Soy & Health

MAY 2007 ISSUE NUMBER 16

EFSA consults on health claims guidance

On 16 May 2007, the European Food Safety Authority (EFSA) published, for consultation, its draft guidance document for the submission of applications under the new nutrition and health claims regulations. In the consultation EFSA invites potential applicants, stakeholders (i.e. industry, consumer organisations and other NGOs), Member States and all other interested parties to participate in this public consultation by commenting on the draft by 17 June 2007.

The purpose of the guidance is to help applicants in preparing and presenting applications for the authorisation of health claims which fall under Article 14 of the Regulation, i.e. reduction of disease risk claims and claims referring to children s development and health. The guidance will be updated at a later stage to cover applications for health claims which fall under Article 18 of the Regulation, i.e. applications for inclusion in the Community list of permitted claims provided for in Article 13(3) which are based on newly developed scientific evidence and/or which include a request for the protection of proprietary data.

In this issue

It is intended that the guidance will be kept under review and will be amended and updated as appropriate in the light of experience gained from evaluation of health claim applications.

The guidance presents a common format to help applicants prepare a well-structured application and to help EFSA deliver its scientific advice in an effective and consistent way.

EFSA's Dietetic Products, Nutrition and Allergies (NDA) Panel will be responsible for assessing the scientific evidence substantiating these claims and is also progressing work on other nutrition issues including nutrient profiles, which will help define the nutrient criteria that foods should comply with in order to bear nutrition and health claims.

Am EFSA scientific colloquium on nutrient profiles is planned for September 2007.

Comments on the draft Opinion on the Scientific and Technical Guidance for the Preparation and Presentation of the Application for Authorisation of a Health Claim can only be submitted online via the EFSA website. For more information and to comment go to <http://www.efsa.europa.eu/en/science/nda/nda_consultation/health_claim.htm>

Alpro Soya to become carbon-neutral

Alpro Soya has become the first food manufacturer in the UK to make a commitment to become completely carbon-neutral. The company, which makes a range of soya products, has said it will dedicate the remainder of 2007 to assessing its carbon footprint, with the push to go carbon neutral starting in 2008.

It will take time, of course, to become a CO2-neutral company, but we have already made the first steps in this direction. From manufacturing to distribution, we will assess our CO2 outputs and minimise them wherever possible. said Bernard Deryckere, Managing Director of Alpro Soya. Alpro's environmental efforts will begin at the company's site in Belgium, before moving on to its UK factory, at Kettering. Initiatives will include projects, such as the installation of windmills, and greater use of water transport. Said Deryckere. We hope that this will provide an extra stimulus for other companies and consumers. Visit <http://www.alprosoya.com>.

Hain Celestial to relaunch Linda McCartney brand in UK

The Hain Celestial Group Inc, is to relaunch the Linda McCartney range of vegetarian food products in the UK. Since the company s purchase of the meat-free Linda McCartney brand in 2006 the brand has undergone a strategic review with new and improved products and contemporary packaging. The new product range, which includes Quarter Pounders, Vegetarian Sausages, Chilli Non-Carne, Country Pies and Lasagna, has been developed in close consultation with the McCartney family to ensure the brand remains true to Linda s original vision and reflects the food values she believed in. The company plans a Taste the Change tour this Summer with further expansion of the brand in Europe and North America in the next two to three years. Visit <http://www.hain-celestial.com>.

New collaboration to reduce bitterness in soy

Solae and Senomyx have entered into a collaborative agreement for the development of new flavour ingredients intended to enhance the taste of soy proteins and mask the bitterness of certain soy-based products. The new agreement includes a collaborative period for the discovery of new soy protein flavour enhancers and taste modulators using Senomyx s proprietary taste receptor-based assays and screening technologies. Under the terms of the new agreement, Solae will fund the discovery and development of new flavour systems and will have exclusive worldwide use of the flavour ingredients in virtually all categories of foods and beverages that contain added soy protein. Senomyx, a biotechnology firm, will be entitled to certain milestone and royalty payments. According to Solae and Senomyx, the new flavour ingredients they plan to develop may accelerate consumer acceptance of soy foods. Visit <http://www.solae.com>.

Frost & Sullivan publish phytonutrients report

The Frost & Sullivan consultancy has just published its report Developments in the Global Phytonutrients Market concluding that there is strong interest in phytonutrients or ingredients from plant extracts on the basis of their purported health benefits not only in the food and supplement industries but also for cosmetics. Both phytosterols and isoflavones are the subject of considerable research but the report warns that stringent health claims regulations in some markets could impede further growth unless the efficacy of potentially useful ingredients are backed by sound science. Overall the report shows that the category is doing well and during the next few years the largest increases are expected to be for glucosamine, probiotics and sterol esters, whey protein, omega 3 fatty acids and Co-Q10. Visit <http://www.marketresearch.com>.

products

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ViveSoy beverages, juices and cereals

Spanish company, Grupo Leche Pascual produce the ViveSoy brand which includes soy beverages (plain, chocolate and vanilla flavours), ViveSoy Juices with Soya (Orange, Pineapple, and Peach) and ViveSoy Cereals and Cereal Bars - a combination of soy with crispy rice or corn flakes. Visit <http://www.lechepascual.com>.

Lipogen launches new PS ingredient

Lipogen, Israel has launched Lipogen PAS a patented complex of soy lecithin phosphatidic acid and phosphatidylserine, which it is claimed, can improve the ability to function under long-term mental and psychological stress conditions. Lipogen PAS has GRAS status and can be used in a variety of functional foods. All Lipogen products are vegetarian and kosher certified. Visit <http://www.lipogen.co.il>.

Alpro chilled organic soy milk

Alpro has added a chilled organic soy milk to its range of chilled dairy free alternatives to milk. Made from water, organic hulled soybeans, organic apple concentrate and sea salt. Alpro Organic is low in saturated fat and contains omega 6 and 3 fatty acids. Visit <http://www.alpro.com>.

Black soybean drink

Yeo s, a leading Singapore-based manufacturer with offices throughout the world, produces a range of soy-based products including Original and Sweetened Soy Drinks. New to the European market is a Black Soy Drink made from whole soybeans and black soybeans. Visit <http://www.yeos-europe.com>.

New fruit and soy drinks range

Beckers Bester GmbH, a leading producer of fruit juices and juice drinks in Germany, is launching a new b2b Fruit & Soya drinks range, an ambient 100% natural drink (containing no artificial sweeteners or preservatives) that has been blended with fruit juices, natural spring water and certified non-GM soybeans. It is available in one litre packs in Peach Orange and Raspberry . Visit <http://www.beckers-bester.de>.

Trek energy

Natural Balance Foods in the UK has launched a Trek Raw Wholefood Bar based on raw fruit, soya and oats.

Each 68g bar contains 11g protein, 4g fibre, 33-38g carbohydrate and between 200-400 kcal. Trek bars come in three flavours - Mixed Berry, Peanut & Oat and Cocoa Brownie.

They are a natural source of phytonutrients, vitamins and minerals and contain Ginko Biloba and Ginseng. Visit <http://www.naturalbalance-foods.co.uk>.

Please note that information in 'Soy & Health' about companies, products or equipment does not imply recommendation or endorsement.

research

Meta analysis supports isoflavones for bone health

A meta analysis from China and Japan supports the hypothesis that increased soy isoflavone intake can boost bone health. Previous studies have been conflicting but this new study suggests that less than 90mg/day of isoflavones may improve bone density. The reviewers focused on randomised controlled trials that measured the marker of bone resorption, urinary deoxypuridinoline (Dpyr) and the bone formation marker, serum bone-specific alkaline phosphatase (BAP). Nine trials containing a total of 432 subjects were identified using three leading databases, PubMed, MedLine and Embase. The marker of bone resorption (Dpyr) decreased significantly in subjects who consumed isoflavones compared with non-consumers. Significant decreases were observed even for isoflavone intakes of less than 90mg/day, and with supplementation lasting less than 12 weeks, compared to placebo. Bone formation markers were also found to increase compared to the placebo.

D-F Ma, et al. Eu J of Clin Nut 2007. Published online ahead of print, doi: 10.1038/sj.ejcn. 1602748, <http://www.nature.com/ejcn/journal/vaop/ncurrent/abs/1602748a.html>.

Effects of soy protein from differently processed products on CVD risk factors

Twenty eight hypercholesterolemic subjects (LDL cholesterol ≥ 3.36mmol/L) aged over 50yrs consumed each of 4 diets for 6 week periods according to a randomised crossover design. The diets were designed to contain products made from either whole soybeans, soy flour, or soy milk and were compared with a diet containing an equivalent amount of animal protein (meat, chicken and dairy products). The cholesterol, fibre and fatty acid profiles of the diets were equalised. All food and drink was provided and body weight was maintained throughout the study. No significant differences in blood pressure, vascular endothelial function, or total cholesterol, VLDL cholesterol, triacylglycerol, apolipoprotein B, or C-reactive protein concentrations were observed between the diets. Consumption of the soymilk diet resulted in a modest decrease (4%) in LDL blood cholesterol concentrations compared with the animal protein and soy flour diets, and higher HDL-cholesterol (1%) and apolipoprotein A-I (2%) concentrations compared with the soybean and soy flour diets. The researchers concluded that the consumption of differently processed soy-based products and different types of protein (animal and soy) has little clinical effect on cardiovascular disease risk factors, including peripheral endothelial function, when other major dietary variables are held constant.

NR Matthan et al. Am J Clin Nut Vol 85, No 4, pp960-966 April 2007, <http://www.ajcn.org/cgi/content/abstract/85/4/960>.

Practical Short Course:
2nd Snack Food Processing and Product Formulation
6 - 7 September, 2007
"Het Pand", University of Ghent, Ghent, Belgium

This is a crash course for new plant personal and an opportunity for those who are experienced to meet experts in the field to discuss their current problems to enhance their plant operations. The course material will also serve as a useful reference for processors, product formulators, chemists and technicians as well as business managers familiar with extrusion, nutrition, snack food processing, extruded snacks and tortilla chips.

This is the only extensive program in Europe that covers a wide range of topics with specific practical aspects!

Who should attend? Decision makers such as product technicians, R & D engineers, engineering supervisors, QA technicians, project engineers, process improvement engineers, business development managers, sales and marketing specialists, equipment manufacturers, product formulators, plant engineers, processors, chemists, and technicians.

For more information visit <http://www.membraneworld.com/snackfoods2007.htm> or e-mail: snackfoods@scarlet.be.

5 Soy diet may help control metabolic syndrome

Researchers at Harvard University of Public Health and Shaheed Beheshti University of Medical Sciences in Iran carried out a randomised crossover clinical trial in 42 post-menopausal women with metabolic syndrome. Participants were randomly assigned to consume a control diet (DASH), a soy-protein diet, or a soy-nut diet, each for 8 weeks. Red meat in the DASH period was replaced by soy-protein in the soy-protein period and by soy-nut in the soy-nut period. The soy-nut regimen decreased the homeostasis model of assessment-insulin resistance score significantly compared with the soy-protein or control diets. Consumption of soy-nuts reduced fasting plasma glucose more significantly than the soy-protein or control diets and decreased LDL cholesterol. Soy-nut consumption also significantly reduced serum C-peptide concentrations compared with the control and soy-protein diets. The researchers concluded that short-term soy-nut consumption improved glycemic control and lipid profiles in postmenopausal women with metabolic syndrome.

L Asadbakht et al. Am J Clin Nut, Vol. 85, No. 3, pp735-741, March 2007 <http://www.ajcn.org/cgi/content/abstract/85/3/735>

Soy isoflavones and cholesterol meta analysis

This meta analysis, carried out by Japanese researchers, was primarily conducted to evaluate the precise effects of soy isoflavones on lipid profiles. The effects of soy protein containing enriched and depleted isoflavones were also examined. The researchers searched PubMed for English language reports of randomised controlled trials published from 1990 to 2006 that described the effects of soy protein intake in humans. Eleven studies were selected revealing that soy isoflavones significantly decreased serum total cholesterol and LDL cholesterol but there were no significant changes in HDL cholesterol and triacylglycerol. They also found that soy protein containing enriched or depleted isoflavones significantly improved lipid profiles and that reductions in LDL cholesterol were larger in hypercholesterolemic than in normocholesterolemic subjects.

K Taku et al. Am J Clin Nut, Vol. 85, No. 4, pp1148-1156, April 2007 <http://www.ajcn.org/cgi/content/abstract/85/4/1148>.

Isoflavone consumption may reduce ovarian cancer risk

In a prospective cohort study researchers investigated the association between consumption of isoflavones and other nutrients with ovarian cancer risk. Among the 97,275 eligible women from the Californian Teachers Study Cohort, 280 women developed invasive or borderline ovarian cancer. Intake of isoflavones was associated with a lower risk of ovarian cancer. Intake of isothiocyanates, however, was not associated nor was the intake of macronutrients, antioxidant vitamins, or other micronutrients. The researchers concluded that although dietary consumption of isoflavones may be associated with decreased ovarian cancer risk, most dietary factors are unlikely to play a major role in its development.

ET Chang et al, Am J of Epid Vol 165 (7), pp802-13, 2007, <http://aje.oxfordjournals.org/cgi/content/abstract/165/7/802>.

conference report

In March this year nearly 300 scientists attended the **7th International Symposium on the 'Role of Soy in Health and Disease Prevention'** held in Bangkok. The symposium was the first international conference of its kind to take place in Asia and provided a good opportunity for researchers from East and West to consider collaborative efforts and to share and exchange information.

Prior to the 2-day scientific symposium there was a one-day meeting that focused on bringing soy foods to the Asian market. Following the meeting there was an additional half-day workshop on the role of soy in malnourished populations.

Nutrition

In common with western countries, many Asian countries now have an increased prevalence for obesity, heart disease, diabetes, etc as well as nutrient deficiencies such as anaemia. For this reason much of the focus of this symposium was on the role of soy foods in benefiting populations suffering from over- as well as under-nutrition.

The nutritional and health benefits of including soy foods in the diet was stressed by Dr Mark Messina (Nutrition Matters, USA) the co-chair of the meeting. Soy foods are excellent sources of good quality protein and are low in saturated fat and cholesterol. They are also one of the few plant foods to provide appreciable amounts of omega-3 fatty acids - an essential nutrient also with potential coronary health benefits. Messina also noted that there is now an even greater need for consumers to have access to a wide variety of healthy sources of protein because of evidence indicating that high-protein diets may help with weight management.

Heart disease

Dr Suzanne Ho (Chinese University, Hong Kong) reviewed the clinical and epidemiologic data on the cholesterol-lowering effects of soy protein pointing out that although current estimates (3 to 5%) of the extent to which soy protein lowers LDL cholesterol are less than initially reported soy protein can still significantly help to reduce coronary heart disease given that each 1% decrease in LDL cholesterol lowers heart disease risk from 2 to 4%. Dr Paul Nestel (Baker Heart Research Institute, Australia) pointed out that isoflavones in soy may directly improve the health of coronary arteries by improving systemic arterial compliance, a measure of arterial flexibility. Dr John Erdman (University of Illinois) endorsed the important role that soy foods can play in heart-healthy diets because of their ability to displace higher-saturated-fat foods, the direct cholesterol-lowering effects of soy protein combined with the possible benefits of isoflavones.

Equol

Studies indicate that equol production may be beneficial to our health. Dr Kenneth Setchell (University of Cincinnati College of Medicine) outlined unpublished research in which isoflavone-fortified pasta lowered cholesterol about 10% and also improved arterial health. Dr Shaw Watanabe (NIHN, Japan) pointed out the huge variation among individuals in isoflavone metabolism and suggested that this might account for some of the inconsistent clinical trial results involving soy foods and isoflavones.

Cancer

The soy-breast cancer relationship has become controversial in recent years although Mark Messina pointed out that human evidence, although not definitive, suggests neither soy foods nor isoflavone supplements are harmful. A recent trial in which postmenopausal women underwent breast biopsies at baseline and after 3 months found isoflavone supplements had no estrogenic effects on breast tissue and did not stimulate breast cell proliferation. Speculative evidence also suggests consuming moderate amounts of soy foods during childhood and/or during adolescence may reduce breast cancer risk later in life.

Dr Mindy Kurzer (University of Minnesota) reported that animal studies and the limited epidemiologic data suggest that soy foods and isoflavones inhibit the development of prostate cancer. However, many of the epidemiologic studies suffer from design flaws. Several clinical trials show that isoflavones slow the rise in prostate specific antigen levels in prostate cancer patients, suggesting that soy foods may have an adjunct role in the treatment of prostate cancer.

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A new unpublished 6-month study from Kurzer s laboratory failed to confirm these findings. However, the study did find that isoflavones significantly reduced androgen receptor expression in the prostate.

Bone health

Dr Yukihiro Ikeda (Kinki University School of Medicine, Japan) presented the results of an epidemiologic study which found that natto intake was associated with higher bone mineral density among Japanese women. The benefit may be due to the soybean isoflavones or the high vitamin K content of natto. Dr Xianglan Zhang (China) discussed the results of a prospective study in almost 8000 postmenopausal women in China which found soy intake was associated with a marked reduction in the risk of having a fracture over a 5-year period. Dr William Wong (Baylor College of Medicine,Texas) presented the results of a 2-year trial funded by USDA that examined the effects of two different doses of isoflavone supplements on bone loss in postmenopausal women. The preliminary results suggest that isoflavones reduce the rate of bone loss in comparison to the placebo group.

Menopausal symptoms

There were three presentations on soy foods as alternatives to hormone replacement therapy (HRT) from Drs Aedin Cassidy (University of East Anglia, UK), Louise Dye (University of Leeds, UK) and Gita Rhadakrishnan (University College of Medical Sciences and GTN Hospital, Delhi). Results from clinical trials on hot flushes have been variable as have studies evaluating the effects of soy foods and isoflavones on cognitive function. Preliminary evidence suggests isoflavones do indeed improve one or more aspects of cognitive function in postmenopausal women. It was concluded that more research is needed in this area.

Safety

There were also discussions on soy infant formulas, the role of soy protein in weight management, and on the safety of soy foods and isoflavones. Most of the safety concerns are based almost entirely on animal data. Unfortunately animal models are not good predictors of results in humans. This is particularly true of rodents which metabolise isoflavones differently from humans. In addition, human clinical and epidemiologic data indicate that soy foods are safe. The meeting concluded that many of the proposed benefits of soy foods remain to be proven but what is known is sufficient to consider soy foods as healthy additions to the diet.

The 8th International Symposium on the Role of Soy in Health and Disease Prevention is scheduled to be held in Tokyo, 9-12 November 2008.

This article is based on a review of the symposium written by Mark Messina for the Soyfoods Council, USA (<http://www.thesoyfoodscouncil.com/>).

Mark Messina, Ph.D. is the co-owner of Nutrition Matters, Inc., a nutrition consultancy, and is an Adjunct Associate Professor at Loma Linda University. His research is primarily on the health benefits of soyfoods and he was chairman at the 7th International Symposium on the Role of Soy in Health and Disease Prevention.

The symposium was organised by (1) The Institute of Nutrition, Mahidol University, Thailand, (2) American Soybean Association International Marketing, (3) Soy Food Forum Southeast Asia (<http://www.soyconferencebangkok2007.com/>). Symposium sponsors: Otsuka Pharmaceutical Co Ltd; Tetra Pak Asia Pte Ltd - Soy Knowledge Centre; The Solae Company; Solbar Plant Extracts Ltd; Food Focus Thailand.

5th International Conference Soy & Health 2008

2–3 June 2008, Ghent, Belgium

The 5th International Conference Soy & Health 2008 is aimed at those with nutrition, dietetic or clinical backgrounds, as well as government representatives and senior executives from food, food ingredient and supplement manufacturers.

The conference will have two main themes and the tentative programme is as follows:

Soy & Health Science Update

- ¥ CVD, osteoporosis, cancer, menopause
- ¥ Soy protein; isoflavones and phytochemicals
- ¥ Newest data for healthcare professionals and company nutritionists

Soyfoods, Soy Ingredients and Supplements

- ¥ Market positioning
- ¥ How to enlarge your product market
- ¥ Science communication and health claims
- ¥ Strategic marketing

Final programme and registration details will be announced in due course.
Visit <http://www.soyconference.com/> or e-mail info@soyconference.com for further details.

diary

5–7 June 2007
Les 9e Entretiens de Nutrition de L Institut Pasteur de Lille. Lille, France. Visit <http://www.pasteur-lille.fr>.

7–9 June 2007
Int l Conference on Lignans, Alkylresorcinols and Health, Helsinki. Visit <http://www.folkhalsan.fi/adlercreutz>.

11–12 June 2007
ProBioTech 2007, Probiotic Development Issues Answered, Nantes, France. Contact: probio2007@gate2tech.com or visit <http://www.gate2tech.com/events/probiotech2007/>.

14–15 June 2007
Nutracon Europe: Food Supplements, Sports Nutrition, Beauty Innovations, Market Opportunities and Regulation, London, UK. Contact: admin@nutraconeurope.com or visit <http://www.nutraconeurope.com/>.

14–15 June 2007
Paris Anti-Obesity 2007, Institut Pasteur, Paris, France. Visit <http://www.isanh.com/anti-obesity/>.

28 June 2007
Health Strategies in Product Development, Ede, The Netherlands. Visit <http://www.nizo.com>.

27–29 June 2007
Natural Products Expo Asia, Hong Kong Convention & Exhibition Centre, Hong Kong. Visit <http://www.naturalproductasia.com>.

20–22 July 2007
NNFA 2005, The Show with a Healthy Perspective, Las Vegas, Nevada, USA. Contact National Nutritional Foods Association. Visit <http://www.nnfa.org>.

28–31 July 2007
IFT Annual Meeting and Food Expo, Chicago, USA. Contact: info@ift.org or visit <http://www.ift.org>.

26–31 August 2007
9th Annual Practical Short Course on Texturization of Vegetable Protein, Texas A&M University, Texas, USA. Contact: Dr Mian N Riaz at mnriaz@tamu.edu or visit <http://foodprotein.tamu.edu/extrusion/shortcourses.htm>.

6–7 September 2007
2nd Snack Foods Processing and Product Formulation Short Course, Ghent, Belgium. Contact: snackfoods@scarlet.be or visit <http://www.membraneworld.com/snackfoods2007.htm>.

16–19 September 2007
5th Euro Fed Lipid Congress - Oils, Fats and Lipids: From Science to Applications, Innovations for a Better World, Gothenburg Sweden. Visit <http://www.eurofedlipid.org/meetings/gothenburg/index.htm>.

25 September 2007
2nd Interactive Workshop, Nutrition & Health Claims, Brussels. Visit <http://www.healthclaims.eu> or e-mail: info@healthclaims.eu.

23–24 October 2007
Healthy Foods European Summit, London, UK. Contact: jpedersen@newhope.com or visit <http://www.healthyfoodssummit.com/>.

30 October - 1 November 2007
Food Ingredients Europe (FIE) and the Natural Ingredients Exhibition and Conference, London, UK. Visit <http://www.ni-events.com>.

9–10 November 2007
10 me Congr s de Nutrition & Sant , Brussels, Belgium. Visit <http://www.congresnutrition.be>.

11–13 November 2007
Soya & Oilseed Summit 2007, Chicago, USA. Contact: customerservice@soyatech.com or visit <http://www.soyasummit.com>.

16–17 November 2007
2e Voedings-en Gezondheidscongres, RAI, Amsterdam, The Netherlands. Visit <http://www.voedingscongres.nl>.

 THV Soy Conference, Lange Dreve 8F, B-8980 Zonnebeke, Belgium, tel: +32 57 46 64 46, fax: +32 57 46 95 25, e-mail: info@soyconference.com, website: <http://www.soyconference.com/>.

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