

Soy & Health

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ISSUE NUMBER 4

Don't delay - register now for Soy & Health 2004

The Soy & Health 2004 conference will be held on the 7 & 8 October 2004 but the deadline for early-bird registrations is **10 September**. So don't delay! Register now to book your place! The programme promises to be very exciting with 18 presentations on the latest research into the health effects of soy foods and soybean constituents (including a new topic on the 'Role of Soy in Weight Reduction') and 30 poster abstracts submitted so far. Leading experts from around the world will be participating in the packed scientific programme. For more details about the conference check out page 7 and visit us at <http://www.soyconference.com/>.

In this issue

Research

Latest research news on soy and health from around the world

p2-4

News

Company, news, people and and markets

p5

Products

New product launches

p6

Soy & Health Conference

Scientific programme

p7

Diary

Calendar of conferences, symposia of interest to the soy world

p8

EU to tackle unhealthy diet

At the Council meeting at the beginning of June, EU Ministers agreed that an unhealthy diet and physical inactivity amongst European citizens are major risk factors to be addressed in a European policy on heart disease.

The Council is looking at developing national and EU policies to improve heart health and reduce cardiovascular disease (CVD). They identified unhealthy diets and obesity as major risk factors. Tobacco use was also cited as a major risk factor.

Ministers also agreed that Member States should consider guidelines for those at high risk or living with CVD and it was agreed that comparable data was needed across the EU as well as more research.

During discussions it was recognised that there is a clear link between diet and disease and it was identified that raised blood pressure and cholesterol levels are strongly and directly related to an individual's lifestyle and diet as well as to levels of activity.

Ministers are particularly concerned about the increase in obesity and overweight among all ages in the EU but especially in children and young people.



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2

Soy and breast cancer risk in postmenopausal women

There has been much debate about whether high levels of dietary soy are safe for postmenopausal women and evidence about their safety has been mixed. Populations that typically consume diets high in soy have lower rates of breast cancer but some studies have shown that soy isoflavones can stimulate breast cancer cells grown in the laboratory. Researchers from Wake Forest University are now suggesting that a diet high in natural plant estrogens does not increase the risk of breast or uterine cancer in postmenopausal women (Wood et al, *The Journal of Clinical Endocrinology & Metabolism*, July 2004).

Wood et al measured how a diet high in soy isoflavones affected markers for breast and uterine cancer risk in postmenopausal monkeys. The monkeys ate one of three diets for three years: soy without isoflavones, soy with intact isoflavones, or soy without isoflavones, but with Premarin, an estrogen therapy, added. The isoflavone group consumed the human equivalent of about 129mg/day, more than most people would get in a soy-rich diet. The researchers measured breast density, numbers of dividing breast and uterine cells, and levels of the estrogen produced by the body in all markers for cancer risk. Monkeys on the soy plus estrogen diet had increased levels of all markers, while monkeys that ate soy with isoflavones did not. In fact, the monkeys eating soy with isoflavones had lower levels of the estrogen produced by the body. High levels of this estrogen are considered an important predictor of breast cancer risk in postmenopausal women.

The researchers suggest that high dietary levels, of soy isoflavones do not increase markers for breast and uterine cancer risk in postmenopausal monkeys and may contribute to an estrogen profile associated with reduced breast cancer risk. It is important to note that the research addressed the effects of plant estrogens on normal breast tissue, and not in breast cancer tissue.



Soy may reduce risk of colon cancer

US researchers have recently suggested that a compound found in soybeans, soy glucosylceramide (soy GlcCer) may reduce the risk of colon cancer, the third most common cancer in the world. Researchers from Georgia Tech, Emory University and the Karmanos Cancer Institute, found that soy GlcCer was effective in reducing the formation and growth of tumour cells in the gastrointestinal tract in mice.

The researchers believe the anti-cancer activity is down to a group of molecules called sphingolipids. It has already been shown that milk sphingolipids can suppress tumour formation but this is the first study to show that sphingolipids of plants, which are structurally different, can also inhibit colon cancer. Other foods rich in sphingolipids are eggs, cheese and wheat flour.

A particularly encouraging feature of this research, which was published in the May 2004 issue of the *Journal of Nutrition* (Merrill A et al) was that the anti-cancer effect did not require a huge dose of soy GlcCer; the amounts used were similar to those found naturally in soybeans. It is still not known exactly how sphingolipids suppress cancer but it is thought that there are probably many mechanisms. However, targeting beta-catenin, a protein involved in cell growth, may be one method.

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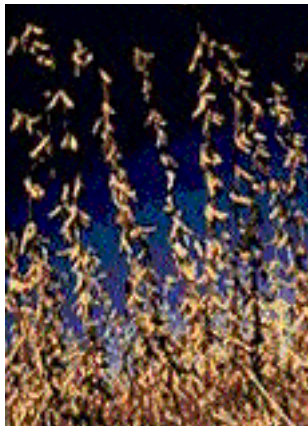


3

Cognitive function in postmenopausal women

Researchers in the Netherlands carried out a double-blind, randomized, placebo-controlled trial of 202 healthy postmenopausal women aged 60 to 75 years, and found no improvement to cognitive function from soy consumption (Kreijkamp-Kaspers et al, JAMA 2004, 292: 65-74).

Participants were randomly assigned to receive 25.6g of soy protein containing 99mg of isoflavones (52mg genistein, 41mg daidzein, and 6mg glycitein) or total milk protein as a powder on a daily basis for 12 months. A total of 175 women completed the baseline and adherence was good. Cognitive function, bone mineral density, or plasma lipids did not differ significantly between the groups after a year. The researchers concluded that this double-blind randomized trial does not support the hypothesis that the use of soy protein supplement containing isoflavones improves cognitive function, bone mineral density, or plasma lipids in healthy postmenopausal women when started at the age of 60 years or later.



Vegetable protein could reduce risk of gall bladder disease

Following a report in the July 2004 issue of the Journal of Nutrition that eating plenty of peanuts could help prevent women getting gallbladder disease a paper in the American Journal of Epidemiology (15 July 2004) suggests that eating vegetable protein in general can also significantly decrease the risk of developing this type of disease. The latest study uses data from the Nurses Health Study and was led by Dr Chung-Jyi Tsai from the Harvard School of Public Health in Boston, US.

Soy protein isolate may benefit Type 2 diabetics

Isolated soy protein added to the diets of 14 men under treatment for advanced stages of type 2 diabetes, was shown to significantly lower unwanted proteins in the patient's urine and slightly raise the "good" HDL cholesterol levels in their blood. The findings, published in the August 2004 issue of the Journal of Nutrition (Teixiera et al) suggest that simple dietary modification of consuming soy-protein rich foods may help to prevent diabetic kidney disease and improve blood lipid profiles.

The researchers from the University of Illinois found that soy protein added to the diet, compared to casein, resulted in a significant reduction in the amount of protein in the urine. Patients eating casein had an increase of urine protein levels. Participants were veteran men ranging in age from 53 to 73 who consumed pre-measured amounts, based on each man's weight, of either vanilla flavoured isolated soy protein made from soybeans, or casein. They were supposed to have substituted 50% of their daily protein intake with the premeasured powders, but instead they consumed the powders as part of additional dishes or drinks in their diet. Those consuming the soy protein had a 9.5 % reduction in the excretion of urinary albumin whilst those eating casein had an 11.1 % increase of urinary albumin. The levels of HDL cholesterol were improved by over 4% but overall cholesterol ratios improved only slightly.

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4

Soy diet may act as analgesic in bone cancer

A soy diet has been shown to reduce some of the pain caused by bone cancer in an animal study. The researchers suggest that the study may have implications for humans. Scientists from the John Hopkins University School of Medicine in the US compared the analgesic effects of a diet with either soy or casein as a protein source on three experimental mice models of bone cancer pain. The results showed some areas where soy appeared to reduce sensitivity to pain, such as in the femur model, although it had no effect on pain sensitivity in the calcaneus model or on movement-related hyperalgesia in the humerus model.

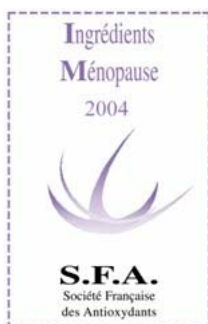
Further research will help determine if nutritional supplements, such as soy proteins, can reduce opioid analgesic use in chronic pain states and help minimize the side effects associated with long-term use of opioids. The soy diet had no impact on tumour size, bone destruction, and body weight in the femur model, suggesting that it had no effect on cancer growth. The research is published in the *Journal of Pain* 2004, 5(2):104-110.



Soy may stimulate estrogen-dependent breast cancer growth

Highly purified soy foods and soy supplements may stimulate the growth of pre-existing estrogen-dependent breast cancer tumours, according to researchers at the University of Illinois. Reporting in the May 2004 online issue of the journal 'Carcinogenesis', the study suggests that isoflavone-containing products consumed in the US may have lost many of the biologically active components in soy and, therefore, may not have the same health benefits as traditional soy foods.

Using an animal model, Helferich et al compared different soy foods and supplements containing the same concentrations of genistein and found that dietary soy products that contain isoflavones in more purified forms were associated with greater tumour growth.



2ND CONFERENCE ON MENOPAUSE INGREDIENTS 23-24 September 2004 - Paris

Aims of the Second Conference on Menopause Ingredients:

- Identify which ingredients used in Menopause and Andropause are effective and supported by scientific and clinical research;
- Present the latest advances in Menopause Ingredients, their efficiency and their role in dietary supplements and cosmetics;
- Debate the usefulness of soybean isoflavones, their uses in dietary supplements, their variation of content and composition, and their effect on breast cancer;
- Provide a perspective on Menopause Ingredients used in dietary supplements, notably the prevention of osteoporosis; and
- Understand marketing approaches, current trends and the role of communication in the promotion of Menopause Ingredients.

Contact: Société Française des Antioxydants (tel: +33 1 55 04 77 55, fax: +33 1 55 04 77 57,
website <<http://www.sfa-site.com/>>

Soy & Health is published 5 times per year and is distributed free by e-mail to readers.

To be added to the mailing list please e-mail your contact details to info@soyconference.com



5

NIH to fund heart benefit study of soy isoflavones in women

The National Institute of Health (NIH) in the US is funding Dr Joseph Janicki of Auburn University in the US to carry out research into the heart benefits of soy isoflavones on women's health.

The research will cover a four year period and will investigate the positive impact soy has on sexual hormones, cardiac mast cells and cardioprotection. The grant of \$1.45 million is one of many provided by NIH through the soybean checkoff Soy Health Research Programme.

European soy food sales hit €1.5 billion

Research from PROSOY Research & Strategy suggests that Europeans are increasingly opting for soy-based alternatives to dairy and meat products. In 2003 the market for soy-based drinks and desserts and meat-free and tofu products. in Europe reached a value of €1.5 billion.

According to PROSOY, the demand for soy-based dairy alternatives is growing because of changes in lifestyle, growing food intolerance and allergies, as well as the positive health image of soy. The market growth was recorded at nearly 20%. For meat-free products the market has grown by 3%. Innovation is believed to have played a large part in the improvement in sales, particularly with soy-based milk products, which are offered through



the chilled sections of supermarkets and the introduction of new meat-free ready meal concepts in the meat-free sector.

The report "Soyfoods: The European Market 2003" covers the following countries: Belgium, France, Germany, Italy, The Netherlands, Spain, Sweden, and the UK and is available from PROSOY Research and Strategy at <http://www.prosoy.org>.

Research ensures vegetarian foods are meat-free

Research funded by the UK's Food Standards Agency (FSA) has been carried out to help ensure that vegetarian foods are not contaminated with meat. A DNA-based technique has been developed that can identify the presence of meat in products that claim to be vegetarian, at levels as low as 0.05%.

A separate study, also funded by FSA, has developed a screening method that detects meat-derived fats in vegetable fats and oils by identifying cholesterol. The method has been found to detect 95% of cases where there was a 10% level of animal fat contamination and 90% of cases where there was a 5% level of animal fat contamination.

(<http://www.food.gov.uk/>)

US market to reach \$202 billion

According to a US report by Business Communications Company Inc, the US market for soy-containing foods (both traditional and processed foods that contain soy) is expected to grow from the current \$187.5 billion to \$202 billion by 2008. According to BCC, changing consumer palates and growing general interest in all foods containing soy are responsible for moving sales of the foods from specialty stores to mainstream outlets. "RGA-117 Engineered and Staple Soy Containing Foods" costs \$3850, e-mail: publisher@bccresearch.com.



6

Soy anti-ageing extracts launched

Solbar Plant Extracts (SPE) has launched a new line of soy extracts designed for 'cosmeceutical' skin care. Solgen C has been approved and assigned an International Nomenclature Cosmetic Ingredient name of 'Solgen C glycine soja soybean (seed) extract (CTFA # 5994)'. It is being used by leading cosmetic manufacturers worldwide as an ingredient in oil-based emulsions such as face creams, skin care and sunscreen products.

Solgen 10/S contains 10% soy isoflavones with naturally high levels of genistein and daidzein. It has been tested for antioxidant properties and UV protection.

An application using 10% soy isoflavones requires 1-2% Solgen 10/S in order to achieve maximum 0.2% active ingredient in a topical application. Solgen 10/S is made from non-GMO Identity Preserved soybeans and is 98% water soluble, and can be used in cosmetics and toiletries such as lotions, hair care products and sunscreens.

For more information contact Solbar Industries Ltd, POB 2231, Ashdod 77121, Israel (tel: +972 8 8632111), e-mail: spe@solbar.com, website: <http://www.solbar.com>.



New soy snacks

Hearty's have extended their range of soy snacks and launched Sour Cream and Onion flavour Soy Crunchies which are high in protein and low in carbohydrate, GM and gluten-free. Approved by the Vegetarian Society, there are 3 other varieties: Salted, Barbeque, and Chocolate coated. Also new for 2004 are Soy Squares in Bacon and Salt & Vinegar flavour.

For more information telephone +44 1423 528822 or visit the website at <http://www.heartys.co.uk>.

Reduced-sodium soy sauce

MH Foods, manufacturers of 'One Cal Fry Light' oil sprays have recently added a new product to their range. Life Soya Sauce has less than half the sodium of regular soya sauce, is made from all natural ingredients and is free from artificial colourings, preservatives and flavourings. It is wheat and gluten free and contains no GM ingredients or mono-sodium glutamate.

To check out the rest of the MH Foods product range telephone +44 1322 337711 or visit the website at <http://www.mhfoods.net>.



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The updated programme can be found at <http://www.soyconference.com/> and includes a new topic focusing on the role of soy in weight reduction.

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Equol
Soy & cancer
Early exposure to soy
Dietary applications & future of soy

Hormonal effects and osteoporosis
Lignans
Anti-inflammatory effects
Cognitive function
Role of Soy in weight reduction



Don't delay the deadline for early registration is **10 September 2004!** The full conference programme and registration form can be found at <http://www.soyconference.com/>

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**September 23–24**

2nd Conference on Menopause Ingredients, Paris, France. Contact La Société Française des Antioxydants, tel: +33 1 55 04 77 55, website: <http://www.sfa-site.com/>.

September 25-26

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

September 26–October 1

6th Annual Practical Short Course on Texturized Vegetable Protein and Other Soy Products, Texas A&M University, USA. Contact: Dr Mian Riaz +1 979/845 2774, e-mail: mnriaz@tamu.edu, website: <http://www.tamu.edu/extrusion/>.

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 11–14

Industrial Applications of Fats & Oils, Chicago, USA. Contact: AOCS, +1 217/359 2344, e-mail: meetings@aocs.org, website: <http://www.aocs.org/meetings/>.

October 14

Creating a Healthier America: The Role of Soy, Washington, DC, USA. Contact the Soyfoods Association of North America +1 202/659 3520, e-mail: info@soyfoods.org, website: <http://www.soyfoods.org>.

October 14–17

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

October 14–17

Organic Products Expo - Bio Fach America, Washington Convention Centre, Washington DC, USA. Contact: New Hope Communications, +1 303/3390 1776, website: <http://expoeast.com/organic.cfm/>, e-mail: tradeshows@newhope.com.

October 17–21

SIAL 2004, Parc des Exposition, Villepinte, Paris, France. Website: <http://www.sial.fr/>.

November 2–4

Eurolipids - International Trade Fair for the Science and Technology of Lipids, Frankfurt, Germany. Website: <http://www.eurolipids.de>, e-mail: eurolipids@mfa.messefrankfurt.com.

November 7-10

World Nutra 2004 - 5th International Conference & Exhibition on Nutraceutical and Functional Foods (+ Pre Conference Symposium- Functional and Specialty Beverages: Market, Regulation, Processing, Formulation & Health Benefits, San Francisco, USA, e-mail: nutra@worldnutra.com, website: <http://www.worldnutra.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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