Welcome to the second edition of the EURRECA Newsletter, we hope you enjoyed the first issue last winter.

In what should be its final year, the EURRECA Network of Excellence has been granted a six month extension, allowing the project to maximise the impact of its work.

Five years since the Network was launched we are seeing many of the objectives of the project coming to fruition. For example, we see the launch of the final research activity (RA4) where EURRECA researchers will focus on case studies to illustrate the application of the most important EURRECA tools.

We hope to be able to compare recommendations derived from status markers with those obtained by innovative genomic approaches. We also hope to be able to investigate the role of consumer groups and the opportunities for SMEs and other stakeholders in achieving effective dietary changes. Most importantly we shall consolidate and sustain the EURRECA Network by promoting the use of the EURRECA tools and continually improving them with relevant methodologies available from other diet/nutrition related EU-projects.

Part of our communication effort this year is to define our key messages for the different tools and activities within the Network. The result is a poster outlining what we call ‘the 8-step scheme’, a scheme which will aid in the scientific alignment of micronutrient requirements. So far we have and will promote the poster at several events in 2011; ILSI Europe Annual Symposium, the Belgium Nutrition Society, ILSI Europe Functional Food Symposium and the 11th European Nutrition Conference.

In this issue we are focussing on some of EURRECA’s achievements, for example the biomarker best practice guidelines currently being finalised and the activities disseminated, for example, at the 3rd International Symposium on Trace Elements and Health (TRACEL) and DIETS Fourth Conference. We will also take a look at EURRECA’s upcoming Fifth Integrating Meeting and other upcoming events. Enjoy!

For more information about EURRECA, visit our website www.eurreca.org.

Sofia Valleley, Dissemination leader of the EURRECA Network of Excellence
EURRECA at the 3rd International Symposium on Trace Elements and Health

In Murcia from 24-27 May 2011, the 3rd International Symposium on Trace Elements and Health (TRACEL) sought to facilitate interdisciplinary discussion between a range of experts to consider soil, crop production, animal husbandry, food, nutrition and human health as one related subject. It was in this setting that EURRECA announced some of its recent findings.

The diet is the main source of trace elements and so producing safe and nutritious food is an important goal of modern agriculture. It is crucial, however, that nutrition and toxicology communities work effectively together when setting acceptable ranges for intake of trace elements.

EURRECA played a key role at the TRACEL conference with two keynote lectures and a short communication representing the work done within the network.

Bioavailability of Trace Elements

Keynote speaker, Professor Susan Fairweather-Tait of the University of East Anglia, presented the results of a systematic review of studies of iron absorption from whole diets. This was undertaken, together with modelling of intake-status data, as part of a work package on iron bioavailability to generate information required for setting dietary reference values using a factorial approach. They found that there is no clear relationship between iron intake and iron status and according to Professor Fairweather-Tait, “a bioavailability factor is required to convert physiological requirements into dietary intakes; EURRECA is developing an alternative approach to derive bioavailability factors from a combination of measured intake and status and calculated physiological requirements”.

Trace Elements and Health

Dr Rachel Hurst of the University of East Anglia presented a second keynote lecture on the findings of a collaborative study with the World Cancer Research Fund. A systematic review was undertaken in order to clarify the relationship between plasma selenium and prostate cancer risk. The results suggest that risk may decrease with increasing selenium (up to around 175ng/ml) and a relatively narrow range of ‘optimal’ blood selenium level and intake of selenium may be associated with the risk reduction.

Finally, in a short communication, Maria Hermoso of Ludwig-Maximilians-University of Munich Medical Centre announced the findings of a systematic review of evidence examining the effect of iron intake of infants, children and adolescents on measures of neurodevelopment, including cognition and psychomotor development and on immunity. Although conclusions could not be drawn regarding immunity, the study did identify a modest positive effect of iron supplementation on cognition and psychomotor outcomes, particularly in anaemic infants and children and when supplementation occurred for over two months. The results highlighted a lack of evidence on which to base iron requirements with respects to the reviewed outcomes.

According to Ms Hermoso “the research presented at the conference was of interest to many participants and was a great chance to share the EURRECA experience”.

EURRECA finalises biomarker best practice guidelines

Finalisation of a comprehensive set of best practice guidelines for biomarkers of micronutrient status is nearing completion. First to be approved by external experts were the six priority micronutrients; iron, selenium, iodine, zinc, vitamin B12 and folate.

Assessing status is an essential component in the derivation of dietary micronutrient requirements and is a core element in the activities of the Network. EURRECA’s core aim of outlining transparent processes for aligning European micronutrient recommendations involves providing standardised methodologies for a range of underpinning techniques. EURRECA researchers have developed a set of comprehensive best practice guidelines for the use of status biomarkers. Assessing status, using appropriate biomarkers, is an essential component in the derivation of dietary micronutrient recommendations.

The biomarker best practice guidelines form part of the body of work and resources developed during the initial phase of the EURRECA project. This phase sought to develop best practice methodologies for deriving requirements and setting recommendations in a scientific framework which consider the socio-political context of micronutrient recommendations.

According to Rachel Collings of the University of East Anglia (UEA), “the best practice guidelines were written to introduce the basics of each micronutrient in the context of human nutrition and to summarise the strengths and weaknesses of commonly used biomarkers of nutritional status”.

Understanding these strengths and weaknesses is important in the process of deriving micronutrient requirements, and as such these
The guidelines, along with these extra resources, will be available on the EURRECA website for use by the wider community. This website will be maintained after the project ends to ensure these resources remain accessible into the future. EURRECA's work on biomarkers will also be used by the Biomarkers of Nutrition for Development (BOND) initiative which is developing a database for stakeholders to identify which biomarkers to measure for their particular needs.

BIOMARKERS OF NUTRITION FOR DEVELOPMENT (BOND)

The Biomarkers of Nutrition for Development (BOND) initiative is intended to dovetail onto and support the goals of EURRECA through provision of information and service in support of the global nutrition research and health enterprise. In addition to the guidance provided by EURRECA, the BOND will support the universal need for accurate assessment methodologies for all essential nutrients including assessments of exposure, status, function and effect of interventions. The BOND Secretariat and leadership is located at the Eunice Kennedy Shriver National Institute of Child Health and Human Development of the US National Institutes of Health (NIH). For more information about the BOND, please contact the BOND Secretariat at raghavar@mail.nih.gov.

EURRECA e-learning module presented at DIETS Fourth Conference

On 3-4 December last year, EURRECA attended DIETS (Dietitians Improving the Education and Training Standards) fourth conference in Amsterdam. The theme was ‘Improving the nutrition of Europe through a fully evidenced based profession of dietetics’.

The conference explored the foundations of education required for a competent and educated dietetic workforce, as well as the areas where professional dietitians provide specialist services, such as in diabetes, obesity, paediatrics and renal disease. Dieticians are among the health professionals that use nutritional reference values to evaluate dietary intake and produce diet plans.

The EURRECA Network of Excellence, in collaboration with Wageningen University, is developing an interactive e-learning module to assist in harmonising the ways that health professionals apply nutritional reference values. The team consists of Agnes Berendsen, Jeanne de Vries, Cora Busstra, Adrienne Cavelaars and Lisette de Groot of the Division of Human Nutrition, Wageningen University.

At DIETS 4th Conference, Jeanne de Vries presented a poster of the e-learning module which aims to give health professionals more insight into the background and application of different Nutrient Intake Values (NIVs, also known as DRIs, DRVIs), focusing on pitfalls with regard to evaluating nutrient intake adequacy, and uncertainties with respect to these reference values. The module includes interactive exercises and animations. It can be used as training for professionals or within higher education, for example nutrition related BSc or MSc.

The proceedings and abstracts for the posters presented at the conference were promoted to the 30,000 dietitians in the Network, as well as NGOs, HEIs and agencies in individual Nation States by Dietetic Associations, providing good exposure for EURRECA.
Communication Star 2011

The European Union (EU) funded project “AgriFoodResults” hosted a special event on 1 March 2011 in Brussels, to present the latest findings in communication best practice in the field of agri-food research. The event, “Communication Star 2011”, acknowledges outstanding contributions to the communication of FP6 and FP7 projects related to the food sector.

EURRECA was invited to give a presentation about some of its communication activities related to the micronutrient recommendation database Nutri-RecQuest and the online training tool on “Reproducibility and validation studies within nutritional research”.

The event included a special presentation on the innovative communication tool “Virtual Supermarket” where visitors can navigate around a number of “Knowledge Hot Spots”, public access points containing results from various EU projects within the agri-food sector. EURRECA’s access point was demonstrated during the meeting.

Over 70 project coordinators and communications experts within EU-funded agri-food projects attended together with Maive Rute, Director of the Biotechnologies, Agriculture and Food Directorate of DG Research and Innovation, European Commission.

Speaking at the event, Rute stated that “the need for communication in getting exciting ideas, research project findings and new ways of working out to small and medium-sized enterprises (SMEs), policy-makers and the general public, is an increasingly important task in creating the successful Innovation Union flagship initiative”.

EURRECA’s Fifth Integrating Meeting

From 20-23 June 2011, Budapest, Hungary will host EURRECA’s Fifth Integrating meeting. The organisers hope to enable partners to share their findings and promote progression towards EURRECA’s objectives.

For the first two days the meeting will focus on parallel progress meetings. Highlights of the achievements of the project so far will be the theme of the third day. Finally, on the fourth day, two workshops are scheduled; one organised as part of EURRECA’s sustainability plans and another discussing EURRECA’s science and policy activities.

Workshop 1
Open Symposium: the future of micronutrient requirements research (invitation only)

Do we still need biomarkers, functional assays or intermediate endpoint biomarkers? We are now able to accurately measure multiple biochemical processes using, amongst other technologies, plasma metabolomics and proteomics. Quantifying the actual cellular biochemistry encompasses all factors of ‘individuality’ and could be the most accurate reporter of micronutrient requirements.

Organised in collaboration with the Micronutrient Genome Project (MGP), this half day symposium forms part of EURRECA’s sustainability plan in aiming to identify the needs in micronutrient research and considering its future; what improvements can be made and what are the next steps to achieve these.

Workshop 2
Science-Policy workshop (open to all)

EURRECA’s Health-Behaviour-Policy (HBP) framework was developed to describe the range of considerations in evidence based policy making relevant to nutrient recommendations. The Science-Policy workshop will present this framework alongside feedback from policy maker interviews across Europe. UNICEF will also give a short presentation. The HBP framework is made up of five concentric circles; desired health outcome; characteristics of policy; human behaviour relevant to the desired health outcome; policy/institutional context and the wider context. The full day workshop will explore each of these layers in turn with group discussions, feedback and conclusions. Finally, the utility of the HBP framework as a practical tool for guidance and transparency in the decision making process will be considered.
Success for EURRECA Scientific Writing Workshop

Positive feedback has been received for EURRECA’s scientific writing course that took place from 4-8 April 2011 at Wageningen University. One attendee said “the course was well structured, Wageningen University was fantastic and the Wageningen team were extremely friendly and helpful. I fully enjoyed the week.”

According to Dr Adrienne Cavelaars of Wageningen University the aim of the course was to help participants to improve their writing skills and the quality of their papers, and to enhance the consistency of EURRECA dissemination. It also provided the opportunity for participants to work together and discuss content.

The course was designed to allow EURRECA partners to practice the components of a scientific paper and to improve English writing and editing skills. The intention was that they would learn to write a clearer and more readable article, identify and correct common errors, distinguish good and bad scientific writing, and edit their work more independently.

Participants praised the course leader, Peter Griffiths from the Language Services at Wageningen UR, for being enthusiastic and engaging, creating a good learning atmosphere and providing useful take home notes. They appreciated that their expectations were discussed in advance and that feedback was given on their draft papers. One individual commented that, “the course itself was at a high enough level to teach everybody, even native speakers, something”.

Another individual suggested; “a lot of exercises and writing are required to ‘digest’ this kind of training (Style and Argumentation), so I do not think that the 1-week format is the most efficient one” but, nevertheless, felt that; “the course exceeded my expectations and I am very much convinced that I did improve my writing”.

A message from one member sums up the success of the course, “thank you for the course opportunity and compliments to the WU-team for the good organisation!”

Food-Based Dietary Guidelines – are we on the right track?

Establishing Food-Based Dietary Guidelines (FBDG) is one thing but ensuring they are read, understood and followed is another. Researchers within the EURRECA Network of Excellence have looked at how consumers perceive them.

The review reveals that consumers, to a certain extent, are aware of FBDG but whether they understand the guidelines is unclear. There appears to be a general understanding of key concrete concepts like ‘low-fat’ and ‘low-sugar’, but greater difficulty understanding more abstract concepts such as portion sizes.

It is also unclear whether consumers are actually using FBDG; there are simply too few studies available to tell whether the awareness and understanding of these types of guidelines help them eat healthier.

Effective public information tools are crucial in achieving public health goals. To find out if the efforts have indeed been worthwhile, effective evaluation measures need to be put in place. The EURRECA review on consumer awareness, understanding and use of FBDG shows that the promotions of these guidelines have not always been accompanied by evaluation measures. Thus, it is too early to tell whether the FBDG approach has been an appropriate way to promote healthy eating.

Once FBDG are evaluated based on clear definitions using well-considered methods, studies can be compared and conclusions drawn on the effectiveness of FBDG as a tool to promote healthy eating; which types of FBDG are most efficient and what the contribution of FBDG is to public health improvements relative to other coexisting public health initiatives.
Recent scientific publications


EURRECA researchers present their research on how stakeholders involved in the setting of micronutrient recommendations perceive dietary guidelines.


EURRECA examines the workings of nutrition-related scientific advisory bodies in Europe. The study found despite scientific consensus behind micronutrient recommendations, there are a range of other influences that affect decisions about the policy approaches to nutrition-related public health.

“A review of consumer awareness, understanding and use of food-based dietary guidelines” (British Journal of Nutrition, 1-12, 2011)

This review summarises consumer evidence related to national FBDG and food guides using a framework of three concepts; awareness, understanding and use.

“Selenium in Human Health and Disease” (Antioxidants & Redox Signaling, Vol. 14, 2011)

This review covers current knowledge of selenium in the environment, dietary intakes, metabolism and status, functions in the body, thyroid hormone metabolism, antioxidant defence systems and oxidative metabolism, and the immune system.


In this paper current approaches for estimating optimal intakes of trace elements are discussed, and cases studies on copper and iron are presented.


This paper is part of a supplement containing summary reports from the first meeting of BOND (Biomarkers of Nutrition for Development). Past and current activities in EURRECA that are relevant to the BOND project and to the derivation of Dietary Reference Values are described.

THE STAKEHOLDER SURVEY

More than 200 stakeholders participated in EURRECA’s 2011 stakeholder survey to evaluate awareness and understanding of the EURRECA Network of Excellence.

The data analysis revealed that the global awareness and understanding of the Network is good, however the tools developed are not very well known, resulting in confusion surrounding the Network’s aim. Stakeholders would like to receive more information about EURRECA; regular news on the progress of the Network and key outcomes. A better understanding of EURRECA stakeholders’ perception and needs will allow for improved and tailored communication of Network results and tools.

Upcoming events

The EURRECA Network of Excellence will be present at the following upcoming events:

- The EURRECA 5th Integrating meeting, 20-23 June 2011, Budapest, Hungary.
- International Society of Trace Element research in Humans (ISTERH), 16-21 October 2011, Antalya, Turkey.