Mechanisms Underlying Dietary Modulation of Adult Hippocampal Neurogenesis: Implications for Mental Health *Dr Sandrine Thuret*
- 16:40 Dietary Control of Drug Resistant Epilepsy: A New Mechanism of Action for the MCT Ketogenic Diet *Prof. Robin Williams*
- 17:05 Lifestyle Factors (e.g. Nutrition, Exercise, Stress) for Preservation of Cognition: What is the Potential Role of Nutrition? Can Exercise Enhance Micronutrient Effects? *Prof. Eef Hogervorst*
- 17:35 Role of Obesity and Cardio-metabolic Health in Brain Ageing *Prof. Anne Marie Minihane*

19:00 Dinner

Thursday, 3 July 2014

PROGRAMME**Overall Chair:** Dr David Vauzour**Overall Co-Chair:** Dr Siobhan Mitchell**Overall Rapporteur:** Dr Siobhan Mitchell**Session 4: Methodological Challenges — Finding Solutions***Chair: Prof. Keith Wesnes; Co-Chair: Prof. Jeremy Spencer; Rapporteur: Dr John Sijben*

- 9:00 Flavonoids and Neuro-cognitive Improvements: The Involvement of the Vascular System as a Mediator of Benefits *Prof. Jeremy Spencer*
- 9:25 Effects of Diets on Cerebral Blood Flow, Structure and Function *Prof. Amanda Kilian*
- 9:50 Nutrition and the Ageing Brain: What Epidemiology tells us? *Dr Pascale Barberger-Gateau*

10:15 Coffee break

- 10:30 Why Randomised Trials in Humans should be the Gold Standard for Data on Nutrients and Ageing? *Dr Robert Clarke*
- 10:55 Biomarkers of Nutrition Status: Recent Advances with Metabolomics *Dr Claudine Manach*

Session 5: Discussion, Debate and Closing Remarks*Chair: Dr David Vauzour; Co-Chair: Dr Siobhan Mitchell; Rapporteur: Dr Siobhan Mitchell*

- 11:20 Specific Nutrient Intake Levels and Cognitive Ability: Are there Optimal Levels for Preserving Cognition? *Dr Gene Bowman*
- 12:00 Lunch**
- 13:00 Key Issues and Knowledge Gaps
- 13:30 Wrap-up and Closing Remarks

Friday, 4 July 2014

Partnerships strengthen public health

- ILSI Europe provide a **unique platform of collaboration** for scientists from the public and private sectors
- ILSI Europe helps stakeholders to connect and to address **public health issues**
- ILSI Europe is involved in ETP Food for Life, JPI HDHL, SAFE Consortium, EFFoST, IUFoST

Research Trends

- SAFE – Strategic Vision Document



Research Trends

- JPI Healthy Life, Healthy Diet – Strategic Research Agenda



JPI Healthy Life, Healthy Diet

Cardiovascular diseases (CVD) and cancer are the top 2 causes of death in Europe

The cost of CVD to the EU economy is estimated at €192 billion per year (*the 2008 EU budget amounted to €129.1 billion in 2008*)

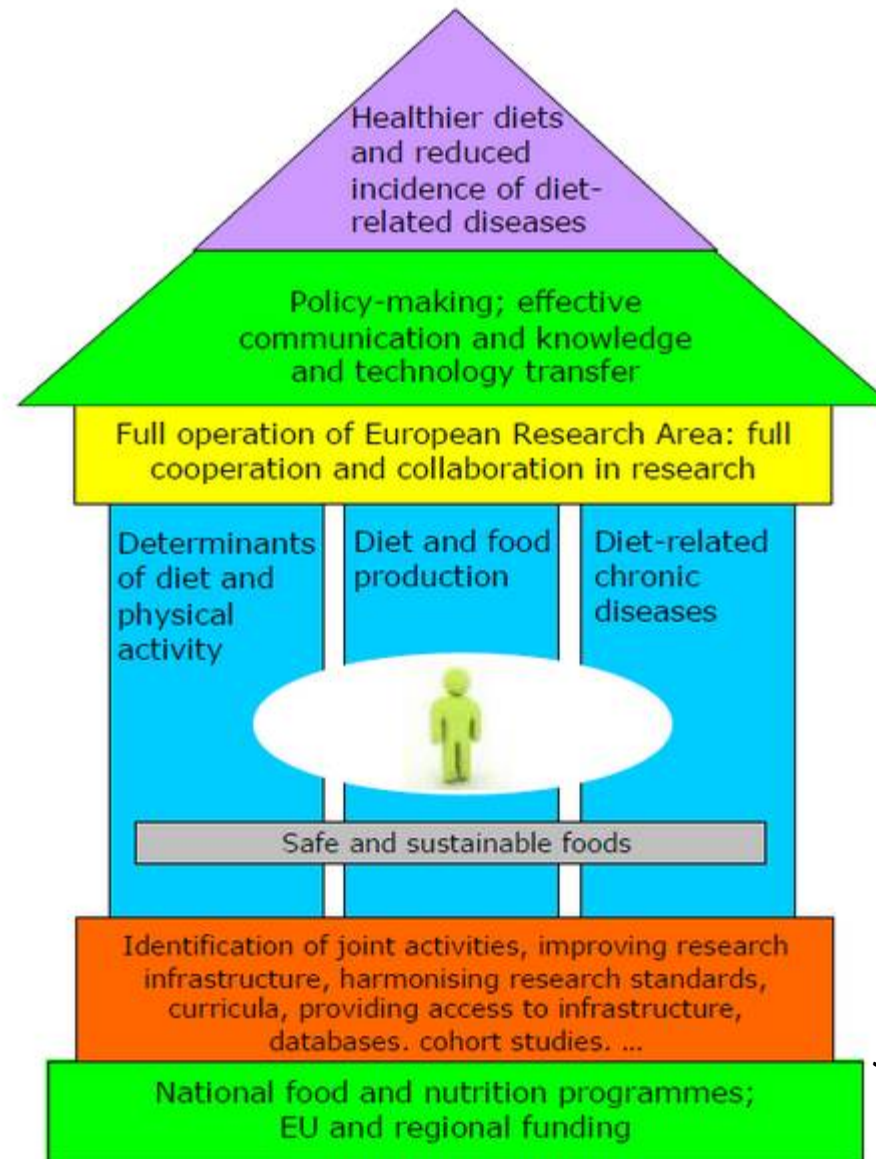
- 57% is due to direct health care cost
- 21% to productivity losses
- 22% to the informal care of people with CVD

By 2020 chronic diet-related diseases will account for almost 3/4 of all deaths worldwide. **There is evidence that improved lifestyles can reduce the risk of type 2 diabetes by 58% over 4 years.**

Population studies have shown that up to 80% of cases of coronary heart disease and up to 90% of cases of type 2 diabetes, could potentially be avoided through changing lifestyle factors, and that about 1/3 of cancers could be avoided by eating healthily, maintaining normal weight and regularly exercising.

JPI Healthy Life, Healthy Diet

JPI - A healthy diet for a healthy life



Research Trends

- ETP Food for Life –
SRIA
(Strategic Research &
Innovation Agenda)





Thank you for
your attention

For more information
dbanati@ilsieurope.be

www.ilsieurope.eu



Collaboration with academics

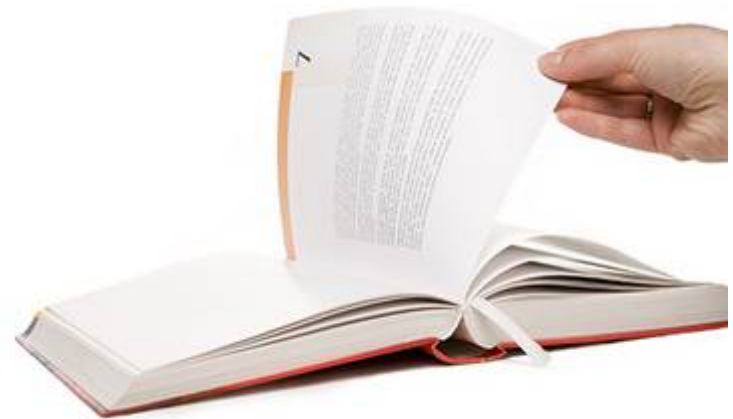
Scientists from academia participates in ILSI Europe work via:

- BOD (>50%)
- SAC (>50%)
- PUC (>50%)
- Expert Groups
- Tack Forces (Co-Chair position)
- ILSI Europe and external events (speakers)
- External reviewer of NAPs and publications
- Traineeships (upcoming project)



Developments of the last 2 years

- Wide range of initiatives implemented to
 - Reinforce our scientific **credibility**
 - Increase our **visibility**
 - Ensure more **transparency**
 - Strengthen our **efficiency**



Scientific Credibility Reinforced

Role of SAC

Stronger involvement of the Scientific Advisory Committee (SAC)

Increased role in reviewing and coordinating the overall LSI Europe scientific programme

More meetings of the SAC members

Creation of sub-committees of the SAC

Review of New Activity Proposal by the LSI Europe Scientific Advisory Committee, Academic External Reviewers and the Board of Directors

Scientific Credibility Reinforced

Each new activity should result primarily in a **peer-reviewed publication**

- Independent review
- Visibility

Revision and strategic evaluation of ILSI Europe scientific portfolio and organisation

- Identification of the best emerging issues
- Strengthening of the link with our members

More academics in our Task Forces

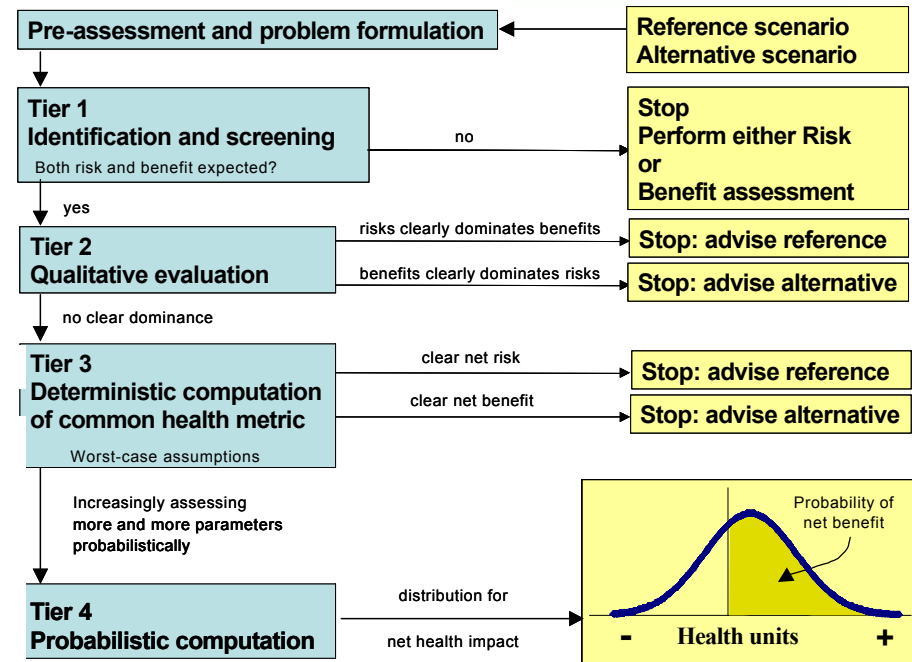
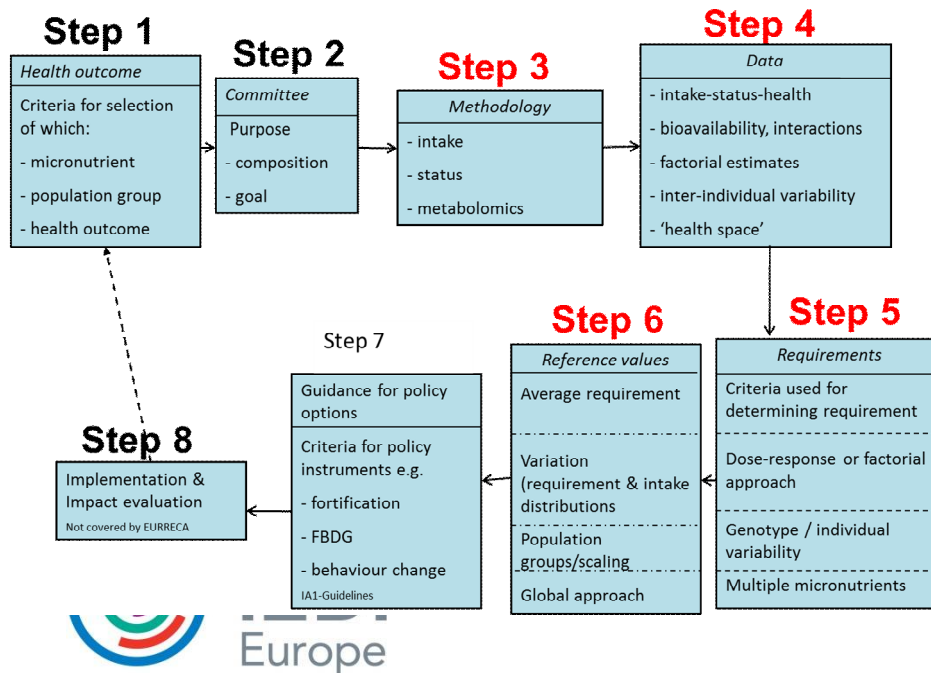
- The role of Chairs, Co-Chairs and Vice-Chairs are clearly defined (guidelines)
- Co-chairs are always academics

Past EC Projects: FP6



EURopean micronutrient RECommendations Aligned

Proposed Generic Scheme



Risk-Benefit Analysis of Foods

Research and innovation

Research

- Using TTC approach mostly developed by ILSI Europe, in understanding its application to way of exposure than ingestion. Skin contact for example with cosmetics (COSMOS, FP7)
- Safe use of Nano materials (H2020). Understand how to best develop safe Nano materials

Research and innovation

Innovation

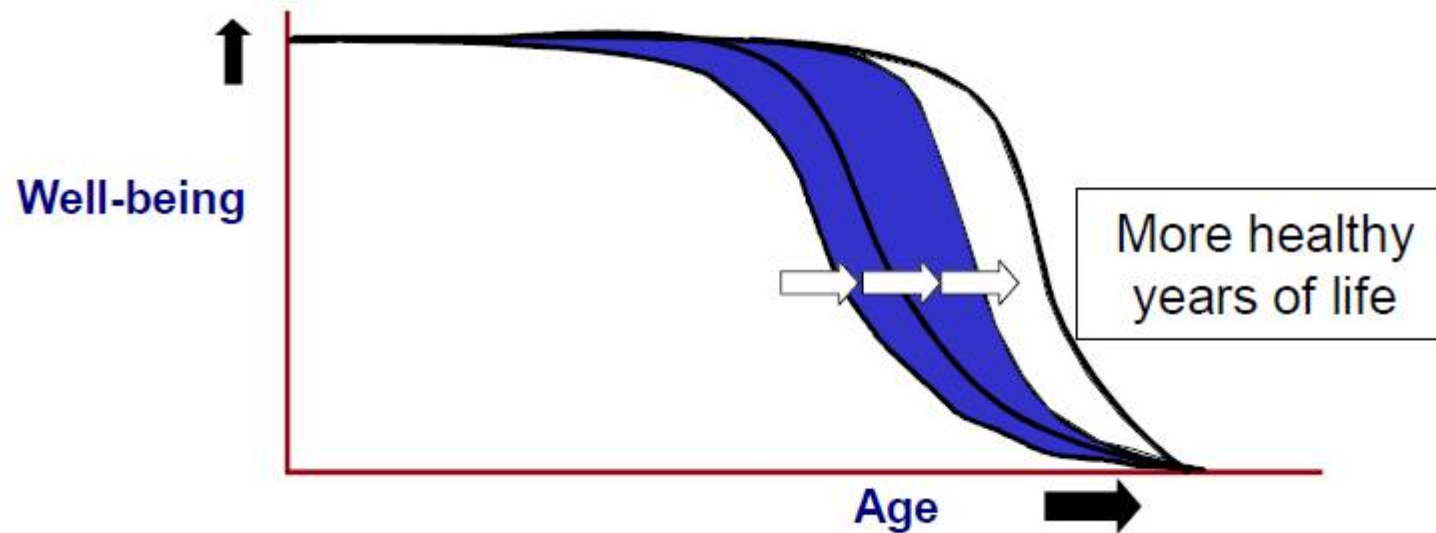
- Better understand the different metabolic pathways (NutriTech, PATHWAY-27) and develop products with added health impact value
- Work on the prevention of metabolic frailty for elderly (H2020-2014) by identifying prevention measures and by proposing the formulation for targeted food products

Research Trends

- EC – DG Research and Innovation – H2020



JPI Healthy Life, Healthy Diet



Source: JPI HDHL, 2014

JPI Healthy Life, Healthy Diet

Comparison of R&D indicators between EU, USA and Japan

	EU-25	USA	Japan
Total R&D¹			
Total R&D intensity (% of GDP), 2004	1.86	2.66	3.18
Share of R&D financed by industry (%) ^(a)	54.8	63.7	74.8
Researchers (FTE) per thousand labour force ^(b)	5.5	9.1	10.1
Share of world scientific publications (%), 2003	38.3	31.1	9.6
Food and drink industry^{2,3,4}			
No. of enterprises in food and drink industry, 2003 ^(c)	282,087	27,897	
Production value, M€ ^(c)	785,244	482,977	
No. of employees, million ^(c)	>4	1.5	
R&D expenditure as % of production value ^(d)	0.30	0.39	0.78
R&D intensity food producers ³	1.9	0.7	2.3

Source: JPI HDHL, 2014