

Soy & Health

APRIL 2004

ISSUE NUMBER 2

Call for abstracts

We hope you have all reserved the Soy & Health 2004 conference dates in your diary (7–8 October 2004) this year's key event that will provide you with an up-to-date overview of the latest research into the health effects of soy foods and soybean constituents. And for those of you who are interested in submitting a research poster please send your 300 word abstract to info@soyconference.com. All abstracts should include the title, complete name of author(s), organisation/institution, address and e-mail. The deadline for poster abstracts is 15 August 2004. For more details about the conference and submitting abstracts see page 7 or visit <http://www.soyconference.com>.

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EFSA provides scientific basis for allergen labelling

The European Food Safety Authority's (EFSA) Scientific Panel on Dietetic Products, Nutrition and Allergies (NDA) has published an opinion relating to the evaluation of allergenic foods for labelling purposes. The Panel concluded that there is ample evidence to justify the mandatory inclusion of the following allergenic ingredients and their derivatives in the list of ingredients on food labelling: cereals containing gluten, fish and shellfish, egg, peanut, soy, milk and dairy products including lactose, nuts, celery, mustard, sesame seed, and sulphites (at concentrations of 10mg/kg or above). These are the most common food allergens which can trigger an allergic reaction in sensitive individuals and the Panel agreed that the list should be reviewed on an ongoing basis in light of changing dietary habits, food processing practices as well as the emergence of new scientific and clinical findings.

The Panel also concluded that current scientific evidence is insufficient to establish for any of these ingredients an intake threshold below which an allergic reaction does not occur, or to predict the effect of food processing on allergenic potential. The possibility that specific derivatives of these food allergens are unlikely to trigger an allergic reaction would need to be evaluated on a case by case basis. For a copy of the NDA Opinion visit http://www.efsa.eu.int/science/nda/nda_opinions/341_en.html

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Soy alters energy metabolism in premenopausal women

A new study published in the journal *Analytical Biochemistry* (Solansky et al, Anal Biochem 2003; 323(2):197-204) describes a metabonomic approach to determining biochemical modifications following dietary intervention in humans. The approach, which is based on chemometric analysis of H_1 nuclear magnetic resonance spectra of blood plasma, was used to investigate metabolic changes following dietary intervention with soy isoflavones in healthy premenopausal women under controlled environmental conditions.

The researchers observed clear differences in the plasma lipoprotein, amino acid, and carbohydrate profiles following soy intervention suggesting a soy-induced alteration in energy metabolism.

Equol may help prevent prostate cancer and baldness

Equol, a metabolite of daidzein, one of the major isoflavones found in soy, has been found to block a potent male hormone (dihydrotestosterone) involved in prostate cancer and male pattern baldness. The study was carried out by researchers at Colorado University, Brigham Young University, and Cincinnati Children's Hospital (Lund et al, Biol Reprod 2004, 70: 1188-1195).

Two experiments were carried out which showed that injections of equol into male rats reduce the size of the prostate. In one study, the testes were removed, eliminating all DHT production. When the rats were injected with DHT their prostates grew. When they gave the rats equol, nothing happened, but when they injected the rats with both equol and DHT, the equol prevented the DHT from functioning normally - as a stimulator of prostate growth. The equol did not change hormone levels but blocked the effects of DHT. This could explain why Japanese men, who eat more soy than American men, suffer equally from benign prostatic hyperplasia as they age, but rarely go on to develop prostate cancer. DHT is also important in the skin and so it has also been postulated that equol may offer a means of controlling hair loss and promoting healthy skin.

Genistein has antibacterial potential

A Swedish study has suggested that, apart from its cardioprotective and anti-tumour effects, genistein also has anti-staphylococcal activity (Verdrengh et al, Microbes Infect, 2004; 6(1):86-92). The potential antibacterial activities of genistein were studied by incubating the bacteria with various concentrations of the compound for different periods of time and assessing viable counts. The researchers found that exposure to genistein showed an inhibitory effect on all staphylococcal strains tested, including methicillin-resistant strains. In addition the growth of *Streptococcus pasteurianus*, *Bacillus cereus*, and *Helicobacter pylori* was clearly inhibited by genistein, whereas *Escherichia coli* was not.

Daidzein, which is structurally similar to genistein but deficient in topoisomerase II inhibitory activity, also inhibited the growth of *Staphylococcus aureus* but with lower potency than genistein. The researchers concluded that genistein exerts potent antibacterial properties in vitro, which are possibly mediated by the stabilisation of the covalent topoisomerase II-DNA cleavage complex.

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Soy protein may have protective effect against colon cancer

A new study suggests that colon cancer may be a hormone responsive cancer and that soy protein could have a positive effect on the number and size of tumours. The researchers (Guo et al, *Journal of Nutrition* 2004, 134(1):179-182) fed ovariectomised female mice five different diets containing: milk protein (no oestrogen component); soy protein (no oestrogen component); soy protein plus genistein; soy protein plus a mixture of isoflavones; and soy protein plus oestrone, a naturally occurring animal oestrogen. The researchers found that the tumour incidence was lower in the mice fed the soy plus oestrone diet compared to those fed casein or soy-isoflavone diets.

They also found that genistein did not affect tumour incidence, but soy protein (independent of isoflavones) significantly reduced colon weight, tumour burden and multiplicity.

Soy and reduced risk of breast cancer

A study by Wu et al (*Carcinogenesis* 2004, 23:1491-1496) suggests that in a population of Asian American women in Los Angeles County the risk of breast cancer was significantly reduced with increasing soy intake. Using a subset of cases and controls they further investigated (Wu et al, *Carcinogenesis* 2004, 25(1):77-81) the relationship between self-reported usual adult intake of soy isoflavones (determined from food frequency questionnaires) and levels of plasma isoflavones and isoflavone metabolites from a randomly timed blood specimen.

The team found that levels of plasma genistein, daidzein and total isoflavones increased with increasing levels of self-reported intake of soy isoflavones. Breast cancer cases and control subjects did not differ in their respective associations between total plasma isoflavone levels and self-reported intake, but there was a three-fold difference in geometric mean plasma levels of total isoflavones between women in the highest quartile of soy isoflavone intake compared with those in the lowest. The difference was statistically significant.



The researchers concluded that the study provides independent corroboration that breast cancer cases and control subjects can reliably recall their usual soy intake and that there is no evidence of selective recall bias. The results also strengthen their previous observations of an inverse association between soy intake and breast cancer risk in this population.

Dutch study finds no association between soy and breast cancer risk

A large prospective study (Keinan-Boker et al, *Am J Clin Nutr* 2004, 79(2); 282-288) of over 15,000 Dutch women aged 49-70 years old investigated the association between phytoestrogen intake and breast cancer. The women were followed up for 4-8 years during which time a total of 280 were diagnosed with breast cancer and isoflavone intake was observed. No association between breast cancer risk and isoflavone intake was observed. In an editorial in the same issue of the journal, RG Ziegler examines the strengths and weakness of the research along with other recent studies. Ziegler concludes that the evidence does not support increasing phytoestrogen intakes in US women to Asian levels but neither did it suggest that typical US intakes are problematic for healthy women.

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The Alpro Company

Alpro is the European pioneer in soybean products. A healthy series of Alpro soja and Provamel drinks, desserts, yoghurt and ice cream is available in department stores and organic food shops in Europe.

Alpro has production sites in Wevelgem (Belgium), Issenheim (France) and Kettering (UK) with over 500 employees.

The Alpro Products

Alpro has been successful in various different European markets for a number of years now.

Our consumers are extremely conscious, particular about choosing products that improve their diet and vitality.

Alpro means a conscious choice for:

- a daily investment in health
- with the best ingredients
- long-life vitality
- with no compromises in taste or convenience

All products are 100% vegetable, free of cow's milk protein, lactose and contain no cholesterol.

The Alpro Traceability System

Alpro soja uses a traceability system to ensure that our products and ingredients avoid contamination with genetically modified organisms (GMO's). The system is approved and monitored by independent auditors cert id.

The Alpro Innovation and Expertise

Today's consumers are increasingly well informed. They demand consistent quality in products and innovation and strive to maintain good health through active lifestyles, wholesome foods and general well-being.

Today the role of nutrition goes way beyond the notion of correcting a deficiency. Now it is about maintaining health and well-being.

Based on in-depth consumer understanding, our R&D department works on the development of new products and on continuously upgrading our existing products, in order to meet the demand by health-conscious consumers for products that taste delicious.

Our Science & Nutrition Department plays a key-role in providing information to the customer concerning product composition, nutritional value etc. The department closely follows all research on soy and its components in order to communicate the facts to medical groups and consumers.



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Soy & Health 2004



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Hain Celestial acquires Natumi

The US-based food group Hain Celestial is buying the German company, Natumi, manufacturer of soy, oat and rice based drinks. The Hain Group has already expanded into the European market with the purchase of the Belgian natural and organic foods producer, Lima, in 2001. The new acquisition of Natumi will allow it to produce its own rice and soy-based products closer to its growing European customer base. Natumi has 36 employees and sells its cows milk-free drinks and desserts principally to retail outlets in Europe. Bruno Fischer, founder of Natumi, will remain with the company's operation in Europe.

Kikkoman invests in soy milk manufacturer

Japanese companies, Kikkoman, and Kibun Foods Group, have announced that they will conclude a deal to establish a strategic partnership in the fields of chilled foods, beverages, overseas sales and distribution. Under the new agreement, Kikkoman acquires a 15% stake in the Kibun Fresh System Company, a chilled food distributor which is 64% owned by Kibun Foods.

Phytohealth project update

The Phytohealth project brings together scientists, nutritionists, clinicians, as well as large and small companies involved in the field of phytoestrogens. It is funded by the EU under the 5th Framework Programme. Phytohealth was formed to build consensus, share research and advise on future research on the topic of phytoestrogens and human health. The project was started in late 2003 and will continue for 3 years, during which time it will organise 3 plenary meetings and 3 platform meetings. At the 2nd plenary meeting to be held in Heraklion in October 2004, 3 European consensus papers will be officially presented on: Health effects of phytoestrogens; Safe and efficacious doses; and Assays for the evaluation of potency. These 3 consensus papers will be finalised by all who attend the meeting.

Phytohealth needs active contributions from consumers, scientists and industry to really make an impact in establishing the health efficacy, safety, and optimal formulation of products from these plant-derived molecules. For more information about the Phytohealth project and future meetings please visit the website at <http://www.phytohealth.org/> or contact Annalisa Corsithe, e-mail: corsi@inran.it.

US prepares new allergen labelling

New food labelling legislation is being developed in the United States that will require manufacturers to label for major allergens. The draft Bill aims to ensure that ingredient statements provide clear information on major food allergens such as milk, eggs, fish, shellfish, tree nuts, peanuts and soybeans and will require manufacturers to identify major allergens by one of three methods:

- listing the allergen on the ingredient list, e.g. Milk;
- using the word "contains" followed by the name of the major food allergen, printed at the end of the ingredient list or next to it, e.g. Contains milk;
- using a statement in brackets to clarify technical ingredient terms, e.g. Casein (milk).

If approved by the House of Representatives, the legislation will take effect on 1 January 2006.



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Calcium-rich miso developed

Japanese scientists have developed a functional fermented miso (soybean paste) which contains 3 times as much calcium as regular miso. Calcium is important for developing bones, muscle function, hormone regulation and in helping to prevent osteoporosis and adequate calcium intake is particularly important for those under the age of 18 or over 50. The average calcium intake in Japan is less than half the recommended daily allowance in these age groups. Miso is one of the staple food-stuffs of Japan and is, therefore, a useful vehicle to increase calcium intake among these populations. The new miso was developed by Japan's Agriculture and Livestock Industries Corporation, in collaboration with the University of Miyazaki, Itoham and

Yamae Foods. The team found that miso made from skimmed milk which had been degraded and fermented thoroughly had more amino acids than typical miso, as well as three times as much calcium. It also had four times the angiotensin converting enzyme which is thought to prevent hypertension.

Serotonin supplement for menopause contains soy

A new serotonin supplement called SeroFem™ has been launched by US company, Directly Young LLC. The product aims to provide relief for women suffering from menopausal symptoms or PMS without the side effects of HRT or other medications. Serotonin is a naturally occurring neurotransmitter and studies have shown that serotonin imbalance is a leading cause of certain debilitating conditions. Serotonin levels drop dramatically during the menopause due to changes in hormone levels. SeroFem™ aims to help by restoring the natural balance of serotonin. In addition, the product contains calcium, soy, black cohosh and essential vitamins, ingredients shown to be important for women's health. For more information visit <http://www.directlyyoung.com/>.

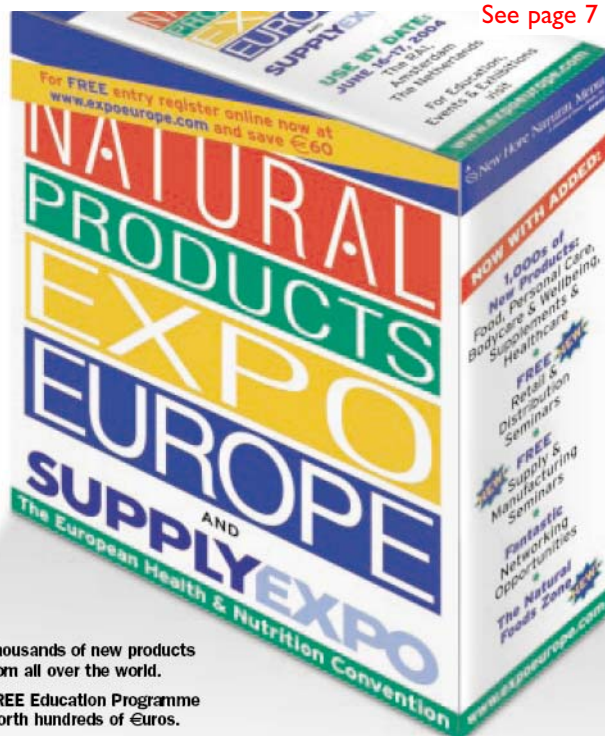
Dr Soy launches low carbohydrate bars

A new line of *Low Carb Snacker* bars, made with soy protein, has been launched in the USA by Dr Soy. The 170kcal bars are available in 3 flavours: Chocolate Coconut Almond, Chocolate Caramel Peanut, and Double Fudge Brownie. As well as soy protein, each bar contains 3-4g of carbohydrate (only 1gm of sugar) and 17 vitamins and minerals. For more information visit <http://www.drsoy.com/>.

Fermented soy milk products - new patent

A new method for preparing food products by fermenting soy milk with *Streptococcus thermophilus* has been patented by Danone (Patent No 6699517). The method supports reduced post-fermentation acidification, by fermenting mixtures of soy milk and either grain meal or almond milk with *Streptococcus thermophilus*, or other lactic acid bacteria.

See page 7



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VENUE “OUD SINT JAN”, BRUGES, BELGIUM

Hundreds of delegates from over 30 countries attended the international conferences “Soy & Health - Clinical Evidence - Dietetic Applications”, held in Brussels (October 2000) and London (May 2002).

The latest scientific information on the possible health benefits of soy were presented.

Both conferences provided insight into the current avenues of research into soy, and provided advice for the food industry on producing tasty and healthy foods as well as practical tips for health care professionals and nutritionists on ways to include soy in the diet.

Soyfoods, soybean ingredients and supplements are more popular than ever. Today, most food and supplement companies offer a broad range of soy products. Their success is largely due to the increased knowledge of the health benefits offered by soy.

The third international conference “Soy & Health 2004 - Clinical Evidence - Dietetic Applications” provides medical doctors, dietitians, nutritionists, nurses and other health care professionals with an up-to-date overview of the most recent findings about the health effects of soyfoods and soybean constituents. The conference will especially focus on clinical studies and practical information on how to incorporate soy into the diet.

SCIENTIFIC PROGRAMME

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Hormonal effects
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Equol

Soy and cancer
Immunity
Early exposure to soy
Dietary applications, functional foods and health claims

CALL FOR POSTER ABSTRACTS

Researchers are invited to submit abstracts for poster presentation. Deadline for submitting abstracts is August 15, 2004. Abstracts must be limited to 300 words.

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CONFERENCE SPONSORS



**April 27–28**

Soy Flavour Workshop at the University of Illinois, USA. Contact Illinois Centre for Soyfoods, website: <http://www.soyfoodsillinois.uiuc.edu/>. e-mail: soyfoodsillinois@uiuc.edu

April 27–28

1st International Congress on Functional Foods and Food Ingredients, Antalya, Turkey. Organisers: Hacettepe University, University of Lincoln and Mersin University (Prof Dr Ilbilger Saldamii) Website: <http://www.cffn.org/>, e-mail: ilbilge@cffn.org.

May 9–11

9th Annual AOCS Conference and Practical Short Course on Soyfoods: Ingredients, Preparation and Utilization (9 May), Cincinnati, USA. website: <http://www.aocs.org/meetings/>.

May 11–13

Vitafoods International (and conference sponsored by Leatherhead Food Research Association), PALEXPO, Geneva, Switzerland. Contact IIR Exhibitions Ltd, website: <http://www.vitafoods.eu.com/>.

May 25–27

Food Ingredients Central and Eastern Europe, Berlin, Germany. Contact FiCEE, e-mail: ahofman@cmpinformation.com, website: <http://www.fi-events.com/>.

May 26–28

IFIA Japan 2004, Tokyo International Exhibition Centre, Japan. Contact E J Krause & Associates, website: <http://www.ejkrause.com/>.

June 15–17

Natural Products Expo Europe Conference and Exhibition, Amsterdam, The Netherlands. Contact Katharine Tooby, tel: +44 20 8232 1600 x225, e-mail: Katharine.Tooby@pentoneurope.com, website: <http://www.expoeurope.com/>.

September 5–8

3rd EuroFed Lipid Congress, Fats and Oils in a Changing World, Edinburgh, Scotland. Contact EuroFed, website: <http://www.eurofedlipid.org/meetings/edinburgh/>. e-mail: amoneit@eurofedlipid.org.

September 25–26

Nutrition and Health Show, Olympia Exhibition Centre, London, UK. Contact +44 (0)208 4556570, email: info@nutritionandhealthshow.co.uk.

October 7–8

3rd International Conference on Soy & Health 2004 - Clinical Evidence; Dietetic Applications, Bruges, Belgium. Contact info@soyconference.com or visit <http://www.soyconference.com/>.

October 14–17

Natural Products Expo East 2004, Washington Convention Centre, Washington DC, USA. Contact: New Hope Communications, website: <http://www.naturalproductexpo.com/>.

November 16–18

Health Ingredients Europe (HiE), The Netherlands. Contact FIE, website: <http://www.hi-events.com/>, e-mail: ahagenstein@cmpinformation.com.

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