

Soy & Health



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EFSA - list of health claims to be published shortly

In July 2008, the European Commission (EC) asked EFSA to prepare a scientific opinion on the Community list of permitted health claims. The draft list of 2,870 health claims provided to EFSA was the result of a consolidation process carried out by the Commission after examining 44,000 claims supplied by the Member States. Subsequently the EC sent EFSA an updated list of 4,185 health claim entries taking into account the conditions of use and references available for around 10,000 similar health claims. EFSA has now screened all the claims received according to criteria adopted by the NDA Panel ("Criteria for initial screening of Article 13 health claims") and identified a number of claims where further clarification or information is required before it can start its evaluation.

This month EFSA will publish the list of health claims received and in cases where further clarification is required the reason will be given. EFSA's Register of Question will provide an overview of EFSA's work, including the evaluation status for each health claim and the deadline for completing its assessment. Timelines are as follows:

- By end of July 2009 about 1,000 main entries - claims originally submitted in July 2008, which have passed the pre-screening stage and have not been subsequently modified.
- By end of November 2009: about 470 main entries - claims originally submitted in July 2008 and subsequently amended, and new claims sent in November 2008. All these claims have passed the pre-screening stage.
- Deadline to be determined: about 2,700 main entries - new claims received in December 2008, claims previously submitted for which changes were received in December 2008, and all claims which have not passed the pre-screening stage and require further information prior to evaluation by the NDA Panel.

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For more information visit: http://www.efsa.europa.eu/EFSA/efsa_locale-1178620753812_article13.htm?WT.mc_id=EFSAHL01

N.B. Functional claims under Article 13 of the EC Regulation on nutrition and health claims refer to:

- The role of a nutrient/substance in growth, development and the functions of the body;
- Psychological and behavioural functions;
- Slimming and weight control or reduction of hunger, increase of satiety or the reduction of available energy from the diet.

Claims related to children's development or health or disease risk reduction are excluded.

USB produces 'Soyfoods Safety Issues' Factsheet

The United Soybean Board in the USA has produced a factsheet on 'Soyfoods Safety Issues'. Prepared by Dr Mark Messina, the factsheet is well referenced and explains the background to many of the more controversial issues that are sometimes raised in relation to soy - including the effect of soy on fertility, thyroid function, breast cancer risk, and allergies.

Dr Mark Messina co-owns Nutrition Matters Inc, a nutrition consulting company, and teaches as an adjunct associate professor at Loma Linda University.

To download a free copy of the factsheet visit the USB website at:

http://www.soyconnection.com/health_nutrition/pdf/Soy_Safety.pdf.



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website: <http://www.soyconference.com>, e-mail: info@soyconference.com.

Alpro Foundation award for anti-ageing research

Laura Ions, a postgraduate student at the Institute for Cell and Molecular Biosciences at Newcastle University, has been awarded the prestigious Alpro Foundation Award for her work on the role of soy in calorie restriction and its potential to provide anti-ageing effects and extend healthy lifespans. The research identified a possible biochemical mechanism and showed that daidzein, an isoflavone found in soy, may mimic some of these beneficial biochemical changes.

The award of 2,500 Euros was presented to Laura by the President of the Foundation, Professor Ian Rowland, Professor of Human Nutrition, University of Reading at an awards ceremony at the 9th National Nutrition & Health Conference in London on the 21 November.

Laura's research was chosen by the foundation's scientific committee as the most outstanding research entry from across the UK & Ireland relating to plant-based nutrition with a special interest in soy.



Professor Ian Rowland presents the award to Laura Ions

This *in vitro* research tested the hypothesis that some of the beneficial effects of calorie restriction are mediated by an enzyme (Sirt1) through beneficial effects on DNA, and that this effect could be mimicked by isoflavones such as daidzein. Sirt 1 belongs to a family of enzymes called sirtuins. Sirtuins are present in many organisms and have been implicated in the extension of lifespan due to calorie restriction. Sirtuins are thus potential targets for anti-ageing interventions or therapies. Sirt1 is involved in regulating fat metabolism, the production of glucose and insulin, and cell survival. It also mediates removal of the acetyl group (COCH₃) from histone (protein within the chromosome), as part of gene regulation. Sirt1 activity is increased in situations of calorie restriction and Sirt1 promotes effects consistent with longevity. The research aimed to investigate whether plant derived polyphenols (e.g. daidzein), acting through Sirt1 result in deacetylation of histones, which results in an improved pattern of DNA methylation (addition of a methyl group – CH₃), which is potentially relevant to longevity.

Laura Ions graduated with a BSc Hons in Human Genetics in 2007 and Master of Research in Medical and Molecular Biosciences in 2008. Laura is currently in her 1st year of PhD study (BBSRC funded) at Newcastle University supervised by Dr Dianne Ford. Her main research interests focus on nutrition-mediated modulation of the ageing process through epigenetic mechanisms.

The Alpro Foundation is an independent non-profit organisation, which was founded in 1996 as an initiative of Alpro. Its objective is to support and promote scientific knowledge and research in the field of nutrition and health with a focus on plant-based nutrition and a special interest in soy. Through numerous activities, the foundation aims to help increase the awareness and knowledge about the impact of 'nutrition on human health' amongst health professionals and the general public. (<http://www.alprofoundation.org>)

EFSA positive opinion on heart health claim for plant stanol esters

The EFSA Panel on Dietetic Foods, Nutrition and Allergies (NDA Panel) has published a positive scientific opinion on an Article 14 disease risk reduction health claim dossier for plant stanol esters. In this context the term 'plant stanol ester' refers to a blend of the plant stanols, sitostanol and campestanol, which are obtained from the saturation of plant sterols from food grade plant oils, (mainly soybean oil) or tall oil, or blends thereof and esterified with fatty acids from food grade low erucic acid rapeseed oil. The applicant, McNeil Nutritionals in the UK, provided an unpublished meta-analysis comprising 30 randomised, double-blind placebo controlled trials, with generally healthy, normo- and moderately hypercholesterolaemic male and female subjects. The health claim still needs to be approved by the EU Commission but according to the NDA panel, foods containing these plant stanol esters (e.g. Benecol® foods) can bear the health claim 'Plant stanol esters have been shown to lower/reduce blood cholesterol which is a risk factor in the development of coronary heart disease'.

Visit: http://www.efsa.europa.eu/EFSA/efsa_locale-1178620753812_1211902157684.htm.



Make your body the best place to live



www.alprosoya.com



3

Special treatment for soy on nutrient profiles?

The European Natural Soyfoods Association (ENSA) is arguing for fairer treatment of soy products under EFSA's nutrient profiling system as laid down in the Nutrition and Health Claims Regulation. The European Commission's latest working document on nutrient profiles defines the conditions under which nutrition and health claims can be made and proposes overall thresholds for saturated fat, sugar and sodium per 100g. If products exceed the thresholds they will be unable to make health claims. Dairy and meat products, however, are to get special treatment as the Commission has proposed a series of 'adapted thresholds' for oils and spreads, dairy products and meat products. These food categories have higher thresholds reflecting their unique contribution to the overall diet. ENSA argues that this unfairly discriminates against soy-based products which frequently compete with dairy and meat products, e.g. a soy-based chocolate dessert would not be allowed to make a health claim but a dairy-based chocolate dessert would, even if it contained more fat or sugar.

Some Member States, including Germany and Belgium, have been supportive of ENSA's position who have asked that soy foods be classified in the food category of the respective reference product (eg. dairy, meat). The profiling scheme is still under discussion in the Standing Committee on the Food Chain and Animal Health (which comprises representatives of the Member States and is chaired by the European Commission) with the final proposal due to be established in early 2009.

On a separate issue, ENSA continues to lobby the Commission to use the term 'soy milk' which is not permitted in Europe under a 21-year-old Regulation (1898/87) that restricts the use of the word 'milk' to substances secreted from mammary glands. Despite concessions made for 'coconut milk' and 'almond milk' no such derogations have been granted to soy.

Soybean genome data available

The soybean genome is to be made widely available to the research community after the US Department of Energy Joint Genome Institute said it has released a complete draft assembly of the genetic code. Soybean accounts for 70% of the world's edible protein and it is hoped that the research will help advance new breeding strategies.



Soy protein is used in the food industry as a low-fat source of protein but risks to the crop, such as water mold which causes stem and root rot, can affect supply and soybean prices have soared over the past year, nearly doubling in price. Scientists hope the knowledge gained on the genetic makeup of soy could be used to reduce the risks to crop supplies. About 5,500 genetic markers have been ordered and localised on the sequence which are potentially of particular importance to those researchers seeking to optimise certain qualities of the soybean.

(http://www.jgi.doe.gov/News/news_12_08_08.html)

Nutri Pharma signs distribution deal with Nikken UK Ltd

Norwegian soy technology company Nutri Pharma ASA has signed a distribution and marketing agreement with Nikken UK Ltd, a subsidiary of the Japanese network marketing company Nikken. The agreement gives Nikken exclusive rights to distribute Nutri Pharma's menopausal health care product Nutri5 in Europe. Nutri Pharma, headquartered in Oslo, Norway, develops soy technology for treatment and prevention of lifestyle-related diseases.

(<http://www.nutripharma.com/>)

Tivall buys Foodtech International

Israeli company, Tivall Ltd, a subsidiary of Osem Investments Ltd (parent company Nestlé), has bought US vegetarian food firm, Foodtech International. Foodtech markets frozen meat substitute products in North America under the Veggie Patch label. Foodtech International is owned by Eli Soglowek.

(<http://www.osem.co.il/Eng/Articles/Article.asp?ArticleID=16&CategoryID=18>)

To receive Soy & Health please e-mail your contact details (including name and company address) to info@soyconference.com



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Soy innovations in praline production

Cargill has developed several soy-based texturising solutions to fulfil praline consumers' taste and texture preferences, while addressing manufacturers' convenience and shelf life requirements. The high fat, high cocoa content of praline fillings requires careful handling throughout the manufacturing process to ensure good stability and shelf life.



Profull™, a toasted full fat soy flour with excellent homogenising and stabilising properties acts as an antioxidant and can be used as a partial substitute for powdered milk. It prevents an over-sweet taste and fat blooming - praline production's two most common problems.

Prolia™, a toasted defatted soy flour, has a more neutral taste and thus is suitable for dairy cream-based praline fillings.

Emulpur™ IP is a de-oiled soybean lecithin which binds the fat and inhibits oil loss - useful in recipes with a high fat proportion. It can be used in combination with Profull™ soy flour with intensified synergistic effects.

(<http://www.cargilltexturizing.com>)



New pasta meals from Finnsoy

In line with their commitment to include soy protein in every food they offer, Finnsoy has launched, under the Terra brand, a range of convenience meals containing soy, pasta and spices. Terra pasta meals provide a healthy meal packed in a bag and only require the addition of water and cooking for 5 minutes to prepare. Each product contains less than 450kcal per portion, is low in fat, high in protein and fibre, and is a low GI food. Terra pasta meals are also convenient to prepare and have a long shelf life. Varieties include: Tomato and Basil; Carbonnara; and Cheese & Broccoli. (<http://www.finnsoy.com>)



Gourmet soy foods from The SoyaBoutique.com

The SoyaBoutique.com is a Canadian company specialising in providing all-natural products and healthy soy alternatives. As well as skincare products the company offers a range of 'Gourmet soyfood' products including soy salmon steaks, soy sauce-marinated soy tenderstrips, marinated soy chunks, soy scallops, soy teas and soy noodles. (<http://www.thesoyaboutique.com/home.php?cat=249>)

Okara for the bakery market launched at HIE

NutriGal Okara is a 100% natural rich fibre and protein ingredient produced as a by-product of soy milk production. Launched at the recent HIE exhibition in Paris by Israeli firm, NutriGal the company is targeting the European baked goods, bars, cereals and pasta market. By the end of 2009, NutriGal aims for Okara to be used by at least two major manufacturers of pasta and flakes. In the mid-term, it plans to target the US market in about two years from now. Okara can be formulated into a variety of finished goods such as breakfast cereals, pasta, breads, bagels, cookies, crackers, nutritional bars, marzipans etc. Okara is also low in fat and high in other nutrients such as calcium, iron and riboflavin. It also has high water retention, which is useful for pasta. This absorption means that 100g of pasta is bigger in volume, and therefore has fewer calories. The amount of regular flour that Okara can replace depends on the application and NutriGal is offering technological support. (<http://www.galam.co.il/articles/c6295.php>)



Thinking sweet thoughts?

Easy processing? Long shelf life? Our confectionery expertise can upgrade your chocolate fillings. Cargill's soy flours, Prolia™ and Profull™, stabilize and Emulpur™ lecithin smoothen your most indulgent products. Let's work together for sweet success.





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New study confirms soy's cholesterol-lowering ability

Solae unveiled a new meta analysis confirming soy's ability to lower cholesterol at the 8th International Symposium on the Role of Soy in Health Promotion and Chronic Disease Prevention and Treatment held in November in Tokyo. The study was also presented at the American Heart Association November 2008 meeting.

Since the health claim was awarded in the USA nearly a decade ago, numerous studies have been published. In this review Solae's research team conducted a meta-analysis to evaluate all the studies from before and after the original health claim to determine the net effect of soy on blood cholesterol reduction. Solae's research team reviewed and ranked more than 150 studies using the FDA's 2007 evidence-based review guidance for scientific evaluation

of health claims. Forty-six of the studies that were deemed high or moderate quality were included in the final meta-analysis.

The meta-analysis found reductions in total cholesterol of 9.54 mg/dL and reductions in LDL cholesterol of 7.12 mg/dL (which is about a 4% and 5% reduction respectively). The meta-analyses also looked at individuals who had high and normal blood cholesterol and found that soy protein consumption resulted in a significant reduction in blood cholesterol for both groups. A possible mechanism was also put forward. Soy protein binds bile acids in the digestive tract leading to excretion of bile acids from the body. This results in the liver extracting cholesterol for bile acid synthesis, which in turn results in an overall decrease of blood cholesterol levels.

(<http://www.abstractsonline.com/plan/AuthorsIntermediate.aspx?DisplayAs=1&Intinerary=0&author1=Samuel&mi1=P>)



Soybean oil + stearidonic acid and risk of cardiac events

A soybean oil (SBO) containing approximately 20% stearidonic acid derived from genetically modified soybeans is under development in the USA. In this study overweight healthy volunteers (n = 45) were randomised to SDA-SBO (24 ml/day providing ~ 3.7 g SDA) or to regular SBO (control group) without or with EPA ethyl esters (~1 g/day) for 16 weeks. Serum lipids, blood pressure, heart rate, platelet function and safety laboratory tests were measured along with the omega-3 index. A per-protocol analysis was conducted on 33 subjects (11 per group). Compared to baseline, average omega-3 index levels increased 19.5% in the SDA group and 25.4% in the EPA group. DHA did not change in any group. Relative to EPA, SDA increased red blood cell eicosapentaenoic acid with about 17% efficiency. No other clinical endpoints were affected by SDA or EPA treatment (vs. control). The authors conclude that SDA-enriched SBO significantly raised the omega-3 index. Since EPA supplementation has been shown to raise the omega-3 index and to lower risk for cardiac events, SDA-SBO may be a viable plant-based alternative for providing meaningful intakes of cardioprotective omega-3 fatty acids.

Harris WS et al. *Lipids*, Volume 43, Number 9, September 2008, pp 805-8112, DOI 10.1007/s11745-008-3215-0

(<http://www.springerlink.com/content/h835221p1p36m153/?p=27f4f2777dd64af29310f72d326d6954&pi=3>)

Fermented black soybean yogurt reduces flatulence

In this study black soybeans were germinated under fungal stress with food grade *R oligosporus* for 3 days and were homogenised and fermented with lactic acid bacteria to produce soy yogurt. Fungal stress led to the generation of oxylipins [oxooctadecadienoic acids (KODES) isomers and their respective glyceryl esters] and glyceollins - a type of phytoalexins unique to soybeans. In soy yogurt, the concentrations of total KODES and total glyceollins were 0.678mg/g (dry matter) and 0.953 mg/g, respectively. The concentrations of other isoflavones (mainly genistein and daidzein and their derivatives) in soy yogurt remained largely unchanged after the processes compared with the control soy yogurt. Germination of black soybean under fungal stress for 3 days was sufficient to reduce stachyose and raffinose (which cause flatulence) by 92 and 80%, respectively. With a pH value of 4.4, a lactic acid content of 0.26%, and a maximum viable cell count of 2.1×10^8 CFU/mL in the final soy yogurt, soy milk from germinated soybeans under fungal stress was concluded to be a suitable medium for yogurt-making. The resulting soy yogurt had significantly altered micronutrient profiles with significantly reduced oligosaccharides and enriched glyceollins.

S Feng et al. *J. Agric. Food Chem.*, 2008, 56 (21), pp 10078-10084 DOI: 10.1021/jf801905y

(<http://pubs.acs.org/doi/abs/10.1021/jf801905y?prevSearch=S+Feng%2C+Soy&searchHistoryKey=>>)



6

Isoflavone supplement may improve artery health in stroke patients

Researchers at the University of Hong Kong investigated the effect of an oral isoflavone supplement on vascular endothelial function in patients with established cardiovascular disease. A randomised, double-blinded, placebo-controlled trial was performed to determine the effects of isoflavone supplement (80 mg/day, n = 50) vs a placebo (n = 52) for 12 weeks on brachial flow-mediated dilatation (FMD) in patients with prior ischaemic stroke. Compared with controls, FMD at 12 weeks was significantly greater in isoflavone-treated patients. Adjusted for baseline differences in FMD, isoflavone treatment was independently associated with significantly less impairment of FMD at 12 weeks. The absolute treatment effect of isoflavone on brachial FMD was inversely related to baseline FMD, suggesting that vasoprotective effect of isoflavone was more pronounced in patients with more severe endothelial dysfunction. Isoflavone treatment for 12 weeks resulted in a significant decrease in serum high-sensitivity (hs)-C-reactive protein level. Isoflavones did not have any significant treatment effects on nitroglycerin-mediated dilatation, blood pressure, heart rate, serum levels of fasting glucose and insulin, haemoglobin A1c, and oxidative stress as determined by serum superoxide dismutase, 8-isoprostane, and malondialdehyde. The researchers concluded that 12 week isoflavone treatment reduced serum hs-C-reactive protein and improved brachial FMD in patients with clinically manifest atherosclerosis reversing their endothelial dysfunction status.

Chan YH et al European Heart Journal Advance Access published online on September 23, 2008. European Heart Journal, doi:10.1093/eurheartj/ehn409
(<http://eurheartj.oxfordjournals.org/cgi/content/abstract/ehn409v1>)



Different treatments affect thermal stability of soy stabilised emulsions

Researchers from University of Limerick and Wyeth Nutritionals Ireland have reported that parameters such as heat pre-treatment, pH and calcium supplementation can all affect the thermal stability of emulsions formulated with commercial soy protein isolates (SPI) and hydrolysates (SPH). In the first study to address these parameters the researchers examined the effects of different thermal pre-treatments (from 70° to 90°C), pH ranges (from 6.4 to 7.5), and calcium addition (450 to 850 mg per litre) on the stability of model emulsion systems stabilised with SPI or SPH. While no changes in the stability were observed as a result of the thermal pre-treatments, an increase in stability was observed at higher pH levels. According to the researchers higher heat stabilities of the model emulsions at higher pH may indicate that intermolecular association between denatured protein molecules may be inhibited due to increased electrostatic repulsion. On the other hand adding calcium decreased stability and calcium as calcium chloride led to less stable emulsions than calcium as calcium citrate. The report concludes that modification of ingredient and manufacturing parameters may be a useful approach for enhancing thermal stability properties of soy protein.

M Ryan et al. Food Research International, Volume 41, issue 8, pp 813–818, doi:10.1016/j.foodres.2008.07.004
(<http://www.science-direct.com/science/journal/09639969>)

Soy protein increases nutritional value of starch-based expanded snacks

Physical and microstructural properties of native corn starch-soy protein concentrate (CS-SPC) extrudates were investigated in relation to the macromolecular changes in starch during extrusion. The effects of extruder screw speed (230 and 330 rpm) and SPC concentration (0%, 5%, 10%, 15%, 20%) were determined. Increasing screw speed resulted in higher specific mechanical energy (SME) and expansion, and lower mechanical strength. On the other hand, addition of 5-20% SPC led to lower SME and expansion, and higher mechanical strength. X-ray micrographs showed smaller yet more cells, and cell wall thickening with SPC addition. Water absorption index increased and water solubility index decreased with increase in screw speed and SPC level. The researchers concluded that increasing screw speed results in a slight shift towards smaller molecular weight fractions of starch, as determined by gel permeation chromatography.

Demasa NJE et al. Journal of Food Engineering, 2009;90(2):pp262-270, doi:10.1016/j.jfoodeng.2008.06.032
(<http://www.sciencedirect.com/science/journal/02608774>)



7

Vegan diet reduces heart disease risk in people with type 2 diabetes

Although vegan diets improve diabetes management, little is known about the nutrient profiles or diet quality of individuals with type 2 diabetes who adopt a vegan diet. Recent research from the University of North Carolina suggest that a low-fat vegan diet has a nutrient profile and diet quality associated with a greater reduction in heart disease risk in people with type 2 diabetes than a diet based on the American Diabetes Association (ADA) guidelines. A 22-week randomised, controlled clinical trial examining changes in nutrient intake and diet quality was carried out in subjects with type 2 diabetes (n=99) in a free-living setting. Participants were randomly assigned to a low-fat vegan diet or a 2003 ADA recommended diet.

Nutrient intake and Alternate Healthy Eating Index (AHEI) scores were collected at baseline and 22 weeks. Both groups reported significant decreases in energy, protein, fat, cholesterol, vitamin D, selenium, and sodium intakes. The vegan group also significantly reduced reported intakes of vitamin B-12 and calcium, and significantly increased carbohydrate, fibre, total vitamin A activity, beta carotene, vitamins K and C, folate, magnesium, and potassium. The ADA recommended diet group also reported significant decreases in carbohydrate and iron, but reported no significant increases. The vegan group significantly improved its AHEI score, while the ADA recommended diet group did not. The difference in AHEI score at 22 weeks between groups was significant. With both groups combined, AHEI score was negatively correlated with both changes in haemoglobin A1c value and weight. The study concluded that vegan diets increase intakes of carbohydrate, fibre, and several micronutrients, in contrast with the ADA recommended diet.

Turner-McGrievy GM, JADA Volume 108, Issue 10, pp 1636-1645 (October 2008) (<http://www.adajournal.org/issues?Vol=108>)



French study shows cholesterol lowering effect of sterol-enriched soy drink

The objective of this study was to investigate the effect of a soy drink enriched with plant sterols on blood lipid profiles in moderately hypercholesterolemic subjects. In a randomised, placebo-controlled double-blind mono-centric study, 50 subjects were assigned to 200 ml of soy drink either enriched with 2.6g plant sterol esters (1.6 g/d free plant sterol equivalents) or without plant sterols (control) for 8 weeks. Subjects were instructed to maintain stable diet pattern and physical activity. Plasma concentrations of lipids were measured at initial visit, after 4 weeks and after 8 weeks. The primary measurement was the change in LDL cholesterol (LDL-C). Secondary measurements were changes in total cholesterol (TC), non-HDL cholesterol (non-HDL-C), HDL cholesterol (HDL-C) and triglycerides. The study found that regular consumption of the soy drink enriched with plant sterols for 8 weeks significantly reduced LDL-C by 0.29 mmol/l or 7% compared to baseline. TC and non-HDL-C concentrations decreased by 0.26 mmol/l and 0.31 mmol/l, respectively. Mean reductions in total, LDL and non-HDL cholesterol were significantly greater than in the placebo group. HDL-C and triglycerides were not affected. The authors concluded that daily consumption of a plant sterol-enriched soy drink significantly decreased total, non-HDL and LDL cholesterol and is an interesting and convenient aid in managing mild to moderate hypercholesterolemia.

Weidner et al. Lipids in Health and Disease 2008, 7:35 doi:10.1186/1476-511X-7-35 (<http://www.lipidworld.com/content/7/1/35>)

Researchers develop probiotic soy protein energy bars

University of Missouri researchers have developed a soy protein energy bar fortified with a strain of probiotics. The research was aimed at developing a dry powder ingredient containing functional probiotics, which could be used to fortify soy foods and reduce raffinose and stachyose, the two carbohydrates in soy that humans cannot digest. The researchers screened 9 strains of probiotics for their ability to produce alphagalactosidase, the enzyme that breaks down raffinose and stachyose. The probiotics were encapsulated with a gel to assure their survival while in storage and after entering the human body. They were then freeze-dried to be easily incorporated into the energy bar recipe. The probiotics remained alive in large numbers for more than two months in this condition. The research was presented at the recent annual IFT meeting in the USA.

Visit: <http://cafnr.missouri.edu/news/friendly-bacteria.php>.



15 February 2009

The Healthwise & Fit4Life Expo (Urban Health and Wellness Event), Atlanta, Georgia, USA.
Contact: HealthWiseandFit4Life@comcast.net.

3 March

Soyfoods 2009. Anaheim, California, USA. Visit: <http://www.soyatechevents.com/>.

10–13 March

Anuga Foodtec 2009, International Trade Fair for Food and Drink, Cologne, Germany.
Visit: <http://www.anugafoodtec.com/>.

15 March

IFE 2009, Excel, London, UK. Visit: <http://www.ife.co.uk/>.

15–18 March

4th European Symposium on Plant Lipids: Plant Lipids: From Fundamental Research to Industrial and Food Applications. Gottingen, Germany. Visit: <http://www.eurofedlipid.org/meetings/goettingen09/index.html>.

5–10 April

Practical Short Course on Snack Food Processing (Extruded Snacks and Tortilla Chips), Texas A&M University, College Station, Texas, USA. Visit: www.tamu.edu/extrusion.

21–22 April

Critical Issues in Crushing, Refining, Processing, Product Formulation and Packaging (in cooperation with Oils & Fats International Middle East 2009), Cairo, Egypt. Visit: <http://home.scarlet.be/~tpm12374/smartshortcourses/ofi-me09/index.html>.

3–6 May

100th AOCS Annual Meeting & Expo, Orlando, Florida, US. Visit: <http://www.aocs.org/meetings/>.

5–7 May

Vitafoods 2009, Geneva Palexpo, Switzerland. Visit: <http://vitafoods.eu.com/>.

10–13 May

Micronutrient Forum, Micronutrients, Health & Development, Beijing, China. Visit: <http://www.micronutrientforum.org/meeting2009/>.

12–13 May

Fourth International Conference on Responsible Soy, Culaba, Mato Grasso, Brazil. Visit: <http://www.responsiblesoy.org/>.

1–5 June

Processing and Marketing Soybeans for Meat, Dairy and Baking Applications, INTSOY, University of Illinois, Illinois, USA. Visit: <http://intsoy.nsrll.uiuc.edu/>.

11 June

International Scientific Conference on Nutraceuticals and Functional Foods, Zilina, Slovak Republic.
Visit: <http://www.foodandfunction.com/>.

1–3 July

Dietary Fibre Conference DF09, Vienna, Austria. Visit: <http://www.icc.or.at/>.

10–15 August

World Soybean Research Conference VIII, Beijing, China. Visit: <http://www.wsrc2009.cn/en/index.asp>.

27–30 September

World Congress on Oils and Fats & 28th ISF Congress 2009, Sydney, Australia. Visit: <http://www.isfsydney2009.com/>.

17–18 October

4th Practical Short Course - Omega-3 Fatty Acids: Market Trends, Nutrition & Health, Utilisation in Food Systems, Graz, Austria.
Visit: <http://www.smartshortcourses.com/>.

18–21 October

7th Euro Fed Lipid Congress, Graz, Austria. Visit: <http://www.eurofedlipid.org/meetings/graz/index.htm>.

17–19 November

Food Ingredients/Natural Ingredients Exhibition 2009, Frankfurt, Germany. Visit: <http://europe2009.fi-events.com/content/default.asp>.