

# Europe's micronutrient research network

**Dr Laura Contor** explains the work of **EURRECA** and how the network is changing micronutrient research in Europe

**Can you outline the aims and objectives of EURRECA and what impact this project will have?**

Micronutrient recommendations in Europe are extremely diverse and there is a lack of coordination. The current recommendations are produced by expert groups, many of whom have different interpretations of the same data. EURRECA is a Network of Excellence (NoE) which aims to build a harmonised methodology to produce micronutrient recommendations.

We incorporate the physiological and policy aspects, where consumers play a considerable role. We are also working on the individual needs towards requirements; therefore part of our work focuses on polymorphisms - in other words, the genetic diversity at individual level. Another crucial aspect of our work is to determine the specific needs of vulnerable groups, including social lower classes and immigrants, infants and children, pregnant and lactating women and the elderly.

**What will you deliver to scientists and policy makers to help them to harmonise micronutrient recommendations?**

We are developing an aligned set of standards to measure nutrient intake, assess nutritional status, estimate nutrient requirements and develop nutrient recommendations. These sets of methodology are tailored to specific purposes and population groups. First, we have conducted systematic literature reviews of the existing scientific data to discover the best way to measure micronutrient intake. Based on this work and on experts' input, best practice guidelines on biomarkers of status were created. These guidelines describe available measures of status and exposure, plus the advantages and limitations of each, for 20 key micronutrients. The next stage will be for EURRECA to assess the dose response relationships relevant to derive micronutrient recommendations, evaluate the bioavailability of micronutrients and determine the risk of inadequate intake.

**In addition to the set of guidelines, how EURRECA is contributing to the harmonisation of micronutrient recommendations?**

We are developing practical tools that are applicable for use by policy makers. A recently developed tool is Nutri-RecQuest, a database which has 16,000 entries and is easily accessible, so that different micronutrient recommendations can be compared across Europe. For example, it would be possible to compare calcium recommendation in the UK and in Albania. This is a useful tool for policy makers, researchers and food industry.

We are also building an inventory, freely accessible on the web, of the different dietary software available and we noticed some flaws. We are developing a new intake software, which will be useful for Small to Medium Enterprises (SMEs) and for research, allowing them to implement the micronutrient recommendations when making labels for nutrient content or planning menus for groups (e.g. in schools).



**In what way does EURRECA plan to ensure cascading of key knowledge to base nutrition policy on science, and to improve public health?**

We are working on two levels; internal and external. As a network of excellence, we have a number of young researchers - currently around 200. We provide training to help them to understand where to start their research studies, what to take into consideration and help them to develop analysis techniques. Once our researchers have participated in internal research they will in turn pass on their acquired knowledge to the people working with them.

We are also developing e-modules (interactive digital learning materials) which will be tested in the network so that they can then be used to educate a broader audience in European universities. We would like to collaborate with other NoEs working on similar and complementary problematic studies such as EUROFIR, NUGO and MONIQA so that we can share digital learning to train policy makers, researchers and the public in the field.

Today, scientists are increasingly in the spotlight. To help them to deal with the media, we are investing in communication training. It is important for scientists to be able to disseminate their message in the right way so that it is not misinterpreted by the media.

**What have been the main challenges met during the development of EURRECA?**

The most challenging aspect is getting the right people in the right place. Every governmental department responsible for establishing the micronutrient recommendations has a different structure. For example, in Belgium it is the Superior Health Council that is developing guidelines but it is another part of the government that decides if they are applicable or not. In this case it is important to work with both in equal measure. In the future we would like to convene a meeting and invite all of these people so that we can discuss the issues openly.

# Micronutrients on a large scale

EURRECA's Network is addressing the problem of national variations in micronutrient recommendations to make Europe a healthier place

**WE ARE ALL** familiar with the packaging of our food informing us of the micronutrients that they contain. The recommended daily allowance (RDA) has been used since 1992 as part of the European Commission's recommendations. It is the perfect example of research in micronutrients filtering down to the consumer level to help ordinary people make decisions that will directly affect their health. Such information is also used by governments and industry to create policies which dictate food supplies and nutritional adequacy. However, EU countries tend to use their own nationally derived values which can vary considerably. EURRECA (EUropean micronutrient RECommendations Aligned) is a Network of Excellence, now in its fourth year, which was established to address these discrepancies.

## REGIONAL VARIATION

Dr Laura Contor, the Network Director of EURRECA, and her partners in the consortium strive to create a better understanding of micronutrients recommendations in order to inform scientists, policy makers and consumers. Funded by the European Commission, EURRECA aims to create a pan-European network, providing a framework that will lead Europe to develop harmonised methodologies for setting micronutrient recommendations. To achieve a consensus on evidence, EURRECA has developed a cooperative approach, as Contor explains:

"Collaborative studies with our partners help us to adopt a more in depth multidisciplinary approach and understanding".

One central objective of the network is to find a way to avoid these inconsistencies between various countries, in the future. A stronger European network for micronutrient recommendations settings will help to level such disparities. The current heterogeneity in recommendations results in confusion

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for policy makers, health professions and consumers. Research activity in the form of systematic literature reviews on observational and interventional studies covers both fundamental nutritional science and policy implications and applications. As such, EURRECA is providing the scientific evidence for specific population groups. This network aims to benefit vulnerable groups

such as the elderly, pregnant and lactating women, children and low income and migrant groups.

## TOOL BOX

The EURRECA network will deliver a best practice toolkit providing a robust scientific basis for assessing micronutrient requirements and for devising micronutrient recommendations. These guidelines will tackle factors that account for variations in nutrient intake between individuals and how to best measure the micronutrient status of individuals and populations. In addition, EURRECA have created models to demonstrate how to better understand consumers and their use of recommendations, providing valuable information for policy makers and health professionals. With this structure in place it is a matter of convincing the scientific community that these are the most advantageous methods to work with, as Contor insists: "We must convince people that we have developed a practical solution to their problems," she says. "We can provide them with tools to help them in their work."

35 partners based in 18 countries fall under the network, but EURRECA's collaboration is not just restricted to academic and government scientists. Stakeholders comprise consumer groups, industry, policy makers and health professionals to provide a complementary and comprehensive



contribution of expertise. Through such an extensive network over Europe, EURRECA wishes to shape prevailing framework and methodology in order to achieve evidence-based policy and brings about healthier nutrient intake for all. The work is gaining attention in Europe and further afield, as Contor reports: "The European Food Safety Authority (EFSA) has expressed interest in this work and they are already using it. The Standing Committee on the Scientific Evaluation of Dietary Reference Intakes in the U.S. has also demonstrated an interest," she continues, "so people in the scientific community are aware of our work and are eager to apply it in their research".

#### TANGIBLE BENEFITS

There are several ways that EURRECA can already be seen benefiting consumers. Contor points to the production of more biomarkers as an example of the network's positive effect: "As we try to combine the results and resources available in the micronutrient research field," she says, "we have been able to validate more biomarkers. Through this we hope to achieve better policy options for consumers based on the most advanced science". The Network is also examining food based dietary guidelines as Contor explains: "EURRECA will deliver a best practice toolkit providing a robust scientific basis for assessing micronutrient

requirements and for devising micronutrient recommendations". Although there is no plan to replicate the work of FAO (Food and Agriculture Organization) or EFSA in this field, Contor believes this is another opportunity for EURRECA's expertise to be used. EURRECA is also engaging with small and medium enterprises (SMEs) in a number of ways. User-friendly software designed to aid group nutrition planning, recipe calculation, diet planning, food labelling and nutrient intake assessment is under development. Furthermore, through offering training to scientists and other interest groups, it is hoped the positive results of the programme will be widely disseminated.

#### THE FUTURE

Looking forward, the aim of EURRECA is also to drive the future of European nutrition science. Contor is quick to add a note of caution however, and stresses the need for sustainability: "Once you have the methodology to make micronutrient recommendations, the challenge then becomes how to make it sustainable," she maintains. Dissemination is also seen as key in order to bring the benefits of the latest research to consumers as quickly as possible. With the spread of EURRECA's work and its training opportunities for young scientists, European scientists will be well equipped to make Europe healthier.

## INTELLIGENCE

# EURRECA

## EUROPEAN MICRONUTRIENT RECOMMENDATIONS ALIGNED (EURRECA)

### OBJECTIVES

- Deliver an aligned set of standards providing a robust scientific basis for establishing micronutrient requirements and for devising micronutrient recommendations
- Focus on the needs of specific vulnerable groups: infants, children and adolescents, adults, pregnant and lactating women, elderly, people with low income and immigrants
- Evaluate the impact of socioeconomic status, ethnic origin, inter-individual variability and vulnerability due to genetics, environmental factors and epigenetic phenomena

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