For over 30 years RSSL has been helping food and supplement companies to develop and supply products that are safe, innovative and of the highest quality.

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Over the last 30 years nutraceuticals have gone from a relatively unknown hypothesis, wrapped in legislative restrictions and controversy, to becoming a regular part of the weekly shopping basket of the ever increasingly health conscious consumer.

We have seen energy boosters, immune stimulants, and claims of protection against cardiovascular disease, to natural sweeteners and weight management solutions for ‘globesity’. Research continues in the endless pursuit of improved health and increased longevity of life as age expectancy of today increases beyond the expectations of yesteryear.

A plant-based diet can be enlightening, however heaven is not for vegetarians only.

More recently there has been exponential growth in vegan/vegetarians diets. Most people living a plant-based diet experience, will automatically have lower blood pressure due to a higher intake of potassium-rich foods. Also, plants contain NO cholesterol, even saturated sources like coconut and cacao. The number one way to fight high blood sugar is to eat more fibre. It slows down absorption of sugars in the bloodstream, controlling your hunger level during the day to a manageable level. It balances cortisol levels that cause stress and reduces cancer risk. You’re going to lose weight, experience less constipation, and sleep better on a plant-based diet, along with less digestive tract inflammation and a lower risk of diabetes.

With all these benefits of a plant-based diet, there can still be nutritional imbalance: for example, a lack of protein that forces the body to adapt and compensate for this nutritional imbalance. Carbs, sweets, caffeine, chocolate, pop, candy, pastries, or chips, constant cravings for these non-nutritional foods point to unstable blood sugar. Cravings for meat. Muscle and/or joint pain. Inability to sleep deeply through the night. Without protein, the body tends to crave carbs and sugar in excess. This creates a dependency on sugar for energy. However, sugar and carbs burn quickly, creating highs and lows in energy levels.

Ayurveda is a vegetarian system of medicine. Cows are sacred and it is just not ‘cool’ to eat them. However, in the case of protein deficiency, Ayurvedic doctors will prescribe the medicinal eating of red meat. As a medicine, not a way of life. Even the Dalai Lama and many of the monks in Kashmir eat meat.

Research continues and new solutions to new problems emerge. Longevity of life brings a host of associated health challenges that can have a crippling impact on individual sufferers along with the people around them. Cognitive and mental health problems, like all disease, start in the gut.

There is much data and commentary on the growth of the nutraceuticals industry, with larger businesses moving into this area for bottom-line gain. With so many changing factors, integrity must be practiced at all levels, and we now see overriding factors such as sustainability, climate change, and mobility, all of which will have major impact in the coming years.
WHERE THE FOOD AND BEVERAGE WORLD TASTES SUCCESS:
FI EUROPE & NI RETURNS TO PARIS

3-5 December 2019: Now in its 33rd year, Europe’s leading trade show for ingredients guarantees inspirational ideas and exciting business opportunities.

This year, food ingredients Europe & Natural ingredients will once again be the food industry’s epicentre over the course of three days. The Parc des Expositions Paris Nord Villepinte will become the number 1 platform where leading ingredient manufacturers establish numerous high-quality business connections.

Trade visitors can expect a broad spectrum of products, concepts and innovations from established companies and promising newcomers. Since its launch in 1986, Fi Europe & Ni has become the leading food and beverage event for the industry, attracting more than half a million visitors in total. As of 2020, Fi Europe and Hi Europe will join forces to create the most comprehensive food ingredients trade show covering specialty food ingredients from sensory to functional.

More than an exhibition: Insights from international experts
Since its launch, Fi Europe & Ni has not only experienced enormous growth in visitor and exhibitor numbers, but also a significant expansion of its concept – from a classic trade show to a tailor-made education pool for global professionals. This year, the show will feature free-to-attend presentations on industry trends and key market insights, a programme on food processing quality and safety in collaboration with IFUFAST, as well as a special Plant-based Experience with ProVeg International featuring cooking shows, tastings, panel discussions and guided tours. The paid-to-attend conference programme will offer leading-edge expert insights into current and future opportunities for F&B professionals. Keynote presentations, panel discussions and master classes at the two-day Fi Conference (3/4 December) will focus on tackling current challenges and identifying immediate opportunities for professionals in the F&B industry.

At the pre-event Future of Nutrition Summit (2 December) independent futurist thinkerts, startups and pioneers from across and beyond the industry will share their insights. The Women’s Networking Breakfast (4 December) and the Food Evolution Breakfast (5 December) are also ideal opportunities to participate in key discussions and network with peers. Once again, the Fi Innovation Awards will celebrate companies and organisations breaking new ground in the food and beverage industry, while the Start-up Innovation Challenge will provide a showcase for the most exciting innovations coming from small startups, which remain largely unknown to the wider industry.

Fi Europe & Ni Brand Director Julien Bonvallet adds: “Besides Avebe, many other companies have been on board from the beginning. Some of them started as young and small companies at Fi Europe & Ni – and then grew simultaneously with the show. For me, these continued partnerships prove that we set high standards with our exhibition and are always at the cutting edge. This year we are back in Paris – and the future co-located set-up of Fi and Hi Europe will alternate between France and Germany covering the two most important markets for the European food and beverage industry.”

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Nutraceuticals Now is a technical review providing the latest information on functional products and ingredients which are defined as having a disease preventing and/or health promoting benefit in addition to their nutritional value. It is targeted at manufacturers of food and drink, who are producing finished products aimed at the ever increasing health conscious consumer.

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TAKING FOOD FURTHER WITH SUSTAINABLE, WHEAT-BASED RAW MATERIALS

Flavoured with nature

With a range of sustainable, wheat-based raw materials for food and beverages, we can take your innovation up a notch.

1. High-quality, sustainable ingredients
2. Flavours and aromas
3. Speciality ingredients
4. Customised solutions

Learn more about our product portfolio on our website.

LORYMA

NEW LARGE-SCALE ANTARCTIC KRILL SURVEY CONFIRMS HEALTHY KRILL BIOMASS

New international research surveying the krill biomass around the Antarctic Peninsula finds more krill than was found in the last large-scale krill survey conducted in year 2000.

The findings and analysis at the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) annual meeting confirms 62.6 million tonnes of krill in Area 48 off the Antarctic Peninsula. This survey carried out by the Institute of Marine Research is the first large-scale scientific investigation of the krill population in the Southern Ocean fishery in 19 years. In 2000, the scientists measured 60.3 million tonnes of krill.

Pål Skogrand, Director Antarctic Affairs, Aker BioMarine comments: “These new estimates confirm that the Antarctic krill biomass is in good shape and that the krill fishery is built on a very solid foundation. These results are also a credit to CCAMLR having managed the industry. In the future we will see the krill fishery regulated by modern fisheries management principles where knowledge of intra- and inter-annual variations in krill collected through acoustic technology, and the needs of the local ecosystem, will decide the harvesting rate. The krill fleet will have to assume a big responsibility for monitoring the biomass under such a management scenario and we have demonstrated through the 2019 survey that this is a responsibility we are willing to take,” Skogrand adds.

Krill are an essential component of a healthy diet. However, increased global demand, along with ecological and ethical concerns, means there is growing consumer desire for vegan sources. Loryma® Loryma present wheat proteins, wheat starches and functional blends for multiple, future-proof applications.

Zwingenberg (Germany), August 2019

Loryma, specialist in advanced ingredients produced from wheat, will focus on solutions to meet the world’s growing need for high quality, protein-rich food at this year’s FiE. With Loryma® Tex, Loryma® Bake, Loryma® Starch and further functional specialities, the company offers a range of options for products such as vegan meat alternatives and enhanced bakery goods, as well as processed foods. Indulgent samples including vegan bacon, low-calorie muffins and high-protein bars will demonstrate both the ease of processing and added value of this new generation of wheat-based raw materials.

Proteins are an essential component of a healthy diet. However, increased global demand, along with ecological and ethical concerns, means there is growing consumer desire for vegan sources. Loryma® Loryma present wheat proteins, wheat starches and functional blends for multiple, future-proof applications.

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Fi Europe & Ni 2019: “High-MAC” wheat bran offers optimum bioavailability for the microbiome and multiple application opportunities

Hamburg, 17 September 2019, booth 6E051 pro Agro Innovation has developed High-MAC wheat bran (MAC stands for ‘microbiota accessible carbohydrates’), a novel wheat ingredient that is ultra-finely ground and stabilised. As such, it can be metabolised optimally by intestinal bacteria. This is what makes the novel product not only well equipped for future growth in the area of health and wellness, but also well to metabolise standard fibres found in whole grain flour and other bran products. Using a special “Multi Micro Process” micronisation and granulation system, the ingredient can impress with a short bite texture and mouthfeel. On request, this ultra-finely ground bran is also available in various qualities and particle sizes and as whole wheat bran, which includes the wheat germ.

Managing Director Michael Gusko explains: “We are very pleased that, in addition to our wide spectrum of wholemeal specialties, we are now also able to offer a bran range that delivers new technological, health and taste advantages. Most consumers associate high fibre products with health benefits, but not always with indulgence. “Through more than three decades of intensive research, including various EU projects, we have been able to develop comprehensive expertise in the field of dietary fibre. And this year, we have once again invested almost 10 million euros in expanding our plant so that we are well equipped for future growth in the area of intestinal health.”

GLATT FLUIDIZED BED AND SPOUTED BED TECHNOLOGIES FOR SOPHISTICATED PRODUCT DESIGN

Fi Europe 2019, booth 31L100: Add-ed-value ingredients require gentle processes and sustainable packaging. At Fi Europe, plant engineering and process development specialist Glatt will present innovative solutions to meet these needs.

At Fi Europe 2019 in Paris, plant engineering and process development specialist Glatt Ingenieurtechnik will present effective methods for enhanced product design with natural ingredients for sports nutrition, dietary supplements and beverage applications.

In many industries, factors such as nutritional requirements, climate change, the debate on plastic waste and the increasing relevance of online media have prompted a shift away from traditional thinking. More and more manufacturers are responding to the need to replace certain ingredients and develop new formulations based on natural ingredients for increasingly health-oriented consumers.

RSSL WINS ENLIGHTENED EMPLOYER AWARD

Reading Scientific Services Ltd (RSSL) secures Enlightened Employer Award in recognition of its exceptional commitment to gender equality in the workplace. RSSL was named most Enlightened Employer at this year’s Women in Business Awards; a Thames Valley initiative set up to empower businesswomen and showcase organisations that “create a better balance for better business.”

With female employees making up 65% of its 300 staff, a female majority in its leadership team and inspirational female role models at every level, RSSL successfully demonstrated itself to be “a truly worthy winner” according to the judges.

The scientific consultancy was praised for its “significant investment in embedding a culture of diversity and inclusion within the organisation” and the number of initiatives in place to attract, retain and develop female talent. RSSL impressed with its emphasis on mentoring and diversity training, as well as a broader management development programme designed to welcome the next generation of female scientists into the world of science.

Commenting on the award win, Jacinta George, managing director at RSSL, said: “RSSL is a place where women are actively encouraged to excel. Our aim has always been to create an environment which supports women, not only in terms of their career development but also on a practical level by building an infrastructure that enables women to successfully balance family and working life. “We are proud that our commitment to providing opportunities for women to thrive has been recognised — all the more so because it adds further credibility to RSSL’s mission to save and enhance lives through our science.”

The Enlightened Employer award was announced at the gala Women in Business Awards evening in the stunning surroundings of The Oakley Court Hotel, Windsor, in front of a sell-out audience of professionals from the Berkshire business community.

NEW GENERATION OF DIETARY FIBRES: BOOSTERS FOR INTESTINAL HEALTH

Fi Europe & Ni 2019: “High-MAC” wheat bran particles is reduced to less than 150 µm – or even smaller – and the bacterial count is significantly reduced. Compared to conventional bran, the new products thus increased by a factor of 1,000 to 100,000. This helps the intestinal bacteria to access up to 100 different fibre components of wheat fibres so far known to be inherent to the bran. Therefore, the micronised bran differs significantly from the chemically isolated and individually administered fibre fractions found in food supplements and common food additives.

High-MAC wheat bran supports the biodiversity of bacteria in the intestine and therefore promotes good intestinal health. At the same time, the ingredient contains valuable natural nutrients including iron, zinc, magnesium, vitamins and polyphenols.

Technologically, High-MAC wheat bran scores with its versatile application potential for a variety of baked goods, pasta, cheeses and confectionery. In particular in biscuits High-MAC wheat bran can impress with a short bite (“crunch”), depending on the recipe.

Natural sugar reduction

The slight natural sweetness of the ingredient also allows the sugar content in recipes from cookie dough to even chocolate creams and other fillings to be reduced, while optimising texture and mouthfeel. On request, this ultra-finely ground bran is also available in various qualities and particle sizes and as whole wheat bran, which includes the wheat germ.

IRVINE, CA, USA, November 14, 2019 – Algae Health Sciences, a division of Biogreen, announced the publication of two double-blind, placebo-controlled human clinical trials using AstaZine® on brain health. The subjects in this study were healthy adults who were experiencing mild forgetfulness. After twelve weeks taking AstaZine®, the treatment group showed a statistically significant improvement versus placebo on two tests for cognitive function and memory. Both verbal and composite memory significantly improved as tested by Cognitrax (a computerized testing system used to monitor and measure brain performance). In addition, subjective assessment of symptoms such as remembering people’s names and the names of things were judged by the AstaZine® group as having significantly improved (Sekikawa, 2019).

“We’re extremely pleased to have two additional successful clinical trials for AstaZine™ under our belt,” remarked Yosune Li, PhD, Chief Scientific Officer of Biogreen. “Our goal is to maintain a leadership role in the botanical sector through innovation and continuing scientific discoveries.”

“Two recent human clinical trials establish algae health science’s AstaZine® as the astaxanthin category leader for brain health.

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“These two studies are particularly significant because they establish AstaZine® as the leading Astaxanthin product for brain health, a quickly growing category in the supplement industry.”

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**INS FARMS OBTAINS EXCLUSIVE DISTRIBUTION OF ASIROS BERRYSHIELD BERRY INGREDIENTS IN NORTH AMERICA**

**PURDY, MO -- Devon Bennett, Co-Founder of INS Farms, has announced that the supplier has obtained exclusive distribution rights of all Asiros BerryShield ingredients for North America and Australia.**

Asiros (Copenhagen, Denmark) is a manufacturer that specialises in berry extract ingredients, including tart cherry, bilberry, blueberry, strawberry, elderberry, redberry, and black currant. Asiros' proprietary delivery system, Berry Shield, protects the biomarker polyphenols in each berry species from degradation, delivering more of the active content.

“Organoleptically, Asiros’ berry ingredients are viable for foods and beverages as the powders retain the vibrant colors, tastes and aromas,” Bennett noted. “They are also water-soluble, free of carriers and do not need to be spray dried or have maltodextrin or M60H2 added. ‘All Asiros’ berry extracts are standardized for both anthocyanins and polyphenols using advanced analytical equipment and test methods that provide consistent accurate results,’” he added. This partnership strengthens INS Farms’ position as a leading supplier of North American grown elderberry for North American brands and consumers by allowing INS Farms to ensure supply management of elderberry all year round, according to Bennett. “We now have a partner in Europe that can supply us with quality elderberry, which strengthens our abilities to grow the business and generate greater sales,” he said.

Bennett added that Asiros and INS Farms “are very much aligned as berry ingredient suppliers that are vertically integrated, control-toting the quality straight from the fields to the final delivery form. We are also both aligned with sustainability and environmentally friendly priorities, as well as transparency and traceability.”

Agnes Friese Skov, COO of Asiros, commented, “We welcome this partnership distribution with INS Farms to help us generate greater sales in North America. We look forward to working together in hopes of becoming the leading berry extract ingredient supplier to the North American market. For more information, visit www.asiros.com and www.qberry.com.”

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**CLASADO DRIVES GUT HEALTH AWARENESS WITH GLOBAL PREBIOTIC ASSOCIATION**

Clasado BioSciences (‘Clasado’), a global leader in the development of clinically proven prebiotic ingredient and product solutions for the human gut microbiome, has joined the Global Prebiotic Association (GPA), the worldwide resource for prebiotic education, insights and awareness building.

Designed to put the benefits of prebiotics, probiotics, and synbiotics in the context of how distinct areas of the body interact, the GPA promotes the production, quality and science of today’s advanced prebiotic market, generating new awareness and education campaigns. To achieve this, the trade association liaises with a number of stakeholder groups, including the medical community, academic institutions, media, government and regulatory groups, as well as consumers.

GPA Logoin its role, Clasado will assist the 18-month old association in spreading awareness of the benefits of prebiotics, driven by a surging public interest in the potential of gut-based health applications. In answer to the rising demand, Clasado has developed Bimuno®, a daily prebiotic fibre supplement containing Galactooligosaccharides (GOS), an active ingredient that stimulates the growth of good bacteria in the gut microbiome.

Per Røhné, Clasado CEO commented: “We are delighted to be joining the GPA. The potential of prebiotics, such as our unique daily prebiotic fibre supplement Bimuno®, is truly rising to the forefront of holistic wellness, buoyed by new medical understanding of how distinct areas of the body interact. “Encouraging the proliferation of microbiota within the digestive tract demonstrates real long-term benefits to gut health and overall wellness. Collaborating with our industry peers within the GPA is a great way to amplify this message. We look forward to working alongside brands, retailers and associates to drive the education initiatives that build long-term demand for the prebiotic category.”

Len Monheit, Executive Director at the GPA, added: “We are thrilled to welcome Clasado to the Global Prebiotic Association and add representation of GOS to our member roster.”

As gut health becomes a more central focus in the health and wellness landscape, Clasado bring a great deal of experience to the committee and we look forward to their contributions. To find out more about Clasado BioSciences, please visit www.clasado.com

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**COMET BIO ACHIEVES SELF-AFFIRMED GRAS STATUS FOR ITS PREBIOTIC ARABINOXYLAN PLANT FIBER EXTRACT, ARRABINA™**

SCHAUMBURG, ILLINOIS - Comet Bio, a manufacturer of award-winning healthy and sustainable ingredients, announced today it achieved self-affirmed GRAS (Generally Recognized as Safe) status for its Prebiotic dietary fiber Arabinoxylan Plant Fiber Extract, trademarked as Arrabina™.

Comet Bio, with assistance from decentra, a leading contract research organization (CRO) and consulting firm for food and supplement safety, compliance and quality, engaged experts to proactively gather and provide the scientific evidence necessary to affirm this important FDA designation. The independent panel declared Comet Bio’s ArrabinaTM dietary fiber as safe for foods, beverages, and dietary supplement applications.

“Obtaining GRAS status is a significant milestone for the commercialization of our ingredient and is an indication of our strong commitment to the efficacy and safety of our ingredients,” said Rich Troyer, CEO of Comet Bio. “This status allows us to better serve our customers in the food, beverage, and supplement categories with confidence.”

For an ingredient to be considered GRAS, scientific data and information about the intended use of the substance must be widely known, and there must be a consensus among qualified experts that the data and information established is safe under the conditions of its intended use. Arabinoxylan Plant Fiber Extract is a naturally occurring dietary fiber found in the cell walls of many plants. Comet Bio produces its Arabinoxylan Plant Fiber Extract from upcycled materials such as stalks, leaves, and hulls, making it highly sustainable. Arrabina™ has been shown to support the growth of beneficial bacteria within the gut and help maintain healthy blood glucose levels.

“We are pleased to have had the opportunity to collaborate with Comet Bio to help them achieve this important step for Arabinxyylan,” said Dr. Karol Wojewnik, Vice President of Business Development at decentra. “Comet Bio has a bold vision for the future of ingredients, and decentra is proud to have contributed to their success.”

To learn more about Comet Bio and its upcycled healthy ingredients, visit www.comet-bio.com or follow them on Twitter at @cometbio.

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**FI EUROPE 2019 STERNVITAMIN: MICRONUTRIENT PREMIXES FOR ‘BETTER FOR YOU’- CONCEPTS**

Ahrensburg, October 2019 — Health and wellness are more than ever among the strongest drivers in the international food and beverage market, and the demand for health-enhancing products is correspondingly high. Solutions tailored to specific lifestyle preferences, especially promising sales potential. At FI Europe in Paris, SternVita-min is showing how manufacturers of nutritional supplements, beverages and foods can generate additional growth with special concepts. As exemplified by its new Stern-Gut premix for gut health, this company specialises in custom vitamin and mineral premixes that help manufacturers develop successful health and lifestyle concepts.

Vitamin D has a protective effect on the immune system in the gut. Studies have shown that an adequate supply of vita-min D reduces the risk of respiratory tract infections. The yeast-derived fibre 1,3/1,6 beta glucan has been proven to improve gut immune defences, and reduces susceptibility to colds in stressful situations. The xyloligosaccharides in the premix are fibres with prebiotic properties that encourage the growth of beneficial bacteria, again sup-porting the immune system. Vitamins E and C are familiar as antioxidants. Zinc helps maintain the balance of the immune system and reduces the risk of infection. The trace element selenium also plays an important role in immune defenses, and is needed for antioxidant enzyme systems.

At FI Europe SternVitamin is presenting this new micronutrient premix as a nutritional supplement. SternMix is also ideal for enriching foods and beverages. It is just one example of many different concepts that address different life phases of consumers. In addition to nutritional supplements, the company’s custom micronutrient premixes can be used for fruit juices, dairy products, baked goods and confectionery.

SternVitamin has also developed special premixes for enriching vegan foods. FI Europe visitors can learn more about these concepts at stand 6D90.
VITAMIN K2 AS MK-7 SHOWN TO IMPROVE ENDOTHELIAL FUNCTION

NEW MENAQ7 MOUSE STUDY PUBLISHES, FURTHERING ARGUMENT OF K2 AS MK-7 AS A CARDIO-PROTECTIVE NUTRIENT BY HIGHLIGHTING NEW PHARMACOLOGICAL ACTIVITY.

OSLO, NORWAY AND EDISON, NJ (12 NOVEMBER 2019) — Adding to the already-strong body of clinical evidence confirming Vitamin K2 as MK-7 inhibits arterial calcification and acts as an antioxidant, a study recently published in Vascular Pharmacology shows K2 as MK-7 boosts nitric oxide (NO), improving NO-dependent endothelial function. The study used MenaQ7® Vitamin K2 as MK-7, supplied by NattoPharma.

Endothelial dysfunction has been associated with many health issues, including being a well-established response to cardiovascular risk factors and precedes the development of atherosclerosis, a disease of the arteries characterized by the development deposition of plaques of and by vascular inflammation fatty material on the inner walls. Given that the fact that endothelial function determines cardiovascular health, researchers hypothesized that the positive effects of vitamin K2 intake on cardiovascular mortality could be linked to the vitamin K-dependent regulation of endothelial function. According to researchers, “The aim was to examine the effects of vitamin K2 - MK-7 on endothelial dysfunction, in ApoE/LDLR-/- mice at the early and late stages of disease development, in the absence and in the presence of atherosclerotic plaques, respectively.”

“We are incredibly encouraged by the results of this study highlighting new pharmacological activity of Vitamin K2 as MK-7,” explains Hogne Vik, NattoPharma Chief Medical Officer.

In ApoE/LDLR-/- mice at the stage prior to atherosclerosis development, four-week treatment with K2-MK-7, given at a low dose (0.05 mg/kg), “improved acetylcholine- and flow-induced, endothelium-dependent vasodilation in aorta or in femoral artery, as assessed in vivo by MRI. This effect, was associated with an increased NO production, as evidenced by EPR measurements in ex vivo aorta.”

The study concluded that low dose of Vitamin K2 - MK-7 compatible with effective doses for K2 - MK-7 recommended for humans, to provide benefits for cardiovascular health, plays an important role in the regulation of endothelial function.

“The study demonstrated that vitamin K2 - MK-7 improved NO-dependent endothelial function in mice, and the results showed that K2 - MK-7 provided a vascular-protective effect independently whether endothelial dysfunction was treated with vitamin K2 - MK-7 prior to or concurrently with the occurrence of atherosclerotic plaques,” explains Vik. “This contributes nicely to our already substantial body of research showing MenaQ7 is a cardio-protective nutrient, and reaffirms why the medical community is interested in ongoing study of this important nutrient for the betterment of global health.”
Healthy aging: joint pain alters the quality of life

Joint pain is a prevalent, debilitating and economically costly condition worldwide. It especially affects an aging population and is complicated by obesity and vulnerable practices. Chronically affected patients experience a loss of everyday quality of life. In the UK (2017), 54% of adults over the age of 45 suffer from multisite peripheral joint pain. In the US, the United States National Health Interview Survey estimated 52.5 million adults are diagnosed with arthritis and 22.7 million adults suffer from arthritis and arhthritic-attributable activity limitations. It has been estimated that by the year 2030, 67 million people will be diagnosed with arthritis.

Curcuma longa

Turmeric (curcuma longa) is a well-known spice from India. Turmeric has been used in India for over 2500 years in Ayurvedic medicine to treat a variety of ailments, of which joint pain is an important one. The ability of turmeric to relieve joint pain and slow pain progression has been studied in various animal models. In an osteoarthritis (OA) model using destabilization of the medial meniscus (DMM), orally administrated curcumin significantly reduced OA disease progression. Curcumin has been found to have anti-inflammatory activity by inhibiting certain enzymes and cytokines involved in cell membrane inflammation, such as LOX, COX-2 and 5-LOX and by inhibiting the transcription of NF-κB. Experiments with syngeneal fibroblasts cultured from human rheumatoid arthritis (RA) patients have shown that inhibition of NF-κB activation and nuclear translocation suppresses IL-1β and OSM-induced MMP-1, MMP-3, MMP-9 and MMP-13 gene expression in human chondrocytes. In a randomized pilot study, the effect of turmeric alone and in combination with sodium chloride was assessed in patients with active RA. Patients in the curcumoid concentrate with naturally occurring single-sourced curcuminoids with distinctly enhanced bioavailability. Vi-Activity™ is a new, 2.2-times higher than standard curcumin. Vi-Activity™ has been designed to be a potent inhibitor of 5-LOX, which is a key enzyme in the biosynthesis of leukotrienes from arachidonic acid in the cellular inflammatory cascade. Boswellia serrata

Boswellia serrata is primarily native to India, in particular the Punjab area. In Ayurvedic medicine, boswellia has been used for hundreds of years in the treatment of arthritis. Boswellic acid and 3-O-acetyl-11 keto-beta-boswellic acid (AKBA) are the most active components of boswellia extracts. AKBA has been demonstrated to be a potent inhibitor of 5-LOX, which is a key enzyme in the biosynthesis of leukotrienes from arachidonic acid in the cellular inflammatory cascade. Boswellic acid and AKBA have been shown to decrease the production of proinflammatory cytokines such as IL-1β, IL-6, IL-10, IFN-γ and TNF-α that destroy joint tissues such as cartilage. NFκB is considered to be the target of AKBA. In a double-blind, placebo-controlled trial, Boswellia serrata demonstrated beneficial effect on knee OA. For 8 weeks, 30 patients received daily either 1.000 mg of Boswellia extract or placebo. Patients in the Boswellia group experienced a significant decrease in pain and swelling and an increase in range of motion compared to placebo. Boswellia serrata is also interesting for its analgesic properties. This effect has been confirmed by an increased Pain Threshold and the Pain Tolerance force and time in a healthy human volunteers pain model. In addition, a double-blind, randomized, placebo-controlled study showed that 30% ARB AKBA boswellia extract could reduce pain and significantly improve physical functioning in OA patients. Reduction of enzymatic degradation of cartilage was identified as a mechanism of action.

Vidya Herbs has developed Nutrisse™, a sesame husk water extract that is fully traceable from the field to the product, it is backed by a botanical certificate of origin and complies with the highest standards of quality. With a 13% naturally occurring calcium content, 5.8 g of Nutrisse™ per day is sufficient to reach the recommended daily intake of 750 mg/d.

Zinc from guava

Zinc is the most abundant mineral in the body after iron. Guava (Psidium guajava) is very well known for its fruit; however, it is backed by a botanical certificate of origin and complies with the highest standards of quality. With a 13% naturally occurring calcium content, 5.8 g of Nutrisse™ per day is sufficient to reach the recommended daily intake of 750 mg/d.

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The novel nutraceutical ingredient Enxtra® has again won the Nutraingredients award in the sports nutrition category, this time in Asia. The awards were announced last month in Singapore and attracted more than 100 entries. Enxtra® received this honour for the second time this year after being awarded the ‘Sports Nutrition Ingredient of the Year’ at Geneva in May.

The panel of judges comprised of industry specialists from across the globe. The judges were impressed that EnXtra® is the first and only natural caffeine-free botanical ingredient, clinically proven to improve alertness and focus. It was also the only ingredient in the category to have a molecular docking study. Nutraingredients-Asia Editor-in-Chief Gary Scattergood said: ‘This galanga based ingredient combines a traditional ingredient with modern science and cutting edge research.’ It solves a real relevant problem of ‘caffeine crash’ and helps reduce the dosage of caffeine.

EnXtra® from Alpinia galanga is a DNA-authenticated, all natural ingredient that provides rapid and safe alertness as well as focus with no crash. It boasts of same day onset of action, comparable to caffeine, which is rare for a botanical extract.

Clinically proven by three published papers and a molecular docking study, EnXtra® is backed by solid science. Enxtra® is the first in its category to have used an objective scale to test the cognitive parameters like visual attention as opposed to a subjective VAS scale. Principal investigator of the study Dr. Shalini Srivastav said: ‘The testing tool used in a clinical study is what gives its results gravitas, hence the clinical research department at Enovate Biolife carefully chose a test which is considered as the gold standard for evaluating cognitive performance. This test makes the study more credible, and is one of the reasons EnXtra® stands out in its category.’

This ingredient from the turmeric-ginger family continues to woo formulators and enjoys wide commercial success across geographies. Enxtra® is also recently shortlisted for the best functional ingredient at the Food Matters Live Awards UK, November 2019.

About Enovate Biolife
Enovate Biolife offers innovative, scientifically validated branded botanical ingredients which help position supplement brands for success in today’s highly competitive market place.

For more information on Enovate Biolife, Enxtra® and rest of the portfolio of innovative ingredients, visit http://www.enovatebiolife.com

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APPLICATIONS & OPPORTUNITIES FOR FREE CURCUMIN IN COGNITIVE HEALTH

By: Leisha Jenkins

According to the CDC, or Centers for Disease Control and Prevention, more than 16 million adults 18 years and older in the United States are living with cognitive impairment.1 This statement highlights a simple fact: cognitive health isn’t solely the concern of seniors and the elderly; people of all ages can experience cognitive impairment.

The Alzheimer’s Association (www.alz.org) emphasizes this point in its 2019 Alzheimer’s Disease Facts and Figures report: “Alzheimer’s disease (AD) is thought to begin 20 years or more before symptoms arise, with small changes in the brain that are unnoticeable to the person affected.”2 An article published in Alzheimer’s & Dementia further notes: “An estimated 40% to 60% of individuals aged 58 years and older with MCI (mild cognitive impairment) have underlying AD pathology.”3 While age is a contributing factor, cognitive impairment is not an inevitable factor of aging; people of all demographics may find the aim of retaining a clear and healthy cognitive function necessary, but daunting.

Putting Cognitive Decline in Perspective

The World Health Organization (WHO) recognizes some individuals may have an increased genetic or medical risk of cognitive decline, but assert that lifestyle factors play a bigger role in society, specifically stating: “Dementia is not a natural or inevitable consequence of ageing.”4 Physical activity, a nutritious diet, and social/ intellectual stimulation are all essential to cognitive well-being.5 In recent years, research suggests natural botanicals (as dietary supplements) may also help maintain and protect cognitive health. Many studies have shown support for key aspects associated with cognitive health, such as: reduced inflammation and oxidative stress, amyloid beta fibril formation, and reduced cognitive impairment.6 Researchers have identified curcumin, a compound naturally found in turmeric, as having potential health benefits.7-10

Curcumin and the Brain

Curcumin, an active compound in turmeric, has long been recognized for its potent antioxidant and anti-inflammatory properties. In studies, curcumin has reduced levels of inflammatory molecules such as tumor necrosis factor alpha (TNF-α), interleukin-1 (IL-1), reactive oxygen species, and cytokines.11,12 Curcumin also reduces pro-inflammatory cytokines, such as tumor necrosis factor alpha (TNF-α), interleukin-1 (IL-1), and cyclooxygenase-2 (COX-2).13 Much of curcumin’s ability to impact cognitive health results from the way it affects a number of major neural health biomarkers, such as oxidative stress, advanced glycation end products (AGEs), neuroprotection, and amyloid plaques.

Oxidative Stress

In the brain, oxidative stress (an imbalance between free radicals and antioxidants) has been linked to many cognitive ailments, accelerated aging, and other neurological disorders. Free radicals (ROS – reactive oxygen species) can damage DNA, cause inflammation, and kill brain cells.14 Consuming antioxidant-rich foods and supplements bolsters the body’s antioxidant levels, making curcumin and its high antioxidant profile a potential way to mediate the effects of oxidative stress.15 Further, antioxidants are known to stimulate nitric oxide production. Researchers at The Ohio State University observed that optimized curcumin increased plasma nitric oxide levels, demonstrating a variety of health-promoting effects in healthy middle-aged people.16 More recently, Santow-Parker et al reported that “in healthy middle-aged and older adults, 12 weeks of optimized curcumin supplementation improved[ed] resistance artery endothelial function by increasing nitric oxide bioavailability and reducing oxidative stress.”17

Researchers also show that curcumin decreases lipid peroxidation, a factor linked to accelerated aging and cognitive decline. Additionally, it stimulates production of superoxide dismutase (SOD), glutathione peroxidase (GPx), and other antioxidants produced by the body that are used for tissue repair, neutralizing free radicals, and protecting against cellular damage.18

Advanced Glycation End-products (AGEs)

When proteins and sugars combine in the bloodstream (called glycation), advanced glycation end-products (AGEs) are formed. AGEs are linked to many degenerative diseases and pose a clear threat to cognitive health.19 Human exposure to AGEs primarily comes from two sources: 1) Foods that have been exposed to high temperatures such as grilling, frying, or toasting and have undergone some degree of caramelization during cooking via the Maillard reaction.20 2) Glycation21

University of Rhode Island researchers explain the impact of AGEs to cognitive health: “AGEs bind to the transmembrane receptor for AGEs (RAGE), upregulate RAGE expression, and activate RAGE-mediated neuronal dysfunction and neuron damage. RAGE then inhibits the transportation of beta amyloid (Aβ) across the blood brain barrier (BBB). Therefore, the activation of RAGE by AGEs can cause Aβ accumulation in the brain. During glycation and AGE formation, ROS and reactive carbonyl species (RCS) are generated as byproducts which, in turn, promote AGE formation and cause neurotoxicity.”22

In addition to neuron damage, AGEs also increase beta amyloid levels in the brain, intensifying oxidative stress. A review of numerous studies on curcumin and AGEs published in Critical Reviews in Food Science and Nutrition concluded that “curcumin can inhibit AGE formation and AGE-induced disturbances.”23

Neuroplasticity

The human brain has an incredible ability to reorganize itself in response to injury, disease, and other neuronal changes, it is called neuroplasticity.24 This ability requires proper neuron function, synapse firing, and neurogenesis, or the formation of neurons in the brain.

Kim SJ et al has found that curcumin appears to “stimulate developmental and adult hippocampal neurogenesis,” and torsion activity that may enhance neuroplasticity and repair.25 Goozee K et al suggested that this is evidence that curcumin has “potentially beneficial effects on neuroplasticity, specifically in “modulating synaptic plasticity.”26

Additionally, the findings of a ground-breaking study examining the cognitive impact of curcumin showed that curcumin restored brain-derived neurotrophic factor (BDNF), enhanced post-synaptic activity, and reduced cell death.27 Another study reported that curcumin helps regulate serotonin.28 Each of these factors is essential to the brain’s response to injury.

Amyloid Plaques

It is well established that build-up of amyloid beta protein fragments in the brain form hard, insoluble plaques that cause neurofibrillary tangles, increase oxidative stress, and induce neuroinflammation.29 Researchers observed that curcumin bound to amyloid plaques, resulting in protection of brain cells by blocking aggregation and fibril formation related to neuroinflammation and cell death.30 In clinical studies, patients given curcumin have shown lower amyloid beta protein levels than control groups, suggesting significant protection against this hallmark indicator associated with cognitive impairment and decline.31

More recently, research confirmed curcumin’s plaque-binding capabilities, suggesting use not only as a neuroprotective agent but also as an imaging tool for the identification of deposits in both the brain and retina. This would allow for early detection of cognitive decline up to 20 years prior to the onset of symptoms; a dilemma that has plagued people for a millennium.32

Overcoming Curcumin’s Bioavailability Problem

A recent review of preclinical and clinical studies of curcumin noted: “Curcumin’s molecular structure and its ability to cross the blood brain barrier (BBB) provide a promising avenue for neuroprotection.”33 Yet, curcumin’s bioavailability has been a problem. The human body quickly metabolizes orally administered curcumin, limiting its potential health benefits.34 Mary S. Easton of the UCLA Alzheimer’s Translation Center explains the problem: “There is a lot of confusion about curcumin bioavailability versus absorption. Curcumin is absorbed, but not necessarily bioavailable. Further GI and liver glucuronidation, or sulfation,” tag(s) curcumin, which interferes with bioavailability in some tissues and leads to its rapid removal by the kidneys. Unlike tagged curcumin, free curcumin readily crosses the blood brain barrier and is relatively stable.35 Free curcumin, then, is the bioactive form that delivers the benefits observed.
Cognitive Curcumin of Choice™

Curcumin, specifically a highly bioavailable one like that of Longvida® Optimized Curcumin® offers a promising option for anyone looking to support, promote, and maintain memory, mood, focus, and overall cognitive vitality.

In the gastrointestinal tract at the point of absorption, and delivering the free form of curcumin into the bloodstream where it can then circulate systematically, and eventually cross the blood brain barrier. When tested for absorption alongside three other commercially available curcumin extracts, Longvida® Cognitive Curcumin of Choice™ resulted in the highest brain concentrations of free curcumin. Since inception, Longvida has been the focus of nearly 30 clinical trials with others underway. In one such study, Swinburne University researchers reported both acute (1-hr post dose) and chronic (after 1 month) improvements on cognition, mood, and blood biomarkers in healthy older adults. Mounting evidence in support of cognitive applications for curcumin, along with promising results in their initial study has led Swinburne researchers to take a second look at chronic cognitive benefits. Recently published results confirm that Longvida® Optimized Curcumin® improves aspects of mood and working memory in a healthy older cohort. The pattern of results is consistent with improvements in hippocampal function and may hold promise for alleviating cognitive decline in some populations.

Curcumin’s Potential for Better Cognitive Outcomes

Today, scientists, medical experts, and healthcare professionals, as well as many consumers, understand keeping memory and mental alertness sharp into old age requires active steps earlier in life, long before any symptoms of cognitive decline manifest. As Goozee K et al notes: “The fresh approach of targeting early AD pathology (by treating healthy, pre-clinical pathology (by treating healthy, pre-clinical cohorts) combined with new curcumin formulations that increase bioavailability is renewing optimism concerning curcumin-based therapy.” The wealth of clinical substantiation supporting supplementation with optimized curcumin® for overall well being and the promotion of cognitive health continues to support all demographics alike in mediating the effects of aging and cognitive decline.

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* Additional references can be found at: marketing.vs-corp.com/longvida-science

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- SLCP Technology
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- Developed by UCLA
- Multiple clinical studies support cognitive health at 400mg/day
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Human milk oligosaccharides (HMOs) offer the potential to provide a valuable weapon in the neonatologist’s armamentarium against necrotizing enterocolitis (NEC), a devastating bowel disease that almost exclusively afflicts premature babies.

Each year, the World Health Organisation (WHO) estimates 15 million babies are born worldwide preterm (defined as before 37 completed weeks gestation).1 The stark facts are complications from premature labour represent the leading cause of death among children under five years of age, and were responsible for approximately one million deaths in 2015.2

One of the primary causes of mortality in premature babies is the condition NEC, characterised by intestinal ischaemia and necrosis, estimated to affect between 5 and 10% of very low birth weight infants (<1500 g).3 In contrast, among babies born at term the incidence of NEC is negligible. Despite improvements in neonatal care, more than 30% of babies affected by NEC do not survive.4

‘NEC represents the perfect storm, the interaction of three distinct processes in premature infants. These are immaturity of the immune system where the premature baby is able to ramp up the immune response but can’t damp it down, pathogens like E coli thriving in the inflammatory environment; and an immature gut with poor blood flow,’ explains Dr. Mark Underwood, who heads the neonatal intensive-care unit at U.C. Davis Children’s Hospital, Sacramento, California.5 NEC, he adds, usually strikes suddenly with large sections of the intestines being destroyed. Although NEC is a gastrointestinal disease in the early stages, it can quickly become a systemic disease that is characterised by cardiorespiratory collapse and systemic sepsis.6

In premature infants, NEC onset generally occurs at the corrected gestational age of 29 to 33 weeks.7 ‘There’s some evidence NEC occurs at a specific time post-conception when the immune system has had a chance to develop, so the more premature a baby is the longer after birth they develop NEC,’ explains Dr. Chris Stewart, a microbiologist from University of Newcastle, UK, involved with NEC research.

Current treatment options for NEC are limited to gut rest, broad-spectrum antibiotics and surgical resection of the necrotic bowel.2 Premature babies who survive NEC have long term complications including poor growth, malabsorption, short-bowel syndrome and neurodevelopmental delays.8

Human breast milk appears to offer protection against NEC, with a number of studies demonstrating that NEC incidence is six to 10 fold lower in human milk fed infants compared to those fed formula milk.9,10 11

One of the main differences between human milk and formula lies in the quantity and complexity of sugars known as Human Milk Oligosaccharides (HMOs). HMOs represent the most abundant and the most cost-effective ingredient in human milk after lactose and fats. While more than 150 different HMOs have been identified so far,12-14 their composition follows a basic blueprint consisting of five ring building blocks glucose, galactose, N-acetylgalactosamine, fucose, and sialic acid in a variety of linkage patterns, that may be linearly branched and occur in several isomeric forms. HMOs ought to provide a rich source of energy, but curiously human babies do not possess the enzymes to break them down, and they pass through the stomachs and small intestines undigested, landing in the large intestine. ‘The compelling evolutionary question is, why does the mother expends tremendous energy and resources crafting these complex sugars that have no nutritive value for her infant?’ says Dr. Underwood. Adding to the puzzle is the fact HMOs are a food source for just two of the hundreds of bacterial species composing the intestinal microbiota. Bacteria and Bifidobacterium. These two observations suggest lactating mothers produce the HMOs to shape the intestinal microbiota of their babies.’

Other established functions for HMOs include having structural homology to cell surface glycans, thereby acting as decoys preventing luminal pathogens (viral, bacterial and protozoan infections) from attaching to the intestinal epithelium, modulating immune cell responses,15,16 providing essential nutrients for brain development,17-21 and protecting against NEC in rats22 and mouse models.23,24

It’s highly unlikely that a single magic HMO provides the whole ‘Boswellia’ thing as complex as NEC,’ says Dr. David Hackam, a paediatric surgeon from John Hopkins University, Baltimore, USA. ‘What’s more likely is an overall Gould effect of the whole range of HMOs that work together and compensate for each other.’

Greater understanding of the mechanisms whereby HMOs protect against NEC may help to identify the most significant HMOs clinically. To this end, Dr. Hackam and his team demonstrated that 2’FL protects against NEC in a mouse model, ‘It was felt, unethical to use for formula-fed babies without HMOs as study controls.’

In a rat model of NEC, Dr. Bode and colleagues showed that adding pooled HMOs (obtained from the milk of 12 mothers) to rat formula increased the survival of rats and reduced the risk of NEC (evidenced by gross necrotic changes) in comparison to rats fed formula without HMOs.25

To address which of more than 150 odd HMOs was responsible for the beneficial effects, the team applied a multidimensional chromatography approach, successfully identifying the first HMOs for the first time by charge and later by size. Ultimately, the approach led to benefits against NEC being attributed to one specific HMO - disialylacto-N-tetraose II (DSLNT).

Observations some premature babies receiving predominantly human milk still develop NEC led Dr. Bode to hypothesize that human milk fed to infants, who developed NEC contains less DSLNT than matched controls whose babies did not develop NEC. A second study analysing HMO composition from a mother baby cohort involved preterm birth they develop NEC,’ explains Dr. Underwood.

The second HMO candidate that has been investigated for NEC protection 2’-FL and another abundant HMO in the milk of most lactating women, has generated conflicting results. Studies of 2’FL were shown to protect against NEC by stimulating the production of nitric oxide, thereby preventing NEC in rats26 and mouse models,27 but failed to protect against NEC in a pig model.28

‘It’s highly unlikely that a single magic HMO provides the whole “Boswellia” thing as complex as NEC,” says Dr. Underwood. Adding to the puzzle is the fact formula-fed infants are at higher risk of developing NEC animal models, where term delivered rats demonstrate NEC protection in babies whose mothers’ milk had higher levels of DSLNT.29

To elucidate exactly which HMOs are involved in NEC protection, Dr. Stewart is using the Great North Neonatal Biobank at the University of Newcastle, to provide a resource of salvaged specimens from premature baby including stool samples, urine, blood surgical samples from NEC operations, and small quantities of the mother’s breast milk. The biobank now includes breast milk samples from the mothers of 5000 premature babies, including those who developed NEC and those who did not. This resource places us in a unique and powerful position to use mass spectrometry to quantify 19 common HMOs in milk and see how their composition relates to development of NEC,” explains Dr. Stewart.30

Defining the HMO profile that protects against NEC, would allow the absence of these HMOs in maternal milk to serve as red flags (biomarkers) for NEC risk in premature infants. Such knowledge, says Dr. Stewart, would allow neonatologists to both monitor vulnerable babies lacking these HMOs more closely for early symptoms, and treat preterm babies at risk of NEC prophylactically through supplementation with key HMOs.

Until recently, the benefits of HMOs were limited to breastfed babies because it was not possible to source HMOs elsewhere for inclusion in formula. However, the German company Jennewein Biotechnologies GmbH has developed a unique HMO production process based on bacterial fermentation, which is allowing industrial-scale synthesis of a range of HMOs, including 2’-fucosyllactose, 3’-fucosyllactose, 3-’sialyllactose, 3-3’-disialyllactose, lacto-N-neotetraose II, lacto-N-tetraose II, lacto-N-neotetraose, lacto-N-fucopentaose I. Such developments open the way for the addition of key HMOs known to protect against NEC to supplement both mother’s milk, and baby formula.

In addition to HMOs, Dr. Stewart believes other factors play a role in development of NEC, including composition of gut microbiota.

By: Janet Fricker

Human milk oligosaccharides (HMOs) offer the potential to provide a valuable weapon in the neonatologist’s armamentarium against necrotizing enterocolitis (NEC), a devastating bowel disease that almost exclusively afflicts premature babies.
bacteria. When Stewart reviewed a cohort of 318 premature babies, including seven infants who developed NEC, he found that protection against NEC was related to a diverse gut microbiome and high abundance of bifidobacteria. Instead of antibiotics, Dr. Stewart suggests, babies with NEC will in future be treated with probiotics, dietary supplements containing both probiotics, such as a bifidobacteria, and prebiotics, such as HMOs to provide nutrition. “But we need to do the basic science first to understand exactly what’s the best combination of these products,” he says, “so that we should be giving, at what dose and how frequently,” he says.

References

Two health issues that are particularly common across the globe are sleep deprivation and feeling of stress. In- deed, FMCG Guru’s research shows that across the globe, a total of 57% of consumers say that they suffer from feelings of stress, whilst 53% say that they are prone to disrupted sleep patterns. These feelings tend to be more common amongst younger adults who are also more likely to say that they do not have a satisfactory work-life balance. Stress and sleep deprivation are something that can be attributed to the frantic nature of modern life, as consumers try to cram as many activities into the day as possible. Moreover, consumers also have several daily worries around issues such as health, and financial wellbeing, which can prevent them from getting to sleep in the evening.

The recognition of the link between cognitive health and overall health and the extent of such problems is a key reason why 51% of respondents say that they want to maintain a good quality of life. This is something that can be attributed to a variety of factors. For instance, society is continuing to age in the short-term. This is something that will drive demand for products that help address cognitive health. The reality is that cognitive health problems across the globe will continue to become more common, at least in the short-term. This is something that will drive demand for products that help address cognitive health. The reality is that cognitive health problems across the globe will continue to become more common, at least in the short-term. This is something that will drive demand for products that help address cognitive health. The reality is that cognitive health problems across the globe will continue to become more common, at least in the short-term. This is something that will drive demand for products that help address cognitive health.
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As Dietary Health Supplements Increase in Popularity, So Do Safety and Efficacy Concerns

By: Shoji Matsukawa, General manager, organic chemicals sales & marketing for Mitsubishi Gas Chemical America, manufacturers of BioPQQ®

Consumers are increasingly interested in maintaining or even improving brain health, as demonstrated by the growth in vitamins and dietary supplements marketed as potentially aiding cognitive function and memory. Older consumers wishing to remain mentally sharp are not the only consumers interested in brain health; increasingly, younger consumers, including millennials, desire greater mental focus and acuity to keep up with a fast-paced lifestyle.

Supplements for brain health represent a significant segment of the $50 billion dietary supplements industry. While consumer demand is important for any OTC product, this is especially critical for products intended to support brain health. Consumers want to be sure something they consume for their brain will be safe and effective.

According to an on-line survey published by AARP last June of nearly 2,300 participants, more than one-third of adults age 74 or older take a supplement for brain health. Highlighting the concern for safety, this same survey indicated that a majority of adults 50 and older were concerned about the purity (76%), effectiveness (76%), safety (73%), as well as the thoroughness of government review (73%) of the supplements they purchase.

When it comes to brain health, trust is critical for consumers. For regulatory agencies responsible for maintaining a healthy marketplace, trust is not good enough. Earlier this year, the U.S. Food & Drug Admini- stration (FDA) announced plans to intensively its oversight of the industry, as concern grow that more supplements are being developed with unapproved or unlisted drug ingredients. In announcing the most significant change to dietary in- gredient regulation and oversight in 25 years, the FDA commissioner at the time noted that three out of four Americans took a dietary supplement in a single year, and for older Americans the rate was four in five. The commissioner cited the example of companies that make false or misleading claims about treating Alzheimer’s Disease as an example of why consumers need to be protected from bad actors in the industry.

There are myriad products on the market that bill themselves as supporting brain health, and clearly there is an eager market for such products. However, for consumers and manufacturers alike, validation of efficacy and safety is paramount because it could lead to harmful—even life-threatening consequences.

VITAMIN-LIKE COMPOUND POTENTIALLY IMPROVES BRAIN HEALTH

A vitamin-like ingredient, pyrroloquinoline quinone (PQQ), has been extensively studied for its potential to improve brain health. PQQ is found naturally in certain fruits, vegetables and meat, as well as in human breast milk, and it has exhibited beneficial antioxidant properties as well as neurotrophic properties. Studies have shown that BioPQQ (MGCPQQ), a highly purified form of PQQ, may stimulate NGF synthesis and secretion, which could play a role in the growth and recovery of damaged nerve cells and organs (Murase K. et al., 1999).

INSPIRING TRUST THROUGH CLINICAL STUDIES

While PQQ is marketed by different manu- facturers under a variety of names, BioPQQ (MGCPQQ) is unique in the industry for the scope and number of clinical studies, both animal and human, that underscore the compound’s safety and effectiveness. In the United States, BioPQQ has received New Dietary In- gredient (NDI) notification from the FDA. In fact, BioPQQ is the only supplement on the market that holds NDI notification. NDI notification represents a significant milestone because the process of ob- taining notification from the FDA can be difficult and rigorous. The steps required in obtaining this notification attest to the high-quality control and safety standards that take place in a product’s production. The NDI notification process dates back to the passage of the Dietary Supplement Health and Education Act of 1994, which regulates dietary supplements in the United States.

In Japan, BioPQQ has also been cer- tified by the Ministry of Health, Labour and Welfare as a food ingredient. Last year, MGCPQQ became the only ingredient of its kind to appear on the European Union’s approved list of Novel Foods. This registration attests to a high level of safety and efficiency that BioPQQ has undergone in clinical trials with consumers, and it follows a safety evalua- tion that the European Food Safety Au- thority (EFSA) completed and published on Mitsubishi’s PQQ, MGCPQQ, in 2017. Today, MGCPQQ is the only POQ available for purchase by European nutraceutical and supplement manufacturers.

Additional validation for BioPQQ (MGCPQQ) comes from its certification by the Informed-Choice and in- formed-Sport quality assurance programs. This represents a seal of approval from a globally recognized organization that the compound has been manu- factured with demonstrated high-qual- ity standards, and that every batch has been tested substantially higher than the World Anti-Doping Agency (WADA) list. This provides an important level of reassurance for amateur and profession- al athletes, as well as for sports-minded consumers that BioPQQ (MGCPQQ) is a safe and well-tolerated supplement for those looking to boost energy and performance.

A NATURAL PROPRIETARY FERMENTATION PROCESS

It is important to note that the studies on POQ, which date back nearly 40 years and number over 1,000, were conducted using the PQQ molecule that Mitsubishi Chemical Corporation (MCC) named BioPQQ. This process involves the purification of natural PQQ disodium salt derived by bacteri- al fermentation. It has been well-studied and validated for its quality and safety and ensures that batches are tested up to food-grade standards.

Several other manufacturers of PQQ supplement ingredients have applied for an NDI and been rejected in the past. To date, BioPQQ remains the only supple- ment of its kind to have the designation. As the consumer appetite for supple- ments continues to grow, so does the awareness of safety and efficacy. Con- sumer purchasing data highlights this increased awareness, and as FDA’s ac- tions this past year demonstrate, regula- tory authorities are responding in kind to consumer demands.

Consumer trust in a brand is critical, but in the world of dietary supplements, trust alone does not pass the test. Just because a company states that its product is safe and that it works doesn’t mean it’s true. Only hard data from well-docu- mented and well-designed clinical studies can provide the level of safety and assurance that consumers need and demand from a brand worthy of their trust. BioPQQ (MGCPQQ) is the most thoroughly studied supplement ingredi- ent in its class, and the human and ani- mal clinical trial data around this product continue to grow. It has been demon- strated to be well-tolerated and may have significant mitochondria-activating and neurogenerative benefits to support brain health.

For more information about BioPQQ or to learn where the ingredient is sold, visit www.biopqq.com

References

WELLNESS FROM WITHIN

Consumers are increasingly paying attention to their digestive health, with more than two thirds of consumers in Europe saying digestive health is very important to them. As understanding of digestive health grows, consumers are now recognizing the wider benefits a healthy gut can have on their overall state of feeling good. This rising focus on the broader, positive health effects that inner well-being can bring presents an opportunity for manufacturers to innovate and capitalize on the trend. Katrien Lambeens, Product Manager Functional Fibres at BENEO discusses the role that digestive health plays in inner well-being and looks at the functional ingredients that can help manufacturers deliver ‘feel good’ foods.

Go with your gut

We often use the phrase ‘gut feeling’ in colloquial terms to refer to our personal instinct or intuition that comes from within. While in the past, the origin or meaning of this saying may have been given little consideration by many, today, more consumers are taking an interest in the intrinsic link between their gut and their overall health. In particular, they are beginning to understand that a balanced microbiome can positively affect the entire body, with research showing that 63% of consumers in Europe recognize that digestive health is very important to them and almost half of European consumers being very interested in the gut microbiota.

Inulin and oligofructose are the only prebiotics naturally available on the market and make up two out of only three currently scientifically proven prebiotics. The International Scientific Association for Probiotics and Prebiotics (ISAPP) gives clear guidance to manufacturers of functional ingredients about the definition and benefits of prebiotics. On top of this, they indicate which fibres have enough science to demonstrate their prebiotic properties, which should be respected, especially at a time when consumers are becoming increasingly aware of their positive effects on health. There is an ever-growing body of research and high-quality scientific studies (in excess of 150) confirming the health benefits of prebiotic fibres which shouldn’t be ignored.

Prebiotic chicory root fibres, inulin and oligofructose contribute to better digestive health and inner well-being by:
1. Promoting the growth of beneficial microorganisms (Bifidobacteria and Lactobacillii)
2. Improving bowel regularity
3. Resulting in an improved quality of life

One of the many supporting studies, a study by Micks et al. published in 2017, showed that BENEO’s prebiotic chicory root fibre, Orafti® Inulin, has specific effects on digestive health and quality of life. Improved bowel regularity was achieved with significantly increased stool frequency per week within the normal range versus the control. At the same time, a validated quality-of-life questionnaire demonstrated that satisfaction ratings were better with inulin in comparison to the control.

In addition, the Vandeputte et al. study further confirmed that the intake of Orafti® Inulin induces selective changes in the gut microbiota composition that can be directly linked to improved regularity and well-being for the first time. For the study, the researchers used a highly sophisticated technology known as ‘next generation sequencing’ to examine the impact of inulin administration. This state-of-the-art method allowed the entire human colonic bacterial ecosystem to be assessed.

The results showed that inulin intake selectively changed three bacterial genera: Bifidobacterium, Anaerostipes and Bilophila. It significantly increased the relative abundance of Bifidobacterium and Anaerostipes, both known as ‘good’ bacteria, supporting a healthy microbiota. The selectivity of Orafti® Inulin was further demonstrated through considerably decreased levels of Bilophila, a potentially harmful genus related to increased gas production. This decrease upon inulin consumption was linked with both softer stools and improved quality of life ratings.

Using this new methodology, the selective modulation of the gut microbiota by chicory root fibre was proven. The link showed that a change in bacterial abundance upon prebiotic chicory root fibre intake, improved bowel regularity and the enhanced quality of life is yet further proof of the important role a healthy gut microbiota plays on overall health and inner well-being.

To support this wealth of evidence surrounding its prebiotic chicory root fibres, BENEO also has an exclusive health claim for its Orafti® Inulin in promoting digestive health. The authorised EU health claim under article 13.5 is: ‘chicory inulin promotes digestive health by increasing stool frequency’, which can be combined with general health-related well-being claims under article 10.3 that include: “chicory Inulin promotes digestive health”, ‘chicory root fibre supports a healthy and balanced digestive system’ and ‘with prebiotic fibre’.

The digestive health consumer

As the evidence in favour of prebiotics continues to grow, manufacturers of functional ingredients are already responding to consumer demand for products that promote inner well-being, with an increasing number of new product launches using a ‘feel good’ claim. However, there is still great market potential, with more than three fourths of European consumers confirming that digestive health is very important to them and almost half of European consumers being very interested in the gut microbiota.

Understanding more about who these consumers are and what they are looking for is key to successful product development. In order to gather these insights, BENEO commissioned worldwide research into consumer attitudes and values and has identified the most important consumer target groups for digestive health, most notably these two segments:

• Consumers interested in digestive health

In 5 European consumers are interested in the impact of digestive health on their overall well-being, despite not experiencing any digestive issues. These consumers are looking to enjoy the holistic benefits associated with a healthy digestive system, such as improved mood, energy and weight.

• Consumers seeking digestive solutions

In 5 European consumers are affected by digestive health issues and are actively seeking out a solution to soothe their discomfort. Given this proactive search for digestive health aids, more than half of these consumers are extremely or very interested in fibres and prebiotics.

Taking these consumer groups into account when researching and planning new product development, will enable food and drink producers to identify the key focuses that are most important to their target audience and innovate in line with their needs.

Breakfast – the key occasion for digestive health

It’s clear that chicory root fibres aid the upkeep of digestive health and overall well-being. Therefore, there is an opportunity for manufacturers to integrate ingredients like BENEO’s Orafti® Inulin and Oligofructose into food and drink products to deliver the digestive health benefits that consumers are seeking.

Consumers see breakfast as the preferred meal time to eat foods which support their digestive health the most. Therefore, just a few grams of chicory root fibres in a bowl of cereal in the morning or a few in their mid-morning snack or in a ready-made coffee, could achieve the effect that consumers desire in their preferred time frame.

In line with this, the team at the BENEO Technology Center has created a fibre-enriched, prebiotic ready-to-drink coffee beverage, that promotes digestive health while keeping the blood glucose level in balance.

References
5. HFI, Global Trends Study 2018. BENEO’s consumer research on prebiotics. 2017. Germany, Italy, Russia.
Bunge Loders Croklaan introduces 100% Shea-based margarine improving puff, colour, crispiness, and workability in bakery goods

Wormerveer, The Netherlands, 13 November 2019—Bunge Loders Croklaan (BLC) advances the industrial and artisanal baking sector with its novel, 100% sustainable shea-based margarine, ideal for baked items such as croissants and Danish pastries. The non-hydrogenated, clean-label margarine has no added colouring or preservatives and delivers high functionality and baking performance with superior handling and allows for better total nutritional value. BLC will introduce the new product at this year’s Food Ingredients Europe show in Paris, 3-5 December, 2019, booth #6E60.

Clean Label

This clean-label shea margarine has exceptional sensory performance, enhancing puff, crispiness and colour in croissants and Danish pastry. It also has excellent flavour and a nutritional profile comparable to or better than most options currently on the market. It uses no preservatives or artificial colouring and is produced using a unique crystallization process which results in perfect plasticity and excellent workability on production lines, lending an improved dough height and flakiness.

“Bakeries and baking companies are seeking plant-based margarine alternatives with superior functionality and good flavour, while consumers are demanding non-hydrogenated, sustainable alternatives to palm oils and GMO oils, as well as healthier products,” explains Renee Boerefijn, Director of Innovation for Bunge Loders Croklaan. “Shea’s fat composition enables it to maintain stable solidity at room temperature making it an ideal candidate for margarine production without the formation of unwanted trans fats. Trans fat is a key problem in margarine that continues to evade most formulators. Our new shea margarine is completely trans-free, and in overall better-for-you product.”

Low Saturated Fatty Acid Level

“The new shea margarine has a lower saturated fatty acid level compared to butter. This leads to improved sensory properties, with better mouthfeel and quicker flavour release, while awarding a more durable crispiness. Because of the superior performance, in certain formulations it is possible to use less fat to get the same quality and organoleptic experience as with dairy butter,” Boerefijn adds.
The main differences between these two groups chemically are that the side chains of the tocotrienol molecule are unsaturated and they have double bonds. Whereas the tocopherol molecules consist of members named alpha, beta, delta and gamma. Each of the tocotrienol molecules, alpha-tocotrienol, beta-tocotrienol, delta-tocotrienol and gamma-tocotrienol, have proven anti-oxidant and anti-inflammatory activity as well as health benefits which have been demonstrated in over 600 medical research studies.

What is the Difference Between Tocotrienols and Tocopherols?

Palm oil is one of nature’s richest sources of tocotrienols, yet commercial palm oil products contain less than 1/100 of 1% tocotrienols. Obtaining an efficacious dosage of tocotrienols from palm oil would require ingesting over 100 grams per day. Dosage levels for preventive or therapeutic health benefits from published studies have been in the range of 25mg to over 200mg per day. In order to obtain this level of daily dosage, a tocotrienol supplement or functional food is necessary.

The Most Diverse Tocotrienol Product—Rice Bran Tocotrienols:

Rice Bran Tocotrienols are the most diverse blend of isomers of all three major sources (and the only form that is permitted by regulators in the European Union). Palm Oil and Annatto Tocotrienols range from 75% to 95% tocotrienols with very low levels of tocopherols, whereas Rice Bran Tocotrienols are close to halfhalf.

Rice bran oil offers high levels of gamma- and alpha-tocotrienols, along with approximately 1% each beta- and delta-tocotrienol. It also contains a large quantity of alpha-tocopherol plus smaller amounts of the other three tocopherol isomers. Without question, Rice Bran Tocotrienols are the most diverse tocotrienol product chemically since they are the only source that contains all eight vitamin E molecules.

The Cardio King

Rice Bran Tocotrienols do not have the diversity of research that Annatto and Palm Oil Tocotrienols have. With the exception of one study showing improvement in some patients with a rare, fatal neurological disease called Familial Dysautonomia (Chethihi, 2016), all of the clinical research on Rice Bran Tocotrienols has been related to a single health concern. But what Rice Bran Tocotrienols lack in diversity, they make up for in depth. Rice Bran Tocotrienols can be called ‘The Cardio King’ because practically all of the research on this source has been done in areas related to cardiovascular health. Within the cardio area, some extremely promising results have surfaced. Following are synopses of some key cardiovascular studies showing dramatic improvements in blood lipids:

• Dr. Qureshi from University of Maastricht School of Medicine has been researching Tocotrienols since the early 1990s. In the most promising of all the cardiovascular studies, Dr. Qureshi led a fascinating clinical trial comparing the effects of Rice Bran Tocotrienols with the statin drug Lovastatin in patients with elevated cholesterol levels. The patients were supplementedin conjunction with commencing the American Heart Association’s Step-1 diet for cardiovascular health. Tocotrienol dosage was at a very low level of 50mg per day. Results after 35 days were similar for both compounds, with Rice Bran Tocotrienols performing slightly better:

  - Total cholesterol was lowered by 14% by Rice Bran Tocotrienols
  - Total cholesterol was lowered by 13% by Lovastatin
  - LDL cholesterol was lowered by 18% by Rice Bran Tocotrienols
  - LDL cholesterol was lowered by 15% by Lovastatin (Qureshi, 2001)

• In a follow-up study done in conjunction with researchers at University of California at Los Angeles and the government of Pakistan published the following year, Dr. Qureshi did a dose-dependency study in patients with high cholesterol. Dosages of 25mg, 50mg, 100mg and 200mg were administered along with enrollment in the American Heart Association Step-1 diet. Optimum results for lowering LDL and total cholesterol were found at doses of 50mg – 100mg per day. The researchers pointed out that the blood lipid-lowering effect of Rice Bran Tocotrienols is due to inhibition of liver enzyme activity. To the contrary, alpha-tocopherol has the opposite effect—it induces liver enzyme activity (Qureshi, 2002).

• People with diabetes suffer an excessive amount of heart disease due to high cholesterol. In patients with Type-II diabetes and elevated cholesterol levels, Rice Bran Tocotrienols led to vast decreases in blood lipids over 60 days. Total lipids decreased on average by 23%, while total cholesterol decreased by 30%. The most significant decrease was in life-threatening LDL cholesterol which was reduced by a whopping 42% on average (Balsarsingh, 2005).

As is evidenced by these impactful studies (which each corroborate the evidence found in the others), Rice Bran Tocotrienols may have strong effects on cardiovascular health through positively impacting blood lipid profiles in hypercholesterolemic humans. For copies of the studies, please contact BGG at support@bggworld.com.

References


Regulatory Status:

Unlike many other markets around the world, in the European Union, Palm Oil and Annatto Tocotrienols are not permitted to be marketed by regulators with the European Food Safety Authority. But the status for Rice Bran Tocotrienols is very different:

• Rice Bran Tocotrienols are permitted in food supplementsin EU.

• As a source of Vitamin E, Rice Bran Tocotrienols can bear the authorized Vitamin E health claim “Vitamin E contributes to the protection of cells from oxidative stress.”

• In order to access this claim, at minimum Vitamin E should attain 1.8mg equivalent to 15% of the nutrient reference value of 12mg. Dosages at or above 1.8mg per day are permitted to use the claim.

• EFSA experts have established the adequate intake for Vitamin E as 13mg for men and 15mg for women of d-alpha tocopherol.

• BGG offers a wide variety of Rice Bran Tocotrienols in oil, water-dispersible powder and water-dispersible emulsion forms ranging from 10% to 80% active content which can easily be used to attain the health claim and adequate intake levels listed above.
COLLAGEN: DRIVING GROWTH IN THE MOBILITY MARKET
Javier Velasco, R&D Director, Bioiberica S.A.U

The concept of mobility health

Bone and joint health have become a significant public health concern across the globe, largely due to the aging population. According to the World Health Organization (WHO), it is estimated that 150 million individuals worldwide will suffer from osteoarthritis by 2050 – a degenerative disease associated with aging and a major cause of disability worldwide. The growing senior population is therefore driving significant momentum in the joint health sector and continues to be a major force in the emergence of new bone and joint health ingredients. Younger consumers are also becoming more health conscious and active, propel ling demand for innovative nutritional solutions that offer holistic and preventative benefits. The result: a shift in the joint health market to a broader concept – mobility. With these trends, the market is expected to experience rapid growth in the next few years. Between 2019 – 2024 alone, it is forecasted that the global bone and joint ingredients market will grow at a CAGR of 6.3% to meet this demand.2

Prevention over treatment

With the world’s population getting older and individuals wanting to stay active for as long as possible, prevention, rather than treatment, is now a significant driver for many consumers when purchasing joint health products. Older generations are increasingly aware of the impact of age on soft tissues and joints, and therefore look to prevent potential health problems with nutritional supplementation. At the same time, younger consumers, who are increasingly active, are looking for ways to support mobility as a way of staying fit. For instance, athletes and gym goers now realize the importance of nutritional supplements in supporting mobility and preventing bone, joint or muscle deterioration due to working out. As such, nutraceutical ingredients, such as collagen, are coming to the fore.

The move towards collagen

For more than a decade, glucosamine and chondroitin sulphate have been widely used as active ingredients for joint health. However, following innovation and research in the joint health arena, ingredients such as collagen are now gaining rapid market share as a result of rising consumer awareness, driving significant growth in the category. According to recent market data, sales in the joint health market increased by 4.3% in 2018 in the US alone, largely driven by a boost in collagen sales, which increased by 30%.2 The joint health category is seeing its best overall growth since 2008.

Collagen and its different forms

Collagen is the main component of connective tissues that make up tendons, ligaments, skin and cartilage. And despite having many important functions in the body, it is best known for its role in providing a structural framework for tissues throughout the body.3 Of the 28 different types of collagen that have been identified, type II collagen is the main structural protein in cartilage. Both native (undenatured) type II collagen and hydrolysed (denatured) collagen are available for commercial use in joint health products. However, there are significant differences between the two forms.

Native type II collagen – also known as underdosely hydrolysed collagen – throughout the nutrition industry – is collagen in its biologically active form. Meanwhile, hydrolysed collagen – or denatured collagen – is collagen that has been broken down into smaller peptide chains. In this natural state, collagen has a folded triple helix structure consisting of long polypeptide chains. Hydrolysed collagen is manufactured via a specific hydrolysis process, where enzymes split the triple helix molecule into smaller pieces, i.e. short-chain peptides.

Native type II collagen takes the lead

The mechanism by which each collagen acts differs. Remaining in its biologically active form, native type II collagen works via an immune-mediated process known as oral tolerance. As a result, it is recognised by the immune system as an endogenous substance, i.e. naturally occurring in the body, and deactivates the body’s immune response against its own collagen. Alternatively, hydrolysed collagen peptides act as building blocks to maintain and rebuild cartilage.

In addition, the daily dose and intake required for both collagens to be effective in the body varies greatly. The native (undenatured) collagen form is only needed at 40 mg/day, whereas the recommen dation for hydrolysed collagen is 10 g/day. The low dosage required for native type II collagen therefore mirrors consumer demand for easy-to-consume, convenient products, offering an innovative alternative to supplement manufacturers.

Understanding the immune-mediated response

Evidence has shown that in diseases such as OA and rheumatoid arthritis, products from collagen breakdown are recognised by immune cells as a potential pathogen. An inflammatory and cartilage degradation response is then activated against endogenous type II collagen, further damaging the collagen in joints and progressing the disease. As such, the tolerogenic immune response initiated by native collagen intake (i.e. its ability to prevent the attack against endogenous type II collagen) has recently been receiving increasing interest from supplement manufacturers, as well as the wider scientific community.

Through the oral tolerance mode of action, native type II collagen modulates the immune response against endogenous type II collagen via the gut-associated lymphoid tissue. When taken orally, it passes through the stomach without being denatured, ultimately reaching the Peyer’s patches in the small intestine – lymphoid structures responsible for activating or deactivating the immune response against foreign substances. When it has reached the Peyer’s patches, native type II collagen1

1. Turns off the immune response against endogenous type II collagen
2. Reduces joint inflammation and cartilage degradation5,6
3. Supports joint health

Native type II collagen in action

To meet growing demand for more effective, low-dose solutions in the joint health market, Bioiberica has developed b-2Cool® - a well-researched, natural-origin ingredient. Extracted from chicken sternum, the manufacture of b-2Cool® is strictly controlled to maintain its characteristic triple helix structure and the specific activity of the native protein. The efficacy and safety of b-2Cool® in supporting joint health has been demonstrated in one pre-clinical and two clinical studies. Specifically, it has been shown to protect articular cartilage and improve joint comfort and mobility.4

In one study, the effects of b-2Cool® on joint inflammation and cartilage degradation were evaluated in a rat model of OA, induced by sodium monoiodoacetate (MIA). In this model, the administration of b-2Cool® induced a protective effect in the cartilage as determined by a reduction of inflammation and tissue catabolism. This protective effect was significant to a significant reduction in pain perception.

Clinical trials have confirmed this effect in humans. In one trial exploring the role of b-2Cool® in those with knee osteoarthritis, individuals who received 40 mg/day b-2Cool® (+1,500 mg/day acetaminophen) over the course of three months experienced significantly lower joint pain (Figure 1), better knee (Figure 2) and better mobility.1 In a second trial investigating patients with hand OA, there was a significant reduction in all evaluations of baseline data at one year in those who received native type II collagen, in addition to glucosamine and chondroitin.5 Further to its effectiveness at doses as low as 40 mg/day, offering a convenient solution to patients, b-2Cool® has demonstrated a good safety profile, making it a safe alternative to hydrolysed collagen.

Innovation in mobility

With the mobility market expanding at its current rate, there is a clear business opportunity for dietary supplement and food and beverage manufacturers to develop new, effective delivery formats that consumers will love. Although, to meet growing demand for innovation in the mobility market, as well as other health and wellness collaboration across the nutrition industry is essential. Through partnerships with manufacturers, for instance, Bioiberica promotes the idea of shared expertise, knowledge and insights – to be central to innovation. Thanks to these types of collaborations, the company has already brought some truly exciting developments to the market, and because of this success it continues to unfairly seek new strategic collaborations with other companies or institutions.

References
TAIYO WILL BE INTRODUCING A FUNCTIONAL COLA WITH THE DIETARY FIBRE SUNFIBER® AND NUTRITIONAL BOOSTERS FOR DAIRY PRODUCTS

Fi Europe 2019, Booth 6H110: Focus on new beverage concepts, to-go innovations and recipe ideas for green tea, cha and turmeric trends

Schwelm (Germany), September 2019 – Taiyo, the health-promoting natural ingredients expert, will be presenting a new soft drink concept: Sunfiber® Cola is the first functional, sugar-free cola to combine the popular refreshing soft drink taste with a saluting effect. The beverage can help with weight management because, according to scientific findings, consuming a drink enriched with Sunfiber® increases the feeling of satiety, with participants consuming 70-100 fewer calories at their next meal. The easily digestible, low FODMAP dietary fibre from the guar bean promotes the balance of useful microorganisms such as Bifido bacteria and lactobacilli, improves the bioavailability of mineral materials such as calcium and magnesium, and reduces bad LDL cholesterol. As with the Sunfiber® Orange concept introduced in 2018, the development partners are soft drink expert SINALCO INTERNATIONAL and SWEETHOUSE’s sweetening specialists.

Drinks sticks to go

Two other concept innovations that can be easily stirred into beverages, including dairy products, in the on-the-go stick portion size are also beneficial for digestion: pure Sunfiber® and a combination concept made of dietary fibre with curcumin. SunCurcumin gives beverages and meals a nutritional boost. The fibre content helps with the absorption of the daily recommended amount of “intestinal food”, and curcumin is a component of the superfood plant turmeric, which is valued for its anti-inflammatory properties. The easily water-soluble agglomerate developed by Taiyo, together with its partner DRS Pharma, is 40 times more bioavailable than conventional curcumin.

Natural L-Theanine from green tea

Taiyo will also showcase an exciting innovation in the popular tea applications segment: Sunphenon TH30 is a natural L-theanine variant for the European market. Because the synthetic form of L-theanine can only be sold outside the EU, Taiyo has now launched a natural L-theanine with the same effect. Taiyo extracts the amino acid L-theanine from the leaves of green tea, which the company with Japanese roots cultivates and produces in accordance with the highest quality standards in China. The tea extract Sunphenon TH30 provides relaxing and stress-reducing effects, and is perfect for hot and cold drinks, and for enriching dairy products or even mint sweets.

Protein + Omega 3: Chia protein

Taiyo has expanded its chia range with a micro-fine ground chia protein of the highest purity, and concepts for ready-to-drink shakes based on water, milk or milk alternatives. Chia protein no longer falls under the Novel Food Regulation and is approved for use in yoghurt, chocolate, juices, isotonic thirst-quenchers and instant drinks. The omega-3 booster is also an interesting new ingredient for raw vegetable bars, containing not only high-quality protein but also dietary fibres.

Other attractions on the Taiyo stand include premium quality Matcha tea powder, the delivery system SunActive® magnesium and zinc, and also SunAvia, a highly bioavailable formulation that makes the immune-enhancing nutrients of the Ayurvedic Indian gooseberry available for dairy products, among others.

INGREDIENT TO UNVEIL NEW CLEAN LABEL REPORT AND PROTOTYPES AT FIE 3-5 DECEMBER, PARIS

Ingredion will launch an exclusive preview report on one of the food and beverage industry’s longest mega trends – clean label – at this year’s Food Ingredients Europe (FIE), Paris. The preview report looks at how the clean label trend has evolved and reflects on what this now means for manufacturers, and the steps the industry should be taking to reflect consumers new found expectations.

Insights from Ingredion’s seventh ATLAS Proprietary Consumer Research will also be unveiled as Constantin Drapatz takes to the stage at the Fi Conference Discover Centre (booth 7A25) on the opening day of the show (11-11:30am). His talk ‘What influences consumers to buy into the clean label megatrend?’ will address the trends and influencing factors that prevent or enable a switch to clean label and also make consumers switch brands.

Delegates will be able to sample a suite of seven delicious recipe prototypes inspired by evolving consumer food and beverage trends including clean label, street food, health and wellness, hidden vegetables and plant power. Designed specifically for the event, these unique recipes show food and beverage manufacturers how they can convert influential consumer trends into indulgent eating experiences that deliver business opportunities. Demonstrating the company’s dedication to trend-connected innovation, Ingredion’s team of culinologists will freshly prepare a menu of dishes that balance both consumer and manufacturer needs. Formulated with Ingredion’s highly functional innovations including the recently launched NOVATION® Lumina clean label starches, rice flours, pulse-based proteins, starches and food systems, the menu features:

• An indulgent celeriac veloute with root vegetables
• Clean label carrot, orange and ginger soup
• Velvety vegan cheese board
• Virtuous vegetarian steamed bao bun
• Creamy yoghurt and fruit pot
• Rich raspberry vanilla tart and creamy chocolate cherry tart
• A frozen chilli masala flavoured dessert.

Charlotte Commarmond, Senior Director - Marketing and Innovation, Ingredion EMEA, says: “The modern shopper is on the hunt for on-trend food and beverage products that are delicious, healthy and convenient. As consumer needs evolve and new trends emerge, food manufacturers face the constant challenge of adapting alongside them to satisfy an ever-diverse range of diets and lifestyle choices, while maximising efficiencies and speed to market.

“Clean label in particular has an enduring appeal and is now front of mind for today’s modern consumers – which is why we’ll be using our 25 years+ experience and research to uncover the latest insights helping the industry to meet, and even anticipate, consumer demand in our exclusive report and conference presentation.

“With a rising number of consumers demanding more ‘natural’ and fewer processed products on the supermarket shelves, this represents a growing opportunity for manufacturers to meet consumer trends whilst bringing business benefit. Our technical experts look forward to meeting with delegates to discuss what they can do to build consumer confidence and trust, while adapting their products to reflect an evolving and ever-diverse range of diets, trends and lifestyle choices.”

Learn more about the business benefits of clean label in Ingredion’s talk, ‘What influences consumers to buy into the clean label megatrend?’, 3 December, Fi Conference Discover Centre (booth 7A25) at 11-11:30am. Delegates can also visit Ingredion on stand 62110 to taste any of the delicious on-trend prototypes and pick up a copy of the preview report.

To find out more about Ingredion’s solutions please visit their experts on stand 62110. To schedule an interview with an Ingredion representative at the event, please contact ingredionpress@steinias.com

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- Enhanced working memory
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Learn more at www.mgcpqq.eu and visit Mitsubishi Gas Chemical at Fi Europe & Ni 2019 (Paris, 3-5 Dec. 2019), Stand 7P70.

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