

SUSTAINABILITY REPORT

WACKER has shortened the publishing intervals for its sustainability report from four to two years and expanded the range of topics. The company has already published the report for the 2007/2008 period. WACKER's sustainability report offers an honest and comprehensive account of sustainability for the benefit of customers, business partners, suppliers, shareholders, analysts, non-governmental organizations and the authorities, as well as the company's employees and neighbours at its various sites. New topics have been added to the report (including sustainability management, demography and anti-corruption) besides the traditional sustainability topics, such as environmental protection, workplace and plant safety and health protection.

www.wacker.com

CARAMELIZED SUGAR FLAVOUR

D.D. Williamson has announced the development of an acid-proof Caramelized Sugar Flavour. The company explains that their innovative Natural Flavour also has incidental colouring properties. Greg Kreder, Product Development Scientist refers: "Class

One (Plain) Caramel Colours and Burnt Sugars are not typically stable

in acidic beverages [...] So, D.D. Williamson's new Natural Flavour represents a breakthrough for those customers seeking acid stability and a clean label ingredient". The company explains that applications include beverages and sauces. The non-GM product provides the characteristic flavour of burnt sugar. It offers stability in phosphoric acid, citric acid, alcohol (60 percent), and salt (15 percent). Ingredient labelling options for customers include "Natural Flavouring" in the European Union and "Natural Flavour" in the United States.

www.ddwilliamson.com

NEW OIL BOTTLING PLANT

Cargill and **Hojiblanca** have inaugurated a new oil bottling plant at Antequera, near



Malaga. The 50/50 joint venture between the companies under the name of Mercaóleo represents an investment of

€18 million in the plant itself. Mercaóleo will produce private label olive oil using the highest quality raw materials, employing the most advanced bottling practices and capabilities to serve Hojiblanca's and Cargill's customers. "Mercaóleo brings together two compelling sets of capabilities" said Stan Ryan head of Cargill's refined oils business in Europe and continued: "Hojiblanca truly understands olive oil and provides reliability, quality and access to large volumes. Meanwhile, Cargill brings production technology and risk management expertise, and a vast global

trade, distribution and export network. As well as opening up new, international markets for olive oil, this joint venture highlights Cargill's commitment to long-term growth and investment opportunities within Spain. This exciting venture should create the best private label olive oil supply chain in the world". Hojiblanca currently exports high premium olive oil worldwide and also produces and markets table olives. The company will continue to work with farmers and cooperatives to produce large volumes of high quality olive oil.

www.cargill.com

INSTITUT ROSELL-LALLEMAND

Institut Rosell-Lallemand participated at the world's largest event for healthy and innovative ingredients, November 11-13 in Las Vegas: SupplySide West. Moreover the company sponsored the post-conference Probiotics Workshop jointly organised by Virgo Publishing and the International Probiotics Association (IPA).

www.institut-rosell-lallemand.com

DANISCO A/S ACQUIRES SORBIAL

Danisco A/S has signed an agreement to acquire Sorbial, an agricultural biotechnology company. With a turnover close to 1 million euros in 2008, Sorbial is the highly innovative branch of the French group, Vallée. It is dedicated to the development, manufacture and application of microbial-based products for the animal production and waste treatment industries. Doug Willrett, Executive Vice President BioActives, Cultures Division explains: "Acquiring the Sorbial technology is a continuation of our strategy to diversify beyond our leading position in dairy & food cultures to new markets for our microbial technologies [...] Sorbial's expertise and proprietary strains will help accelerate our product development to create sustainable solutions for animal nutrition and environment protection".

www.danisco.com

2008/09 CHOCOLATE INDUSTRY

In an exceptionally difficult economic environment fiscal year 2008/09, Juergen B. Steinemann, CEO of **Barry Callebaut**, said: "I am pleased that we were able to deliver strong top-line and bottom-line growth in the face of a rarely seen global chocolate consumption decline. After reaching a low in winter 2008, growth resumed and regained momentum in the second half of the year. Our growth strategy based on the three pillars of geographic expansion, innovation and cost leadership, coupled with our robust business model, our diversified product offering and ongoing efficiency improvement initiatives, clearly stood the test of the global economic recession. In this context we took further significant steps such as expanding to new markets (e.g. Mexico), implementing new outsourcing deals (such as Morinaga in Japan) and adding new capabilities (e.g. new pastry factory in Spain). We reconfirm our strategic focus on industrial and artisanal customers. We will continue to build upon this strategy in the coming years while also achieving further synergies across our businesses and completing the integration of recent acquisitions".

www.barry-callebaut.com

AAK

AAK is seeing clear synergies following the merger, strengthening the balance sheet and opening up for acquisitions. During the recently Capital Market Day in Stockholm, AAK summarised the development and gave an insight into the company's prospects. The proposal to merge Aarhus United A/S and Karlshamns AB was announced in August 2005. Following the completion of the merger and the delisting of the respective companies on the stock exchanges in Copenhagen and Stockholm, AarhusKarlshamn AB, AAK, was listed on the OEM Stockholm Stock Exchange's Mid Cap list during the autumn in 2006. AAK reports that the combined company would allow them to accelerate growth, strengthen competitiveness, optimise investments and improve cash flow. After four years of operation, they are pleased to note a growth in EBIT by approx. 90 percent. Further savings of SEK 100 million will come in late 2010, and another SEK 200 million – as announced during the second quarter of 2009 – will come in the second half of 2011. As from 2012, AAK will thus be operated with a cost base that is half a billion lower per year than the two companies' total cost base the year before the merger.

www.aak.com

BENECOL® PRODUCTS

Raisio's new partner in Colombia, Cooperativa Colanta Limitada (Colanta), will launch a line of Benecol® products containing plant stanol ester on the Colombian market under their brand name Colanta Benecol. Raisio explains that Colanta is the first company to introduce Benecol products in Colombia. With this new partnership, Raisio continues its efforts in reaching new market areas in South America where the need for cholesterol-lowering functional foods is growing. Raisio's CEO Matti Rihko says: "The launch in Colombia represents a significant expansion of Benecol products in South America and is an indication of Raisio's ability to expand into new markets with major local partners. We are very pleased having Colanta as our new partner. We view South America as an interesting opportunity for Benecol products".

www.benecol.net

BIOGAIA & LABORATOIRES BIOETHIC

BioGaia has signed a distribution agreement with the French company Laboratoires BIOETHIC. The company explains that the agreement gives Laboratoires BIOETHIC exclusive rights to sell BioGaia's Probiotic drops and tablets in France. The products will be sold under the BioGaia brand. Frédéric Derome, Managing Director, Laboratoires BIOETHIC, refers: "Given BioGaia's extensive clinical studies in the area and the large sales force that will

work with BioGaia's products on the French



market, we at Laboratoires BIOETHIC have high expectations for this collaboration". The launch of BioGaia's Probiotic drops, containing *Lactobacillus reuteri*, in France was planned in Autumn 2009, whilst tablet sales will start Spring 2010. Peter Rothschild,

Managing Director, BioGaia, adds: "We are happy to have contracted a distributor in France who work according to our now well-established model with the BioGaia brand, especially since we consider that France can become an important market for us".
www.biogaia.com



"YOGHO! YOGHO!" AND "CHOCO! CHOCO!" BRANDS

The European Commission has given its approval for the acquisition of the "Yogho! Yogho!" and "Choco! Choco!" brands by the Belgian dairy cooperative **Inza cvba** (a subsidiary of Milcobel cvba) from **Royal FrieslandCampina**. The transaction was finalised on 31 October 2009 and concerns the "Yogho! Yogho!" and "Choco! Choco!" brands in the European Union, including the product recipes and associated commercial operations. The company explains that the acquisition will not effect employment of staff. FrieslandCampina will receive a license from Inza to use the "Yogho! Yogho!" brand within the European Union, but excluding the Benelux. Outside the European Union FrieslandCampina will continue to own both brands.

www.frieslandcampina.com
www.inza.be

FIBRES

Tate & Lyle's research reveals that fibre is now seen by European consumers as valuable as more established claims such as "low in fat". 40 percent of the respondents rated fibre as an important benefit when purchasing products, while 72 percent said they would be willing to pay extra for products enriched with fibre (up from 50 percent in 2008 when we last asked this question in a survey on European consumers' dietary preferences). 26 percent of the respondents suggested they would be willing to spend 20 percent or more for products which include a "high in fibre" claim (again, up from 16 percent in 2008). Jerome Tauzin, Product Manager for fibre at Tate & Lyle commented: "We are also opening Europe's first dedicated polydextrose production line in January 2010, allowing us to manufacture a range of easy-to-use, low calorie, cost effective soluble fibres. It will also shorten the supply chain, make the product available in more user friendly forms and reduce the need for stock through the "Just in Time" service".

www.tateandlyle.com

FIRMENICH

For its 2009 fiscal year, ended June 30, 2009, **Firmenich** posted sales of CHF 2'641 million, a decline of 4.3 percent in local currencies. Consumer products were the most resistant to the global recession that marked the period, as consumers continued to eat and drink, wash and clean, while Fine Fragrance was affected by lower demand. The Group preserved its financial strength through controlled spending, while maintaining key investments to respond to future client and consumer needs. Thirty-two new patent applications for new fragrance and flavour ingredients, unique delivery systems and original processes were filed during the year, while their perfumers and flavourists

continued to create the great fragrances and tastes that are the hallmark of the Firmenich Group.

www.firmenich.com

NIZO FOOD RESEARCH

The **NIZO** foundation and the management of NIZO food research B.V. have come to an agreement involving the sale of 100 percent of the shares of NIZO food research B.V. to the current management. They underline that this step signifies the completion of a policy initiated more than 10 years ago, aimed at the transformation of NIZO into a healthy, independent research company. This policy has led to the current decision.

www.nizo.com



NEPTUNE KRILL OIL NKO®

Valensa International has announced that it has reached an agreement with **Neptune Technologies & Bioresources Inc.** for an exclusive, worldwide license to incorporate and market Neptune Krill

Oil NKO® in condition specific dietary supplement formulas targeting eye health and joint health. Valensa plans on using the unique biofunctional properties of the highly bioavailable Omega-3 phospholipids in NKO®, in conjunction with several of its proprietary ingredients such as Zanthin® Natural Astaxanthin, extending its current platform of patented eye health formulations. According to Rudi E. Moerck, President and CEO of Valensa, NKO® is an ideal ingredient for the development of new supplement formulations for the company's signature eye health portfolio as well as the joint health market.

www.valensa.com

FORTITECH EUROPE

Fortitech Europe part of the global network of manufacturing and distribution facilities of Fortitech, Inc., makes its entry into the Russian market during *Ingredients Russia 2009*. The company, has aligned itself with KUK, a well established distributor in Russia and eastern Europe, to develop fortification opportunities with food and beverage manufacturers in these marketplaces. Fortitech premixes are used in baby formulas, cereals, bars, dairy products, nutrition and sports drinks, juices, snacks, waters, candies and more. The company explains that the benefits of custom premixes include streamlining the production process because a premix is a single source of multiple nutrients. Martin Austin, managing director/general manager of Fortitech Europe ApS, explains: "The consumer demand for fortified foods and beverages in Russia, as well as the rest of eastern Europe is exploding [...] Tapping into KUK's vast experience within these marketplaces and combining it with our expertise and capabilities in the field of nutrient premixes will enable us to grow our businesses exponentially. We are looking forward to developing our presence in these dynamic and growing marketplaces, and delivering a superior level of customer service that is unparalleled within the industry".

www.fortitech.com

PRODUCTS

QUICK GUM™ HIGH-POWER EMULSIFIER

ALFRED L. WOLFF presents a new Quick Gum™ Gum Arabic specially developed for flavour emulsions and beverages. It is a high-power emulsifier and stabilizer in spray-dried powder form. Efficient through its aptitude to homogenize and stabilize flavour or beverage emulsions, to maintain liquid compositions in stable suspension without skimming effect and to encapsulate the micro-particles of spray-dried flavour powders. Through its perfect wettability and quick dissolution time, Quick Gum™ provides top emulsions in a minimum of time. While it encapsulates the aromatic spray-powders, it impedes their oxidation. By homogenizing the oil-in-water emulsions, it enhances their texture. Having a neutral taste and odour, Quick Gum™ is an ideal carrier that allows for a full flavour release of the various recipe components. Adequate to produce a certain turbidity in liquids, Quick Gum™ is equally able to create clear and transparent emulsions corresponding to the sensory characteristics of the product. Thermostable as well as acid-stable, Quick Gum™ is easy to handle and integrate to any production process. It provides the consumers with nutritional benefits due to its low caloric value and its naturally high fibre content. Soft drinks, fruit-flavoured, near-water a/o milk-based beverages, smoothies, soft-alcoholic drinks, light-coloured or dark aromatic emulsions as well as transparent or turbid emulsions benefit from the performing properties of this new **ALFRED L. WOLFF's** Quick Gum™.

www.alwoff.com



PADDLE BLENDER PB 100

RETSCH presents its new Paddle Blender PB 100. The company explains that this innovations offers the most effective blender for semi-solid and solid food samples. RETSCH reports that the homogenization of the sample is produced by a combination of mechanical effects. The patented SMASH effect is complemented by a peristaltic mixing of the sample which guarantees optimum sample preparation. The automatic overload protection for difficult samples, such as carrots or cheese rind, helps to avoid blockage; it is not necessary to reposition the bag. The company adds that the samples are prepared in disposable sterile bags. Thus, cross contamination is avoided and instrument sterilization between samples made obsolete. The PB 100 is exceptionally easy to operate. Three preset speeds and nine different blending times offer a wide range of possibilities. In case sample material leakage into the chamber, cleaning the PB 100 is a matter of seconds due to the fully accessible chamber, integrated waste drawer and round corners. Another crucial advantage: the innovative design of the PB 100 (soundproof conception) makes it the quietest lab blender compared to any standard blender in the market with approximately 10 dBA less noise development.

www.retsch.com

HANDHELD PIPETTING SYSTEMS

INTEGRA has announced its complete range



of handheld pipetting systems offering accurate liquid handling from 0.5µl to 100ml. The

company explains that, proven in over one hundred thousand installations worldwide the PIPETBOY pipettor range sets a high benchmark for ease-of-use, reliability, build quality, performance and operational safety. Each PIPETBOY pipettor can be used with plastic or glass pipettes with volumes of 1-100 ml. Precise and reliable pipetting is simply achieved by applying varying finger pressure to the operating buttons and by adjusting the pump speed. The PIPETBOY is powered by a high-performance NiMH battery that alerts you when it needs recharging. The PIPETBOY comes in several different colours that customers can assign to a particular application, user etc. thereby avoiding mix-ups. Perfectly complementing these products INTEGRA is now able to offer the complete range of Viaflo handheld electronic pipettors. www.integra-biosciences.com

SIPERNAT® and AEROSIL®

Evonik offers to its food industry customers cost optimization and increased efficiency through a wide spectrum of precipitated (SIPERNAT®) and fumed (AEROSIL®) silica products. The company refers that SIPERNAT® and AEROSIL® can also aid precise dosing of liquids after high performance carrier silicas have converted the liquids into powders. Evonik reports that all of the products are of course available in food grade quality. www.evonik.com

RONOZYME®NP

Novozymes and DSM Nutritional Products are launching an enhanced phytase feed enzyme, RONOZYME®NP, to the European market. The companies explain that this product could make it easier for animals to absorb nutrients in feed. They report that farmers avoid the addition of inorganic phosphate to the feed, which both reduces cost and the release of phosphate into the environment. Novozyme's Alliance Manager Peter Christensen says: "By adding phytase to the animal feed the animals can better absorb phosphate, which they need for growth. At the same time the release of phosphate from the manure into the environment is reduced". Through a targeted research effort, Novozymes and DSM have developed RONOZYME®NP with a focus on better product characteristics, such as the increased release of phosphorus from the feed and better thermal stability. This means reduced feed costs for the individual farmer and at the same time a positive development with regard to agriculture's effect on the environment. www.novozymes.com

SELENIUM: MANY HEALTH BENEFITS AND ANTIOXIDANT PROPERTIES

Selenium is highly recognized for its many health benefits and antioxidant properties, supported by solid scientific documentation. This was prompted by the EFSA Panel on Dietetic Products, Nutrition and Allergies to accept health

claims linking the dietary intake of selenium to: "protection of DNA, proteins and lipids from oxidative damage, normal function of the immune system, normal thyroid function and normal spermatogenesis". Lalmin™ Se, rich in selenium, offers opportunities for manufacturers who want to innovate in premium quality functional food. For example, they can now commercialise cereal bars or fruit juices bearing the claim: "contributes to the protection of cell constituents from oxidative damage" or "contributes to the normal function of the immune system". Moreover, a recent consumer test shows acceptance of a food product enriched with **Lal'Food-Lallemand Lalmin™ Se** yeast. An hedonic test has been conducted in partnership with the Laboratory of sensory analysis AgroTec, in Agen, France, with a panel of consumers on a fruit juice enriched with Lalmin™ Se: the results turn out very positive. www.lalfood.com

FRUTAFIT® INULIN AND FRUTALOSE® OLIGOFRUCTOSE

Sensus is a fast-growing company that produces the innovative food ingredients Frutafit® inulin and Frutalose® oligofructose. The company explains that Frutafit® inulin and Frutalose® oligofructose are prebiotic, soluble dietary fibres with both nutritional and functional properties. Solubility: Frutafit® powders are soluble fibres. This solubility varies from low to high, depending on the type of product. Frutalose® has extremely high solubility and is only available as syrup. Taste: the taste of Frutafit® and Frutalose® varies from neutral to slightly sweet without any off taste or aftertaste. It combines easily with other ingredients without modifying delicate flavours. Frutafit® and Frutalose® show a synergy in sweetness with HIS. They can also improve the taste profile of HIS (e.g. masking the bitter aftertaste). www.sensus.nl

VEGETABLE PROTEIN INDUSTRY

Sten Warburg, Deputy Division Manager for **GEA Niro's** food and dairy division said: "The vegetable protein industry is thriving at the moment and the world's demand is increasing. We can give our customers the equipment and know how to produce high yields of good quality SPI (Soya Process Isolate) and SPC (Soya Process Concentrate) powders with low production costs and minimum payback time". GEA Niro is now offering processing technology from individual items of equipment up to complete process lines to customers in the vegetable protein powder market. Vegetable proteins are increasingly replacing meat proteins in the human food market as a cheaper alternative, with a healthier nutritive value and better technical functionality. Demand for these proteins is on the increase as food manufacturers try to reduce costs while increasing sustainability. www.niro.com

CANDURIN® GOLD SPARKLE

At this year's FiE, **Merck** has presented Candurin® Gold Sparkle, which features a new, elegant gold effect and with which Merck is expanding its exquisite range of pearl effect colours for the food industry. The

company refers that due to its special particle size, Candurin® Gold Sparkle has a brilliant glitter that imparts a noble, glamorous look to chocolates, pastries, fruit gums, candies, desserts, ice cream, sauces and beverages. Merck, thanks to this innovations, offers confectionery producers and other food manufacturers a high potential for differentiating their products. From silver, gold and inference tones to red and bronze: Candurin® pearl effect colours are distinguished by their excellent stability and their ideal combinability with other colorants. The company explains that they are manufactured in compliance with GMP (Good Manufacturing Practice) and fulfil international safety standards for foods and pharmaceuticals. The mineral, non-synthetic Candurin® pearl effect colours are based on natural silicate and are thus in keeping with the trend topic of the FiE 2009: "Natural Ingredients". In addition, Merck is showcasing a new colorimeter (Colorimeter Spectroquant® Picco Cl2 / O3 / ClO2 / CyA / pH), which can be used as a portable on-site instrument for disinfectant control. Merck is also presenting new, easy-to-use rapid tests for checking chemical parameters of incoming raw materials and in the handling of drinking, process and waste water as well as the detection of salmonellae or genetically modified organisms (GMOs). As a leading supplier of laboratory chemicals and analytical methods for food safety, Merck is thus making an important contribution to the top topics of the food industry. www.merck-chemicals.com



SYRAL

During FiE 2009, **SYRAL** stand will allow visitors to discover its Application centre. Its 1,300 square metres of state-of-the-art pilot and analytical equipments enable better customer support when working on application development, optimisation, or even on presentations of new product concepts. The stand at FiE will feature a bakery workshop, producing biscuits and cakes with improved nutritional profiles. The company reports that the new centre will boost capabilities to develop optimal sweetening formulations and creative solutions for food products in line with consumers expectation. It is a key element in the development of healthier foods such as proteins enriched (MERIPRO™ range of wheat proteins), enriched in fibres or with prebiotic benefits (ACTILIGHT®). SYRAL will also present its wide range of polyols, including MERISORB™ (sorbitol powder), MERITOL™ (sorbitol liquid), and MALTILITE® (Maltitol syrups and crystalline) for sugar replacement in confectionery, sweet bakery and dairy products. www.syral.com

Rousselot® Functionality and Rousselot® Reformulation

Rousselot has announced the reorganization of its gelatine range within two main product lines: Rousselot® Functionality and Rousselot® Reformulation. The company explains that Rousselot® Functionality Gelatine is an all-in-





one ingredient that is used in a wide array of applications for its multidimensional features. Due to its whipping, emulsifying, stabilizing, thermo reversibility, gelling, texturizing, foaming and many other functionalities, gelatine use is unequalled in many recipes. The Rousselot® Functionality range comprises more than 50 kinds of gelatine. Moreover Rousselot thinks about reformulation of products to make them healthier. Its Reformulation range is based on the texturing and emulsifying properties of its gelatines as well as on the protein supplied by its hydrolysed gelatines. The Rousselot® Reformulation is part of RHC / Rousselot® Healthy Choice axis alongside the range of hydrolyzed collagens Peptan™.

www.rousselot.com

LECICO IPM

LECICO IPM Lecithin has a fully certified traceability "from farm to fork" available. The company explains that the lecithin is of conventional, non GM-origin. This is backed by analytical testing along the whole production and logistic chain. Thanks to the certified documentation available and POLYMERASE CHAIN REACTION (PCR) analysis, the labelling as GMO of the product and the manufactured foods and feeds is thereof not necessary. LECICO IPM Lecithin is produced from **not genetically modified** conventional harvests. The company assures that the quantities supplied by the producers originate exclusively from Brazilian cultivation and Brazilian certified crushers. Cultivation is monitored and controlled by the crushing plant. There are procedures in place to ensure all reasonable steps have been taken to avoid contamination of the soybeans during harvest, processing and transport to the plant, warehouse and customers. To match the EC-Regulations 1829/2003 und 1830/2003 LECICO IPM Lecithin has full documentation and traceability on the origin of seeds, storage, transportation and processing of raw materials, intermediates and finished lecithin products. Analytical examinations at different stage of production take place to confirm the documents and certificates generated along the production chain.

www.lecico.de

Marinol® Omega-3 Emulsion

Lipid Nutrition introduces Marinol® Omega-3 Emulsion worldwide. The company explains that Marinol® Omega-3 Emulsion contains high concentration of the two of the most important long-chain polyunsaturated fatty acids (LC-PUFAs): eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

Lipid Nutrition believes that the superior stability of the emulsion could prevent the formation of notorious smell and taste of fish and therefore it

increases the applicability of EPA and DHA in food products, such as milk. This highly concentrated fish oil emulsion with superior stability creates better opportunities for food companies to fortify food application with omega-3 fatty acids and create a great tasted healthy food product. Miriam van

Marinol

Wanroij, Application Manager for Lipid Nutrition refers: "Lipid Nutrition realized that the challenge for any food or dietary supplement manufacture has been to find a way to incorporate omega-3 fatty acids into their products without compromising taste and stability [...] With this new emulsion there is a solution to create a more stable and tasteful product without compromising of the fortified Omega-3 concentration".

www.Lipidnutrition.com

BUTYRIC ACID, FOOD/FEED GRADE PRODUCT

Eastman Chemical Company introduces the commercial availability of its new Butyric Acid, Food/Feed grade product. The company refers that manufactured and handled according to current Good Manufacturing Practices (cGMP), Butyric Acid, Food/Feed grade will be produced at



Eastman's global headquarters in Kingsport, Tenn., USA.

Eastman refers that in addition to following cGMP guidelines, the product will also be managed under a Hazard Analysis Critical Control Point (HACCP) plan to ensure food and animal feed safety requirements. For use as a flavouring agent in food and animal feeds, the U.S. Food and Drug Administration (FDA) lists butyric acid as "generally recognized as safe" (GRAS). Similarly, the governing bodies in the European Community recognize Eastman™ Butyric Acid, Food/Feed grade for use as a flavouring agent for food and feed.

www.eastman.com

STUDIES, AWARD & INNOVATIONS

DSM NUTRITIONAL PRODUCTS

DSM Nutritional Products has identified consumer concerns in the area of infant nutrition and translated these into five innovative marketing solutions: Growth and Development, Brain Development, Immunity, Healthy Bones and Eye Health. Pregnancy and breastfeeding are periods when nutrition is exceptionally important. The optimal "Growth and Development" of the infant depends on the mother's diet. An adequate intake of micronutrients not only has direct effects on the body composition and body functions of the foetus and newborn, but is also fundamental for a healthy life in general. While the influence of early nutrition on traditional health outcomes such as linear growth, mental development and educational performance in adulthood is well established, the latest research has investigated its effects on the development of chronic diseases. Mounting evidence indicates that nutrition in the earliest stages of human development – even before birth – may influence the occurrence of diabetes, cardiovascular disease, asthma, cancers, osteoporosis, and neuropsychiatric disorders. The *Developmental Origins of Health and Disease* hypothesis postulates that early nutrition can program metabolism, organ growth, and functional development. Programming is explained by structural changes of organs induced during early development or by modifications of

observable characteristics (phenotypes) that permanently alter patterns of gene expression. This in turn affects organ function at various stages of the life course. These changes are thought to predispose individuals to obesity and other nutrition-related chronic diseases in later life, either by increasing their susceptibility to disease directly or by interacting with other risk factors (Godfrey et al., 2007). Currently, several research projects are investigating the effects of early nutrition on later health outcomes. Study programs such as the *Early Nutrition Programming Project* have shown, for example, that the risk of developing asthma was significantly reduced in children whose mothers had been given fish oil supplements during the last trimester of their pregnancy (Sausenthaler et al., 2007). There is increasing evidence that an adequate intake of vitamins and other micronutrients during pregnancy and lactation is a long-term investment in the offspring's health. DSM's high-quality nutritional products provide optimal micronutrient supply during these important stages of life.

www.dsminfantnutrition.com

Cereboost™

Naturex unveils Cereboost™, a new ingredient for brain health backed by science. A study conducted by the Brain Science Institute (BSI) at Swinburne University in Melbourne (Australia) has demonstrated that Cereboost™ has a significant positive impact on mental function.

Cognitive health is set to become one of the hottest areas of the functional food, beverage and dietary supplement markets. Cereboost™ is an innovative trademarked ingredient. The study has demonstrated that the subjects supplemented with Cereboost™ experienced significant improvement in the cognitive areas of working memory and alertness. Cereboost™ is a patent pending extract of American Ginseng that is perfectly suited to be incorporated into foods, beverages and dietary supplements. The company explains that developed for its activity on cognitive performance, it has a specific profile of ginsenosides. These unique characteristics make Cereboost™ the ultimate ingredient for brain support, for people of all ages.

www.naturex.com



AstaREAL® & Presbyopia

Age-related accommodation loss results in difficulty with near vision work and reading/writing. It is also called Presbyopia and it can affect any individual after or near 40 years of age. The ability of the eye to accommodate is lost with ageing. This may be due to the functional deterioration of several internal parts of the eye such as i) ciliary muscle body, ii) pupillae muscles or iii) decreased elasticity of the crystalline lens surface (capsule). An open label prospective study, conducted by the Kajita Eye Clinic in Japan, involved 22 male subjects (mean age 53.9±5.1) taking 6 mg of AstaREAL® astaxanthin for 4 weeks. The pupillary constriction ratio (calculated

AstaREAL

accommodative response by TrilIRIS C9000) and subjective questionnaire response (5-point scale) were recorded before and after the experimental period. This latest investigative study suggests that astaxanthin supplementation may help slow down the progression of presbyopia or improve near vision of people above 40 years of age.

www.fujichemical.co.jp



AEROBIC AND ANAEROBIC FORMATS

Although regarded as an anaerobic bacterium (i.e. growing in the

absence of oxygen), there is some evidence that *Clostridium botulinum* could also grow in conditions where oxygen is present. Baked products on the UK market are found in both aerobic and anaerobic formats and there is concern that the organism may be able to grow and produce its neurotoxin botulin in some situations. In order to establish whether *Clostridium botulinum* can grow in products such as white and wholemeal bread, naan bread and muffins under aerobic and anaerobic conditions, **Campden BRI** is bringing together manufacturers, retailers and others to fund research into the issue.

www.campden.co.uk

SOY PLANTS TO ABSORB NITROGEN

for the first time in dry areas of Eastern Austria, the capacity of soy plants to absorb nitrogen from the air has been precisely determined. This project backed by the **Austrian Science Fund FWF** would compare methods for determining nitrogen fixation levels and their application under conditions of drought stress. These methods are of particular interest for organic farming, where soy is playing an increasingly important role. Recently were presented initial findings and discussed at an "open field day". The study reports that the soy plant does not depend on artificial fertiliser - quite the opposite in fact. It "fertilises" itself, as it were. By forming a symbiotic relationship with particular nitrogen-fixing soil bacteria, soy can use nitrogen from the air, where - unlike in the soil - it is abundant. In actual fact, this ability to absorb nitrogen from the air can also help improve soil quality - even without adding fertiliser. Thus making soya of particular interest to organic farmers. Soy cultivation in Austria would also help cut dependence on protein feed imports. Reason enough, therefore, to investigate the nitrogen fixation of soy further. However, the methods available for measuring this nitrogen fixation are subject to certain limitations.

www.fwf.ac.at

RED MEAT AND PROSTATE CANCER

A research led by Rashmi Sinha from the Division of Cancer Epidemiology and Genetics (National Cancer Institute) and published in the *American Journal of Epidemiology*, reports the link between red meat and risk of prostate cancer. Earlier this year in the *Archives of Internal Medicine* the same authors published similar findings from a study with half a million people, noting that that increased consumption of red and processed meat may have a modestly increased risk of death from all causes and

also from cancer or heart disease. For this study 175,343 American men aged between 50 and 71 were analyzed. Over the nine years of the study, 10,313 cases of prostate cancer were diagnosed, with 419 deaths from the disease. The authors report that the highest average intakes of red and processed meat were associated with 12 and 7 percent increases in the risk of prostate cancer. National Cancer Institute scientists, could report that: "Red and processed meat may be positively associated with prostate cancer via mechanisms involving heme iron, nitrite/nitrate, grilling/barbecuing, and benzo[a]pyrene".

American Journal of Epidemiology



NEW STUDY

Lonza has sponsored a new study that demonstrates a positive immune response by the Larch Arabinogalactan (LAG)-based ResistAid™. Presented at the 50th Annual Meeting of the American College of Nutrition in Orlando, Florida, the results of the randomized, double-blind, placebo-controlled, parallel-group study showed that ResistAid™ increased the antibody (Ab) response to the 23-valent pneumococcal (pneumonia) vaccine. Bryan Rodriguez, Technical Marketing & Scientific Affairs Manager at Lonza, refers: "This study broadens our understanding about the beneficial impact of ResistAid™ on the immune system. To date, research has shown a non-specific, cellular response in healthy populations. Based on the study results, we now see that the immune benefits are broadened to include the adaptive immune response, which is a response to specific antigens. The study further showed that ResistAid™ had an immunomodulatory effect, meaning that ResistAid™ enhanced the appropriate response to the antigen without indiscriminately enhancing other arms of the immune system that would not be expected to respond [...] Combined with its ability to increase beneficial immune cell populations while supporting natural killer cells, cytokines, macrophages and white blood cells, ResistAid™ supplies companies with a science-backed ingredient that can be incorporated into a variety of delivery forms for end-use products".

www.lonza.com

DSM NUTRITION AWARD 2009

The **DSM Nutrition Award 2009** for research on Human Nutrition has been granted jointly to Michael F. Holick of Boston University, USA, and Heike A. Bischoff-Ferrari of the University of Zurich, Switzerland. The award was in recognition of their seminal contributions to research on vitamin D and its role in human nutrition and health. The award - which carries a cash prize of EUR 50,000 that the two winners will share - was presented by Eggersdorfer and Mauricio Adade, President Human Nutrition & Health, DSM Nutritional Products, at the International Congress of Nutrition 2009 in Bangkok (Thailand) on 6 October.

www.dsm.com

2009 EXPORTER OF THE YEAR

Hilmar Ingredients is the whey protein and lactose division of Hilmar Cheese Company.

Hilmar Ingredients was recently named 2009 Exporter of the Year by the U.S. Dairy Export Council and co-sponsor *Dairy Foods* magazine.



The evaluation criteria for Exporter of the Year are both significant and extensive. Hilmar Ingredients demonstrated on-going export sales success; a leadership role in driving global dairy demand; providing high-quality U.S.-produced products that fulfil worldwide trends; and a commitment to customer service and long-term investment in international markets.

www.hilmaringredients.com

GOLD IN THE INNOVATION 2009 AWARD

PULEVA BIOTECH EXXENTIA has taken Gold in the Innovation 2009 Award contest held during the CPhI worldwide Fair (Madrid 13-15th October 2009). The award was granted to PULEVA BIOTECH EXXENTIA for the investigation project on the Hereditum™ application in mastitis. Hereditum™ is a group of probiotic bacteria derived from human breast milk that is capable of being used in infant nutrition products and play a very important role in lactating babies immune defenses as well as other health areas. These bacteria were discovered and patented by PULEVA BIOTECH EXXENTIA in 2005.

www.pulevabiotech.com

EUROPEAN OUTSOURCING AWARDS: TENSVIDA™

DSM's lactotripeptide blood pressure management ingredient tensVida™, has won this year's European Outsourcing Awards. DSM worked closely with the University of Maastricht and TNO. DSM refers that this latest award for tensVida recognises the close collaboration between DSM and its expert partners. Judges in the category of Outstanding Application in Nutraceuticals commended DSM's strategy for developing and launching tensVida with a highly innovative approach. Garnet Pigden, Vice President-Functional Foods, DSM Nutritional Products, comments: "The award further highlights DSM's commitment to research, open innovation and science-based product development. We are encouraged by the response to tensVida to date and are very pleased to receive this recognition. Our integrated approach was crucial to achieving success, particularly as extensive research, product development and new manufacturing processes were required".

www.dsm.com

WWW.GLOBALHARMONIZATION.NET

The **Global Harmonization Initiative (GHI)**, is a network of scientific organizations and individual scientists working together to promote harmonization of global food safety regulations and legislation. Recently it launched its updated website at a new address: www.globalharmonization.net. They report that members and visitors will find the site easier to navigate, with more accessible membership enrollment forms and meeting details. GHI President Huub Lelieveld, refers: "As part of GHI's mission to develop a



global and impartial consensus-building framework, it is important to provide a website where members can find timely updates on meetings and activities [...] We encourage scientists from industry, government and academia working in the field of food safety to join us in our effort to provide decision-makers the tools to harmonize food safety laws and regulations by using the enrolment form online".

www.globalharmonization.net

ETENIA™

Modified potato starch is currently used in various countries in dairy products like yoghurt. Yoghurt, chocolate mousse, croissants, candy and cream cheese are just a few of the many applications for ETENIA™, the world's first starch-based hydrocolloid. The Food Valley Award is presented every year to the food industry's most distinctive initiative in terms of innovation, cooperation and CSR. AVEBE was voted the winner of the 2009 Dutch Food Valley Award for ETENIA™. Using ETENIA™ the company explains that manufacturers can reduce a product's fat content without compromising its sensory characteristics. AVEBE received the award during the Food Valley Conference on 8 October 2009 in the Netherlands. Piet Buwalda, AVEBE's Manager Innovation Centre Food, called the award an important sign that others recognize the value of this innovation. "Winning the Food Valley Award means your product is something special" Buwalda said after the award presentation.

www.foodvalley.nl

2009 THOMAS ALVA EDISON PATENT AWARD

Sabinsa has received the coveted 2009 Thomas Alva Edison Patent Award in the Nutraceuticals Category for the patent on its proprietary product, GarCitrin®. The patent, US 7063861, is entitled "Bioavailable Composition of Natural and Synthetic HCA". The Thomas Alva Edison Patent Awards were presented by the Research and Development Council of New Jersey at the Council's annual fall dinner, held at the Liberty Science Centre on November 5th. For nearly 20 years a small group of researchers, engineers, inventors and industry professionals have worked to create a higher-level of public awareness of the many outstanding New Jersey inventors that have impacted society. Muhammed Majeed, Sabinsa founder explained: "We are honoured to receive the 2009 Thomas Alva Edison Patent Award [...] We have long held the belief that science and innovation can benefit human nutrition, and it is gratifying to have that commitment validated by this distinguished organization". The company reports that GarCitrin® is a patented natural

extract combining the weight management benefits of hydroxycitric acid (HCA) with the bioavailability-enhancing effects of garcinol, a polyisoprenylated benzophenone isolated from *Garcinia cambogia* and *Garcinia indica*. Garcinol enhances the biological action of HCA and contributes antioxidant activity to the composition. Sabinsa has done a human clinical study to show GarCitrin® is statistically significant in reducing total body weight and reducing body fat.

www.sabinsa.com

FRIEND OF THE SEA (FOS) CERTIFICATION

Friend of the Sea is a non-profit, non-governmental organization dedicated to the conservation of marine habitat. It is currently the world's largest sustainable seafood certification organization, having assessed more than 10 million MT of wild-catch and 500,000 MT of farmed products. Friend of the Sea's criteria compliance is verified by independent accredited certification bodies. Essential criteria for fisheries are: - the product should not originate from overexploited (nor depleted, data deficient or recovering) stocks; - the fishing method should not impact the seabed; - the fishing method should be selective (below the world average for discards). EPAX AS was awarded Friend of the Sea (FOS) certification for its sustainable marine sourcing and production methods. The company assures that soon it could offer its Omega-3 oils as having a documented and traceable origin from sustainable fisheries. Bjorn Refsum, CEO of EPAX AS, refers: "Environmental sustainability and concern for the world's sea life is a top priority at EPAX; the Friend of the Sea certification speaks to our commitment to being a documented, sustainable operation [...] We are fortunate that our vertical integration through our corporation allows us, as well as our customers, the unique position of providing complete traceability from our own fish harvesting in Peru to our finished Omega-3 products in Norway".

www.epax.com

24-HOUR URINE OXALATE LEVELS

Urologic Nursing has recently published a study by **KGK Synergize Inc.**. The study conducted as a randomized, double-blind, crossover trial of vitamin C with metabolites (Ester-C®) compared to ascorbic acid in 50 healthy adults, evidenced a significant change in 24-hour urine oxalate levels among the two treatments. All subjects on a controlled diet ingested 1000 mg/day vitamin C with metabolites for 5 days and 2000 mg/day for an additional 5 days. Their urine oxalate level was measured. Researchers report that after a 7 day

washout, participants repeated the same protocol (crossed over) with the alternative form of vitamin C. The study underlined that there was a significant change in the urine oxalate levels between the two treatments. Approximately 25 percent more subjects experienced a reduction in 24-hour oxalate (59 to 34 percent) and oxalate concentration (72 to 46 percent) over the 10 day period when taking vitamin C with metabolites compared to ascorbic acid.

www.kgksynergize.com

IRRITABLE BOWEL SYNDROME

Irritable Bowel Syndrome, or IBS, affects nearly one in five people. Although the severe impact of IBS on patients' quality of life and the considerable healthcare costs associated with the disorder are clearly recognized, there is no cure for IBS to date. It seems that certain probiotics could help improving overall gut function and reducing IBS symptoms in patients. The *Lactobacillus plantarum* 299v strain, which is backed by over twenty scientific publications, is one of these probiotics. In fact, several clinical trials have proven its efficacy in alleviating multiple symptoms in IBS patients, such as abdominal pain and bloating. **Institut Rosell-Lallemand** presented these studies during *Gastro 2009* (November 21-25, 2009, London).

www.institut-rosell-lallemand.com

ICE-CREAM WORTHY GLUTEN-FREE WAFFLE CONES

The winners at the ninth annual **AACC** International Student Product Development competition (Baltimore, MD, USA) are: Ice-cream worthy gluten-free waffle cones, new pea-based pancake-like breakfast item and Dietary fibre fortified instant noodles.

These innovative products were chosen from thirteen teams that applied to develop a new, original food product consisting of one cereal product as the main ingredient. Each team prepared a report discussing product description, target market, and processing/packaging procedures. Five were selected to present their products to the judges at the AACC Intl. annual meeting. Each finalist team created a poster describing formulation, shelf life, marketing aspects, processing, packaging, and other relevant information regarding their products. Teams delivered a 10-minute oral presentation for the judges and provided servings of the product at a tasting session. Team "Fun Flavoured Waffle Cones" from Kansas State University took the first place prize of \$2,550. Team members Melissa Daniel and Angela Dodd developed waffle cones made with brown rice flour as an alternative to the conventionally-used wheat flours. The gluten-free waffle cones would be available in an assortment of flavours, including chocolate, cinnamon, strawberry, and vanilla.

www.aaccnet.org

ERRATA CORRIGE

The article "Managing oxidative stress with a unique vegetal ingredient, chitin-glucon" published in *AgroFood industry hi-tech - July/August 2009 - vol 20 n 4* must be updated as follows:

- **Co-authors:** Gaëlle Hick and Nicolas Paquot (Hospital Center of University of Liege, Diabetology, Nutrition and Metabolic Diseases Department Belgium);
- **Acknowledgement:** The authors are indebted to the Wallonia Region for financial support of the human study in the frame of the Walnut20 project (convention number 5459).

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NEWS