ICN Daily News

IUNS 20th International Congress of Nutrition, Granada Exhibition and Congress Centre, Granada

2013 September 17

Methodology to evaluate energy balance

The Parallel Symposium about energy balance and active living, organized by ILSI North America and ILSI Europe, will be chaired today by James O. Hill, from the University of Colorado Anschutz Medical Campus and by Marcela González-Gross, from the Universidad Politécnica de Madrid. **Page 8**

Interview with Ibrahim Elfadma

The president of IUNS 2009-2013 and Professor Emeritus of Nutrition in the University of Vienna, talks about the importance of IUNS Global Forum where almost all disciplines of nutrition, diet and health are considered. **Page 6**

Advances in the role of nutrients for inflammation and tissue injury

Professor Charles N. Serhan updates new advances on the biosynthesis and functions of this novel genus of specialized pro-resolving mediators and cellular mechanisms

Yesterday's plenary lecture was focused on the novel cellular mechanisms and mediators involved in the resolution of self–limited inflammation and how they have provided new insights into host defense, tissue injury and nutrition. As Professor Serhan explained, "using a systems approach coupled with lipid mediator lipidomics and resolving inflammatory exudates, we uncovered several new families of potent bioactive mediators derived from n-3 essential fatty acids precursors EPA, DHA and DPA". His presentation updated new advances on the biosynthesis and functions of this novel genus of specialized pro-resolving mediators (SPM). SPM include 4 families of mediators: resolvins, protectins, maresins and the most recent addition, their n-3 DPA-derived immunoresolvents. **Page 3**

Charles N. Serhan and J. Alfredo Martínez.

Relationship between hydration and health

The Hydration and Health Symposium, sponsored by the European Hydration Institute (EHI) was chaired yesterday by Jane Holdsworth, from EHI and Professor Gregorio Varela-Moreiras, from the department of Nutrition and Bromatology of San Pablo-CEU University (Madrid). It reviewed several aspects such as the methods to record liquid intake and the health consequences of insufficient intakes —in a talk given by professor Lluis Serra-Majem from the University of las Palmas (Spain)— or the importance of hydration in elderly people, as Lee Hooper, from University of East Anglia, has explained. **Page 6**

Jane Holdsworth.

Gregorio Varela.

Web initiative

Yogurt for health

Next Thursday the Yogurt in Nutrition Initiative for a Balanced Diet will launch a new website aimed at sharing research on this dairy product

Page 3

Parallel Symposium

Food-based approaches and multiple micronutrient deficiencies

As Charlotte G. Neumann, Professor at the School of Public Health UCLA, explained yesterday "food-based approaches are the most promising ways forward for multiple micronutrient deficiencies, especially iron and zinc. These can be found in bioavailable, readily absorbable form in any animal source foods from insects to cattle, fish, and poultry, which have a wide variety of micronutrients and high protein quality".

Studies with school children

Examples of food-based approaches include rearing small animals and eating local fish. Professor Neumann's studies with school children using meat in their school lunches "yielded excellent results for physical and cognitive development". **Page 4**

Science for
Better Nutrition

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Plenary Lecture

Do nutrients play a role in the resolution of inflammation?

Yesterday's plenary lecture was focused on the novel cellular mechanisms and mediators involved in the resolution of self–limited inflammation and how they have provided new insights into host defense, tissue injury and nutrition.

As Professor Serhan was explaining, "using a systems approach coupled with lipid mediator lipidomics and resolving inflammatory exudates, we uncovered several new families of potent bioactive mediators derived from n-3 essential fatty acids precursors EPA, DHA and DPA".
His presentation updated new advances on the biosynthesis and functions of this novel genus of specialized pro-resolving mediators (SPM). SPM include 4 families of mediators: resolvins, protectins, maresins and the most recent addition, their n-3 DPA-derived immunoresolvents. Professor Serhan highlighted that "these autacoids possess potent multi-pronged anti-inflammatory, pro-resolving and microbial clearance actions in animal models. Each SPM proved potent, cell type-specific and stereoselective with human cells and in animal diseases models. Endogenous formation of resolvins and protectins and their organ-protective roles were confirmed by others and extended into human clinical trials. SPM display potent actions in, e.g. infection, obesity-induced insulin resistance and liver disease, murine colitis, arthritis, as well as reduce pain. Resolvins regulate specific microRNAs during resolution via GPC receptor-dependent mechanisms".
Identification of SPM biosynthesized locally and temporally during acute inflammatory responses demonstrated that resolution of acute inflammation is an active programmed process that also stimulates tissue regeneration. "These findings change the more than 200 year old concept that resolution is a passive process. Collectively, they indicate that failed resolution pathways may underlie many prevalent diseases associated with uncontrolled inflammation and open potential for resolution-based pharmacology" he added. ●

Charles N Serhan, Center for Experimental Therapeutics and Reperfusion Injury Department of Anesthesia, Perioperative and Pain Medicine Harvard Institutes of Medicine, BWH and Harvard Medical School.

Sponsored Symposia

Yogurt for Health: from Disease Prevention to Healthcare Cost Savings

The Yogurt in Nutrition Initiative for a Balanced Diet will launch next thursday a new website dedicated to sharing research and insights on the health effects of yogurt.

As evidence of the health effects of yogurt consumption continues to grow, international experts with the Yogurt in Nutrition Initiative convened to address new and ongoing research about the potential benefits of the dairy product on yesterday. The symposium was held as the Yogurt in Nutrition Initiative launches a new website, aimed at serving as the go-to resource for information on yogurt science for professionals.
The presentation event featured information from experts who spoke about the main science related to yogurt and identified gaps that need to be addressed within the scientific community, including the link between yogurt and weight loss, cardiovascular health and nutrition.
The research presented at the symposium, along with other studies, facts and news related to yogurt, that will be available on the newly launched YogurtInNutrition.com website, a partnered effort between the American Society for Nutrition and Danone Institute International. The website will serve as a collaborative online environment for researchers, nutritionists and health practitioners to share and discuss scientific information related yogurt science and will offer information on the latest publications, events and videos on the health benefits of yogurt consumption.
According to Andrew M Prentice, PhD, from MRC International Nutrition Group, London School of Hygiene & Tropical Medicine, in global ecological comparisons milk and dairy intake is strongly associated with adult height and many international advisory bodies recommend the consumption of 400-500ml milk equivalents per day, but few population groups meet these levels. Of 50 national food-based dietary guidelines surveyed two-thirds make reference to yogurt and either give guideline quantities or encourage an increase in consumption within the wider guideline to increase intakes of low-fat dairy produce.
www.yogurtinnutrition.com
Available on 19th September

UNILEVER SYMPOSIUM

BEHAVIOUR CHANGE FOR BETTER HEALTH TODAY!

How to make the healthy choice a preferred choice for kids to grow up healthy and adults to stay healthy?

Please join us to discuss these questions with international experts at the Behaviour Change for Better Health symposium – today at 17.00 in the Falla Auditorium.

Falla Auditorium, September 17th, 17.00 – 19.00

Programme

Changing behaviours throughout life	*Chair: Dr Hans Zevenbergen (Unilever)*
School meals for a brighter future The importance of school meals for children's nutrition and health	*Dr Ans Eilander (Unilever)*
Developing tasty, appealing and nutritious school meals – the chef's perspective	*Janice Lazaga (Unilever Food Solutions, Philippines)*
Impact of improved school meals on nutrient intake – a case study from the Philippines	*Dr Imelda Agdeppa (FNRI, Philippines)*
Partnering to speed up salt reduction Global IUNS and Unilever partnership on salt reduction	*Professor Yang Yuexin (President Chinese Nutrition Society, National Institute of Nutrition and Food Safety, China)*
Global consumer perception from a multi-country study: "Salt reduction is fine but my intake is healthy"	*Dr Gerda Feunekes (Unilever)*

WWW.UNILEVER.COM/ICN 2013

CALL FOR APPLICATIONS

2ND PREMIO DANIEL CARASSO* FOR OUTSTANDING RESEARCH IN SUSTAINABLE FOOD AND DIETS FOR LONG-TERM HEALTH

*AN INITIATIVE OF THE DANIEL AND NINA CARASSO FOUNDATION

The Premio Daniel Carasso is an international award named after the founder of Danone in France and Dannon Co. in the US. It recognizes and encourages outstanding research in the field of sustainable food and diets for long-term health. The first Premio Daniel Carasso was awarded in 2012 to Jessica Fanzo, an American scientist known for her expertise in nutrition and the promotion of biodiversity. The Premio Daniel Carasso also paid tribute to her unwavering commitment to addressing world hunger through research in sustainable development.
The award winner receives an amount of €100,000.

Application conditions for the 2nd Premio Daniel Carasso will be available as of November 4th, 2013. For more information: www.premiodanielcarasso.org.

premio daniel carasso
sustainable food and diets for long term health

Parallel Symposium

Food-based approaches, promising in iron and zinc deficiencies

Meat in school lunches yields excellent results for physical and cognitive development

The best food-based approaches to improve multiple micro-nutrient deficiencies and protein quality were discussed at the parallel symposium held on Sunday. Iron deficiency is the most widespread micro-nutrient deficiency, followed by zinc, vitamin B12 and vitamin A. The main health problems related to micro-nutrient deficiencies are anemia due to iron or B12 deficiencies, lack of resistance to infection due to zinc, iron and vitamin A deficiencies, rickets due to calcium deficiency, cognitive function impairment due to iron and B12 deficiencies and physical activity and muscle strength problems due to iron and zinc deficiencies.

> Iron deficiency is the most widespread micro-nutrient deficiency, followed by zinc, vitamin B12 and vitamin A

As Charlotte G. Neumann, Professor at the School of Public Health UCLA, explained "food-based approaches are the most promising ways forward for multiple micronutrient deficiencies, especially iron and zinc. These can be found in bioavailable, readily absorbable form in any animal source foods from insects to cattle, fish, and poultry, which have a wide variety of micronutrients and high protein quality".

> There are several main health problems related to micro-nutrients deficiencies

Examples of food-based approaches include rearing small animals and eating local fish. Professor Neumann's studies with school children using meat in their school lunches "yielded excellent results for physical and cognitive development".
"Food-based approaches through the raising of small animals for household consumption and/or the use of traditional foods readily available in the environment, such as insects, analids, mollusks, and wild game, can be utilized in the diet. The above approach will require an increase in agricultural and animal extension education for households. Food-based approaches are far more sustainable than pill/supplement distribution which is more costly, logistically difficult, and may have poor coverage of hard-to-reach populations particularly in rural areas", she added. ●

Charlotte G. Neumann, Professor at the School of Public Health UCL.

TATE & LYLE

Developing innovative ingredients to meet nutrition, health and wellness needs

Visit Tate & Lyle at Booth #51

Tate & Lyle, a global leader in health and wellness innovation, is committed to progressing scientific knowledge on the links between diet and health and delivering high quality, innovative ingredients to the food and beverage industry. Examples of ingredients and evolving science on important health benefits include:

PROMITOR® Soluble Gluco Fibre* and **STA-LITE® Polydextrose**—dietary fibres that can help meet fibre recommendations and provide potential benefits for digestive health, calcium absorption and bone health, and reduced glycaemic response.

SODA-LO™ Salt Microspheres—a new salt-reduction ingredient that reduces the sodium content of foods by 25%-50% without sacrificing taste or quality.

Non-nutritive sweeteners like **PUREFRUIT™ Monk Fruit Extract**, **TASTEVA™ Stevia Sweetener**, and **SPLENDA® Sucralose** which can help reduce calorie and sugar levels in foods and beverages.

Sponsored Symposium:
Wednesday 18 September 13
Lorca Auditorium
17.00-19.00h

Nutrition and Health Benefits of Emerging Fibres

This symposium will present a research overview on the health benefits of soluble gluco fibre, polydextrose, and soluble fibre dextrin on gut health, satiety, and potential impact on bone health via increased calcium absorption. Speakers include:

Joanne Slavin, PhD, RD
University of Minnesota

Connie Weaver, PhD
Purdue University

James Hollis, PhD
Iowa State University

To learn more about our science and products visit www.foodnutritionknowledge.info.

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>> Interview **IBRAHIM ELMADFA** *President of IUNS 2009-2013*

"This is a good forum for young scientists to interact with their peers"

Ibrahim Elmadfa is the president of IUNS 2009-2013 and Professor Emeritus of Nutrition in the University of Vienna, Austria

What will you highlight of IUNS work?
IUNS was founded in 1946 as an independent, scientific non-profit association. Its mission is to improve the advancement of nutrition research and development through international cooperation globally. IUNS has an established record in Capacities Development and Nutrition Leadership with some success stories in Asia, Africa and the Middle- East. Together with the Spanish Society of Nutrition (SEN) IUNS founded in 2011 the "Fundacion Iberoamericana de Nutricion (FINUT) to promote nutrition research in Latin-America. Scientists representing IUNS are involved in different activities of organizations and agencies of the United Nations System carried out at regional and global levels.

What's the importance of this congress?
The International Congress of Nutrition ICN serves as the IUNS global forum of interactions in research and information exchange in the field of nutrition science. The ICN is organized every four years in a different region of the world. Traditionally the ICN offers a unique global forum where almost all disciplines of nutrition, diet and health are considered and results of basic and applied research projects are presented. It is also a good forum for young scientists to interact with their peers and to approach experienced fellow scientists.

Today's approach of nutrition is based in a multidisciplinary work of several health profesionals. How importance is the colaboration among them? Is there any fields of improvement?
Nutrition Science is multidisciplinary. Health related nutrition research requires good networking within a country, at the European and sometimes at the global level. Many research projects in the EU have to be by their concepts *Team works*. Research in methods to efficiently prevent and treat nutrition related health problems needs more qualified problem oriented support.

Which are the challenges in nutrition both in rich and in under development countries?
In developing countries major health problems are caused by under nutrition and micronutrient deficiencies affecting health status and productivity. Consequences of the other form of malnutrition, hyper alimentation, are also of public health concern, although to a lesser extent. Poor diet quality (over nutrition with micronutrient deficiencies), physical inactivity, tobacco smoking and alcohol abuse are in the industrialized countries the main risk factors for cardiovascular diseases, cancer, diabetes and high blood pressure with according high morbidity and mortality. ●

In developing countries major health problems are caused by under nutrition and micronutrient deficiencies

☆ Hydration and Health Symposium

New insights about the relationship between hydration and health

The Hydration and health simposium, sponsored by the European Hydration Institute (EHI) was chaired yesterday by Jane Holdsworth, from EHI and Professor Gregorio Varela-Moreiras, from the department of Nutrition and Bromatology of San Pablo-CEU University (Madrid). It reviewed several aspects as the methods to record liquid intake and the health consequences of inadequate intakes —on a talk given by professor Lluis Serra-Majem from the University of Las Palmas (Spain)— or the importance of hydration in elderly people, as Lee Hooper, from University of East Anglia, was explained.

Ronald J Maughan, professor of Sport and Exercise Nutrition from Loughborough University (UK) has detailed the effects of hydration on physical activity and exercise performance and perception of effort. Loss of body water, if sufficiently severe, would result in impairment of all physiological functions. The level of dehydration at which effects appear will depend on many different factors, including the method used to induce dehydration, the nature of the task, the environmental conditions, and the physical characteristics of the individual.
"It is usually considered that a loss of about 2% of body mass induced by sweating or diuretic administration will lead to a meaningful impairment of endurance exercise performance, but this will vary among individuals. Smaller losses of body water may result in performance loss at high ambient temperatures. Tasks requiring high levels of strength or power are generally not affected until body water losses reach much higher levels, perhaps 4% or more", remarked.
It's important to highlight that tests of cognitive function and of performance in tasks where judgement and skill are involved (as in many sports and games) have produced mixed results. The reasons could be the variety of tests used, the confounding effects of the various methods used to induce dehydration and the test population.
"Healthy young individuals seem resistant to dehydration-induced impairments of cognitive function, but the elderly may be adversely affected. Loss of body water seems to increase the perception of effort during exercise and this may be relevant when there is a need to promote increased participation in physical activity. Over-hydration is occasionally observed, sometimes in a deliberate attempt to avoid dehydration and sometimes inadvertent, but is generally self-limiting and without effect on performance", added.
Finally, Jason Kai Wei Lee from Yong Loo Lin School of Medicine, National University of Singapore, detailed the several fluid intake guidelines for recreational exercisers in different environments.

"Due to variability of sweat losses even amongst a homogenous group, accurate recommendation for fluid intake is individual-specific. Many hydration studies adopt some form of pre-exercise hypohydration protocol. Studies using these experimental methods have repeatedly produced results supporting the conclusion that dehydration significantly increases hyperthermia and cardiovascular drift. However, in an actual race, participants are more likely to commence euhydrated than hypohydrated", Wei Lee said.
Studies conducted on subjects taking part in actual races thus report different findings, suggesting that ad libitum drinking had little impact on the physiological responses and hence will unlikely to impair exercise performance. While the recommended volume before and after exercise is widely accepted, there are two dominant views regarding fluid replacement during exercise. "One is that athletes should aim to prevent fluid loss of >2% body mass while the other suggests that it is adequate to drink *ad libitum*, cautioning against the adverse consequences of over drinking. Many may perceive these official guidelines to be contradicting. A closer analysis suggests a complimentary role". ●

NUTRITION IN TIMES OF ECONOMIC CRISIS

ENLP INVITES YOU TO AN INTERACTIVE SESSION:

WEDNESDAY, SEPTEMBER 18TH

11.30 - 13.30H – PS3-39A

MACHUCA ROOM – T7 - 7.6

Speaker

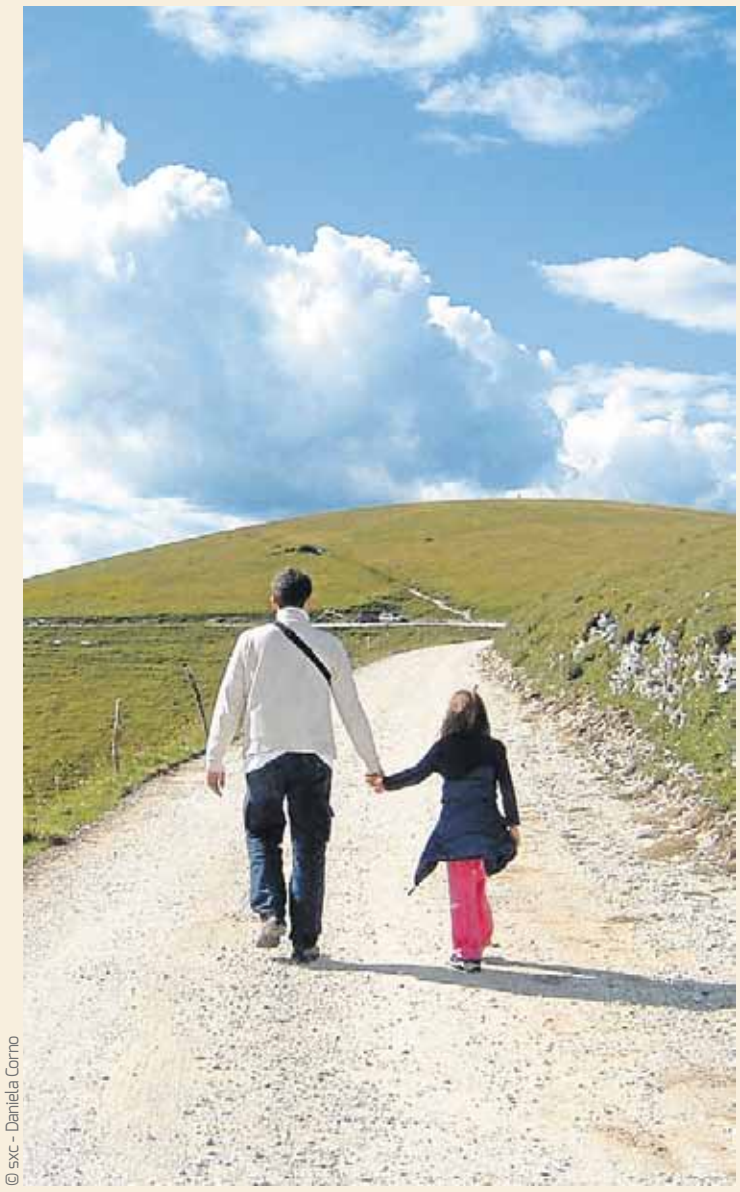
Professor Martin Caraher
Centre for Food Policy at City University London
United Kingdom

Karl Raats
Trainer in applied creative thinking
Belgium

Chairs
Roosmarijn Verstraeten
PhD researcher at Ghent University and
Institute of Tropical Medicine, Belgium

Christophe Matthys
PhD, KU Leuven, Belgium

ENLP is the network of leaders in nutrition in Europe.
Our vision is to solve the world's nutrition and health problems to improve the quality of life. Our next annual leadership courses will be held in April 2014 in Luxembourg. Please apply now:
www.enlp.eu.com



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Parallel Symposium

Debating about the new methodology to evaluate energy balance

The environmental changes have increased the sedentary behaviours in the last 20 years and new tools are needed to assess energy consumption and expenditure

The Parallel Symposium about energy balance and active living, organized by ILSI North America and ILSI Europe, will be chaired today by James O. Hill, from the University of Colorado Anschutz Medical Campus and by Marcela González-Gross, from the Universidad Politécnica de Madrid.

The energy balance refers to the integrated effects of diet, physical activity and genetics on growth and body weight over and individual's lifetime and Gregorio Varela, from Universidad CEU San Pablo de Madrid (Spain), will review the influence of food consumption on it. In his talk, professor Varela will remark how environmental changes over the past two decades have increased sedentary behaviours, decreased physical activity, and increased consumption of more energy dense foods and larger portion sizes. Although an imbalance in energy consumption and expenditure are required to promote inappropriate weight gain, the relative contributions of each remain not well characterized, mainly due to the lack of appropriate methodology to evaluate energy balance or lacking of updated data for many countries.

> The population attributable risk (PAR) for low fitness in more than 50,000 women and men followed for many years is 16-17% of deaths

This issue will be detailed today by David Allison, from the University of Alabama, with many difficult and specific questions related to whether energy compensation occurs under a particular set of circumstances, whether some circumstances cause differential energy compensation to a perturbation than other circumstances, precise measurement of the amount of compensation that occurs, or the behavioural, biological, or energetic mechanisms through which any compensation occurs.

The impact of the lack of physical activity is clear and data from studies like In the Aerobics Center Longitudinal Study (ACLS) shown by Steven Blair, from the University of South Carolina, prove it clearly: the population attributable risk (PAR) for low fitness in more than 50,000 women and men followed for many years is 16-17% of deaths.

Finally, John Blundell, from the Institute of Psychological Sciences of the University of Leeds, will give his perspective on the influence of physical activity on energy balance and will explain his on-going research in this field. ●

ICN

Monday, September 16th

Connecting people through nutrition

Paul Thornalley, UK

"This congress Is a mix of disciplines that i´m not usualy coming to contact. I´m interested in Biochemistry and Clinical Nutrition in medical aspects"

Naila Rabanni, UK

"The congress is very good organized and is a find conductive to our speciality. Also is in a beautiful place, its very sunny. We come from England, which is always cold and wet"

Zandile Mchiza, South Africa

"I´m senior specialist scientist and this conference is a good oportunity to share information about my speciality: chronic diseases of lifestyle and the study of lipids"

Rekha Battalwar and Thomas Anooja, India

"We are interested in therapeutic nutrition, the new guidelines and lifestyle management"

twitter

#20icn

Rhonda Smith @RhondaMinerva — Seguir

Insect Protein for animal feed and human food contributes to sustainability t'out world #20icn #nutrition #sustdiets #ag4dev #FoodSecurity

Ellie Hadjilucas @Elli_HLucas — Seguir

Diabetes prevention studies show that intensive lifestyle interventions that show sustained weight loss reduce the risk of T2D!#ICN20

maurice bloem @mauricebloem — Seguir

@SUN_Movement discussing need to improve curricula nutrition & pediatrics to incl comms & behavior change. Don't 4get generalists! #icn20

Trish Guy @TrishGuy — Seguir

Med diet improved LDL particle size in small study of men with MetS #ICN20

ICN Daily News

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