

Soy & Health

FEBRUARY 2008

ISSUE NUMBER 19

FDA to re-evaluate science behind authorised soy health claim

The US Food and Drug Administration (FDA) has announced an opportunity for public comment on its intent to re-evaluate the scientific evidence for two previously authorised health claims (dietary lipids and cancer, and soy protein and the risk of coronary heart disease) plus two qualified health claims that were the subject of letters of enforcement discretion (antioxidant vitamins and the risk of certain cancers, and selenium and certain cancers). The reason behind this re-evaluation is because of new scientific evidence that has emerged for these substance-disease relationships which may either strengthen or weaken the scientific support for these health claims.

With respect to the soy and heart health claim the FDA has noted that since its authorisation on 26 October 1999, numerous studies have evaluated the relationship between soy protein and coronary heart disease, but the findings of these studies have been inconsistent. In July 2005 the FDA issued a report outlining the effects of soy products on health outcomes including cardiovascular disease and concluded that soy products appear to exert a small benefit on LDL-cholesterol. However, it is not clear whether soy protein is responsible for this effect. FDA plans to evaluate the scientific evidence for soy protein and the risk of coronary heart disease to determine if the totality of the scientific evidence continues to meet the FDA's significant scientific agreement standard.

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The date for submission of comments is 19 February 2008. For more information visit the FDA website at: <http://www.fda.gov/OHRMS/DOCKETS/98fr/E7-24813.htm>.

Call for Poster Abstracts

5th International Conference on Soy & Health Het Pand, University of Ghent, Belgium, 2-3 June 2008

Soy Conference and the Soy & Health community encourage researchers to submit the results of the latest scientific research or clinical testing at the Soy & Health 2008 conference. A poster area near the exhibition hall will be open for direct visits throughout the conference, and for meetings with the authors during the coffee, tea and lunch breaks.

Poster abstracts for Soy & Health 2008 can be submitted by e-mail to info@soyconference.com preferably in Word format. Abstracts should be no longer than 300 words, not including the title, author name(s) and affiliation. Please indicate which author will present the poster during the conference.

Deadline for submission: 27 April 2008

A confirmation of acceptance will be given in the shortest delay possible.

Visit: <http://www.soyconference.com>.

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Solbar enters cosmeceutical market

Following two years of product development, Israel's Solbar Plant Extracts is introducing a range of Solgen natural soy isoflavone extracts to the cosmeceutical market. Designed for both topical and inside-out beauty applications clinical research has shown that soy isoflavones can act as age-defying ingredients, not only helping conditions such as hot flushes and osteoporosis, but also to helping to recover and reinforce skin elasticity, and improve antioxidant activity.

Solbar's new marketing campaign uses the slogan "Not even Cleopatra could rely upon baths alone for beautiful skin."

Market research in 2006-2007 has demonstrated the value of this growing market. According to a published study from Freedonia (2006), US cosmeceuticals demand will grow 8.5 percent annually, propelled by a stream of new products offering age-defying and other appearance-enhancing benefits. Datamonitor reported in 2007 that the European cosmeceutical market will see a compound annual growth rate of 4.8% between 2004 and 2009, increasing it from a value of US\$929 million to US\$4.4 billion over the same time period.

For more information visit: <http://www.solbar.com>.

10 key trends in food, nutrition, and health

10 Key Trends in Food, Nutrition & Health 2008, published by New Nutrition Business, provides a review of the strategy-defining trends in the food, beverage and health businesses. Focusing on the key long-term trends each trend is illustrated with examples of how brands around the world are already capitalising on the trends, illustrated by case studies and supermarket sales data taken from the 350-plus interviews conducted with industry executives each year. The 10 Key Trends for 2008 are:

- 1: Digestive Health — a wellness issue and the biggest opportunity
 - 2: Fruit and superfruit — the future of food and health
 - 3: The marketing power of "naturally healthy"
 - 4: Beauty foods — the newest niche
 - 5: Weight management more about maintaining than losing
 - 6: Mood food feels its way
 - 7: A tipping point for the premiumisation of health
 - 8: Healthy snacking for the "me" generation
 - 9: Kid's nutrition — connecting to multiple trends is crucial
 - 10: Are antioxidants the new probiotics?
- Why "premiumisation" has become a standard for healthy foods and shows which brands are able to command price premiums of 100—800% over regular foods — and how they do it
 - Why green tea, antioxidants, probiotics and fibres are the ingredients with the brightest future
 - Why omega 3 and plant sterols will continue to turn in a niche performance
 - How packaging innovation is the biggest product differentiator — even in health.

The report also shows:

Visit: <http://www.newnutrition.com/indexDev.asp>

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Call for Papers

Abstracts will be reviewed until June 15, 2008.
www.aocs.org/meetings/8thSoy > Call for Papers

Where scientists from the East and the West will meet to
 establish international collaborations in soy research

3

Cargill launches 'lecithin quality toolbox'

Cargill is introducing a new grading system for its standard and specialty lecithins. Food manufacturers around the world can now select from four main grades of lecithins that take into account a range of factors with particular focus on product quality, functionality and value.

To help food processors navigate through the complexities involved in the quality specification of lecithins, Cargill Texturizing Solutions now offers its extensive range of lecithins in four main grades: Standard, High, Premium and FQ-MaxX. These provide an easy-to-use, application-led approach to narrowing down the lecithin selection

criteria minimising the need for long, elaborate questionnaires and extensive quality testing procedures.

Visit: <http://www.cargilltexturizing.com>.



New soybean varieties provide sweeter edamame soybeans

Sweeter edamame soybean varieties for organic farmers are being developed by Virginia State University and the Agricultural Research Service (ARS) in the US. Researchers have found five types of vegetable soybeans with higher than usual levels of sugar and these five types serve as the parent lines for new lines of edamame. Virginia State University researchers carry out the hybridisation and chemical analyses for sucrose and total sugar content whilst the ARS researchers search for the sweeter edamame varieties using knowledge and experience gained from more than two decades of breeding giant soybean plants for livestock forage. For more information visit: <http://www.ars.usda.gov/is/pr/2007/071210.htm>.

Safety watchdog advises on soy infant formula and soy supplements

The German Federal Institute for Risk Assessment (BfR) has recommended that because of their high concentration of isoflavones and levels of phytate, infant formulas and follow-on formulas made from soy protein should only be given to infants on medical grounds and then only under medical supervision. The Institute recognises that the impact of isoflavone levels on infants from soy infant formulas has not been fully determined and acknowledges that the results from animal experiments cannot be transposed to humans but for precautionary reasons the Institute is backing the recommendation of the Nutrition Committee of the German Society for Pediatric and Youth Medicine until further data becomes available. The BfR has also undertaken a health assessment of isoflavone supplements and has concluded that there is a lack of evidence to confirm the safety of such supplements and that there is some evidence to suggest that there may be health risks. Long term studies of these extracts are needed to evaluate the health implications. For more information visit the German Federal Institute for Risk Assessment website: <http://www.bfr.bund.de>.

Natto and health

Products containing nattokinase, an enzyme present in natto are being developed for their potential health benefits. Japanese company, Honda Trading, a division of the Honda Motor Corporation, has invested in the production and study of natto and natto products and has now teamed up with UK company, Healthcare Supplements, to produce a range of products using non GM soybeans with a specially developed non GM culture and proprietary micro technology techniques to create an odour and taste controlled environmentally stable product with good solubility. 'Natto Heart Health', 'Natto Bone Health' and 'Natto Nutrition Plus' are formulations based upon this technology. Visit: <http://www.healthcaresupplements.co.uk/>.



A healthy decision

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Alpro, Vlamingsstraat 28,
8560 Wevelgem, Belgium,
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Soy linked to less belly fat in postmenopausal women

A new study from the University of Alabama at Birmingham suggests that a daily soy supplement may prevent increases in abdominal fat in postmenopausal women. In a randomised placebo-controlled trial, women receiving a daily soy shake experienced reductions in their subcutaneous abdominal fat while women receiving a casein placebo experienced gains in fat around their waist and abdomen. Fifteen postmenopausal women (average age 55.6, average BMI 30.5) were assigned to receive either a daily soy shake containing 20g of soy protein plus 160mg of isoflavones, or a casein placebo shake for 3 months. At the end of the trial there were no differences in the weight of women in both groups, however, measures of subcutaneous abdominal fat were significantly different between the two groups with women

in the soy group experiencing a 14.7 sq cm reduction compared to a 22.9 sq cm increase in the placebo group. However, no differences were observed in total body fat, lean mass and insulin resistance. The researchers note that the mechanism behind the apparent benefits of isoflavones are not well understood. Animal studies have suggested that genistein may decrease lipoprotein lipase messenger RNA levels, which reduces the build-up of fat cells. Alternatively, isoflavones may affect fat cells by gene regulation by repressing the differentiation of adipocytes. Whatever the mechanism the authors conclude that their trial suggests that soy protein containing isoflavones may prevent the accumulation of fat in the abdomen.

CK Sites et al, Fertility and Sterility, December 2007, Vol 88, Issue 6 Pages 1609-1617. <http://www.sciencedirect.com/science/journal/00150282>



Daidzein-rich supplement reduces hot flashes

Research from Harvard Medical School suggests that a dietary supplement rich in daidzein can reduce the incidence of hot flashes by 52% with no negative side effects. Researchers carried out a 12 week trial with 147 postmenopausal women (aged 38 to 60 years) who experienced 4 to 14 hot flashes per day. Assigned subjects received daily supplements of the daidzein rich isoflavone (DRI) aglycone supplement at a dose of either 40 or 60mg, or placebo. The DRI ingredient used in the study was manufactured by Nichimo Co (Tokyo) and the isoflavones are extracted from soy germ fermented with Koji fungus. At the end of the study the researchers reported that the number of hot flashes in the group receiving the lower dose was reduced by 52% while the women receiving the high dose experienced a 51% reduction in the number of hot flashes. The placebo group reported a 39% reduction in hot flush frequency. The researchers concluded that the degree of improvement in women taking the DRI supplement was similar to that of alternative therapies such as serotonin inhibitor but without the negative side effects. The authors conclude that the DRI supplement may be an effective and acceptable alternative hormonal treatment for menopausal hot flashes.

L Khaodhia et al, Menopause, January 2008 Vol 15, Issue 1 Pages 125-134. <http://www.menopausejournal.com>

New meta analysis on soy and bone benefits

According to a new meta analysis of 10 randomised controlled trials, increased soy isoflavone consumption can boost bone mineral density in the spine by almost 1g in menopausal women. In this new meta analysis, carried out by researchers from Peking University, University of Yamanashi (Japan), and Soochow University (China), 10 randomised controlled trials were analysed using a total of 608 subjects. Significant favourable effects were reported with consumption of more than 90mg isoflavones per day. Intake of isoflavones varied amongst the trials ranging from 4.4 to 150mg/day and trial duration also varied from 3 to 24 months. The researchers reported that isoflavone consumption was associated with 10.6mg per sq cm increase in spine bone mineral density (SBMD), compared to subjects consuming a placebo. In addition, isoflavone intake of more than 90mg/day for 6 months was associated with a 28.5 and 276mg per sq cm increase in SBMD respectively. The SBMD was 0.93g higher on average in subjects taking isoflavones compared to placebo. The authors conclude that future randomised trials should include large sample sizes, use graded isoflavone dosages and allow for an examination of long term effects of isoflavone supplementation on bone mass and fracture risk.

DFMa et al, Clinical Nutrition, Published online ahead of print (doi:10.1016/j.clnu.2007.10.012). <http://www.sciencedirect.com/science/journal/02615614>



5

Isoflavones do not adversely affect blood clotting function

According to a study from Brazil, isoflavones from soy do not adversely affect blood clotting function. In a double-blind, placebo controlled study, the researchers recruited 47 postmenopausal women to receive either a daily isoflavone supplement (40mg) or a casein placebo (40mg). The aim was to verify the role of isoflavones on blood clotting factors. A range of biomarkers related to blood clotting, including factors VII and X, and fibrinogen, were measured at the start and end of the study. No significant changes in the levels of blood variables were found but there were significant reductions in plasma concentrations of prothrombin fragments 1 and 2, and both the placebo and isoflavone groups showed changes in antithrombin, protein C and free protein S levels. Overall they found that isoflavones are not associated with changes to coagulation factors suggesting that soy isoflavones do not have biologically significant estrogenic effects on the haemostatic system. Further research is required particularly from larger clinical trials.

DRA Rios et al. Nutrition 2007 Volume 24, Issue 2, Pages 120-126. <<http://www.sciencedirect.com/science/journal/08999007>>.



Equol production higher from soymilk than soy germ

It has been hypothesised that equol, a microbial metabolite of daidzein, may provide a clue to the effectiveness of soy and its isoflavones but it is excreted by only 33% of Caucasians. In this study microbial and dietary factors associated with the ability to harbour equol-producing bacteria were studied in a randomised dietary intervention trial with 100 healthy postmenopausal women (average age 57, average BMI 23.9). After a 4-day baseline period, subjects were randomly assigned to receive three portions per day of soymilk or soy germ containing 28.51 and 37.99mg of isoflavone aglycone equivalents per portion for 5 days. Urine, faecal, and breath samples were tested. Urine samples taken over the 24 hours of the last day showed that genistein and daidzein concentrations were higher when the isoflavones were consumed from soymilk than from the soy germ tablets. Subjects were classified into poor, moderate, and strong equol producers and researchers observed that higher counts of the bacterium *Clostridium coccooides-Eubacterium rectale* were associated with increased equol production. In addition an increased dietary intake of polyunsaturated fatty acids was associated with increased equol production. The researchers noted a good correlation between the urinary excretion profiles and equol production and the subjects' phenotypes based on the daidzein metabolism by faecal cultures and concluded that faecal incubations had the potential to identify equol producers without dietary intervention.

S Bolca et al 2007. J. Nutr. 137:2242-2246, October 2007 <<http://jn.nutrition.org/cgi/content/abstract/137/10/2242>>

Study looks at soy isoflavones bioavailability in children and adults

The purpose of this study by researchers in Hawaii was to determine whether children experience a higher systemic exposure to isoflavonoids when consuming a body weight-adjusted dose of soy compared with adults. Forty study participants were recruited from a local school, including 21 children and 19 adults. Participants collected a baseline urine sample and ate immediately thereafter a body weight-adjusted dose of soy nuts (15 g/54.4kg equivalent to 0.615 (sd 0.036) mg total isoflavones/kg) followed by a 12hr urine collection. Nineteen children and 18 adults completed the protocol correctly (fourteen child—parent pairs). Children, compared with adults, showed a statistically significant ($P < 0.05$ by unpaired t-test) higher urinary isoflavone excretion rate for daidzein (+39%), genistein (+44%), all non-metabolites (daidzein + genistein + glycitein; +41%) and total isoflavonoids (+32%). The researchers concluded that isoflavones are more bioavailable in children than adults and that urine is an excellent medium to determine systemic isoflavone exposure in children due to its non-invasiveness and high compliance, in particular when collected overnight; it also allows evaluation of completeness of specimen collection.

BM Halm et al. British Journal of Nutrition 2007 Volume 98 Pages 998-1005. <<http://journals.cambridge.org/action/displayJournal?jid=BJN>>



6

Mastertaste launches masking flavours for soy

Flavourings manufacturer, Mastertaste, has launched a new range of flavours focused on improving the taste of soy products in response to increasing consumer demand for dairy alternatives. Working for two years in association with its parent company, the Kerry Group plc, the aim was to create a range that could improve the taste of soy, acting on the most unpalatable notes, without deleting its desirable taste characteristics such as its astringency. Mastertaste have developed various flavours, from mild taste enhancers, for hardened soy lovers, to stronger maskers, for consumers who prefer a flavour profile more comparable to traditional cow's milk.

Mastertaste identified distinctive notes through various extraction technologies and then through GC-MS and GC sniffing. They concluded that the most negative flavour aspects of soy may be associated with oxidative and degenerative processes during manufacturing and ageing. The company has created a range of products to address different issues. The flavours can be used in all sweet soy-based applications, from soy beverages to ice creams. They come in liquid and capsule form and can be used in soy protein concentrate and isolate formulated beverages and desserts, as well as those prepared from whole soybeans. They can be used on their own or as building blocks included in broader flavouring systems to improve overall taste. <http://www.mastertaste.com>.



Alpro tofu mince and lightly seasoned tofu pieces

Exclusive to Asda stores in the UK, Alpro's new Tofu Mince and Slightly Seasoned Tofu Pieces are available in 180g packs suitable for 2 servings. <http://www.alpro.com>

The Soy & Health 2006 Conference proceedings are available (45 EUR including 6% VAT; advance payment is necessary) from [http://www.soyconference.com/](http://www.soyconference.com)

ADM launches soy as dairy protein alternative

In response to high milk prices the Archer Daniels Midland Company (ADM) has launched a new line of soy proteins for use in place of dairy ingredients or to extend milk supply. ADM's new Pro Fam soy isolates and Arcon soy concentrates can work out around 20% cheaper than skim milk powder and caseinates in the current climate. The ingredients have been developed to have the same emulsifying functionality as dairy proteins in applications like yogurts, frozen desserts, biscuits, cakes and imitation mozzarella cheese. <http://www.admworld.com>.



New soymilk to support bone health

Leading US soymilk company, WhiteWave Inc, has launched a new 'Silk' brand soymilk specifically aimed at helping consumers get more calcium into their diet. Silk Plus For Bone Health® provides 400mg of calcium in addition to all the vitamins and minerals provided by regular Silk. In addition, it contains NutraFlora®, a natural prebiotic fibre to help the body absorb calcium more effectively. As with all Silk soymilks, Silk Plus is lactose-free, dairy-free and cholesterol-free. Other varieties in the Silk Plus range include Silk Plus Fiber and Silk Plus Omega-3 DHA. <http://www.silksoymilk.com>.

New organic soy infant formula launched in Canada

Canadian manufacturer, Clearly Canadian, has launched, under the 'My Organic Baby' brand, the first nationally branded organic soy-based infant formula in Canada. The new product was formally launched at the Canadian Health Food Association show in Toronto last September following the company's recent acquisition of DMR Food Corporation and My Organic Baby Inc which has a full range of organic baby and toddler foods under the brand name My Organic Baby and My Organic Toddler. <http://www.clearly.ca>.

Soy & Health

June 2-3, 2008

Het Pand, University of Ghent, Ghent, Belgium



1st International Symposium Soy & Strategic Marketing 5th International Conference Soy & Health

PROGRAMME INFORMATION AVAILABLE ONLINE

<http://www.soyconference.com>

The 5th International Conference Soy & Health is aimed at those with nutrition or dietetic background, food research and development and marketing staff, clinical researchers, government representatives, as well as senior executives from soy food, food ingredient and supplement business.

International top scientists bring the latest developments in the field of Soy & Health research as well as educative overview presentations. The programme will consist of two major tracks:

- Clinical Evidence based presentations focusing primarily on human study results obtained with soy or soy components
- Dietetic Applications will focus more on directly applicable results and ways of introducing soy in healthy diets.

Confirmed speakers: M. Messina, M.R. Lovati, G. Mann, K. Setchell, S.L. Atkin, F. Squadrito, W. Verstraete, J. Harland.

The 1st International Symposium on Soy & Strategic Marketing is designed for marketing & sales people active in the soyfood and soy ingredient industry or entering this market. The programme will learn how to strengthen the market position and bring new insights in the way to further develop the market.

Confirmed speakers: P. Wennstrom, V. Krishnakumar, M. Messina, A. Sahota, G. Klein-Essink.



Online Registration on <http://www.soyconference.com>

Please check website regularly for programme information updates or e-mail info@soyconference.com for further details.

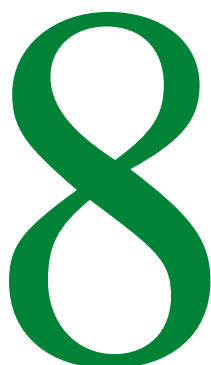


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Practical Short Course on Snack Food Processing (Extruded Snacks, and Tortilla Chips), Texas A&M Campus, College Station, USA. Visit: <http://www.tamu.edu/extrusion> or e-mail mnrriaz@tamu.edu.

4–6 March 2008

International Congress on Vegetarian Nutrition, Loma Linda University, California, USA. Contact vbrown@llu.edu (registration) and srajaram@llu.edu (programme). Visit <http://www.vegetariannutrition.org> for online registration and abstract submission.

13–16 March 2008

Natural Products Expo West, Anaheim Convention Center, Anaheim, California, USA. Visit: <http://expowest.com> or e-mail tradeshows@newhope.com.

17–18 April 2008

14th Soy Symposium - Soy: New Horizons, Chicago, Illinois, USA. Held in conjunction with Processing and Marketing of Soybeans for Meat, Dairy, and Baking Products at the University of Illinois at Urbana-Champaign, Illinois from April 21 to 25, 2008. Visit: <http://www.soyfoods.org/2008-soy-symposium/>.

21–28 April 2008 (extended 1 May 2008)

Intsoy Short Course: Processing and Marketing of Soybeans for Meat, Dairy and Baking Applications, University of Illinois, USA. Visit: http://intsoy.nsr.uiuc.edu/courses/processing_marketing/.

20 April 2008

9 me Congr s de Nutri- & Phytoth rapie, Genval, Belgium. <http://www.nutriphyto.be>.

22–24 April 2008

Food Ingredients Eastern & Central Europe, Warsaw, Poland. Visit: <http://cee2008.fi-events.com/content/default.aspx> or e-mail: Ficee@cmpi.biz.

24 April 2008

3rd Roundtable Conference on Responsible Soy, Buenos Aires, Argentina. Visit: <http://www.responsiblesoy.org>.

6–8 May 2008

Vitafoods International, Geneva, Switzerland. Visit: <http://www.vitafoods.eu.com/>.

18 May 2008

99th AOCS Annual Meeting & Expo, Washington State Convention & Trade Center, Seattle, USA. Visit: <http://www.aocs.org> or e-mail: meetings@aocs.org.

2–3 June 2008

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2–3 June 2008

1st International Symposium Soy & Strategic Marketing, Ghent, Belgium. Visit <http://www.soyconference.com/> or e-mail info@soyconference.com. See page 7 for more details.

5–6 June 2008

ILPS Short Course, Phospholipid & Lecithin in Healthy Emulsions, University of Ghent, Belgium. Info: lecithin@lecipro.nl or visit: <http://www.ilps.org>.

17 June 2008

Interactive Workshop, Supplement Claims, Brussels. Info at e-mail: info@supplementclaims.eu.