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From the Editor

Trade War Has Supplement Industry on High Alert

The U.S. and China trade war boiled over in July as the two countries levied billions of dollars’ worth of tariffs against each other. The U.S. food and dietary supplement industries, which heavily import ingredients from China, have been on high alert. Nutritional Outlook spoke with Scott Steinford, executive director at large of the CoQ10 Association (Salt Lake City, UT), about how the fallout may hit consumers in both countries.

Steinford estimates that up to 90% of the dietary supplement ingredients used in U.S.-manufactured products come from China. Steinford knows firsthand how the brewing trade war threatens some of the dietary supplement market’s major ingredients. Take CoQ10. Much of the U.S. CoQ10 supply comes from China. CoQ10 came close to the tariff fire on April 4 when the U.S. released its initial list of proposed tariffs against China. CoQ10 was one of the ingredients on the list. Steinford says the CoQ10 market was relieved when the Office of the United States Trade Representative released its final tariff list on June 15. CoQ10 was removed from the list.

“The CoQ10 ingredient manufacturers and retailers were caught off guard to the possibility CoQ10 would be considered for tariff inclusion,” Steinford says, describing how his association submitted comments voicing objection to the April 4 list. In its comments, the association stated, “Tariffs on supplement ingredients in general do not have a positive impact on either the U.S. economy or consumer. Most tariff considerations support the return or protection of U.S. jobs. Neither of those issues can apply to supplements, as there is no U.S. industry for most ingredients.”

In the case of CoQ10, Steinford says the U.S. only manufactures approximately 10% of the total CoQ10 in the market. U.S. CoQ10 is “priced from 100% to 1000% above the Chinese-produced material,” he says. As such, “a 25% tariff would not likely result in great consumer adoption of the U.S.-manufactured material.”

“It would be wonderful to definitively believe that CoQ10 would not appear on any future lists,” he adds. “However, without clear understanding to what logic led to its inclusion on the tariff list, it is impossible to predict future logic.”

The future is even less clear for other ingredients. Shortly after the initial $34 billion round of imposed tariffs, the Trump administration published a list of an additional $200 billion worth of Chinese goods it said could face an additional 10% tariff. On the proposed list, as of press time: Pork and fish; various vegetables (soybeans, carrots, peas, chickpeas, etc.); various fruits (mangosteen, guava, strawberries, bananas, coconut, etc.); various nuts (peanuts, almonds, walnuts, chestnuts, pistachios); oats, corn, quinoa, and rice; inulin; other herbs and botanicals (seaweed, ephedra, ginseng); cod liver oil; xylitol, cane sugar, and beet sugar; numerous minerals (calcium, sodium, potassium, zinc, magnesium); phospholipids; choline; and more.

Steinford points out the long-term negative effects of a trade war with China on the U.S. supplements industry. In addition to all of the other topline concerns a trade war brings, Steinford says, Chinese consumers, who generally largely prize U.S. dietary supplement products, could sour on U.S. exports.

Both Chinese and U.S. consumers will certainly suffer from increased costs. If CoQ10 had been the subject of final tariffs, Steinford says, “the most likely impact a tariff on CoQ10 could provide would be a reduction of the total CoQ10 market and an increase to consumer pricing.”

Ultimately, he says, “in the case of CoQ10, the supplement most recommended by cardiologists, the increased cost will potentially impact the lives of people who depend on the ingredient regardless of the country of origin.”

CoQ10 may have escaped the tariff war for now, but Steinford says: “The current trade rhetoric between the U.S. and Chinese governments is only the surface of trade discussions that are carried out on behalf of the two nations’ economies. The tone and tenor set by the Administration’s words and actions affect the outcomes and attitudes of the actual conversations leading to transactions. It remains to be seen how the current events impact future outcomes, but it would seem advisable both sides should work towards mutually beneficial actions and words.”

Jennifer Grebow
Editor-in-Chief
Discerning customers expect more out of their supplements. Sometimes fewer ingredients with a better delivery is just right. Vcaps® Plus capsules are the premier vegetarian clean label solution for the health and nutrition markets. These capsules deliver superior performance with only two simple ingredients. With a glossy, high-end finish, these capsules are Non-GMO Project Verified, vegetarian, vegan, kosher and halal certified and offer a clear path forward to broad market acceptance. To learn more about Vcaps® Plus capsules solutions for liquid and powder concepts, visit capsugel.com.
FDA Adds Inulin and Seven Other Fibers to Legal Dietary Fiber Definition

Suppliers of inulin and certain other non-digestible carbohydrates can breathe a sigh of relief. After waiting two years to hear whether or not FDA would include these ingredients in the agency’s new legal definition of a dietary fiber, these companies learned on June 15 from FDA Commissioner Scott Gottlieb, MD, that the agency will in fact consider these ingredients dietary fibers, meaning the ingredients can be listed as dietary fibers on the Nutrition Facts label and be included when calculating the total amount of fiber per serving declared on the Nutrition Facts label.

When FDA announced in 2014 that it was revising the Nutrition Facts label, the agency made numerous changes, including adding a requirement to list total sugar content; requiring dual-column labeling for larger serving sizes; and updating Daily Values. Another change the agency made was establishing, for the first time, an official definition for dietary fiber. In May 2016, the agency published a final rule for the Nutrition Facts label, which defined a dietary fiber as either:

1) non-digestible soluble and insoluble carbohydrates (with three or more monomeric units) and lignin that are intrinsic and intact in plants (such as whole grains and fibers naturally present in fruits and vegetables), and
2) isolated or synthetic non-digestible carbohydrates (with three or more monomeric units) determined by FDA to have physiological effects that are beneficial to human health—with emphasis on the fact that companies have to prove to FDA that their ingredients have benefits for human health. As Gottlieb said in his June 15 announcement, “Before the FDA established this definition, manufacturers could declare synthetic or isolated fibers as fiber on the label without evidence that these fibers had beneficial physiological effects on the body.”

When FDA released the final definition for dietary fiber in May 2016 as part of its Nutrition Facts label final rule, the agency authorized a list of seven non-digestible carbohydrates that the agency said were included in the list of dietary fibers. Those seven were: beta-glucan soluble fiber, psyllium husk, cellulose, guar gum, pectin, locust bean gum, and hydroxypropylmethylcellulose.

Suppliers of other non-digestible carbohydrates not on the shortlist, like the increasingly popular insoluble and prebiotic fiber inulin, have been left to worry for years that FDA would bar their ingredients from being classified as dietary fibers. During the past two years, many of these fiber suppliers have been submitting citizen petitions to FDA, imploring the agency to include their fibers in the dietary fiber list, and submitting evidence to demonstrate that their ingredients meet FDA’s requirement for “physiological effects that are beneficial to human health.”

On June 15, Commissioner Gottlieb announced the agency has approved eight new, additional fibers that can be counted as fiber on the Nutrition Facts label and the Supplements Facts label. These eight are:

1. Mixed plant cell wall fibers (a broad category that includes fibers like sugar cane fiber and apple fiber, among many others)
2. Arabinogalactan
3. Alginate
4. Inulin and inulin-type fructans
5. High-amylose starch (resistant starch 2)
6. Galactooligosaccharide
7. Polydextrose
8. Resistant maltodextrin/dextrin

Gottlieb said the agency has already responded positively to citizen petitions from companies requesting approval for these eight fibers. Gottlieb said these eight approvals “are based on a careful review of the scientific evidence suggesting that each of these additional fibers has a physiological effect.”

A new FDA guidance document on dietary fiber FDA released on June 15 states likewise: “Based on our review of the citizen petitions, comments that we have received, and our independent evaluation of the available scientific data, we intend to propose to add eight new isolated or synthetic non-digestible carbohydrates because we have tentatively determined that they have physiological effects that are beneficial to human health.”

The agency also said it would be looking to amend its existing regulations to include the
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new fibers: "We intend to exercise enforcement discretion for the declaration of dietary fiber, pending completion of rulemaking regarding revising our regulations."

The agency did not approve all of the petitions it received. Commissioner Gottlieb said, for instance, "The FDA also issued two denials to petitioners because we did not agree that the evidence submitted met the scientific standards as described in our March scientific guidance." (In February of this year, the agency published industry guidance describing the agency’s thinking in terms of what kind of scientific evidence the agency is looking for when companies, via citizen petitions, try to show that their fibers are beneficial to human health.) Gottlieb said FDA is still in the process of reviewing more citizen petitions and that "we’re also working expeditiously to complete our review and responses for the other petitions that we haven’t yet responded to."

He added, "We recognize the importance of providing timely responses so that food makers have certainty around their manufacturing decisions. We also welcome the submission of additional petitions in the future as science emerges and as new ingredients are identified. Our expectation is that we will continue to evaluate additional dietary fibers on a rolling basis, and we expect that additional fibers may be recognized in the future."

These changes come on the heels of FDA’s official announcement in May that it has extended the compliance deadline for the new Nutrition Facts label regulation. Manufacturers with $10 million or more in annual food sales have until January 1, 2020, to comply with the new law; while smaller manufacturers have until January 1, 2021 to comply.

Fiber Suppliers Celebrate

Inulin supplier Sensus (Lawrenceville, NJ) celebrated the news in an official statement: “Sensus, manufacturer of Frutafit and Frutalose chicory root fibers, welcomes the announcement that the U.S. Food and Drug Administration recognizes inulin-type fructans derived from chicory root as dietary fiber for the new Nutrition Facts label.” Sensus had submitted a joint citizen petition to FDA together with inulin suppliers Beneo (Manheim, Germany) and Cosucra-Groupe Warcoing (Belgium).

Sensus America president Carl Volz added, “The FDA’s inclusion of chicory root fiber as a dietary fiber in its new food labeling regulations allows our customers to continue marketing their products as sources of dietary fiber and to continue to use chicory root fiber as a tool to reduce calories and added sugar.”

Other fiber suppliers celebrated the good news in public statements.

Anke Sentko, vice president of regulatory affairs and nutrition communication at Beneo, supplier of Orafti chicory root inulin and oligofructose, said: "Given the ever-growing body of research in favor of our fibers, we never doubted this outcome but are obviously delighted with the result of the latest ruling from the FDA. This decision means that consumers can continue to access great-tasting fiber naturally sourced from chicory roots, without any labeling confusion. The FDA ruling has further reinforced that Beneo’s chicory root fibers, including Orafti inulin and oligofructose, are a beneficial way for customers to improve the nutritional quality of their products and to help consumers bridge the fiber gap."

Greg Dodson, vice president, fiber, for ADM/Matsutani LLC (Chicago; the joint venture between ADM, Matsutani Chemical Industry Company, Ltd., and Matsutani America Inc.), said of the company’s soluble dietary fiber Fibersol digestion-resistant maltodextrin: "ADM supports the FDA’s efforts to provide consumers with nutritional labeling information that is honest, clear, and relevant. We remained confident in the totality of scientific evidence that shows Fibersol’s physiological benefit to human health and its classification as a dietary fiber. With the FDA’s decision, food and drink companies can be reassured that their products using Fibersol can continue to be labeled as containing dietary fiber and will meet the compliance date for the Nutrition Facts labeling final rule."

Yutaka Miyamoto, executive vice president, Matsutani America, added: "Fibersol has a large body of clinical science behind it. The citizen petition for Fibersol presented a multitude of scientific studies conducted on Fibersol, including: postprandial blood glucose response, postprandial blood triglycerides response, and non-English language journals for the FDA’s review and determination of Fibersol as a dietary fiber.”

Andrew Taylor, president ICD, Tate & Lyle (Chicago), supplier of Promitor soluble fiber (a resistant maltodextrin) and Sta-Lite polydextrose, both now on the approved list, said: "Due to extensive clinical research on our fibers of their proven physiological benefits, we were confident that our fibers would meet the new requirements, and are delighted that this has now been confirmed by the FDA." The company’s PromOat beta-glucan was already on FDA’s original list of approved non-digestible carbohydrates. The company says that, following the new approvals for Promitor and Sta-Lite, “Tate & Lyle’s full fiber portfolio is accepted under the FDA’s new fiber definition.”

Grain Mills (Eden Prairie, MN) said its oat fiber ingredients are now recognized as a dietary fiber, under the “mixed plant cell wall fibers” category. The company said it utilizes a proprietary, chemical-free, environmentally friendly processing technique for all of its oat fiber ingredients, including what it said is the market’s first chemical-free and organically certified oat fiber. "In today’s era of demand for transparency and traceability, our oat fiber has always checked all the boxes for discerning consumers,” said Chris Kongsores, executive vice president of Grain Mills, in a press release. "The recent change in FDA regulations further strengthens our position as a market leader in the supply of organic, chemical-free, clean-label dietary oat fiber.”

Ingredion (Westchester, IL) confirmed that three of its fibers meet FDA’s new definition: 1) inulin-type fructan NutraFlora short-chain fructooligosaccharide (scFOS), 2) Hi-Maize 260 high-amylose maize resistant starch 2, and 3) BioLigo GL 5700 galactooligosaccharide (GOS). "Ingredion’s fibers help to enable diverse benefits and are suitable for applications ranging from beverages to dairy to bakery to snacks,” said Maria Stewart, PhD, director of global nutrition R&D, Ingredion Inc., in a press release. "NutraFlora short-chain fructooligosaccharide, Hi-Maize 260 resistant starch, and BioLigo LG 5700 GOS can now continue to bring consumers the benefits of fiber in convenient, everyday foods.”
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NEWS

Does FDA’s Epidiolex CBD Drug Approval Threaten Legal Status of CBD Supplements?

FDA approved the first drug made from cannabidiol (CBD), a derivative of the hemp plant (Cannabis sativa), on June 25. Epidiolex, the drug from GW Pharmaceuticals, is a treatment for severe forms of epilepsy, and it has also long been cited as a potential threat to whether FDA considers CBD dietary supplements legal.

Nutritional Outlook sought the opinion of a few industry experts on whether, in their opinion, the Epidiolex drug approval further threatens the legal status of CBD supplements.

Epidiolex Approved

The new drug, Epidiolex, comprises CBD, a chemical compound in cannabis with potential health benefits but that does not contain tetrahydrocannabinol (THC), the compound in marijuana that causes intoxication. FDA says that this is the first time that it has approved a drug specifically targeting patients with Dravet syndrome, a rare form of epilepsy that begins in infancy.

Epidiolex is a liquid solution that is approved to treat not only Dravet syndrome, but also Lennox-Gastaut syndrome, another rare and severe form of epilepsy. Both genetic conditions are characterized by frequent seizures and reduced motor skills, including sitting and crawling. Patients with these conditions often require significant assistance with daily living. Epidiolex is now approved for patients two years old and above.

In order to obtain FDA approval for this specific drug targeting two particular medical conditions, GW Research Ltd. evaluated Epidiolex’s efficacy and safety in three randomized, double-blind, placebo-controlled clinical trials. The trials included 516 patients with either Lennox-Gastaut syndrome or Dravet syndrome. In those studies, Epidiolex, taken with other medications, was shown to be effective in reducing the frequency of seizures when compared with placebo. Some of the side effects of treatment with Epidiolex included, among others, sleepiness, lethargy, diminished appetite, rashes, and infections.

Upon reviewing the research data for Epidiolex, FDA said it granted priority review designation for its application. FDA also granted fast-track designation for Epidiolex for Dravet syndrome. Finally, FDA granted orphan drug designation for Epidiolex for both Dravet and Lennox-Gastaut syndrome indications. Orphan drug designation gives special status to a drug or biological product to treat a rare disease or condition upon request of a sponsor.

What about Supplements?

The legal status of CBD as a dietary supplement ingredient has been mired in gray area for some time. The legality of CBD as a supplement ingredient has been, according to some, uncertain in part because of two existing Investigational New Drug (IND) applications that GW Pharmaceuticals filed years ago for Epidiolex as well as its other CBD drug, Sativex. According to section 201(ff)(3)(B)(ii) of the Food, Drug, and Cosmetic Act, if FDA has already authorized an ingredient for investigation as a new drug “for which substantial clinical investigations have been instituted and for which the existence of such investigations has been made public, then products containing that substance are outside the definition of a dietary supplement.” FDA also quoted this section of the FD&C Act in warning letters the agency sent in February 2016 to CBD companies the agency said made unproven and unlawful health and drug claims for products marketed as dietary supplements.

On the other hand, hemp advocates argue that CBD was marketed as a dietary supplement ingredient prior to when FDA granted GW Pharmaceuticals’ IND applications, which would make CBD eligible to be a dietary supplement ingredient.

FDA Commissioner Scott Gottlieb, MD, announced the Epidiolex approval on June 25 in a press release and added that FDA is “prepared to take action when we see the illegal marketing of CBD-containing products with serious, unproven medical claims. Marketing unapproved products, with uncertain dosages and formulations can keep patients from accessing appropriate, recognized therapies to treat serious and even fatal diseases.”

Nutritional Outlook interviewed Kristi Wolff, a partner in the advertising and food and drug law practice of Kelley Drye & Warren LLP, on whether the Epidiolex FDA drug approval in any way jeopardizes the status of CBD as a dietary supplement ingredient. Wolff noted that in Gottlieb’s June 25 statement, the commissioner seems to
focus attention mostly on CBD products making unauthorized health claims.

“In its press release regarding Epidiolex, FDA appears to re-state its position that CBD is not a dietary ingredient but also possibly indicates that its intent with regard to enforcement is focused on instances where CBD is marketed with disease treatment claims,” she said. “Although opposition to CBD as a supplement generally could be understood from prior warning letters, FDA did not state in its announcement that it intends to expand its enforcement on CBD marketed as a dietary supplement absent any therapeutic claims.”

She added, “Whether this is a manner of indicating that FDA is exercising enforcement discretion without saying as much remains to be seen.”

Wolff said she doesn’t believe Epidiolex’s approval will “impact the existing arguments for legality of hemp-derived CBD, which focus on the long history of hemp being used for a variety of products in the U.S.”

The CBD and hemp industry recently celebrated a major victory: the Congressional passage of the Farm Bill, also in June. The bill legalizes, for the first time, growing commercial hemp on U.S. soil. Hemp will now be removed from Schedule I of the Controlled Substances Act, clearly separating it from marijuana, and will become an agricultural crop in the U.S. Legitimization as a commercial agricultural crop means that hemp farmers can apply for research grants and assistance from federal bodies like USDA and can also apply for crop insurance coverage. Hemp growing will be regulated by the states.

The Hemp Farming Act of 2018, which was rolled up into the Farm Bill that ultimately passed, had strong bipartisan support. “Given the existing momentum in Congress to discuss issues around hemp and cannabis legalization, it seems most likely that hemp’s legal status will be clarified in the relatively near future,” Wolff said.

Hemp advocacy group the U.S. Hemp Roundtable appears to be confident in CBD’s legal standing. On its website on June 26, the group, along with its FDA legal counsel law firm Amin Talati Upadhye, stated, “Fundamentally, Epidiolex’s approval has no legal impact on the sale of hemp-derived CBD.”

Like Wolff, the U.S. Hemp Roundtable pointed out that FDA has directed its enforcement effort thus far against companies making unproven, unlawful health claims. “The Roundtable applauds the FDA’s efforts to target bad actors in the industry who undermine legitimate hemp-derived products by making unproven claims,” the group said.

The U.S. Hemp Roundtable maintains the CBD supplement industry’s opinion that CBD was marketed as a dietary supplement ingredient prior to the GW Pharmaceuticals IND application.

“The arguments related to the marketing of hemp-derived CBD as a dietary supplement remain the same as before FDA’s approval of Epidiolex,” the group’s website states. “[Amin Talati Upadhye] contends that hemp-derived CBD was marketed as a food or dietary supplement prior to the institution of substantial clinical investigation of Epidiolex that was made public by GW Pharmaceuticals, and even prior to the date on which FDA authorized the article for investigation as a drug. This would mean that dietary supplement versions of hemp-derived CBD would be permissible.”

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Every year, three million children under the age of five die of malnutrition, accounting for half of all deaths of children in that age group. Malnutrition within the first 1,000 days of life also leads to stunted growth, cognitive impairment, and other developmental problems. According to Swiss NGO Humanium (Versoix, Switzerland), the problem of malnutrition is not a result of resource unavailability, but rather, the unequal distribution of resources. In other words: childhood malnutrition could be prevented through better resource allocation. One organization, Vitamin Angels (Santa Barbara, CA), is proving this to be true.

Howard Schiffer, founder of Vitamin Angels, has always had a passion for helping children. After working as a midwife in his early 20s, Schiffer transitioned into the nutrition and natural products industry where he learned how to create and market nutritional supplements. What Schiffer didn’t realize at the time was that this career move would be the start of a new social change initiative that would become his passion for 25 years of his life. Over time, he would gain the skills and connections necessary to distribute life-saving vitamins and medications to over 70 million children in 74 countries.

But he didn’t do it alone. For years, Schiffer has relied on the generous support of donors, employees, volunteers, nutrition and dietary experts, and companies who were interested in making a social impact.

Vitamin Angels is changing the way nutrition companies give back.

BY MIKE STRAUS
supplement industry insiders, and over 1,200 partner agencies all over the world. It was the strength of Schiffer's vision and his motivation to make an impact that attracted supporters to Vitamin Angels. And now, more than 20 years later, it's this same common sense of mission and vision that is making the difference between life and death for millions of children all around the world.

How It Started: An Earthquake, a Mortgage, and a House Fire

Over the course of his 14-year career in the natural products industry, Schiffer developed not only promotional and marketing skills, but also an extensive network of industry contacts that included raw materials suppliers, manufacturers, distributors, and retailers. Eventually, Schiffer started looking for a new challenge.

"I was in my 40s, and the work wasn't fulfilling anymore, and it became more of a business than an aspiration," Schiffer says. "I kept thinking, 'I should be able to do something with all of these connections.' And then later, in 1994, an earthquake hit Northridge, California. At that point in time, I owned a vitamin company. I got a call from a relief agency who wanted vitamins for farmers' families who had been displaced by the earthquake."

Schiffer placed a few calls to his industry contacts, and soon enough, a crate full of vitamins was on its way to Northridge. But rather than simply go back to business as usual, Schiffer needed to know more. A debriefing session with the agency he'd assisted illustrated the immense need for vitamins all around the world—as well as the positive impact vitamins can have.

"Vitamins are recognized as one of the greatest public health inventions of the last 30 years. When someone told me that just two doses of vitamin A can prevent childhood blindness due to a vitamin A deficiency, it floored me. At the debrief, the agency told me that I have no idea how many vitamins they need. So, I just started calling up people I knew in the industry."

Schiffer's calls paid off. All of his contacts told him that donating vitamins and supplements was an initiative they'd always wanted to start, but a lack of know-how was a significant barrier. That's when Schiffer realized he had the skill set to bridge the gap. Within three weeks, Vitamin Angels was up and running.

Schiffer had found new meaning. In its first year, Vitamin Angels provided 100,000 vitamins to people in need. And armed with a new sense of mission, Schiffer pushed on.

When Vitamin Angels' rapid growth posed a challenge, Schiffer took out a third mortgage on his home to fuel the organization. When he lost that home in 2009 due to a forest fire in Santa Barbara, Schiffer and
his team continued their work. They saw the need, and they refused to let circumstances dictate how and when they were able to help others:

“When we started 24 years ago, we’d often hit a point in the year where we didn’t know where the money was going to come from,” Schiff er says. “We went from serving two million children in 2005 to 70 million this year. We’ve constantly had to backfill our capacity—we had to create whole new divisions for logistics, training, and programming. But you can see the dedication our employees have. Everyone is all in.”

The Vitamin Angels Revolution: A New Approach to Charitable Giving

Schiff er says that he structured Vitamin Angels with a sales- and marketing-focused business model rather than a standard non-profit model. Sales and marketing is his professional background, he says, and it’s this different focus that has enabled Vitamin Angels to be so effective in its philanthropic efforts.

“We realized early on that the stereotypical charity model wouldn’t work for us,” he explains. “With typical charities, you go to a donor and ask them to support your work. That model can be effective, but only on a limited scale, and it comes with a variety of inherent problems. I didn’t want to spend my days filling out countless reports, but if I took money from governments or foundations, that’s the only thing I would be doing, all day, every day.”

Schiff er knew that he wanted to spend his time on the ground in the villages that Vitamin Angels serves. So, he established a corporate partnership program that weaves Vitamin Angels into the culture at its partner organizations.

“It’s a qualitatively different model, and there’s a much bigger ask involved. Businesses are looking for partnerships with nonprofits that they can weave into the fabric of their culture in a deep way. (RED) did something similar with the (Product)RED campaign,” he says.

Schiff er is referencing (Product)RED, a charitable initiative founded by Bobby Shriver of the ONE Campaign and U2 frontman Bono. The campaign involves licensing the (Product)RED logo and branding to companies that then manufacture and sell stylized (Product)RED versions of their products. Half of the proceeds from (Product)RED are donated to the Global Fund, while the brand partner keeps the remaining half.

The Vitamin Angels approach isn’t just about charity; it’s about corporate social responsibility. Vitamin Angels engages with for-profit businesses to work together on marketing and human resources initiatives in addition to charitable giving. Rather than simply acting as a typical charity, Vitamin Angels encourages corporate social responsibility within the nutrition industry.

Expanding Reach with a Sense of Mission

Schiff er’s dedication to the Vitamin Angels mission is contagious, and thanks to a growing sense of enthusiasm for philanthropic projects in the supplement industry, a number of partners have come on board to support Vitamin Angels.

Sharon Wong, family owner and board of directors member at NOW Foods (Bloomingdale, IL), says that NOW Foods’ owners were moved early on to support Vitamin Angels by donating children’s multivitamins. “NOW has been a supporter of Vitamin Angels since 1994,” Wong says. “We’re one of two Founding Supporters. After Vitamin Angels launched their vitamin A program, we transitioned to provide large quantities of those supplements.”

Gencor (Irvine, CA) is also an ardent supporter of the Vitamin Angels mission, with an eight-year history of providing Vitamin Angels with resources. Gencor president Jith Veeravalli says that Gencor started with financial donations, but in 2014 the organization helped establish an independent NGO in India that handles Vitamin Angels activities in the country. The nonprofit organization, called OPEN (Operation Essential Nutrients), is a joint project between Vitamin Angels and Gencor.

“So far, we’ve been funding the overhead costs in India directly,” Veeravalli says. “This year, we’re expecting to give vitamin A and
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In addition to Vitamin Angels, there are a variety of other philanthropic initiatives through which nutrition industry insiders can help address real problems and improve lives around the world. Corporate social responsibility isn’t one-size-fits-all, and philanthropy isn’t a zero-sum game. Here are just a few of the many nutrition industry philanthropic initiatives that are helping those in need.

Teaching Children Proper Nutrition Habits

Cargill (Minnetonka, MN) is demonstrating its commitment to philanthropy in a variety of ways, with over $50 million in charitable giving making an impact in 54 countries in 2017 alone. One of Cargill’s primary areas of giving is in nutrition education for children. In partnership with Minneapolis Public Schools, Cargill has created Junior Iron Chef, a nutrition and meal prep education program for area students modeled after the popular “Iron Chef” television show. Each year, 16 middle school and high school students team up with Minnesota-based chefs to compete in an Iron Chef-style cook-off. Students receive education around preparing healthy meals from scratch.

Eliminating World Hunger with Science and Logistics

World hunger is a multifaceted issue, but it’s one that the team at Kemin (Des Moines, IA) is working hard to solve. Ceci Snyder, RD, global manager of vision products for Kemin, says that the company was founded by a family with a strong belief in corporate social responsibility.

“The Nelsons, who started and still run Kemin, are involved in a variety of charitable organizations,” Snyder says. “We encourage our employees to personally donate to World Food Day through our Share the Meal program.”

Kemin is also a sponsor of the World Food Prize, which was started by Nobel Peace Prize winner and Iowa food scientist Norman Borlaug. The World Food Prize is a $250,000 award that is given to an individual who has advanced human development by improving the quality, quantity, or availability of food in the world.

Helping at Home: Hot Meals for Food Bank Users

Philanthropy knows no borders, but the need for philanthropic initiatives is just as urgent in the United States as it is overseas. After witnessing families living in poverty and hunger in Texas and New Jersey, Megan Shea and Chip Heim were moved to establish The Soulfull Project (Camden, NJ).

The Soulfull Project strives to provide wholesome food to those who need it most. The organization sells prepackaged hot cereal products in grocery stores and online. For every cup or bag of cereal sold, The Soulfull Project donates a serving of its Four Grain hot cereal to a local food bank. The Soulfull Project has donated 690,000 servings of hot cereal to date, and is aiming to donate one million servings by the end of next year.

Supplementing Dairy-Deprived Diets through Project Leche

Kerry Group (Tralee, Ireland) Sustainability Communications Manager Pádraig Mallon says that Kerry’s flagship philanthropic projects span a variety of areas, including environmental stewardship, sustainable nutrition, promoting diversity, and building communities.

“We’re currently engaged in the First 1000 Days of Life program, which supports prenatal nutrition,” Mallon says. “The initial stage of that project was completed in 2016, and we’re currently in discussions about what the next stage will look like.”

Kerry is also involved in initiatives like Sustainable Vanilla and The RAIN Project, but one initiative has a special connection to the company: Project Leche. Project Leche is a joint initiative between Kerry and the United Nations World Food Programme, one that emphasizes sourcing local ingredients in order to provide a market for local farmers.

“Kerry started in dairy,” Mallon says. “Our philanthropic initiatives are much more than just the provision of supplies; we’re also providing expertise. We have people on the ground in Honduras. We’re helping dairy farmers find ways to improve the quality and sustainability of Honduran milk.”
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deworming medicine to 14 million children. We’re also rolling out a new initiative to give neonatal supplements to expectant mothers.”

But Gencor and NOW Foods aren’t the only companies that have been moved to work with Vitamin Angels. Companies like Sabinsa (East Windsor, NJ), Pharmachem (Kearny, NJ), Lonza Consumer Health & Nutrition (Basel, Switzerland), Lycored (Secaucus, NJ), AIDP (City of Industry, CA), and HP Ingredients (Bradenton, FL) have all made generous financial and in-kind donations to help Vitamin Angels fund its operations and procure vitamins.

DSM ( Parsippany, NJ), a longtime Vitamin Angels supporter, for instance, is donating raw materials for vitamin A production as well as technical services. “We send teams of DSM employees to volunteer in the field so they can see firsthand the impact the program has,” says Liz Calvez, external communications manager at DSM.

Saumil Maheshvari, marketing analyst for Orgenetics Inc. (Brea, CA), says that in addition to providing financial support, Origenetics is currently devising new ways of supporting Vitamin Angels’ work.

HP Ingredients CEO Annie Eng said in May that the company recently donated to support Vitamin Angels’ new Global Prenatal Campaign, whose goal is to “eliminate newborn mortality around childbirth due to vitamin deficiency disease by 2030.” Eng said her company chose to contribute some of its own growing sales revenue to the charitable organization, noting that “it makes sense to give back to the number-one charity that not only promotes goodwill throughout the globe—but actually saves lives.”

Schiffer says that it’s the scope of the Vitamin Angels mission that attracts supporters. “I always dream big,” he says. “When I created our goal for prenatal vitamins, I said, ‘Let’s eliminate infant mortality around childbirth due to vitamin deficiency disease by 2030.’ We thought we had a plan, but it turns out, 192 million pregnant women need help every year. So now we have a goal to reach at least 50 million of them by 2030. I think people are drawn to Vitamin Angels because we have a big vision.”

New Horizons: Prenatal Nutrition Goes Global

The prenatal campaign that Schiffer references is a recent initiative that is already gaining traction. Vitamin Angels’ Global Prenatal Campaign launched at the Natural Products Expo West trade show in March 2018, and Schiffer says he’s already seeing a high level of corporate support for the initiative.

“The goal is to eliminate newborn mortality due to vitamin deficiencies by 2030. We had some great support to get us off the ground, and we’re working on getting more support for it this year,” he says.

The campaign’s initial launch event, on March 8, 2018, brought together senior executives from over 60 natural products companies and yielded over $300,000 in donations. The funds will be used to help meet Vitamin Angels’ program commitments.

“Once we reach a child, we’re committed for at least five years,” Schiffer says. “That’s why we have to buy so much more product now; we can’t wait and hope that we’ll have the product donated.”

The organization is working hard to ensure it can reach even more children and mothers, with a variety of internal improvements underway. Vitamin Angels recently produced an e-learning training program for its volunteers and partner agencies, and is building up its capacity for data monitoring and analysis.

For Schiffer, though, the mission always comes first.

“When we engage with companies, we aren’t asking for a donation. We don’t just want a check. We’re asking to be woven into the fabric of the organization. A lot of our partners tell new recruits that they work with Vitamin Angels, which is a big HR draw for the Millennial workforce.”

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Globally, the nutraceutical industry is worth more than $200 billion. It is a dynamic industry with a growing rate of large-scale mergers and acquisitions. For example, in August 2017, the private equity firm HGGC acquired dietary supplements manufacturer Nutraceutical International Corporation in a transaction valued at approximately $446 million. A few months later, Innophos Holdings purchased ingredient supplier Nutrigenesis for $28 million.

Intellectual property rights are an important consideration in the nutraceutical industry. Investment in intellectual property rights, such as patents, trademarks, and trade secrets, both protects nutraceutical innovators from competitors and makes companies more valuable and attractive to investors.

Apart from protecting their own intellectual property, nutraceutical companies also should be aware of the risk of having the intellectual property rights of others asserted against them. In 2013 alone, ThermoLife International filed 117 patent infringement suits. Similarly, the Tawnsaura Group brought nearly 100 patent infringement suits over a 13-month period. Thus, prior to launching a new product, a nutraceutical company should consider: 1) the types of

A primer on patents, trademarks, and trade secrets in the nutraceutical industry

BY ARI FEINSTEIN, JASON JARDINE, AND CALEB BATES OF KNOBBE MARTENS
Importantly, not all inventions can be patented. Abstract ideas, natural phenomena (including natural products), and laws of nature cannot be patented.

Patent

There are many different ways to cover a soon-to-be-launched nutraceutical product with patent protection. Patents may be obtained on a new chemical compound or a new use of a known compound or a new combination of known compounds. Processing or manufacturing techniques may also be patented. Patents for new and non-obvious compositions, formulations, methods of use, or manufacturing techniques are referred to as “utility patents.” A “design patent” may also be obtained to cover the ornamental features of a new and non-obvious design—for example, for bottles or other packaging.

Before sharing information with anyone outside the company (who has not signed a non-disclosure agreement), the company should consider filing a “provisional” patent application. Provisional applications are not required but may provide potential benefits to innovators. In particular, provisional applications allow a company to hold its place in line for up to 12 months while determining whether there is sufficient market demand for the innovation through public disclosures that could impact its ability to obtain patent rights. This 12-month period also provides time for additional research and development that may be needed. Within 12 months of filing, a provisional application must be converted to a regular “non-provisional” patent application. Filing a provisional application can also be less expensive than a formal non-provisional patent application, which must meet certain requirements. In contrast to a non-provisional application, a provisional application could consist solely of a research proposal or a presentation for potential investors.

Once a non-provisional patent application is filed, the U.S. Patent & Trademark Office’s (“PTO”) inquiry into whether the invention is patentable will begin. Although this process may be accelerated with the payment of certain fees, typically it will take several years before the negotiation between the PTO and an applicant is complete, ideally resulting in an issued U.S. patent.

Importantly, not all inventions can be patented. Abstract ideas, natural phenomena (including natural products), and laws of nature cannot be patented. However, it is possible to obtain patents on subject matter that relates to a natural phenomenon, but that also, for instance, transform the natural phenomenon by adding some “inventive concept.” In a recent case, a federal district court determined that a patent claim relating to a dosage range of beta-alanine was invalid because beta-alanine is a natural phenomenon and ingesting it in a supplement form is not “inventive.” Alternatively, a transformative inventive concept related to beta-alanine could include, for example, use of beta-alanine to treat a particular condition that was not known or expected to be treatable by beta-alanine, a composition of beta-alanine with another ingredient that provides superior properties (for example, increased absorption), or a composition of beta-alanine with another ingredient that provides a synergistic effect (either for the beta-alanine or for the other active ingredient). As another example, the hydrolysis of a protein in acid is not, by itself, patentable. However, a method of increasing the rate of protein hydrolysis in water with a catalyst (a new and non-obvious method) may be patentable.

Another statutory requirement is that the invention must be new. For example, if an old patent or other publication discloses the subject matter for which a patent is sought, then the subject matter is not new and is, therefore, unpatentable. As simple and straightforward as this sounds, there are many nuances to this analysis. What if an old patent discloses a chemical formula with variables and, after substituting the variables in every way possible, the formula represents 100 or 1,000, or 1,000,000 different chemical compounds, but only 15 compounds were actually synthesized and described in the patent? In that case, even if the company’s nutraceutical product is one of the many undescribed chemical compounds in the patent, the product may still be deemed “new” if it could not be “at once envisaged” from the old patent.

The company’s invention must also not have been obvious to make, based on the knowledge in the field at the time of invention. Obviousness is a complicated, fact-intensive area of patent law that involves looking at the differences between the claimed subject matter in the patent application and what was previously known in the field. Specifically, the relevant inquiry is whether a “person of ordinary skill in the art” would have viewed those differences as obvious before the patent application was filed. For example, a small modification to a known chemical compound that does not yield any surprising benefits would be considered obvious (such as changing a methyl group to an ethyl group). On the other hand, any suggestion in the nutraceutical art that, for instance, teaches that a purification
technique or chemical formulation previously used in the field is unsafe or unsatisfactory for some other reason could weigh in favor of non-obviousness.

Given the importance of patent rights and the dynamic nature of the nutraceutical industry, strategic patent filings are a critical component of creating and maintaining value in this field. An attorney specializing in patent law can help a company determine what aspects of its innovations may be protectable with a patent.

**Trademark**

The primary objective of trademark law is to prevent consumer confusion about the source of goods being sold. Effective use of trademarks can also confer a competitive advantage on a business by generating goodwill with consumers. Businesses may obtain trademark protection on various aspects of a good—including designs, phrases, colors, and symbols—that help identify and distinguish the source of their goods from the source of others' goods. A nutraceutical company may trademark various aspects of its labeling and packaging, including the design of the container and label(s), as well as the company logo and slogan.

Mere use of a mark is sufficient to accrue some trademark protection. However, this “common law” protection is limited. Specifically, the company’s rights will be geographically limited to areas of the mark’s use or reputation. So, for example, a company selling a trademark-protected post-workout supplement exclusively in Los Angeles may not be able to enforce its common law rights in San Francisco. Trademark registration—at the state and federal levels—is relatively inexpensive, and is a quick way to strengthen a company’s trademark rights. State registration gives the registrant trademark rights within that state, while federal registration provides the registrant trademark rights throughout the United States, its territories, and its possessions.

Similar to patent infringement suits, trademark infringement suits may involve challenges to the validity of the trademark—meaning the mark is not something that should ever have received trademark protection. The strength of a trademark—i.e., the chance its validity will be upheld by a court—is essentially based on whether the mark is “fanciful” or “arbitrary,” “suggestive,” “descriptive,” or “generic.” A “fanciful” or “arbitrary” mark that bears no relationship to the type of goods, such as EXXON for gasoline, is the strongest type of mark. A “suggestive” mark that is somewhat related to (“suggests”) the type of goods, such as Whirlpool for washing machines, is slightly less strong. A “descriptive” mark is one that describes a function, characteristic, feature, purpose or use of the goods or services. For example, “White-out” for a white fluid used for correcting printed text is descriptive. “Descriptive” marks are weak because they interfere with competitors’ abilities to describe their similar products. Finally, generic marks, such as “Apple” for apples, are unprotectable as a trademark.

**An attorney specializing in trademark law can help a company determine what aspects of its product names, logos, and packaging may be protectable.**

Nutraceutical companies should take advantage of these protections. An attorney specializing in trademark law can help a company determine what aspects of its product names, logos, and packaging may be protectable. In the crowded nutraceutical marketplace, protectable marks can help a company positively distinguish itself in the eyes of consumers and prevent competitors from benefiting from customers’ goodwill.

**Trade Secret**

The primary objective of trade secret law is to protect a company’s decision to maintain a valuable business secret from which it derives a competitive advantage in the market. A “trade secret” generally refers to information that derives independent economic value from being kept secret and is subject to reasonable efforts to maintain its secrecy. In contrast to patent or trademark applications, trade secrets do not require registration, do not expire, and never become public (unless independently discovered by others or improperly misappropriated). However, if a competitor “reverse engineers” a company’s trade-secret process, or independently develops the process, the company has no recourse to prevent their use of the (formerly) secret information.

Similar to trademark law, trade secret law is two-tiered, at the state and federal levels. Most states have signed onto a uniform set of trade secret laws, called the Uniform Trade Secrets Act (“UTSA”). UTSA’s definition of a “trade secret” mirrors the definition above but clarifies that protectable information includes formulas, patterns, compilations, programs, devices, methods, techniques, and processes. However, states have implemented UTSA in different ways, and it is important to consult an attorney for legal advice to understand the scope of trade secret law in the relevant jurisdiction. A recent federal law, the Defend Trade Secrets Act (“DTSA”), similarly defines “trade secrets,” but there are currently few examples of courts interpreting the DTSA. While both state and federal trade secret laws provide remedies, including damages, for trade secret misappropriation (e.g., corporate espionage or former employee disclosures), an important limitation of trade secret protection is that once the secret is out—even through improper means—the protection is gone.

There are certain ideas or types of information a nutraceutical company may wish to maintain as trade secrets instead of pursuing patent protection. For example, a company may choose to protect manufacturing methods as trade secrets if it would be challenging for competitors to determine the method used via reverse engineering. In contrast, if one obtained a patent on the manufacturing method, the method would necessarily be disclosed to the public. Although the patent would provide a right to exclude for a limited time period, it may be difficult to determine whether a competitor is using the patented method or some other method.
Information about which suppliers provide which ingredients may also be kept as a trade secret. Further, perhaps there is information about the physiological mechanism through which a supplement enhances a particular physiological function that is a trade secret. A company could use that information to more intelligently select ingredients, manufacturing methods, and advertise its product—without, of course, sharing the secret information.

A company may also formulate a proprietary blend and keep the blend a trade secret. While the United States Food and Drug Administration (FDA) generally requires the amount of each ingredient to be displayed, only the total amount of a blend of dietary ingredients needs to be displayed. Therefore, the amounts of the individual ingredients within the blend are eligible for trade secret protection—so long as all other requirements are met. However, if a proprietary formula can be reverse engineered, the secret may not last long, and patent protection may be preferable.

Some states also protect “negative know-how.” “Negative know-how” refers to information discovered during development about what does not work. If a nutraceutical company has tested 1,000 different formulations, information regarding what does not work could be even more valuable to a competitor than information regarding what does work.

Each of the aforementioned examples derives some value from being kept secret. To qualify as a protectable trade secret, the company must also take reasonable efforts to maintain the secret. This can include, for example, password-protecting all documents relating to the information, limiting the number of individuals at the company with access to the information, and ensuring that all individuals with access have signed documents acknowledging the information is a trade secret and is not to be shared with any unapproved individual.

Trade secrets and patents provide distinct benefits, and accordingly, nutraceutical companies must carefully weigh the benefits of each type of protection.

**Freedom to Operate**

A critical component of launching a new nutraceutical product is determining whether the product has freedom to operate ("FTO"). An FTO determination requires a detailed legal analysis of whether a company can market its new product free of potential liabilities to third parties. This analysis may include running searches to identify patents and trademarks that could be asserted against the company based on the sale, offer for sale, use, and/or manufacturing of the product in the U.S. The company should also consider reviewing any and all contracts its suppliers have entered into to understand their liabilities and any restrictions on their ability to sell. Additionally, it is important to review all statutory and regulatory requirements, at the federal, state, and local levels, regarding the sale of dietary supplements, distribution, advertising, and quality control (and any other activities in which the company will be engaged). There is no guarantee that this analysis will unearth every potential FTO problem. That said, a thorough FTO analysis will allow a company to make a name change, adjust its labeling, or make other modifications to its product to potentially mitigate its liability and protect its reputation. Furthermore, a company seeking investors, partners, or acquisition will almost certainly face scrutiny regarding FTO during due diligence.

Another significant FTO issue involves the pejoratively termed “patent trolls.” The term patent trolls generally refers to non-practicing entities (NPEs) that assert patents covering products they do not produce. The assertion of patents by NPEs is often merely an attempt to extort value through settlement. Recent rulings by the U.S. Supreme Court as well as challenges of patents before the PTO have reduced the risk of patent trolls, but companies may still be targeted. A company that does receive a demand letter accusing its products of infringing one or more patent claims (or a “notice” letter that merely suggests there could be an opportunity for licensing)—should immediately consult an attorney for advice. How companies ultimately proceed will vary in each case depending on the circumstances. But a company’s strategy might include seeking to invalidate the patent, entering into licensing negotiations, purchasing the asserted patent, or doing nothing until a complaint is filed.

**Conclusion**

The current trend of healthy eating, healthy living, and active lifestyle is constantly increasing, and there is a constant flow of new products into the market. This presents eager consumers with a dizzying array of choices, but also means it is a time of great opportunity for companies innovating in the nutrition space. Investing in protecting innovation and developing brand recognition, while carefully avoiding infringement liability, requires resources, but this investment is well worth it to protect the right product with the right combination of intellectual property.

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3. Although the FDA does not generally require approval of nutraceutical products, consulting with a regulatory attorney is the best way to determine what types of products and labels may be required for compliance with the FDA.
Aloe vera is an herb that has been used for its healing properties since ancient times by cultures throughout the world. The first recorded use of aloe dates to the Ebers Papyrus from the 16th century B.C. in Egypt. Traditional medicine supports the broad use of aloe as a remedy, and modern science continues to validate its beneficial mechanisms of action.

The two main components of the aloe leaf are its fluid (called latex) and gel. The latex is a source of anthracene compounds, which have strong laxative effects. The gel, on the other hand, contains polysaccharides, including glucomannan and galactan, as well as glycoproteins.

Aloe has historically been used for its wound-healing properties when applied topically. Evidence also supports its antioxidant, anti-inflammatory, and immune-health benefits. Recent studies highlighted here attest to the beneficial effects of aloe on blood sugar and cardiovascular health, digestive function, healthy skin aging, and antioxidant support.

Blood Sugar Management
As the incidence of diabetes and metabolic syndrome continues to rise, the need for effective measures to manage blood sugar levels is critical. A recently published meta-analysis reviewed the evidence related to aloe supplementation and blood sugar metabolism.

William Dick and colleagues examined the literature for human clinical studies assessing aloe's effect on fasting blood glucose, hemoglobin A1c (HbA1c), insulin resistance, and response to oral glucose tolerance tests.

Aloe has much to offer, from skin benefits to digestive support.

BY IRFAN QURESHI, ND
Digestive Health and Function
Aloe is commonly regarded as a remedy for digestive issues because it has a soothing effect on the digestive tract. A group of researchers led by Yunes Panahi from Baqiyatallah University of Medical Sciences (Tehran, Iran) aimed to investigate the effects of aloe syrup in individuals with gastroesophageal reflux disease (GERD).2

In this four-week randomized, controlled, comparative study, 79 individuals with GERD were asked to consume either 10 ml/day of aloe syrup (containing 5 mg of polysaccharides per ml); omeprazole (20 mg/day), a proton pump inhibiting drug; or ranitidine (150 mg twice daily), a heartburn drug. The frequency of eight common GERD symptoms were evaluated at two and four weeks. These included heartburn, food regurgitation, flatulence, belching, dysphagia, nausea, vomiting, and acid regurgitation.

Aloe supplementation provided significant relief and was found to reduce the frequency of all GERD symptoms, with all but the reduction in vomiting reaching statistical significance versus baseline values. The popular drugs ranitidine and omeprazole also reduced the frequency of the majority of GERD symptoms. The investigators determined the efficacy of aloe syrup to be comparable with both drugs for reducing symptoms of GERD.

Antioxidant and Immune Health
Previous research has found the inner leaf juice of aloe to have immune health-supportive properties. However, there is less research investigating the effects of decolorized aloe leaf juice. Decolorization is a purification process whereby the laxative components of aloe are removed.

Caroline Ingles from Herbalife (Torrance, CA) led a recent study in collaboration with researchers from NIS Labs (Klamath Falls, OR) aiming to compare the antioxidant and immune-modulating effects of aloe decolorized leaf juice to the inner leaf juice in vitro.3 The researchers assessed the preparations for total antioxidant capacity and direct immune-modulating effects of human peripheral blood mononuclear cells, as well as looked at their ability to activate other immune-cell populations, including natural killer (NK) cells, NK T-cells, and T-lymphocytes.

The study found that decolorized leaf juice significantly enhanced total antioxidant capacity and activation of T-lymphocytes and monocytes. Further, the decolorized leaf juice showed the ability to increase the expression of immune markers on NK cells. By contrast, the inner leaf juice showed only a limited immune-modulating activity on T-cells.

These results indicated that the decolorized leaf juice has a greater immune-stimulating effect than the inner leaf juice and supports the innate immune system. These findings point to the potential benefits of decolorized leaf juice and pave the way for additional research to corroborate these effects in human studies.

Irfan Qureshi, ND, is executive director, research and regulatory affairs, for Healthy Directions.

References
Turmeric continues to trend among consumers, renowned for its properties as a top-flight anti-inflammatory botanical. The recent surge in research on turmeric (Curcuma longa) and its constituent curcuminoids has both boosted the herb’s popularity with consumers and led to its inclusion in a plethora of products. Beginning with its use in the Ayurvedic tradition for multiple conditions, the herb’s traditional health benefits are now being validated scientifically. Turmeric’s purported benefits range from cardiovascular health to brain, joint, and liver health. Scientists are still just scratching the surface of turmeric’s potential, which is now available in an array of bioavailable forms and preparations.

In addition to its beneficial effects in the areas mentioned, a lesser known but certainly well-researched application for turmeric and curcuminoids is blood sugar health. Current estimates suggest that over 30 million individuals in the U.S. have diabetes, and an additional 84 million have prediabetes. The need and demand for safe and efficacious blood-sugar-management alternatives is clear. Several studies show benefits of various preparations of turmeric on parameters related to metabolic function, supporting turmeric’s potential usefulness in the scope of this chronic health epidemic. Here, we cover a recent meta-analysis that attests to turmeric’s effectiveness for supporting healthy blood sugar metabolism, along with additional studies focusing on uncovering turmeric’s beneficial mechanisms in this important area.

**Improved Fasting Blood Sugar and HbA1c Levels**
Brazilian researchers led by Ingrid de Meloa at the Federal Institute of Alagoas (Alagoas, Brazil) recently conducted a meta-analysis and review of randomized controlled trials to assess the effect of curcuminoid-containing turmeric extracts on blood sugar regulation. The researchers included studies that were conducted in adults aged 18 or older and had a placebo control where treatment lasted longer than four weeks. Overall, 11 trials were included in the analysis. The primary outcome was changes in fasting blood glucose levels, while secondary outcomes included changes in hemoglobin A1c (HbA1c) levels and measures of insulin resistance.

Results of the meta-analysis revealed a significant decrease in HbA1c levels and decreases in fasting blood glucose with turmeric supplementation; however, no significant changes were found in HOMA-IR, a measure of insulin resistance. Interestingly, supplementation of isolated curcumin or combined curcuminoids was found to be most effective in those with some degree of blood sugar dysregulation, including in those with diabetes, but not in non-diabetic individuals. This indicates the ingredients’ effectiveness in those with more advanced blood sugar issues. This research confirms that turmeric extracts can play an important role as a component of a therapeutic plan for supporting healthy blood sugar levels.

**Enhanced Fatty Acid Metabolism**
A team of researchers from Harbin Medical University (Harbin, China) aimed to find one of the potential mechanisms whereby curcuminoids exert their glucose-lowering effects. In previous animal research, the same investigators found that curcuminoids...
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A lesser known but certainly well-researched application for turmeric and curcuminoids is blood sugar health.

This broad range of action makes curcumin a useful compound for ensuring healthy metabolic function and healthy blood sugar metabolism.

Irfan Qureshi is the executive director, research and regulatory affairs, for Healthy Directions.

References
2. Melo ISV et al., “Curcumin or combined curcuminoids are effective in lowering the fasting blood glucose concentrations of individuals with dysglycemia: systematic review and meta-analysis of randomized controlled trials,” Pharmacological Research. Published online September 18, 2017.

Botanicals/Herbs

led to significant decreases in blood sugar levels and improved insulin resistance by reducing serum levels of free fatty acids and by enhancing fat oxidation in muscle tissue. The current human study was designed to determine whether these effects held true in diabetic patients. Overweight diabetic individuals were assigned to supplement with 300 mg/day curcuminoids or a placebo for three months. A total of 100 participants completed the trial.

Supplementation with the curcuminoids led to significant decreases in fasting blood glucose and insulin resistance, while at the same time significantly lowering serum total free fatty acids and triglycerides. There was also an accompanying increase in the activity of the enzyme lipoprotein lipase, which breaks down triglycerides into free fatty acids. Thus, an important mechanism of curcuminoids in humans may be their ability to reduce fasting blood sugar levels by promoting fatty acid oxidation and utilization.

**Improved Adiponectin:Leptin Ratios**

Since there is previous research that curcumin offers benefits to those experiencing insulin resistance, Yunes Panahi and colleagues from Baqiyatallah University of Medical Sciences (Tehran, Iran) investigated whether this beneficial effect occurred through curcumin’s interactions with the adipokines adiponectin and leptin. Adiponectin is known to increase insulin sensitivity. Leptin is a hormone known to be higher in obesity, but whose ultimate net effect is to inhibit appetite, stimulate thermogenesis, enhance fatty acid oxidation, decrease glucose, and reduce body fat in the obese state. Improving the ratio of adiponectin to leptin is thought to support healthy insulin function.

In the randomized, placebo-controlled trial, individuals with metabolic syndrome were asked to supplement with curcumin (1,000 mg/day) or a placebo for eight weeks. Serum levels of adiponectin and leptin were measured before and after the intervention. At the end of the study, curcumin treatment was associated with a significant increase in serum adiponectin and a reduction of serum leptin levels, indicating a potential mechanism for curcumin to support healthy insulin sensitivity.

**Antioxidant and Anti-Inflammatory Effects**

Curcumin is well-known for its antioxidant and anti-inflammatory benefits, and these mechanisms likely contribute to its usefulness in managing several aspects of metabolic syndrome. Egyptian researchers recently sought to determine the role that antioxidant and anti-inflammatory functions of curcumin play in metabolic syndrome by studying its effects in male albino rats.

Researchers induced metabolic syndrome in rats by feeding them a high-fat diet. The rats were administered curcumin (200 mg/kg body weight orally once per day) or were assigned to the untreated group for eight weeks. Body weight, blood pressure, insulin resistance, and levels of serum glucose, insulin, leptin, blood lipids, malondialdehyde (a lipid peroxidation product), serum catalase (an antioxidant), and inflammatory markers (including NF-κB and TNF-α) were evaluated during the study period. While the control diet produced several significant negative changes in these metabolic parameters, animals co-treated with curcumin experienced significant improvements in all glucose and fat metabolism markers, as well as in markers of oxidative stress and inflammation. The results indicated curcumin’s ability to significantly influence the body’s endogenous inflammatory and oxidative state, yielding substantial metabolic protection.
ALL-NATURAL, VEGAN & VERSATILE ALMOND PROTEIN

In recent years, extensive research on almonds has proved that this all-round nutrient exerts an array of health benefits, including healthy heart support, managing oxidative stress and provides an excellent source of protein.* Promond™ has a well-balanced profile which fulfills the essential amino acid requirements outlined by the World Health Organization. Promond is highly soluble, and gets easily digested unlike whey protein powders because it does not contain lactose or gluten, hence no bloating. Come discover Promond.

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* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, mitigate or prevent any disease.
We have an advantage over other health science companies across the world. Unlocking the mystery of ancient Ayurvedic herbs, extracting their potency, using science to standardize it and gifting the world with new plant-based molecules to catalyze reliable healthcare - that is the mission we pursue with a passion at Sabinsa. . . . OUR INNOVATION IS YOUR ANSWER®.

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ABH Pharma is an industry leader in the realm of supplement manufacturing. We offer full turn-key services from formulation to marketing and even fulfillment. We take pride in bringing our client’s supplement brand vision to life. With both custom formulations and our own growing private label line, we aim to revolutionize the supplement industry.

ABH Pharma offers top-tier manufacturing of all types of supplement forms. We have mastered the manufacturing of powders, extracts, tablets, capsules, liquids, softgels, and gummy vitamins. Outside the lines of manufacturing, we offer exceptional fulfillment and digital marketing services. Our in-house compliance and graphic design teams are readily available to ensure optimal label and bottle design. We are also one of the few manufacturers with an in-house quality assurance and quality control teams.

Our private label brand, StockNutra, features a wide array of different supplements ranging from gummy vitamins to our signature focus formula. If you are an existing brand, StockNutra can help you expand into different markets and reach more consumers. With a low minimum order quantity of 750 bottles per supplement, we offer low-risk business opportunities suitable for newcomers in the industry.

Our most popular StockNutra products:
- Stock Keto Collagen Capsules
- Stock MCT Oil Liquid
- Stock Magnesium Citrate Tablets
- Stock Organic Turmeric Curcumin Formula
- Stock Fish Oil
- Stock Greens Superfood Formula
- Stock Hydrolyzed Bone Broth Protein
- Stock Ketogenic BHB Powder
- Stock Hair, Skin, and Nails Gummy Vitamin
- Stock Calm Formula

For further information please visit www.abhpharma.com, www.StockNutra.com, or call us at (866) 922-4669. Our highly knowledgeable customer experience team will be more than happy to provide you with free quotes and answer any of your questions.
ADH Health Products Inc.
Prime Source of Quality Vitamins and Supplements

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**Description:**
ADH Health Products Inc. specializes in custom formulations and contract manufacturing of dietary supplements and nutritional products. ADH manufactures products using GMP standards and is registered with FDA. ADH’s facility is subject to regular quality audits by third-party organizations such as NSF International and has received NSF’s prestigious GMP certifications and participated in NSF’s Certified for Sport program. Private label clients can choose from a complete line that includes all-natural, hypoallergenic, kosher, and vegetarian supplements available in capsules, tablets (including timed-release and chewable), powders, and liquids.

**Facilities:**
ADH manufactures its products in a state-of-the-art, 75,000-sq-ft facility, complete with in-house QC and microbiology labs where rigid testing is conducted during every phase of manufacturing—from raw material to finished product.

**Products & Services**
In 30 years of operation, ADH has formulated well over 1000 products for customers. ADH develops formulations to best suit customer needs for short lead time, offering small-batch sizes for clients who are looking to optimize on-hand inventory. In addition to product design and development, ADH also has full in-house graphic capabilities and can help clients create label designs.

**YOUR ONLY CHOICE FOR CONTRACT MANUFACTURING**

Find out why ADH Health Products has been a trusted source of quality supplements for three decades:

- Compliant with FDA and cGMP standards
- Distributes to more than 30 countries
- Offers a variety of delivery forms
- State-of-the-art facility

ADH offers the following turn-key solutions that can enhance your company’s success:

- Research & Development
- Product Development
- Regulatory
- Customer Service
- Packaging Solutions
- Fulfillment & Warehousing

**ADH Health Products is your one-stop source that will exceed your contract manufacturing and private labeling needs.**

**Prime Source of Quality Vitamins, Minerals & Herbs**

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www.adhhealth.com
Acadian Seaplants
Improving wellness through the science of seaweed

Scientific research confirms that 2.5 billion years of evolution have left us with thousands of species of marine plants which are bioactively complex, nutritionally dense, and highly beneficial and versatile for use within the nutraceutical, wellness, cosmetics, and food & beverage industries.

Acadian Seaplants was founded in 1981 and is the largest independent marine plant processing company in North America and a global leader in aquatic plant products for humans, animals, and agriculture.

New offerings include 3 recently approved National Health Product registrations for antioxidants: SeaPlus™ Asco, SeaPlus™ Fucus, and SeaPlus™ Laminaria—available in capsule format.

SeaPlus™ Wellness Ingredients meet or surpass rigorous international production quality, food safety, and sustainability standards.

- SQF Quality Code 8
- FSVP
- FSMA
- PCQI
- Organic & natural

- Halal & Kosher
- Non-GMO
- Vegetarian
- Gluten-free

Species available
- Ascophyllum nodosum
- Fucus vesiculosus
- Chondrus crispus

- Palmaria palmata
- Laminaria digitata

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Marketing Brand Strategist
Marine plants have an ocean of benefits and possibilities for your supplements, foods & beverages and cosmetics.

Acadian Seaplants offers a variety of wild and cultivated marine plants in a broad range of mesh sizes that can added to nutraceutical, food and beverage product formulations. The range of offerings is branded as SeaPlus™ Wellness Ingredients, providing formulators an identifiable high quality mark and traceability assurance for their consumers.

As a vertically-integrated harvester and producer, Acadian Seaplants offer fulls traceability as well as a wide range of organic, food safety and quality certifications.

We are your trusted source for a variety of wild and cultivated seaweeds and provide custom blending options.
AIBMR Life Sciences

We Don’t Make Natural Products. We Make Them Better.

Description
AIBMR is the industry leader in natural products research and consulting, with a mission to put the science behind natural products.

Founded in 1978, AIBMR is celebrating its 40th anniversary. With a team of PhD research scientists and Naturopathic Physicians, AIBMR can assist your company with:

- GRAS (Generally Recognized as Safe) Independent Conclusions (formerly Self determinations)
- FDA GRAS Notifications
- FDA NDI (New Dietary Ingredient) Notifications
- Toxicological Safety Studies
- FTC & FDA Regulatory Compliance

AIBMR also provides a host of other services to investigate the safety, efficacy, and mechanism of action of ingredients intended to be sold as dietary supplements or for the addition to functional foods or beverages in the United States.

Staying abreast of the ever-changing regulations surrounding the dietary supplement and functional foods industries is key to your success in the marketplace. AIBMR provides expertise in U.S. regulatory compliance, structure-function claims generation, product label reviews, and much more.

At AIBMR, we maintain one of the largest private natural products research library holdings in the world. This collection, managed by our Director of Information Services and support staff, allows us to conduct timely and cost-effective scientific literature reviews.

The breadth of knowledge and services available through AIBMR Life Sciences allows for convenient, centralized, and affordable support with your nutraceutical research and product development needs. Our clientele are worldwide, and include start-ups as well as Fortune 500 companies. Services are tailored to the individual needs of each client.

We invite you to tap into our natural resources to ensure that your products are safe and effective—and help you succeed in today’s highly competitive marketplace. Please visit our website and give us a call to learn more.

Additional Products and Consultation Services:
- cGMP consulting
- Product R&D
- Compliant Product claims development and substantiation
- U.S. regulatory compliance
- Nutraceutical products consulting
- Functional Food products consulting
- Monthly Service Agreements
- CRO Services
We don’t make natural products. We make them better.

At AIBMR, we do more than help ensure the safety and efficacy of your products. We also help you get them to market quickly and cost-effectively. Through our exclusive relationship with GLP-certified Toxi-Coop Toxicological Research Center, we can save you thousands on FDA, OECD, and EU/EC compliant toxicological studies while delivering faster lab results. Our 40 year history, and unmatched expertise with nutraceuticals, functional foods and beverages, translates into savings and expeditious service. Partner with the company who can save you time, trouble and expense.

Tap into our natural resources. www.aibmr.com www.toxicoop.com 253.286.2888

GRAS  NDI  FDA/FTC COMPLIANCE  LABEL REVIEW  SAFETY  S/F CLAIMS

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Purely Icelandic Astaxanthin

Based in Iceland, Algalif™ is a leading supplier of high-grade natural astaxanthin ingredients and finished products from the Haematococcus pluvialis microalgae. The company offers astaxanthin oleoresins, algal biomass, bulk capsules, and branded finished formulations. Its premium astaxanthin ingredient, branded Astalíf™, is a powerful natural antioxidant with multiple health benefits and a solid scientific foundation.

Algalif is committed to providing a reliable supply of high-quality, pure, sustainable astaxanthin from algae. Its indoor cultivation process is designed to deliver high yields of premium astaxanthin using pure Icelandic water and renewable energy.

Algalif is proud to be part of Sana Pharma Holding, an international company founded in 2002 with businesses in ingredient manufacturing, food supplements, medical devices and over-the-counter medicines.

Product Range
- **5% and 10% Oleoresin** - For soft gelatin capsules and topical oil-based cosmetics.
- **Algal Biomass** - For soft and hard gelatin capsules.
- **Bulk Softgel Capsules** - For white label applications.
- **Branded Supplements** - For retail applications.

**The Algalif Advantage**
Algalif is built on a foundation of quality, purity, and sustainability. Its combination of high-quality, clean, sustainable microalgae is very relevant in today’s market.

**Quality and Safety First**
- State-of-the-art, cGMP-compliant facility
- High astaxanthin content in the dried algal biomass (over 7%)
- Non-GMO, Novel Food, Halal, and Kosher certified
- No traces of heavy metals

**Icelandic Purity is Unmatched**
- One of the most sustainable countries in the world
- Icelandic water is extremely pure, low in minerals, and unchlorinated
- The country generates 100% of its electricity from clean energy
- Iceland has better air quality than nearly all OECD-countries

**Sustainability Matters**
- Facility 100% powered by renewable geothermal energy
- Proprietary lighting system, enabling 50% reduction in energy use
- Its production methods allow for minimal water evaporation
- Water is not cooled, heated, or moved during production

---

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Home to volcanoes, glaciers and northern lights, Iceland is now home to the purest, high-grade astaxanthin. Algalif™ makes responsible use of unmatched Icelandic natural resources like pure naturally filtered water and renewable energy as inputs for our proprietary, enclosed cultivation and harvesting process. The result is premium quality astaxanthin with no detectable levels of the four major heavy metals, plus a continuous supply to meet marketplace demand without interruptions.
Description:
Alpha Packaging is a leading manufacturer of high-density polyethylene (HDPE), polyethylene terephthalate (PET) and polypropylene (PP) bottles and jars for the nutritional supplement, pharmaceutical, personal care, animal health, consumer chemical, and niche food and beverage industries. Sizes range from 1 ounce to 2 gallons, and include styles ideal for tablets and capsules; powders and granules; and liquids and lotions. We continue to work on sustainable packaging solutions, including bottles and jars with FDA-approved post-consumer resin (PCR) and lighter-weight options for the nutritional market. Alpha has seven manufacturing plants and one decorating facility in strategic locations across North America, as well as a manufacturing plant in The Netherlands. Alpha offers in-house tool-making capabilities, and can build everything from unit cavity molds to complete high cavity production tooling.

Alpha is known as the leading manufacturer of wide mouth PET bottles for the rapidly-growing “gummy” sector. We have a full range of bottle and jar sizes in our stock portfolio, and can also build a custom jar, packer, oblong or cylinder for a minimal investment.

Over the past year, Alpha has added substantial HDPE vitamin packer capacity to the Northeastern US. This includes new molds for a dozen sizes of bottles, ranging from 50cc to 950cc. Sizes up to 300cc are manufactured on brand new equipment using the Injection Blow Molding process. Larger sizes are Extrusion Blow Molded on high-cavitation equipment with brand new blow cavities. Production lines also feature state-of-the-art vision systems and leak detectors.

Major Markets
- Nutritional Supplements
- Pharmaceuticals
- Personal Care
- Niche Food & Beverage
- Consumer Chemicals

Major Products:
- 900 stock bottles and jars.
- Custom styles in HDPE, PET, PLA and PP.
- Custom-colored PET packaging.
- High-quality container decorating on a variety of substrates.
A spark can ignite a movement and a ripple can spur a sea change in these fast-paced, highly-connected times.

Join CRN at its events, The Workshop and The Conference—known for thought-provoking speakers and discussions that drive change, industry-wide.

See change and be part of it this October at the Ritz-Carlton, Laguna Niguel—four registration options are available. Learn more and register today:

www.crnusa.org/2018events

Council for Responsible Nutrition
The Science Behind the Supplements
Anderson Global Group

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Fax: 949/502-4775

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CherryPURE® Tart Cherry powder is the premier tart cherry material in the marketplace and the only tart cherry source backed by ingredient-specific clinical studies. Texas A&M recently completed two sports nutrition–based human clinical studies focusing on recovery from intense resistance and endurance training.

Immuna™ has been shown in human trials to optimize immune system modulation. The unique and patented production methods create a very stable, yet active bio-ingredient. No preservatives are added at any point, and it is free from pesticides, solvents, heavy metals or other toxins. Due to the efficacy of the ingredient, only a small daily dose of Immuna™ is necessary to initiate enhancement of the immune system.

At only 0.3 kcal/g, AllSweet™ Allulose Natural Sweetener provides a clean, satisfying sweetness to your beverage, bakery, frozen, confectionery, and dairy applications. AllSweet™ performs like sugar in formulations and delivers the syrupy mouthfeel your reduced-calorie consumers crave.

fiberSMART® plant-based, non-GMO soluble fibers are low-sugar, high-fiber binders perfect for all food and beverage applications. Available from corn or tapioca starting sources, fiberSMART® contains an astounding 89% AOAC-validated dietary fiber content and will improve product texture and enhance stability under low-pH and high-temperature processing conditions. fiberSMART® has been specially formulated to be tolerated at very high usage rates and avoid the gastrointestinal distress associated with other high-fiber binders.

PreB® Macrobiotic Superfood delivers 55 organic ingredients to your product label like no other source can. Available as a liquid or powder, these ingredients are combined and fermented to achieve maximum nutritional and prebiotic value. All the ingredients in PreB® are organically grown on a pristine 17,000-acre parcel of land in Brazil and fermented on site.

VegiSurge® and GuaranaSol® are 100% soluble, all-natural caffeine sources that are perfect for clean sports nutrition, ready-to-drink, and powdered beverage formulations. Natural caffeine provides a clean label and long-lasting energy benefits over synthetic materials containing solvent residues and contaminants.

EnXtra™ from Alpinia galangal is a DNA-authenticated, stim-free energy ingredient that provides fast, effective and safe energy with no crash. In a 53-person, double-blind, double-dummy human clinical trial, EnXtra™ was shown to improve mental alertness & acuity for up to 5 hours without increasing heart rate or blood pressure. EnXtra™ can be used as a replacement for caffeine or used with caffeine to prevent crash and prolong benefits. EnXtra™ is easy to formulate with, water soluble and has a pleasant taste profile.
CAFFEINE AMPLIFIER

- A stimulant-free, nootropic botanical extract
- Amplifies caffeine benefits, without the “crash”
- Compelling human studies support safety & efficacy
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---

**Description:**
Applied Food Sciences (AFS) is the leader in innovation for functional, organic ingredients in the natural products industry. Quality is transparent from seed to label through organic farming, ethical sourcing, and sustainability. AFS cares about every stakeholder from rural farmers to the largest companies in the world.

**Featured Ingredients:**

- **PurCaf**
  - +95% Caffeine
  - Non-GMO Project Verified
  - Sourced from coffee

- **AMATEA™**
  - Organic Guayusa Extract
  - 20% Caffeine
  - 30% Chlorogenic Acids

- **PurGinger™**
  - Fully water-soluble
  - 2% Gingerols
  - Excellent ginger flavor

- **PurTurmeric™**
  - Fully water-soluble
  - 5% Curcuminoids
  - Flavor + health benefits

---

**AMATEA™** patented organic guayusa extract, is designed to meet demand for a modern clean source of energy while balancing some of the negative physical effects that can be commonly experienced with caffeine intake. Preliminary findings suggest AMATEA™ guayusa extract may help regulate a key “flight or fight” hormone released upon caffeine intake, called epinephrine.

**20% Caffeine • 30% Chlorogenic Acids**

Contact AFS for pricing, specification info, or to request a sample.

www.appliedfoods.com or call 1(800)345-9666 or email sales@appliedfoods.com
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Description
With over 85 years of experience, Arista Industries has evolved into a top global supplier of specialty marine oils, natural vegetable oils, essential oils, butters, and powder-form oils. These ingredients are used in food, pharmaceutical, nutraceutical, and nutritional supplements, as well as cosmetic and personal care applications.

Arista started bringing in cod liver oil and vitamin A and D fish oils from Norway, and shortly thereafter became a highly regarded supplier of natural vegetable oils. Arista was one of the first suppliers of omega-3 fish oils in the early 1980s and has continued to offer top-quality marine oils.

The company also recently restructured its sales force and customer service department in order to maintain the high level of personal and professional service that is guaranteed. Arista customers know that each of their inquiries will be handled to their satisfaction. Offering quick responses to technical questions, prompt order processing, and accurate lead times is simply the way we do business.

ARISTA
FOR ALL-NATURAL OILS.

Arista is the name to remember when you’re in the market for all-natural, first quality marine and vegetable oils. From cosmetic and pharmaceutical applications to food and nutritional uses, we specialize in delivering the finest all-natural oils at remarkably competitive prices.

Vegetable Oils
- Abyssinian
- Acai
- Almond
- Apricot
- Argan
- Avocado
- Black Currant
- Borage
- Canola
- Chia
- Evening Primrose
- Flax Seed
- Grape Seed
- Hazelnut
- Hemp Seed
- Hydrogenated Oils
- Marula
- MCTs
- Moringa
- Olive
- Perilla
- Pomegranate
- Pumpkin
- Rice Bran
- Rose Hip
- Sacha Inchi
- Safflower
- Sea Buckthorn
- Sesame
- Sunflower
- Walnut
- Wheat Germ

Marine Oils
- Cod Liver
- Fish Liver
- Krill Oil
- Omega-3 Fatty Acids
- Salmon
- Shrimp Oil
- Squalane
- Squalene
- Tuna

Miscellaneous Ingredients
- Fruit Oils
- Powder Form Oils
- Fish Gelatin
- Hydrolyzed Fish Collagen
- Lauric Acid
- Stearic Acid
- Sunflower Lecithin
- Vegetable Glycerin

Since 1930
1-800-ALL-OILS
ARISTA INDUSTRIES, INC.
557 DANEbury ROAD, WELTON, CT 06897 • 203-761-1009 • FAX 203-761-4980
www.aristaindustries.com • info@aristaindustries.com
Ashland’s acquisition of Pharmachem expands the ways in which our solvers serve up solutions for customers. We are proud to say that not many companies have the breadth of products and expertise we have to support nutraceuticals and functional food customers. We offer a broad range of ingredients, including BCAAs, MCTs, Aloe vera, film coatings, tablet binders, and disintegrants. We also have particle engineering and specialty processing capabilities to bring value-added solutions to your products. And if you need help with formulation, we can help with that, too.

Who knows their way around a particle?  
We do.

Blending. Agglomerating. Spray drying. Chilsonating. Instantizing. Granulating. And more. Pharmachem, a division of Ashland, has a breadth of processing and formulation capabilities to solve your toughest product development challenges. With more than 35 years of expertise, we also offer:

- Custom processing of USP and value-added vitamins and minerals
- Packaging of custom food and beverage powders
- Custom formulation
- DTH (drum-to-hopper) premix systems
- Premix and fortification
- Raw material sourcing

Who maximizes the goodness of cranberries?  
We do.

Cran-Max™ is a concentrated whole fruit cranberry extract, made from 100% of the cranberry. Cran-Max™ provides a good source of PACs and anthocyanins, compounds known to support urinary tract and overall health.

Pharmachem, a division of Ashland, uses 34 pounds of cranberries to make one pound of Cran-Max™, and there are no carriers, solvents, added sweeteners, flavorings, or added colors. It can be used in a variety of foods and beverages, including bars, powdered drink mixes, chewables, tablets, and more.

Who has the skinny on carb control?  
We do.

Phase 2™ is a proprietary, natural ingredient derived from the white kidney bean. Phase 2™ is not a stimulant; it works by reducing the enzymatic digestion of dietary starches. Phase 2™ has been clinically shown to reduce the digestion and absorption of dietary starches by up to 66%.¹


These statements have not been approved by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.
who knows their way around a particle? — we do.

Blending. Agglomerating. Spray drying. Chilsonating. Instantizing. Granulating, and more. Pharmachem, a division of Ashland, has a breadth of processing and formulation capabilities to solve your toughest product development challenges. With more than 35 years of expertise, we also offer:

- custom formulation
- DTH (drum-to-hopper)
- packaging of custom food and beverage powders
- premix and fortification
- custom processing of USP and value-added vitamins and minerals
- raw material sourcing

Pharmachem
a division of Ashland

ashland.com/blend7
AstaReal Inc. is an industry leader in the research, development, and production of Natural Astaxanthin from Haematococcus pluvialis microalgae. The company grows its algae at state-of-the-art indoor sites in Sweden and Washington State, USA. Both AstaReal facilities utilize environmentally friendly and ultra-pure photobioreactor cultivation technology to ensure the highest-purity astaxanthin product available. The company’s globally recognized brand is AstaReal®. The company maintains inventory of 5% and 10% astaxanthin oleoresin, 2% and 2.5% astaxanthin powder, 1% water-soluble astaxanthin liquid, and custom astaxanthin softgels at its GMP-compliant Burlington, NJ, facility. The company serves the North American and South American dietary supplement, functional food, beverage, and cosmetic markets. AstaReal Inc. is part of a global group of subsidiaries dedicated to the worldwide development of natural astaxanthin and is wholly owned by the Fuji Chemical Group of Toyama, Japan.

Products
AstaReal® L5: 5% Astaxanthin Oleoresin – Ideal for softgel or hard capsules. Can be blended as well as standalone formulation.

AstaReal® L10: 10% Astaxanthin Oleoresin – Ideal for softgel or hard capsules. Can be blended as well as standalone formulation.

AstaReal® P2AF: 2% Astaxanthin Extract Powder – Ideal for capsules, tablets, direct compression and powder blends.

AstaReal® P25HB: 2.5% Spray Dried Powder – Ideal for capsules, tablets, direct compression and powder blends.

AstaReal® CLEAR100: 1% Water Soluble Astaxanthin Extract – Ideal for ready to drink (RTD) beverages, food and liquid nutraceutical supplements.

AstaReal® CWS25: 2.5% Astaxanthin Water Soluble Astaxanthin Powder – Ideal for adding directly to foods and beverages.

AstaReal® Custom Softgels – Ready to bottle bulk softgels are available in various potencies and custom formulas are also an option.
From Cultivation
To Extraction
AstaReal is 100% Made in the USA

Demand The GOLD Standard.
INDOOR Cultivation.

World’s Most Studied Brand of Natural Astaxanthin for Over 20 Years.
got AUDIT?

In this ever-changing media landscape, it’s crucial to know that the amount you invest in advertising plans WILL reach your next potential customer.

*Nutritional Outlook* guarantees that you are reaching **13,000** AAM-qualified subscribers per issue. In addition, *Nutritional Outlook* has an AAM-audited website and e-newsletters.

**WHAT DOES THIS MEAN TO YOU?**

Our AAM-audit provides you solid assurance and insight that you are reaching the right key decision-makers with your marketing message.

**CONTACT US TODAY TO LEARN MORE.**

Tim Baudler, Brand Director
Phone: 310-445-3757
tim.baudler@ubm.com

[www.nutritionaloutlook.com](http://www.nutritionaloutlook.com)

Source: AAM Digital Audit, June 2017
Axiom Foods Inc.

Description
Axiom Foods, the world’s largest and most innovative source for organic, hexane-free, and allergen-friendly Oryzatein® Whole Grain Brown Rice Protein, now produces an even more comprehensive line of all-natural ingredients.

Oryzatein® was the first food grade, chemical-free 80% and 90% whole grain brown rice protein to hit the world market. Now, not only are emulsified and soluble rice protein options being introduced, but our rice protein is now the only one that comes with patented claims which are backed by clinical trials. We are constantly increasing our production capabilities, with additional factories in development.

Products
Now FDA GRAS, our whole grain brown rice ingredients are Non-GMO Project Verified, all-natural, chemical-free, hexane-free, allergen-friendly, and traceable to the farms. Many of our ingredients are available in both organic and conventional preserved options.

Plant Protein • Rice & Oat Non-Dairy Milk • Sweeteners • Starches • Rice Bran

Coming Soon
Our Plant Proteins are a fantastic alternative to whey protein boasting a high quality amino acid profile while being inherently lower in cholesterol and sodium, chemical- and hexane-free, easily digestible, part of a clean label, all-natural, more earth friendly, and most importantly allergen-friendly.
About Balchem

Balchem Corporation is a global leader in choline, microencapsulation and chelated mineral technology. Committed to providing products with superior performance, Balchem’s unique and proprietary technology offers the most efficient and cost-effective source of select nutrients for supplementation and fortification. The Balchem Human Nutrition and Pharma business unit manufactures and sells Albion® Minerals brand of scientifically validated chelated minerals, and the VitaCholine® brand of the essential nutrient choline. Both brands provide premium ingredients that offer superior delivery of health benefits and are built on strong science and innovative technologies recognized worldwide for their quality, efficacy and safety. Balchem’s premium ingredients provide consumers with proven benefits in cognition, vitality and a healthier metabolism across dietary supplement, infant formula, and food and beverage applications.

VitaCholine

Balchem is the leading manufacturer of choline and offers its branded VitaCholine as a premium, quality ingredient.

Choline is essential for single carbon metabolism, neural function, and cognitive health. After many years of study, an RDI (recommended daily intake) for choline was established this year recognizing its essentiality. Today, a large part of the population does not consume enough choline in their diets, necessitating supplementation. Choline plays a key role in cholinergic memory function, and is essential during natal development, and throughout life. Choline also contributes to cell membrane integrity, as part of the phospholipid membrane.

VitaCholine® brand choline salts are added during manufacturing to help fortify infant formula, dietary supplements and foods and beverages to support choline intake essential for all life stages. To learn more about VitaCholine, visit vitacholine.com.

Albion Minerals

Minerals are essential to life, but cannot be manufactured by the body. With Albion, science and patented technology have been combined to create an organic molecule in a form the body can readily assimilate. These organic forms of mineral elements are mineral amino acid chelates.

Inorganic sources of minerals can cause irritation of the gastrointestinal tract, toxicity with larger doses, and mineral interactions that may suppress rates of absorption. Albion minerals chelated with amino acids have shown greater bioavailability and utilization in humans. Less irritation has been indicated in human studies from ingesting these minerals as metal amino acid chelates.

Albion pioneered the use of Fast-Fourier Transforming Infrared spectroscopy (FT-IR) to identify bonds between the ligand and mineral, and to verify the molecular structure is that of a true chelate.

With more than 150 patents, Albion is continuously working on ways to improve mineral delivery systems.

Albion’s mineral products include: chelated calcium products, Ferrochel® fully chelated, more bioavailable iron, several forms of Albion magnesium amino acid chelates, a totally reacted, nutritionally functional zinc bisglycinate chelate, boron, copper, chromium, manganese, potassium, selenium and vanadium. For more information please visit AlbionMinerals.
Want Brains and Brawn?

Balchem’s got you covered

VitaCholine®
- Supports mental focus
- Aids in fat metabolism
- Optimizes nitric oxide for a better pump

Albion®—Magnesium chelate
- Supports brain health
- Improves muscle recovery
- Delivers more energy

www.VitaCholine.com
www.AlbionMinerals.com

CONTACT THE EXPERTS

Balchem Human Nutrition & Pharma Changing the Way you see Nutrition
Barrington Nutritionals

Description
Recognized for over 25 years for our commitment to quality, reliability, and unparalleled customer service, Barrington’s diverse product portfolio serves the nutraceutical, pharmaceutical, and functional food industries. Our focus is on vitamins, minerals, carotenoids, excipients, and specialty ingredients that conform to, or exceed, the latest compendia of quality standards.

Innovative partners with state-of-the-art manufacturing facilities, coupled with the convenience of nationwide warehousing, provide our customers exceptional sourcing and problem-solving capabilities. We partner with integral manufacturers in the industry and accept only top-of-the-line ingredients that allow Barrington to lead the way to better health and wellness. We are faithful to doing what is right for our customers, partners, and industry.

Key Product Categories
• Amino Acids
• Antioxidants
• Carotenoids
• Enzymes
• Excipients
• Herbal Extracts
• Minerals
• Proteins
• Hemp Stalk Oil
• Specialty Ingredients
• Sweeteners
• Vitamins

Major Markets
• Functional Foods and Beverage
• Gluten Free
• Nutritional Supplements
• Pet Food and Health
• Pharmaceuticals

Specialty Products
ICL-IP Dead Sea Periclase’s full line of Ultra-Pure:
• Magnesium Oxide
• Magnesium Carbonate
• Magnesium Hydroxide

Divis Laboratories’ full line of:
• Beta-Carotene
• Lycopene
• Lutein
• Vitamin D3

AstaPure™ Natural Astaxanthin is available in several market forms

Nisso’s Hydroxypropyl Cellulose, USP and FCC

Huakang’s full line of:
• Xylitol
• Maltitol
• Sorbitol

Vernon Walden’s full line of Vitamins A & E

Corporate Headquarters
Barrington Nutritionals
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Harrison, NY 10528

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Tel: 914/381-3500
Web Site: www.BarringtonNutritionals.com
E-mail: sales@BarringtonNutritionals.com

Contacts: Stuart Gelbard
Anna Zielonka
Daniel Semenuk
Chris Holland
Stuart Robertson

Locations of Other Offices and Facilities
Utah Office
1596 S. 500 W., Ste. 100
Bountiful, UT 84010
Tel: 801/394-3110
Contact: Stuart Robertson

J.M. Huber’s full line of:
• Calcium Carbonate

PureFruit Monk Fruit Extract

Eevia’s Organic Extracts
• Chaga
• Bilberry
• Pine Bark

Gadot’s full line of:
• Fully Reacted Mineral Citrates
• Crystalline Fructose
• Specialty Minerals
• Phosphates

Verdant Oasis’ Phyto-Rich Hemp Stalk Oil
“Over 25 years of quality ingredients and service.”

800-684-2436
www.BarringtonNutritionals.com

Naturally Better...
Leading The Way To Better Health & Wellness.
Batory Nutra is a dedicated division of Batory Foods providing an enhanced focus on fulfilling the needs of our dietary supplement customers. Our focus on customer needs begins with a strong platform of vendor relationships. These relationships allow us to stand behind a high level of quality and reliability when supplying ingredients to customers through our distribution services.

At Batory Nutra we offer a powerful mix of the highest quality protein products and industry knowledge to make your formulation a success. Whether you’re looking for a single protein ingredient or a full complement of plant or animal based proteins, you’ve come to the right place.

For more information, or to order a sample today, visit batorynutra.com or call 800.451.9067

Animal Based • Plant Based • Dairy Based • Egg Based
Best Formulations
Quality Pharmaceutical and Nutraceutical Manufacturer

**Corporate Headquarters**
Best Formulations  
17758 Rowland St.  
City of Industry, CA 91748

Tel: 626/912-9998  
Fax: 626/912-8881

Web Site: www.bestformulations.com  
E-mail: sales@bestformulations.com

**Key Personnel**
Eugene Ung  
CEO

Robin Koon  
Executive Vice President

**Description**
Best Formulations is a leading contract manufacturer of prescription, OTC, vitamin, and nutraceutical products. We are an FDA-licensed drug manufacturer and are cGMP-certified by both the NPA and NSF. Our mission statement conveys the importance of quality and our customers:

“To develop and maintain mutually beneficial relationships with our employees, customers, and partners by providing the highest-quality products and the Best customer service.”

**Facilities**
Our state-of-the-art, 120,000-sq-ft manufacturing facility and full in-house laboratory allow us to schedule flexible production runs to get your products to market faster, without sacrificing quality.

**Statistics**
Founded in 1984, Best Formulations currently employs a team of over 300 trained chemists, formulators, machine operators, engineers, quality-control lab personnel, and support staff. We are highly committed to having the highest quality and best customer service in the industry.

**Products and Services**
Best Formulations manufactures all products in house to keep a close eye on quality and maintain competitive prices. We’re also on the forefront of developing cutting-edge nutraceutical products, including V-Gel™, the first truly viable, non-animal–based soft gel–encapsulation technology.
Bergstrom Nutrition / OptiMSM®

For more than 30 years, Bergstrom Nutrition has set the standard for MSM (methylsulfonylmethane) in dietary supplements, for joint health, skin care, sports nutrition, and more.

Bergstrom Nutrition pioneered the use of MSM for animal and human health use and remains an industry innovator and the world’s leading manufacturer of MSM. Bergstrom’s flagship product, OptiMSM® is the premium branded form of MSM supported by safety data and published clinical research. OptiMSM is recognized as the purest and only GRAS-designated MSM available.

OptiMSM® is manufactured exclusively in the USA at Bergstrom Nutrition’s single-purpose, cGMP-compliant, ISO-registered facility to provide essential traceability. Bergstrom uses a proprietary, multi-stage distillation process to create OptiMSM®, and every batch is third-party tested for optimal purity, quality, and consistency. The result is an MSM that is the same as that found in nature.

Trusted by manufacturers and consumers alike, OptiMSM has earned the reputation as the purest, safest, most consistent quality MSM in the world.

OptiMSM is Kosher and Halal certified, GRAS-designated, vegan, non-shellfish-derived, gluten-free, non-GMO and allergen-free.

The Bergstrom Nutrition team has over 100 years of combined experience in the manufacturing and uses of MSM. Bergstrom is committed to exceptional customer service and helping its customers succeed by producing OptiMSM – the world’s most trusted MSM.

Bergstrom Nutrition continually drives research to discover new applications for MSM to benefit its partners, customers, and the health of all. Current studies build on MSM’s recognized joint support benefits to extend to Beauty from Within, Skin Care, Exercise Recovery, Sports Nutrition, Immune support and benefits for Healthy Aging.

We don’t compromise on MSM, and neither should you. Look for OptiMSM.
NOURISH THE SKIN FROM WITHIN

Nourishing the skin from within is vital to strengthen and protect skin while inhibiting factors that accelerate aging*.

OptiMSM® (MSM, methylsulfonylmethane) supports and preserves connective tissue, where the building blocks of healthy skin are formed.

IN A RECENT STUDY, PARTICIPANTS USING OPTIMSM EXPERIENCED IMPROVEMENTS IN:

- Fine lines and wrinkles*
- Elasticity*
- Skin Firmness*

A 38% REDUCTION IN TOTAL WRINKLE COUNT IN AS LITTLE AS 8 WEEKS!

FOR ADDITIONAL INFORMATION ON OPTIMSM®

- info@optimsm.com
- www.optimsm.com
- 888-733-5676

* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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Bioactive Resources, LLC
At Bioactive, Quality is Everyone’s Business!

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E-mail: cs@bioactiveresources.com

West Coast Facility
Sparks /McCarren
Nevada, USA
Tel: 908/561-3114

Key Personnel
Divya Desai,
VP Sales, Bioactive Resources

Mayur Desai,
VP Sales, Safe Sterilization USA

Description
All natural Conventional & Organic Dry Ingredient Supplier for a wide variety of industries, including Nutraceuticals, Lifestyle & Specialty Diets, Gourmet Foods, Snack Foods and Pet Foods/Supplements. We offer Toll Blending, Custom Formulation Creation and Pre-Mixes for Private Label. Our In House Lab utilizes FTIR identification tests, microbiology testing & an array of analysis tools. FSMA compliant. Certified by NSF/GMP, HACCP, Oregon Tilth Organic, OU Kosher. Member of AHPA, Specialty Food Assoc., & OTA.

Manufacturing
• Blending
• Milling
• Sieving
• Particle Reduction
• Pasteurization
• Blanching
• Roasting
• Drying
• Bioburden Reduction/Kill Step

Products
• Botanical Powders & Botanical Extract Powders
• Herb & Spice Powders
• Fruit & Vegetable Powders
• Fruit & Vegetable Juice Powders
• Proteins, Fibers, Nutritive Ingredients & Sweeteners
• Bulk Teas, Smoothie & Drink Mixes
• Bulk Soup, Pudding & Flour Mixes

Value Added Services
• R&D Food Lab
• Microbial Testing
• Custom Formulating
• Bulk Repackaging Options

Industries Served
• Nutraceutical
• Functional Foods & Drinks
• Supplement
• Healthy Snacks & Treats
• Lifestyle & Health Diets
• Tea & Power Drink Mixes
• Pet Foods & Supplements

Quality Organic & Conventional Ingredient Supplier
Offering: Botanicals, Herbs,
Fruits, Vegetables, Seeds, Proteins,
Spices, Nutrionals, Fibers, Botanical Extracts,
Custom Formulations For Private Label, Toll Blending.

www.bioactiveresources.com

Continuous Process Safe Steam Treatments.
Blanching, Drying, Roasting, Pasteurization.
New Jersey & Nevada Locations.
Gluten Free Facility Avail.

Effective, Non-Toxic Kill Step For Dry Ingredients
## Bioriginal Food & Science Corp.

Innovative nutritional solutions from around the world

| Corporate Headquarters | Bioriginal Food & Science Corp  
102 Melville St.  
Saskatoon, SK S7J 0R1 Canada  
Tel: 306/975-1166  
Fax: 306/242-3829  
Web Site: www.bioriginal.com  
E-mail: business@bioriginal.com |
<table>
<thead>
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<tr>
<td>Company Description</td>
<td>Bioriginal sources, formulates, blends and packages a wide variety of plant and marine-based specialty oils, proteins and nutraceuticals for food and nutritional brands. Using our network of company-owned facilities throughout North America, we work closely with strategic customers to develop finished turnkey retail products.</td>
</tr>
</tbody>
</table>
| Locations of Other Offices and Facilities | Bioriginal Europe/Asia  
Den Bommel, The Netherlands  
Tel: +31-0-187-618-020 |
| Key Personnel | Joe Vidal, President  
David Lakey, VP, Sales & Marketing  
Matt Phillips, VP, Business Development |

### Market-Leading Innovation

Innovation is at the core of what we do. Our in-depth scientific knowledge and application expertise, combined with research-driven market insights, ensures the best quality product is brought to market.

### Commitment to Quality

With multiple points of inspections and testing throughout each stage of the manufacturing process, our vertically integrated BioTrace™ supply chain offers traceability, transparency, and ingredient control for product confidence.

### Key Products

- **Plant Proteins** – Pumpkin, Hemp, SolaThin® Potato and Alfapro® Alfalfa proteins ranging from concentrates and isolates to organic and non-GMO options
- **Plant-based Oils** – Conventional and custom-formulated Coconut Oil, PrimeMCT™ Coconut MCT products, GLA-rich Borage Seed Oil, and PhytoC™ Hemp-based products
- **Marine-based Oils** – Sustainable fish oils including OmegaPure® for food applications and OmegaActiv® for supplements, and RIMFROST SUBLIME Antarctic Krill Oil

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**From start to finish, we’ve got you covered**

Full-Service Product Development & Manufacturing

Ingredient Sourcing | Turnkey Packaging | Complete Processing | Quality Assurance  
Regulatory Compliance | R&D Expertise | Market Insights | Label & Design

Contact us today to develop an innovative solution for your brand.

bioriginal.com | 306.975.1166
BIO-CAT and BIO-CAT Microbials
Catalyzing Biotech Solutions

About
BIO-CAT and BIO-CAT Microbials are the industry leaders in enzymes, microbials and custom formulations for nutritional food processing, animal nutrition and agriculture. We are an FSSC 22000 certified enzyme facility in Virginia and a GMP certified facility manufacturing microbials in Minnesota. With 30 years in business, we provide customized solutions for your product ideas. We are best in class in research & development, regulatory, quality assurance and product development in our state-of-the-art facilities.

Product Applications
Dietary Supplements
Food, Beverage & Ingredients
Animal Nutrition
Agriculture
Aquaculture
Cleaning
Bioremediation

Technologies
BIO-CAT has an established application based R&D group for enzymes and Bacillus technology. With over 30 years’ experience in enzymes and 15 years in Bacillus, you can count on BIO-CAT for your customized solutions. With patents covering a range of applications from food probiotics to bioremediation our technology, history, and customer service can help you find solutions to your challenging problems.

• Single to multi-enzyme blends; Bacillus manufacturing, formulating and blending
• Custom blending & formulations
• Large capacity blending
• In-house R&D and QC lab
  o Research & Development (R&D) team provides custom solutions in our applications lab for scientific research and product development
  o Quality Control (QC) lab conducts testing assuring strict quality standards are met and testing to ensure the potency and overall quality
• Powder and liquid packaging
• Climate controlled storage and warehouse

Manufacturing Standards
BIO-CAT- FSSC 22000 certified company
BIO-CAT Microbials- GMP certified
Kosher and Halal Certified
Multiple Patents
Catalyzing BIOTECH SOLUTIONS... to optimize nutrition

OPTI-ZIOME™ Pro-ST
- Enhanced nutrient absorption
- Better mixability
- Improved hydrolysate flavor

OPTI-BIOME®
- Bacillus subtilis MB40
- Non-GMO probiotic
- Clinically tested
- Shelf stable
- Thermostable

OPTI-ZIOME™ Pro-BA
- Comparable hydrolysis
- Stable supply
- Bromelain alternative

Enzyme Blend

www.bio-cat.com • www.bcmicrobials.com • 888.492.4004

FSSC 22000/GMP • R&D, Regulatory, Quality and Product Development • Personalized customer service • 30 year industry leader • Exclusive enzyme distributor for Amano Enzyme and Shin Nihon • 4000+ custom formulations • Clinical trials
BioCell Technology LLC
Long Terms Solutions for Life™

BioCell Technology is a research, product development, branding, and marketing company that manufactures innovative, science-based raw material ingredients that have applications in dietary supplements, functional foods and cosmetics.

BioCell Collagen is a clinically tested dietary ingredient that promotes active joints, youthful-looking skin, and healthy connective tissues. It contains a patented composition of naturally occurring hydrolyzed collagen type II, chondroitin sulfate and hyaluronic acid in a highly absorbable matrix form that has been the subject of numerous human clinical trials, including trials on safety, efficacy, and bioavailability.

BioCell Collagen has been clinically shown to:
- Promote joint comfort and mobility
- Enhance post-exercise recovery
- Support skin & joint collagens (type I, II & III)
- Reduce wrinkles and fine lines
- Reduce skin dryness up to 76%

BioCell Collagen is self-affirmed GRAS, holds multiple patents, and is available for both oral and topical applications.

i-Sabi™ is a natural dietary supplement made from the rhizomes of pure Wasabia japonica. It provides a full spectrum of phytochemicals called isothiocyanates (ITCs) that support your immune system, detoxify and maintain healthy liver function, and provide strong antioxidant activity for cellular health.

iSabi is laboratory tested and has been shown to exhibit the following properties:
- Supports Liver Health and Detoxification
- Supports Healthy Immune Function
- Supports Cellular Health
- Potent Antioxidant Support

Corporate Headquarters
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Web Site: www.biocelltechnology.com

Locations of Other Offices and Facilities
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Tel: 49(0)4125/957993

Key Personnel
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President
Douglas Jones
Global Sales and Marketing Manager
Toni Dizon
General Manager
BioCell Collagen® is clinically shown to:

- Promote joint comfort & mobility
- Enhance post-exercise recovery
- Support skin & joint collagens (type I, II & III)
- Reduce wrinkles & fine lines
- Reduce skin dryness

Patented Synergistic Ingredient

Hydrolyzed Collagen II
Hyaluronic Acid
Chondroitin Sulfate

Feed Your Skin and Joints

#1 Selling Type II Collagen & Hyaluronic Acid Ingredient

www.biocelltechnology.com

* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.
Bioenergy Life Science Inc.
Branded Functional Ingredients for Healthier Living

Company Profile
It is our mission to create branded, innovative ingredients for healthier living. Our scientific based, all-natural ingredients help people feel, perform, and look better. Our clinically-proven ingredients support digestive health, weight management, anti-aging, heart health and many other health-enhancing benefits. We sell in bulk to companies who manufacture functional foods & beverages, supplements, sports nutrition, cosmetics & animal nutrition products.

Products
Bioenergy Ribose® is a unique 5-carbon carbohydrate that stimulates the body’s natural energy production. It is the backbone of our ATP structure (Adenosine Tri-Phosphate), the source of all cellular energy. Ribose is naturally present in every living cell in the body but the process of making Ribose is very slow, making it hard for your body to build up any energy stores. Therefore, supplementing with Bioenergy Ribose can help increase those pools of energy and provide a more natural, overall energy. Bioenergy Ribose is the only patented, branded form of Ribose on the market. It is GRAS certified, non GMO Project Verified, Kosher, Halal and allergen free.

RiaGev™ is the first and only commercially available proprietary compound uniquely combining Bioenergy Ribose® and a form of Vitamin B3. It is distinctly formulated to enter the salvage pathway directly to more efficiently increase nicotinamide adenine dinucleotide (NAD) in the body.

Why is It Important to Increase NAD?
• NAD is a coenzyme and essential metabolite in all human cells.
• NAD plays a key role in cellular metabolism and energy production.
• NAD is vital for mitochondrial health.
• NAD is a rate-limiting co-substrate for sirtuins (longevity regulators), which play key roles in the calorie restriction (CR) method of life extension and exercise response.
• NAD levels decrease during aging.
• High NAD levels are essential for DNA repair and recovery in a health crisis.
• NAD activates CD38, which is present on all immune cells.

Benefits of Our Branded Ingredients
Bioenergy Ribose and RiaGev work at the cellular level creating benefits that help people feel, perform, and look better.

Our ingredients:
• Promote mitochondrial health;
• Increase sustainable energy in heart and muscle tissues;
• Support healthy aging;
• Slow cellular aging;
• Improve athletic performance;
• Increase muscle endurance;
• Stimulate healthy cellular metabolism;

• Support cardiovascular health;
• Lower cholesterol;
• Foster weight management;
• Promote healthier skin;
• Serve as an anti-inflammatory;
• Reduce age-related cognitive decline; and
• Promote DNA repair and recovery during a health crisis.

Corporate Headquarters
Bioenergy Life Science Inc.
13840 Johnson St. N.E.
Minneapolis, MN 55304

Toll-Free: 877/474-2673
(877.4RIBOSE)
Fax: 763/757-0588
Web Site: www.bioenergylifescience.com
E-mail: info@bioenergyls.com

Key Personnel
Leo Zhang,
Chief Executive Officer, Chairman
Marianne McDonagh,
Vice President Sales
Our mission is to create innovative, scientifically proven, all-natural ingredients that help people feel, perform, and look better.

Applications include dietary supplements, sports nutrition, functional food and beverages, cosmeceuticals, animal nutrition and therapeutic remedies. Benefits range from energy enhancement to cardiovascular health, digestive health to anti-aging, mitochondrial health to weight management and much more.

Contact us to learn how you can enhance your new and existing products with our branded ingredients.
Biova provides water-soluble eggshell membrane (WSEM) ingredients to the dietary supplement, skin care and pet care industries. Eggshell membrane is a unique ingredient that provides many of the fundamental building blocks for skin and joint health. Naturally occurring compounds include collagen, elastin, glycosaminoglycans, hyaluronic acid, protein and a variety of amino acids. These compounds work together to support healthy joints, and healthy skin.

Our patented manufacturing process produces water-soluble ingredients, which mean expanded delivery options for formulators. Biova’s ingredients can be incorporated into traditional tablets and capsules as well as gummies, chews, beverages, stick packs, chocolates, bars, powders, etc.

We work with some of the largest egg production facilities in the US. As a by-product of the food industry, Biova’s commitment to sustainability helps to keep over 2 billion eggshells from landfills per year. Through the removal of the membrane, the remaining eggshell is then easier to process into calcium supplementation for feed and fertilizer.

Biova’s patented ingredients offer proven health benefits: BiovaFlex® supports joint health in humans; BiovaDerm® is used as a topical ingredient for youthful looking skin; BiovaBIO™ (Beauty-Inside-Out) supports skin health through nutritional support; and BiovaPlex® provides healthy joint and coat support for companion animals.

Years of dedicated investment, ongoing scientific research and leading-edge technology are at the core of these all-natural, ultra-pure, nutrient-rich ingredients.
BiovaFlex has been clinically proven to support joint health in these 4 key areas:

- **Comfort**: Reduction of lower back pain within 5 days*
- **Activity**: 4x increased activity levels and ease of performing daily tasks*
- **Mobility**: Over 15% improvement in range of motion*
- **Protection**: Reduces free radicals and oxidative damage*

BiovaFlex water soluble egg membrane (WSEM) is a nutritional ingredient that supports joint health and offers proven elemental building blocks to support essential joint health needs.

Our patented process maintains the natural ratios of nutrients found in egg membrane, and creates a water-soluble, formulation-friendly ingredient.

**Contact Us:**
CustomerService@stauberusa.com
1.714.441.3900 | www.stauberusa.com

*These statements have not been evaluated by the Food and Drug Administration. This product not intended to diagnose, treat, cure, or prevent any disease.
About Biovation Labs
At Biovation Labs, quality happens within product manufacturing, not by chance. Deliberate. Sustainable. Verifiable.

Our story is simple. Our mission is to manufacture and supply the highest quality of dietary supplements for our clients. We want our clients to be able to provide their customers with meaningful products that enhance lifestyles and that create economical value for their business.


We are a preferred partner in the manufacture, production, and packaging of clients’ products. This is a commitment we take seriously. We invite you to work with us and experience a higher level of quality supplement manufacturing.

Quality Workmanship
Biovation Labs is a 104,000-sq-ft, NSF-registered, cGMP-certified manufacturing facility. We are proud of our FDA good manufacturing practices certifications. It has required hard work. And it’s another testament to the dedication of our manufacturing team.

Our strong quality commitment grows from the deep roots of our management team. Members come from both nutraceutical and pharmaceutical industries. Our passion is reflected in decades of supplement manufacturing experience and industry know-how that we use to make our client projects succeed.

Additional Specialties
• Formulation
• Encapsulation
• Tableting
• Label accuracy & compliance
• Bottling
• Carton packaging
• Order fulfillment
• Private label

Turnkey expertise, from formula to finished product. Dependability aimed toward the success of client products.

Crafting the Supplement Story
Combine Biovation Labs’ depth of formulation experience and manufacturing with clients’ innovative supplement ideas, and what do you get?

You get years of formulation knowledge, loads of industry best practices, and an entrepreneurial drive for dietary formulations with spark and uniqueness.

Which is why there is no surprise that so many supplement brand companies choose a relationship with Biovation Labs, from industry giants to start-up entrepreneurs.

As clients partner with our expert formulators, as we source pure ingredients, as we run a manufacturing pilot program, as we churn out millions of perfect capsules every day, we are writing the client’s supplement story. Let us help craft your perfect supplement story—from formula to finished product.
Every Capsule Has A Story.

Let us help craft your perfect supplement story – from formula to finished product.

We have been helping craft quality supplements for decades and would like to help craft your perfect supplement story.

Do you need a new or back-up contract manufacturer? Are you experiencing explosive growth and need a quick turn in manufacturing? We can help!

As an NSF cGMP certified facility, our quality standards produce some of the best dietary supplements on the market.

Call, email or visit our website for a quick quote or to explore manufacturing options.

Call for Quality Manufacturing

(844) 390-3482

2323 S. 3600 W., Salt Lake City, UT - 801-845-2075
info@biovationlabs.com - www.biovationlabs.com
Bolton & Company

PARTNER WITH THE LEADING INSURANCE BROKER FOR THE DIETARY SUPPLEMENT INDUSTRY.

Bolton & Company founded its dedicated Dietary Supplement Practice Group in 2014, with the objective of giving our clients in this industry access to a team of individuals who are focused on their needs and have experience and knowledge in servicing their accounts.

We handle placing all commercial insurance coverages, including property, workers’ compensation, automobile, international, professional liability, employment practices liability, directors & officers, cyber liability, aviation and environmental insurance.

The formation of the Dietary Supplement Practice Group comes from Bolton’s commitment to enhance the services available to our clients. As the leading insurance broker for your industry, we are constantly trying to keep you abreast of key issues that affect your business.

Bolton & Company’s Greg Doherty, CPCU, ARM, has a rich tradition since 2001 of protecting the interests and exposures of dietary supplement companies, including:

- Raw Materials Suppliers
- Contract Manufacturers
- Wholesale Distributors/Retailers
- Formulators
- Testing Labs
- GMP Consultants and Other Industry Specialists

Greg sets the standard for a nutraceutical product liability insurance broker and has published articles on dietary supplement product liability insurance and related topics.
Cactus Botanics CA Inc
Raw Materials For Health Industry

**Description**
As a botanical extract expert, Cactus Botanics has cultivated a global reputation supplying superior-quality ingredients. The company is U.S. FDA registered, passed US FDA audit, ISO 9001:2008, organic certified (EU Regulation 834/2007 and NOP USDA), and kosher and halal certified. All of its operations are NPA GMP certified. Its raw materials are clinically proven to support human health.

**Services**
Product quality is ensured by both in-house labs and reputable third-party labs. The firm’s warehouses, both in the western and eastern United States, provide U.S. Customers with added convenience.

**Products**
Cactus Botanics’ key products are:
- Fucosea®
- European Bilberry Extract
- Turmeric Extract Curcumin
- *Griffonia simplicifolia* Extract 5-HTP
- Milk Thistle Extract
- Gingko Biloba Extract
- Grape Seed Extract
- Horny Goat Weed/Epimedium Extract
- American Ginseng Extract
- Hyaluronic Acid
- Chondroitin Sulfate

Cactus Botanics also develops and markets various fruit juice powders, amino acids, vitamins, and biochemical products for dietary supplements and foods/beverages.

**Clients Served**
With proficiency in production and logistics, combined with industry expertise, Cactus Botanics confidently provides competitive strengths to our customers.

Please e-mail us at info@cactusbotanics.com for more information.

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Corporate Headquarters
Cactus Botanics CA Inc
2691 Richter Ave., Ste. 113
Irvine, CA 92606

Tel: 949/556-4287
Fax: 949/271-5639
Web Site: www.cactusbotanics.com
E-mail: info@cactusbotanics.com

Key Personnel
Carol Cheow,
President
California Natural Color

Nature’s True Colors

Company Description
California Natural Color manufactures colors from fruits, vegetables, and other natural sources for the food, beverage, and nutraceutical industries. With the support of a strong supply chain beginning in vineyards and fields combined with state-of-the-art technologies for processing and packaging, we can offer unique product solutions. These capabilities and an unwavering commitment to quality resulted in California Natural Color becoming the world’s largest supplier of red anthocyanin colors.

Since our start in 1994, we have expanded our portfolio to offer crystal colors. Our crystal colors come in a wide range of color intensities and shades and are made from blends of Rubired grape, black carrot, purple sweet potato, and other natural ingredients. They are dried into a crystalline form without the use of carriers. Crystal colors are completely and easily soluble with much less dust than spray dried colors. They have a shelf life of 5 years at ambient temperature.

California Natural Color is a division of E. & J. Gallo Winery and is located adjacent to the Fresno winery. The two facilities strive to be zero waste facilities and have been presented with various awards regarding sustainability. SJVC is a FSSC 22000 certified facility.

Corporate Headquarters
California Natural Color
5631 E. Olive Ave.
Fresno, California, 93727 USA

Toll-Free Number: 800/557-0220
Tel: 559/458-2500
Fax: 559/458-2564
Web Site: californianaturalcolor.com
E-mail: inquiries@californianaturalcolor.com

Key Personnel
Thomas Lampe,
Director of Business Development

Kai-Mei Loo,
Quality Manager

Alice Conley,
Customer Service Manager

Products
Crystal Colors:
- Pure Purple Grape
- Pure Red Grape
- Pure Purple Carrot
- True Magenta
- Pure Purple Sweet Potato
- True Pink
- True Blush
- Real Red BG NEW!!
- Real Red CF NEW!!
- True Rose
- Pure Red Carrot
- Pure Brown Grape NEW!!

Product Qualifications
- Unique Crystal Form
- High Color Concentration
- Carrier Free
- Enables Zero Calorie Label
- Superior Color Stability
- Halal
- SO2 Free
- Non-GMO
- Organic Compliant
- Enables Clean Label
- OU Kosher
- 5 Year Shelf Life
- Fast Solubility
- Less Dust Than Spray Dried Colors
- Offers Supply Chain Savings

Major Markets
- Beverages
- Confections
- Nutraceuticals
Color from Natural Sources

Our unique color crystals are the perfect solution for a multitude of food and beverage applications.

- Carrier-Free
- Solution for Global Distribution
- Zero Calories
- OU Kosher
- Halal
- SO₂ Free
- Crystal & Liquid Color
- Non-GMO
- Organic Compliant
- Fast Solubility

CONTACT US TODAY for more information or a sample kit
800.557.0220 • inquiries@californianaturalcolor.com
5631 E. Olive Ave., Fresno, CA 93727 • californianaturalcolor.com

California Natural Color is a division of the E. & J. Gallo Winery
Captek Softgel International Inc. is a leading, FDA-compliant contract manufacturer and distributor of specialty softgel formulations in the nutraceutical sector. Captek provides customized, hard-to-make formulations under contract manufacturing relationships for leading global brands. Captek operates high-efficiency encapsulation lines running 24/5, capable of producing over 10+ billion softgels annually. Our facilities encompass approximately 290,000 sq ft of production, analytical laboratory, pilot laboratory, and warehousing space. Captek fully complies with FDA cGMPs and has been independently certified by NSF International.

Captek is dedicated to providing quality products to customers worldwide. With the demands of more complex and novel products coupled with increasing regulatory and compliance needs, Captek has set the bar in the dietary supplement industry. Our reputation of providing excellent, quality products and services is evidenced by our longstanding relationships with our brandholders. Captek’s Quality team is actively driven to remain on the leading edge of our industry’s quality initiative. Our Quality Unit is made up of highly knowledgeable, skilled, and experienced subject matter experts from a variety of industries and backgrounds, translating into a robust quality system our customers can rely on.

Our in-depth knowledge of our products, processes, and regulations provides our customers with:
- Technical data pertaining to product manufactured, ranging from components to process and systems
- In-house laboratory testing for all incoming materials and finished products
- U.S. FDA 21 CFR Part 111 compliance
- Timely and complete technical and regulatory support
- Robust quality systems to support all aspects of manufacturing operations and processes

Contact Captek to find out how we can serve you:
- Formulation & product development
- Raw materials sourcing
- Laboratory evaluation & testing
- Encapsulating
- Imprinting & laser etching
- Bottling, labeling, and warehousing
- Certifications & external compliance
ALL THE INGREDIENTS OF
AN INDUSTRY LEADER.

Over the years, Captek has emerged as a world-class maker of high quality softgels and other superior
dietary and nutritional products. We have built an international reputation for providing just the right mix
of uncompromising manufacturing standards, consistent and reliable customer service, and extensive
knowledge and experience in the development of premium, cutting-edge products—in other words, all the
ingredients that promote the strength and success of your brand. To learn more about what a partnership
with Captek holds for you, join us at SupplySide West, booth #1663.

Go to capteksoftgel.com or call us at 562.444.1798 for further information.
Certified Nutraceuticals Inc.
Healthy Living through Innovative Technology

Certified Nutraceuticals offers patented raw ingredients in bulk powder, finished products in bulk, capsules/tablets, private label, bioanalytical, research and development.

Expert in anti-aging ingredients
Backed by three decades of research and development of nutritional supplements, Certified Nutraceuticals pioneered the original invention of three Collagen Type II patents (US Patent #8,344,106 B1) for dietary supplements and the first to introduce Collagen Types I, II, and III food supplements to the health food market more than 25 years ago.

Certified Nutraceuticals is the ideal partner for companies that want success in the fast-growing anti-aging nutritional supplements sector. Certified Nutraceutical's expertise in nutritional anti-aging food supplements are based on long-term experience in dietary supplements processing and production, using state-of-the-art spray-dry, mixing and filling plants. The Certified Nutraceuticals team comprises nutritionists, chemists, scientists, product development experts, experienced purchasers and many partners from science, law, market analysis, packaging design, logistics and other fields.

Corporate Headquarters
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Fax: 951/600-8676
Web Site: www.certifiednutra.com
E-mail: info@certifiednutra.com

Key Personnel
Ahmad Alkayali, Inventor, CEO
Terri Stiles, Director
Abdul S. Alkayali, Vice President, International Div.
Lisa Donato, Office Manager

Services portfolio
• Raw materials procurement
• Product development
• Production development
• Manufacturing
• Package design
• Filling and packaging
• Distribution
• Logistics.

Product examples

Anti-aging
• Telomere health support
• DNA/heart health protection Anti-Oxidant
• Immune system and liver function

Health mobility
• Collagen Type II - complete joint health
• Collagen Types I,V,X - skin health/wound healing/ connective tissues disorders
• Collagen Types I,II,V,X and Mucopolysaccharides - advanced collagen recovery compound
• Collagen Type II Pomegranate Liquid Concentrate/total body health
• Grapevine Liquid Concentrate/powerful antioxidant/promote heart health and immune system
• Natural Food Grade Hyaluronic Acid Sodium from Rooster Comb-Nature’s Most Perfect Synovial Fluid

Introducing The First New Food Grade Edible Hydrolyzed Jellyfish Collagen:
• KollaJell™ Edible Hydrolyzed Coastal Jellyfish Collagen Powder (Patent Pending)

Health Benefits of Jellyfish Collagen:
• Helps to Improve Memory and Brain Function
• Helps to Fight the Decline of Calcium Binding Proteins
• Reverses Photo Aging & Restores Skin Health
• Anti-Fatigue & Anti-Cell Oxidation
• Helps to Stimulate the Immune System & Neurological Activities
• Proprietary Technology Extraction and Purification

Beauty
• Marine Collagen from fish skin and jellyfish
• Pomegranate seed extract
• Olive leaf extract (25% Hydroxytyrosol) most powerful Antioxidant discover to date!
TELOMERE HEALTH SUPPORT

Nobel Prize Winning Research Unlocks the Key Elements that Causes Cell Aging. Telomeres, an Important Piece of the Puzzle of Human Aging!

**BENEFITS OF Telos95®**

- Clinically Proven Effective
- Supports Telomere Health
- Combats Oxidative Stress
- Supports Healthy Longevity
- Halts Telomere Shortening

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**BENEFITS OF TendoGuard™**

- Clinically Proven Effective
- Keeps Tendons Healthy and Flexible
- Increases Range of Motion Associated with Pain
- Helps Stimulate Collagen Synthesis
- Provides Necessary Nutrients to Tendons-Recovery Process

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**Olea25®**

**ORGANIC OLIVE LEAF EXTRACT 25% HYDROXYTYROSOL**

Often considered nature's perfect antioxidant, hydroxytyrosol is one of the key active ingredients in the olive that is largely responsible for the olive's tremendous health benefits.

**BENEFITS OF Olea25®**

- Clinically Proven Effective
- Protects Against All 5 Common Free Radicals
- Promotes Heart Health and DNA Health Protection
- Ten Times Higher than Green Tea and Three Times Higher than CoQ10

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**kollaGen L.V.X.**

**EGGSHELL MEMBRANE COLLAGEN**

Collagen Types I, V, X, are powerful compounds found in eggshell membrane accounting for 15% to 20% of the total collagen.

**BENEFITS OF kollaGen L.V.X.**

- Clinically Proven Effective
- Promotes Fibroblast Activity for Skin Elasticity
- Promotes Skin Collagen Renewal and Repair
- Decreases Body Inflammation
- Increases Joint Mobility

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**VISIT US AT:** Vitafoods Europe
Geneva, Switzerland
May 9-11, Booth# C12

**FOR INFORMATION & AVAILABILITY PLEASE CONTACT:**
Tel: (951) 600-3899
Fax: (951) 600-8676
info@certifiednutra.com
www.certifiednutra.com
www.trytelos95.com
**Ciranda Inc.**

Organic, Non-GMO, and Fair Trade Ingredients

The employee-owned company operates from headquarters in Hudson, Wisconsin, with ingredients available from multiple warehouses across North America for fast, responsive service. Visit us at booth #3377 at SupplySide West.

**Corporate Headquarters**
Ciranda Inc.
221 Vine St.
New Richmond, WI 54016

Toll-Free: 888/329-3577
Tel: 715/386-1737
Fax: 715/386-3277
Web Site: www.ciranda.com
E-mail: sales@ciranda.com

**Key Personnel**
Tonya Lofgren,
Marketing Manager

**Description**

Ciranda’s extensive portfolio of certified organic, non-GMO, and fair trade ingredients provides function and nutrition in a variety of applications, including bars, RTDs, meal-replacement products, protein powders, supplements, and more.

As a customer, you will benefit from decades of organic industry experience and a global network of suppliers who share our vision for a clean and healthy food system. Ciranda’s quality assurance, procurement, logistics, sales, and service teams work in harmony to ensure consistent quality and reliable supply.

**Organic & Non-GMO Ingredients**

- Tapioca syrup, syrup solids, and starch
- Tapioca dextrose and maltodextrin
- Brown rice syrup — NEW!
- Soy, sunflower, and canola lecithin
- Cocoa powders, natural and alkalized
- Chocolate and couvertures
- Coconut cream, milk, and milk powder
- Virgin and refined coconut oil
- RSPO-IP sustainable palm oil
- Cassava flour
- Jerusalem artichoke flour
- Agave syrup and inulin
- Crystalline grape sugars

Brands and manufacturers of bars, protein powders, meal replacement shakes, and supplements trust our certified organic, non-GMO and free-from ingredients to create healthful products that deliver on texture and flavor.

- **Cocoa Powder & Chocolate**
- **Coconut Products**
- **Inulin (from Blue Agave)**
- **Fluid & Powdered Lecithin**
- **Tapioca Syrup**
- **Brown Rice Syrup New**
- **Tapioca Dextrose & Maltodextrin**
- **Crystal Grape Dextrose & Fructose**

**REQUEST A SAMPLE:**
1-888-329-3577 | sales@ciranda.com
Explore our ingredients at www.ciranda.com
Evolva was founded in 2004 and has operations worldwide today. Based on a strong research foundation, Evolva is a pioneer and global leader in sustainable, fermentation-based products, including resveratrol, the powerful healthy-aging ingredient.

Evolva’s resveratrol, Veri-te™ resveratrol, comes from an innovative yeast fermentation process which delivers a consistent, contaminant-free, high-quality ingredient that easily formulates into a variety of applications.

Introducing Veri-te™ Resveratrol CWD 90

Evolva has partnered with Pharmako Biotechnologies to create Veri-te™ Resveratrol CWD 90, using LipiSperse® Dispersion Technology. With a 90% trans-resveratrol content, this unique ingredient system is designed to deliver a large amount of resveratrol into aqueous environments in a simple, effective way. With a neutral taste, the system is easy to flavor in a variety of formulations.

Veri-te™ Resveratrol CWD 90 offers you a wide range of delivery opportunities

• Functional beverages
• Liquid shots
• Oral dispersible tablets
• Effervescent tablets
• Fast melt powder sticks
• Instant powder drinks

Contact us today
to learn more about this exciting new technology and how it might work with your formulas

veriteresveratrol.com
1.800.250.1032
res@veriteresveratrol.com

LipiSperse® is a registered trademark of Pharmako Biotechnologies. Veri-te™ is a trademark of Evolva.
Ecuadorian Rainforest LLC
South America and Beyond

Description
Ecuadorian Rainforest, LLC, is your premier supplier of nutraceutical ingredients from South America and beyond. Since 1997, Ecuadorian Rainforest provides over 1,000 all-natural fruit, herb, marine, spice, and vegetable ingredients. With over 20 years of experience in the field, Ecuadorian Rainforest remains one of the industry’s most reliable suppliers of all-natural ingredients.

Associations
- Natural Products Association (NPA)
- American Herbal Products Association (AHPA)
- Organic Trade Association (OTA)
- Better Business Bureau (BBB)

Services
- Star-K kosher certified ingredients
- ISWA halal certified ingredients
- Conventional, wild harvested and organic ingredients
- Bulk powders & powdered extracts
- Bulk specialty ingredients

Quality Assurance
Meeting state and federal food and drug regulation says you are committed to passing a periodic review to ensure that your business continues to operate. However, when a company creates its own standards and enforces them on a weekly basis, that company is committed to the clients themselves and to the quality of what people put into their bodies. Ecuadorian Rainforest exemplifies the latter scenario. Some of the ways in which we define and enforce rigorous standards of quality for our products are:

- Internal Quality Control Program to ensure products are free of toxins and undesired byproducts
- Alliances with scientific laboratories to enforce rigorous testing procedures
- Weekly testing for microbial pathogens and heavy metals such as lead, cadmium, arsenic and mercury.
- Microbiological testing (total plate count, yeast and mold, coliforms, E. Coli, and Salmonella)
- Random testing of materials’ moisture content
- High-Performance Thin Layer Chromatography (HPTLC) testing for initial approval and supply
- High-Performance Liquid Chromatography (HPLC) testing for powdered extracts
- Prevention of all sub-potent and contaminated materials from entering products
- Regular testing for proper identification and chemical efficacy

Major Products
Black Currant, Longjack, Jiaogulan, Arugula, Beetroot, Boswellia, Mango Leaf

Superfruits: Acai, Acerola, Goji, Maqui, Goldenberry, Pomegranate
South American Ingredients: Pata de Vaca, Cassava, Yerba Mate, Lucuma, Purple Corn, Maca
Natural Colorants & Sweeteners: Tomato, Carrot, Stevia, Monk Fruit, Blueberry
Sleep Support: Valerian Root, Chamomile, Mucuna, Lemon Balm
Energy: Guarana, Guayusa, Green Tea
Plant Proteins: Rice Protein, Soy Protein, Lentil, Pumpkin Seed, Fish Protein
Alternative Grains: Quinoa, Chia, Millet, Amaranth, Garbanzo

...and many more ingredients from around the world!
We're a team of creative and strategic thinkers — seasoned communications professionals with in-depth food and nutrition industry knowledge including the trends and regulations affecting it. We get your business environment, because we immerse ourselves in it every day.

At Quiet Light, our mission is to make your business successful by quietly, but effectively shining a brilliant spotlight on your products, services and expertise. So.....

When you're ready to talk solutions, please give us a call.

To get started, contact Don Peach at 815-398-6860, dpeach@quietlightcom.com.
Farbest Brands brings the highest quality food, beverage and nutrition ingredients to you from the world’s most trusted suppliers. We enjoy over 60 years of long-lasting relationships with our customers because our business is built on integrity and representing the most ethical suppliers in the industry.

Committed to Quality
Now more than ever, consumers are demanding clean-label and organic ingredients. Farbest offers USDA-certified organic, non-GMO, RBST-free, pasture-fed, allergen-free, gluten-free, kosher, vegan, and halal ingredients. Farbest supplies dairy proteins, plant proteins, vitamins, carotenoids, specialty nutrients, gum acacia, natural colors and specialty sweeteners.

Outstanding Service
Our deep commitment to providing outstanding customer service means when you call us, you’ll speak with a real person and get the personalized service you deserve.

Market Insights
Gain a competitive advantage with our extensive market knowledge and six decades of industry experience. We spot the trend before it’s a trend and can help you decide what to source, when to buy, and more.

To request a free ingredient sample, along with product information and specification sheet, visit www.farbest.com/sample-request. Have a question? Need a quote? E-mail information@farbest.com or call us today at 800/897-6096!

Farbest Brands Products

Non-GMO
Consumers are demanding natural ingredients in their food and beverages, ones that are free from modifications like GMO, rBST, and allergens. Farbest can help you meet this need with a full range of high-quality proteins, vitamins, nutrients, vitamin premixes, sweeteners, and gums—along with organic ingredients—at cost-effective pricing.

Non-GMO Project Verified
Farbest Brands now offers ingredients that are Non-GMO Project Verified, with several more on the way. The ingredients that are currently Non-GMO Project Verified are: Farbest Pea Protein 80% Fine Mesh, Jianyuan Pea Protein 80%, Jianyuan Pea Protein 80% Low Sodium, Jianyuan Pea Protein 85%, Organic Sunflower Lecithin Fluid, and Organic Sunflower Lecithin Powder, Organic Soy Lecithin Fluid, and FarSweet™ Non-GMO Crystalline Fructose.

Proteins
Dairy Proteins: rBST-free, pasture-fed, kosher, and halal. Products include casein, caseinates, whey protein concentrates and isolates, and milk protein concentrates and isolates.


Organic

Gum Acacia
Farbest offers Gum Acacia Senegal and Seyal varieties. Our Gum Acacia is non-GMO, gluten-free, and vegan, as well as kosher and halal certified. Available in both conventional and USDA-certified organic versions.

Natural Colors
Farbest offers a line of natural colors that can be custom formulated to meet your specific color target, shelf life or process.

Vitamins
Farbest offers a complete line of vitamins and carotenoids, including vitamin premixes and blends.
FrieslandCampina Ingredients

At FrieslandCampina, we take great pride in more than 140 years of milk processing heritage. As a dairy co-operative, FrieslandCampina has unique control of the complete value chain “from grass-to-glass” ensuring the highest level of quality possible.

Milk from our own dairy farmers is processed into specialized ingredients such as:

- Caseinates
- Milk Proteins
- Whey Proteins
- Encapsulates
- Hydrolysates
- Prebiotics

FrieslandCampina Ingredients has a broad portfolio of value-added technologies for use in:

- Performance Nutrition
- Beverages
- Mainstream Food
- Infant Nutrition

Our passion for dairy, creativity and entrepreneurial spirit inspires us to find the right solution, adapting the functionality of our ingredients to suit your unique application. Our goal is to bring the highest innovative, nutritional and functional value to your product.

Interested to learn more? Visit us at Booth #3435 at the Supply Side West!

Nutri Whey™ Native
Whey Protein in its Pure Form

Consumers today want healthy and natural protein products. Nutri Whey™ Native is whey protein in its pure form, extracted directly from milk.

Expand your product portfolio with our ingredient solutions that support you in your clean label journey.

Visit us at the Supply Side West in Las Vegas Booth #3435.

www.frieslandcampinaingredients.com
Forbes Chocolate
Quality First

Description
Forbes is a leading provider of top quality cocoa and flavors to food and beverage companies all over North America. Founded in 1901, we have established a reputation for top quality products and customer service.

Products and Services
Forbes manufactures cocoa blends and other flavor powders for flavoring protein blends, beverages, beverage mixes, fortified products, nutraceuticals, baked goods, milk, and frozen desserts.

- We offer an extensive selection of cocoa powders in a wide spectrum of colors and fat ranges.
- We offer specialty cocoa powders such as defatted, black, dark natural and mid-high fat.
- Forbes follows the changing beverage market and offers trending and seasonal flavors.
- Our dedicated food scientists and product specialists can provide custom blending, product development, formulation and application support.
- We offer certified products such as Organic, Fair Trade, Kosher, Halal and Non-GMO Project Verified.

Quality Assurance
We have a long standing reputation for quality and customer care. Flexibility, responsiveness, and technical expertise are all characteristics this family-owned company has worked hard to maintain since its beginning in 1901.

- Forbes Cocoa and Flavors has achieved SQF Level 3 certification.
- Our facility holds Organic, Halal and Kosher Certifications.
Supply Side West
Booth # 2229
Mandalay Bay
November 8 & 9

Forbes Cocoa
AND FLAVORS
Providing Top Quality Cocoa,
Since 1901
Conventional, Organic and
Specialty

Food Quality & Safety
2018 Award Winner

@ForbesChocolate

NON GMO Project
FARM TO FORK SAFETY
Providing quality control, from field to consumer, Fruit d’Or Nutraceuticals, a division of Fruit d’Or, supplies rich, high-potency, organic, all-natural wild blueberry, cranberry fruit powders and cranberry seed oil for the health and nutrition industries. Our mission is to produce and promote high-quality fruit ingredients for food, beverages, and nutraceuticals, while reducing the environmental impact. Through an environmentally friendly approach, we meet and surpass the standards of environmental and sustainable development.

We have designed an organic brand called Cran Naturelle, which is the purest, all-natural, high-quality whole-food cranberry powder in the market. Cran Naturelle is also clinically studied and tested. Our state-of-the-art manufacturing process delivers the highest level of natural proanthocyanidins (PACs), while maintaining the natural integrity of the fruit. The commitment to quality, science, and innovation sets Fruit d’Or Nutraceuticals ingredients to a higher standard, helping manufacturers create superior end-products that are tried, tested, and true. We are not the world’s largest but one of the leaders in the world of organic cranberries and blueberries. We invite you to join our team and grow together to become involved in the next-generation cranberry company.

Process
We pride ourselves on our quality assurance, quality control, and manufacturing processes. We meet or exceed cGMP standards. Unlike those of other cranberry suppliers, our fruits are grown without GMOs or nanotechnology, fossil fuel fertilizers, or sewage sludge, and without toxic and persistent synthetic pesticides, herbicides, fungicides, or fertilizers. There are no irradiation, preservatives, chemicals excipients, colors, flavors, or chemical additives used.

Products
Our main focus is supplying all-natural, full-spectrum organic cranberry and blueberry ingredients. Products include:

- **100% Whole Food All Natural Fruit Powder**, guaranteed to contain the highest potency of PACs than all other all-natural cranberry ingredients
- **Organic Cranberry Juice Powder**, water soluble carrier free standardized for PACs tested for efficacy
- **Patented Organic Cranberry Prebiotic Powder**, derived from the seed of the cranberry. A complete protein that contains 25% protein, 16 essential amino acids, 8 branch-chain amino acids, phospholipids, potassium, and high amounts of fiber 50%
- **Organic Pure Cranberry Seed Oil**, cold-pressed from the seed without chemicals, excipients, or high temperatures. Ideal for the cosmetic industry as a rival to palm oil and known for its high level of tocotrienols, Omega-3, -6, -9, and Sterols
- **Organic Tea Powder**, custom-formulated for the beverage industry. For functional medicinal use, containing the highest potency of PACs than any other cranberry tea powder
- **Conventional Blue d’or and Organic Blue Naturelle** contains 100 percent all-natural wild blueberry powder. It is made from the whole fruit. It is a pure, whole food with no chemicals, preservatives, fillers, food colors, additives or processing aids.

Support
We offer our customers assistance with support in the following areas:

- Educational material is offered to sales and marketing teams to promote science and research.
- Development of strategic promotional marketing campaigns to generate sales for both manufacturers and retailers
- Investment towards research and science to demonstrate the health benefits beyond UTI
- Establishing higher-quality assurance standards for guaranteeing purity, potency, and safety for consumers and preventing adulteration through methods such as DNA testing
- Collaborating with third-party accredited labs to establish new test methods for measuring bioactives of cranberry and blueberry such as proanthocyanidins, using new technology and advanced analytical Equipment
CRAN naturelle™
Organic
Raising the bar of quality.

Your guarantee of efficacy, purity, safety.
Setting higher standards of quality in the cranberry industry.

10X Powerful Than Cranberry Juice Powder

Discover The Cran naturelle™ Difference
• ORGANIC Whole Food
• DNA Tested for Authenticity
• Tested for Adulteration
• Non-GMO Verified Approved
• No Flow Agents Preservatives and Additives
• Clinically Studied and Tested
• Standardized for Highest Natural Soluble and Insoluble PACs

www.crannaturelle.ca

Fruit d’Or Nutraceuticals

Contact:
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Sales & Marketing Business Development
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1 888 472-2275
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Supported by such companies as
Frutarom Health
Enjoy Health Ingredients

Years of experience have made Frutarom Health one of the world’s leading manufacturers of high-quality health ingredients. Everything we do is backed by science and supported with the evidence that markets and regulators demand.

As a company that puts science first, we undertake proprietary studies to continually improve the efficacy and safety of our ingredients, and to drive innovation. For example, our one-of-a-kind EFLA® HyperPure process technology was born from our determination to ensure we produce ingredients with the highest possible levels of purity.

With our regulatory knowhow, comprehensive market knowledge and global capabilities we can offer you high quality application and formulation support. This helps you – our customer – gain a competitive edge in today’s dynamic health landscape.

Frutarom Health offers a selection of technologies that keep pace with developments in health and wellness, and help you find solutions to the unique needs of your consumers. Even better – all our products reflect our commitment to quality, science, and innovation.

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Raimund C. Hoenes,
General Manager
Maider Gutierrez,
Director of Marketing & Product Management

Frutarom Health
We are a leading global manufacturer of high-quality health ingredients backed by science

health@frutarom.com | www.frutaromhealth.com

BrandHive is a full service brand development agency dedicated to the healthy lifestyles category.

- strategic planning
- branding
- public relations, social
- web interactive

www.brandhive.com
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GMP Labs
You know your marketing. We know our manufacturing.

**Description:**
For today’s fast-paced and ever-changing marketplace, the need for a dependable, versatile and certified contract manufacturer partner is critical. For over twenty years, GMP Laboratories of America has been providing our clients with the quality products made to current Good Manufacturing Practices (cGMP) standards in a variety of different dosage forms, including tablets, capsules, liquids, and powders. We are recognized in the nutraceutical industry for our attention to detail, flexibility, and quick turnaround. Our team of qualified professionals will offer innovative solutions for your specific needs. Our friendly staff and our personal service have played a key role in establishing GMP Labs as a leading contract manufacturer and packager of quality dietary supplements and homeopathic drug products.

**Manufacturing:**

**Hard Shell Capsules**
- Capacity exceeds 400 million per month

**Tablets**
- Capacity exceeds 500 million per month
- Customizable tablet shape
- Special Tablet Formulations
- Enteric coating
- Aqueous coating
- Rapid release
- Quick dissolve
- Chewable

**Liquids**
- RTD (ready to drink) supplements
- Premium health juices

**Powder Blends**
- Capacity exceeds 1,000,000 kg per month
- V-Blending
- Planetary mixers
- Ribbon blending
- Particle Sizing

**Packaging**
- Bottle Filling & Labeling
- Fully automated lines
- Flexible run sizes
- Big Container Filling
- From small jars to large buckets

**Product Development & Technical Services:**

**Custom Formulations**
- Our highly skilled team of chemists offer formulation assistance.

**Pilot Batches**
- Turn your concept to reality with a free pilot batch when you purchase a full production batch of the pilot formula.
GMP Laboratories of America, Inc.

Custom Contract Manufacturer of Quality Supplements

Excellent Service • High Quality • Prompt Turnaround

Best in Class Contract Manufacturing.
Best in Class Service.

GMP Labs® is your best choice for manufacturing dietary supplements and homeopathic drug products:

- Tablet Compression
- Hard Shell Encapsulation
- Powdered and Liquid Drink Blends
- Bottles
- Jars

Call us at:
(714) 630-2467
www.gmplabs.com

EXPORT

Canada  Hong Kong  Singapore
Saudi Arabia  Korea  UK
U.A.E.  Vietnam  EU
Japan  Malaysia  Brazil

USDA Organic  OTC  NSF  NSF

cGMP  SPORT

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With over 25 years of experience, Gnosis is a biotechnology company specialized in the manufacturing and sale of fermentation-derived raw materials and natural finished products for the pharmaceutical, nutraceutical, cosmetic, veterinary, and agricultural industries.

Successful integration of R&D centers and GMP-approved manufacturing facilities enables Gnosis to constantly develop and introduce innovative, industry-leading products to its customers, merging excellence in biotech innovation and constant evolution in nutraceutical applications. The company also offers tailor-made industrial manufacturing of intermediates and active ingredients.

Gnosis’s primary branded proprietary ingredients for the nutraceutical industry include:

- **Probiotics**: Saccharomyces boulardii
- **Folate**: Quatrefolic®

SAMe: Adonat® (S-adenosyl-methionine powder), Adogran® (SAMe granular), Adomix® (SAMe dried mix), Soloesse® (all-natural tablets), SamEspresso® (mouth-soluble granulate), SamEdrink® (effervescent tablets), and Superesse® (enriched natural yeast)

- **Vitamin K2**: vitaMK7® (menaquinone 7) and K2&Olive™
- **S-Acetyl-Glutathione**: Emothion™
- **Silybin**: Phosphocomplex™
- **Non-animal Chondroitin Sulfate**: Mythocondro®

The Gnosis Group includes a European manufacturing network made up of three operating divisions: the R&D Centre in Desio (Milan, Italy); production plants in Bellinzona (Switzerland) and Pisticci (Matera, Italy); and three commercial operations located in Italy, the United States, and China.
Since 1943, Grain Processing Corporation has been developing products that touch the lives of millions of people every day. We offer an industry-leading line of maltodextrins along with a diverse range of food starches. GPC ingredients are used in a wide variety of food, beverage and nutritional products. We are committed to collaborating with customers to create innovative solutions that meet their needs. Our commitment to quality is second to none and is supported by the world-renowned GPC global supply and service.

Premium Maltodextrins
As an industry leader, providing a dependable supply of high-quality maltodextrins is a primary focus for GPC. With an unmatched product line, GPC MALTRIN® maltodextrins and corn syrup solids are considered the gold standard for the industry. They are used in various applications including nutritional and sports beverages, infant formulas, nutritional bars, frozen desserts and healthy snacks. They help build solids, improve texture and product stability, reduce calories from fats and oils, moderate sweetness and aid in the dispersion of other ingredients. Their neutral flavor profile, low hygroscopicity and high solubility make them ideal for spray drying flavors, colors and fruit juices. Quick-dispersing versions are also available.

New from GPC
The newest additions to GPC’s MALTRIN® line of ingredients are MALTRIN® tapioca maltodextrins and tapioca syrup solids (MALTRIN® T-Series). Sourced from 100% tapioca, these functional carbohydrates are Non-GM by origin and available in a wide range of dextrose equivalents. MALTRIN® tapioca maltodextrins and tapioca syrup solids are allergen free and Cronobacter free, which makes them ideal for infant nutrition formulations among numerous other applications. These new tapioca-based products can also help with clean label requirements for many customers.

Specialty Starches
Another primary focus is our family of specialty starches including PURE-COTE® coating/film-forming starches, INSCOSITY® instant modified starches, PURE-SET® thin-boiling starches, PURE-GEL® stabilized starches and PURE-DENT® unmodified and specialty starches. This unique product line has evolved to solve very specific product integrity challenges. They are used in a myriad of applications to thicken, bulk, bind, carry, gel, coat, manage moisture, stabilize, replace or reduce fat or aid in spray drying.

Exceptional Products, Superior Service
Contact GPC today.
Gold Coast Ingredients
Where Science, Nature and Knowledge are brought together for your success

Description
Gold Coast Ingredients is a privately held and operated, wholesale flavor and color manufacturer that has been satisfying taste since 1985. We are a GFSI and AIB certified company capable of serving all types of industries from food and beverages to animal treats and oral care. With us you will find Organic, Natural, Non-GMO, Allergen-Free and other Clean Label flavors that take your most delicious ideas and translate them into a universal language for the world to enjoy.

Our flavors are available as liquids, powders, powder encapsulations, emulsions and advanced extractions to be compatible with any product requirements. GCI also supplies custom, QAI Certified Organic, ISA Certified Halal, OU Certified or KOF-K Certified Kosher flavors upon request. Our current manufacturing facility is located in Commerce, California, while utilizing distribution facilities throughout the United States, Asia and Europe.

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FLAVORS & COLORS

trust us with trends

Organic
Natural
Non-GMO
Allergen-Free
Gluten-Free
100% Vegetarian
N&A
and more flavors

GFSI
Organic
Halal & Kosher
certified

Browse through thousands of
sweet & savory flavors
at www.goldcoastinc.com

GOLD COAST ingredients, inc.

Tel +1 (323)724-8935
Contact: info@goldcoastinc.com
HORN Nutraceuticals is your first choice for science-based innovations and best-in-class ingredients.

A premier distributor of specialty ingredients and raw materials in North America, HORN specializes in the distribution of high-quality, efficacious ingredients from many of the world’s most respected manufacturers of raw materials. These specialty ingredients are used in a variety of industries, including nutraceuticals.

Comprising seasoned technical experts, HORN delivers superior customer service, unmatched formulation expertise, and strategic problem-solving capabilities. Established in 1961, HORN is a company driven by an entrepreneurial spirit that embraces challenge and inspires innovation.

Partner with HORN. We orchestrate success.

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Cabot
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GFR Ingredients
Grain Processing Co.
Guzen Development
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Japan Bio Science Laboratory
Kyowa Chemical Industry
Leiber GmbH
Lesaffre Human Care
Lonza
Nutri Granulations
Nutri-Pea Ltd.
Roquette America
Ryusendo
Saw Palmetto Berries Co-Op of Florida
SLOiron
Sun-Green
Tate & Lyle

**Nutraceuticals Applications**
• Capsules
• Powders
• Soft Gels
• Tablets
• Liquids
• RTDs

*Please check with your dedicated HORN account manager to confirm sales territory and application.
PERFORMANCE. ENDURANCE. STRENGTH.

Boost creatine absorption up to 50 percent.

Exclusively available through HORN, Outlast is a proprietary creatine-Palatinose™ blend clinically proven to improve the bioavailability of creatine in the blood up to 50 percent compared to using dextrose as a carbohydrate transport mechanism.¹

Learn more about Outlast and HORN's other specialty ingredients from leading manufacturers around the globe.

Partner with HORN. We orchestrate success.®

HP Ingredients
Quality and Research-Based Botanical Ingredients Supplier

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Toll-Free: 877-437-2234
Website: www.hpingredients.com
www.lj100.com
www.paractin.com
E-mail: info@hpingredients.com

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Hame Persaud,
Executive Vice President
Jessica Eng,
Chief Operating Officer
Dr. Juan Hancke,
Chief Scientific Officer

Core Products
LJ100® – for men’s health and sports nutrition*
ParActin® – for bone, joint and muscle health*
Bergamonte® – support for metabolic syndrome, cholesterol, blood glucose balance, & weight management*
MaquiCare™ – supports healthy skin, immune and inflammatory response*
CitruSlim® – for healthy weight management*
NeuroActin® – supports improved learning & memory, helps support neuronal health*
NoMax® – increases nitric oxide for enhanced physical performance*
QuantumIQ™ – supports cognitive function, mood, IQ performance*
ProteoActin™ – supports skin healing and healthy inflammatory response*

Naturally... when we started 17 years ago, our founder, Annie Eng, set out to create a company that would not only deliver herbal science for health products that people all over the world could rely upon, but also support the indigenous peoples who provide the raw botanical materials for our ingredients.

Today we manufacture and supply safe, patented, science-based, clinically proven natural botanical extracts that are used by hundreds of companies as ingredients to produce successful health products. Our mission is to maintain a reputation as a pioneer in the global natural health industry while we continue to deliver unique ingredients backed by rigorous scientific research.

It’s only natural, and that’s the way we plan on keeping it.

We provide unique ingredients that address common health and aging concerns such as support for: • Metabolic Syndrome • Cholesterol, Blood Glucose Balance • Weight Management • Skin Care • Men’s Testosterone Health • Enhanced Physical Performance • Sports Nutrition • Neuronal Health • Bone, Joint and Muscle Health • Cognitive Function, Mood, IQ Performance • Antioxidant Support

* The products and the information provided have not been evaluated by the Food and Drug Administration. The product is not intended to diagnose, treat, cure, or prevent any disease.
Description
Ingredia Dairy Experts develops and produces milk powders, milk proteins, functional systems, and innovative bioactives for the food and health & nutrition industries throughout the world.

Ingredia Inc., the North American subsidiary, promotes and distributes the company’s products and solutions in the U.S., Canada, and Latin America. Ingredia Inc. also offers contract manufacturing capabilities in its Ohio blending facility. Ingredia’s expert R&D team can provide technical assistance and help develop targeted functional solutions to meet customers’ specific needs.

With the expertise of soft and non-denaturing technologies, Ingredia can provide customers with native milk ingredients. Ingredia offers a wide range of solutions to create innovative, healthy, and value-added end-products in a variety of applications (cultured dairy, cheese, ice cream, beverages, sport nutrition, weight management, clinical nutrition, etc.). We offer Grade A ultra-filtered milk, milk protein concentrates, and isolates; micellar casein; native whey hydrolysates; native whey concentrates and isolates; lactoferrin; and lactium.

Lactium® is a brand of Ingredia
Icon Foods

Description
As consumers weigh in on healthier food choices, they are studying labels. Many of them are looking for natural claims.

This is when it’s helpful to have stevia in the food designer’s toolkit. Extracted from the leaves of the South American plant *Stevia rebaudiana*, this high potency sweetener has 200 to 300 times the sweetness of sugar.

Icon Foods offers custom sweetening solutions of all particle sizes that function as a plugin to replace sucrose, 10x sugar, invert sugar and high fructose corn syrup, including:
- CocoSweet+ stevia fortified organic coconut sugar
- Erysweet™ stevia erythritol blend
- Fructevia™ Non-GMO crystalline fructose and stevia blend
- Fructooligosaccharides (FOS)
- FruSweet – Crystalline fructose
- KetoseSweet+ allulose, stevia and monk fruit blend
- MonkSweet+™ monk fruit stevia sweetener
- MonkSweet LS™ monk fruit stevia blend
- Nectevia™ stevia-fortified agave nectar
- SteviaSweet 95-60™ stevia extract
- SteviaSweet RA98™ stevia extract
- XeroSweet+ stevia fortified xylitol

In addition to offering all-natural sweetening options that are GMO-free, pesticide- and petrochemical-free, soy-free, corn-free, and allergen-free, Icon Foods has the expertise to deliver consumer-preferred, naturally sweetened applications in the most efficient way. Icon’s natural-sweeteners specialists work with developers to deliver food and beverage products that are healthier for consumers, with a natural sweetener cost that is in line with more traditional sweeteners.

Call 310/455-9876 for information on formulating with Icon Foods’ natural sweeteners.
CLEAN-LABEL SUGAR REDUCTION MADE EASY
check out these sweetener swaps

Icon Foods’ sweetening systems address functionality and calorie goals by replacing sucrose and/or HFCS to deliver natural, clean-label sugar reduction in your applications.

CLEAN & NATURAL SWEETENING SYSTEMS FOR EVERY FORMULATION:

**BARS**
Replace sucrose with Erysweet® 100 for a well-rounded flavor profile with a mouthfeel identical to sugar – minus the calories or carbs. Erysweet is your solution for reduced sugar, low carb bars.

**BEVERAGES**
Clean up HFCS-laden beverage ingredient statements with MonkSweet® 100. Icon’s PuRefine purification process provides a sweetening system that delivers both mouth feel and flavor, making your beverage shine.

**SPORTS NUTRITION**
Score big points in the sports nutrition category with the industry’s go-to sugar replacement, Erysweet*. Eating a bar or drinking a meal replacement shake? It’s likely you are enjoying the clean natural flavor profile of Erysweet* or Erysweet® 100. Enjoy instant dispersion into solution with Icon’s fine mesh particle sizes.

**FROZEN DESSERTS**
Leverage the explosive low-sugar, high-protein ice cream trend with HiPro Ice Cream Dry Mix, a plug-in mix that yields the solid nutritional, addresses freezing depression point and over run while delivering amazing flavor, perfect mouthfeel and creamy smooth texture of traditional ice cream.

**CONDIMENTS/ SAUCES**
Substitute corn syrup, sugar and HFCS for KetoseSweet* syrup, designed to create condiments safe for diabetics and those following the super-hot ketogenic, low-sugar and low-carb lifestyle trends.

**CONFECTIONERY AND BAKED GOODS**
Calling all chocolatiers! Use Erysweet* Ultra, super fine mesh for brilliantly tempered reduced sugar chocolate, decadent frostings, fabulous fillings, coatings and fondants. Keep KetoseSweet* in your food technologist toolkit to drive down sugars in sweet baked goods.

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**SUGAR REDUCTION**
We work with technologists and food developers to deliver consumer goods and products that savvy label reading consumers can get behind. Our natural sweetening systems won’t break the bank since the cost is in line with more traditional sweeteners.

**QUALITY**
In the words of Dr. Edwards Deming, quality always costs less. All of our ingredients are third-party tested for purity and never fall out of spec. Taste the difference that Icon quality makes.

**RELIABILITY**
Our proprietary contracts with suppliers provide consistent, dependable ingredient sourcing, making Icon Foods your reliable supply chain partner for clean label sweetening.

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Since 1999, A Symbol of Excellence in Food Ingredients.
Allergen-free | Non-GMO | Gluten-Free | Keto friendly | Certified Kosher | US FDA Gras
Icon Foods / www.iconfoods.com / info@iconfoods.com / 310-963-5802
Indena
Excellence as ancient tradition

Indena is a leading Italian company in the field of botanical extracts with a strong international soul, operating in the pharmaceutical field since 1921. Headquartered in Milan, Indena has five international branches worldwide (Europe, Asia, USA, and South America) and five production sites, processing 20,000 tons of raw materials per year, 90% of them sold in international markets.

Indena’s success has always been grounded in four pillars: botanical expertise (GACP, biodiversity, micropropagation); research (screening processes, pre-clinical, clinical), scale up and industrial production (dedicated areas, extraction, purification, isolation), and quality, safety, and efficacy. These are the basis for the development and production of high-quality active principles derived from plants, for use in the pharmaceutical, health food, and personal care industries. They include pure molecules, selected active principles, standardized extracts, semi-synthesis active principles, and the Phytosome delivery system, all of them with documented and specific activity.

For more than two decades, Indena has been active in the food supplement and functional food market, offering standardized extracts from edible plants whose activity is supported by a wide number of scientific studies that provide evidence of the safety and efficacy profile. Indena products for the nutrition market are validated and certified, and comply with the highest quality and regulatory standards mandated by different countries.

Indena’s commitment towards the environment and employees’ safety and wellness has been formalized by the ISO14001 and the OSHAS 18001 certifications for its production sites of Settala (Italy) and Tours (France).

In 2013, Indena started the SuSo (Sustainable Sourcing) program with the creation of a multidisciplinary team. The approach includes a sustainable sourcing standard and guidelines referring to environmental and social specifications for the supply chain aimed at making them even more sustainable. Some of the projects already completed have received awards at the international level.

Indena in figures:
- 5 production sites and 5 international branches
- About 800-strong workforce
- About 10% of turnover invested in research
- Cultivation, production, and sales in over 80 countries
- More than 120 primary patents and more than 700 scientific articles published
- Business sectors: 58% pharmaceutical, 37% nutraceutical, 5% personal care
- 120 botanical species cultured in 57 countries
Meriva® is the unique formulation of turmeric featuring the Phytosome biomimetic delivery system inspired by the principle Nature as Measure™: mimicking nature, re-making it with the brain power of researchers by building processes and principles on the bench of a laboratory, a real scientific gem from Indena.

Designed to optimize bioabsorption for full effectiveness, safety and tolerability, Meriva® stands as The Life Guardian™ during the entire course of our life.

It sets off the energy of a new historical cycle in which the greatest level of innovation is represented by the intersection between nature and technology.

Call Indena today: there is no complete healthy life maintenance program without Meriva®.
Jost Chemical Co.

Description
For over 30 years, Jost Chemical Co. has manufactured high-purity mineral salts for the nutritional, clinical nutritional, and pharmaceutical markets. Jost’s 300,000-sq-ft manufacturing site in St. Louis is FDA-registered and operates under bulk pharmaceutical cGMP. Jost is a trusted global supplier. Our products meet or exceed USP/NF/EP/FCC standards, are fully reacted, lot-to-lot consistent, and have very low levels of vagrant metals such as Pb, Hg, Cd, As, etc. Jost also manufactures a family of Ultra-Pure calcium salts with very low levels of aluminum.

Our wide selection of 250+ products includes ascorbates, citrates, fumarates, gluconates, lactates, malates, nitrates, phosphates, and sulfates. Products manufactured by Jost are Kosher- and Halal-certified, allergen-free, and GMO-free. All products are completely tested in-house. Jost manufactures products with particle sizes ranging from free-flowing granular to ultrafine (< than 6 microns) powders for improved suspension of insoluble minerals.

Products are typically packaged in fiber drums, bags, cartons, and super sacks. Custom packaging is also available. Jost routinely ships orders ranging in size from one drum to a truckload.

Jost also manufactures JOSTCOTE® microencapsulated high-purity mineral salts, including copper gluconate 20%, ferrous fumarate 60%, ferrous sulfate dried 60%, reduced iron 70%, magnesium oxide 40%, manganese sulfate 50%, and zinc oxide 50%.

Custom Products
Jost is committed to working with our customers to provide value-added solutions and personalized service. Our experienced and dedicated technical staff responds quickly and thoroughly to customer requests for technical information, customer-requested testing, etc.

Key Products
- Calcium Citrate – USP/FCC
- Calcium Magnesium Citrate
- Calcium Phosphate Tribasic NF/EP/FCC
- Copper Gluconate – USP
- Cupric Oxide Purified
- Magnesium Citrate Tribasic – USP
- Magnesium Lactate – EP
- Magnesium Phosphate Dibasic USP/FCC
- Manganese Citrate – USP/FCC
- Manganese Sulfate – USP/EP/FCC
- Potassium Gluconate – USP
- Zinc Ascorbate
- Zinc Citrate – USP Low Lead
- Zinc Oxide Low Lead
- Zinc Gluconate – USP
- Zinc Sulfate – USP
Jost is the leading supplier of high purity
Calcium Citrate
Calcium Hydroxide
Dibasic Calcium Phosphate
Tribasic Calcium Phosphate
Other Calcium Salts

Ultra Pure Minerals
for applications where purity is a must.

At Jost Chemical Co. we manufacture our Calcium products with exceptionally low levels of Al, Pb, Cd, As, and Mn. Our high purity mineral salts are manufactured using innovative, controlled processes, which yield products that go beyond the established high purity standards.

Our 30-year history of manufacturing success has established Jost as the leading supplier of these high purity USP/EP/FCC mineral salts. Jost products are manufactured in a cGMP compliant, FDA-registered facility. Our products are fully reacted, consistent from lot-to-lot, and meet all customer requirements.

jostchemical.com  314-428-4300
Jiaherb Inc.

Why Jiaherb?
JIAHERB is the industry’s premier NSF-GMP certified manufacturer of natural ingredients. Our commitment to our customers is to provide reliable, high quality ingredients supported by our superior customer service and competitive pricing.

JIAHERB knows that the ingredients you choose to put into your products are a reflection upon your standards of quality and excellence. We guarantee our customers consistent efficacy and efficiency through fast delivery, large inventory of products, 100% traceability, complete regulatory documentation, and uncompromised service and support.

Our People
Our greatest asset is our people. Over eight hundred dedicated, highly motivated employees around the world make up the JIAHERB team. Our continuous growth and strong foundation is a direct reflection of our employee’s diligence, pride, and enthusiasm.

Sustainability
JIAHERB commits itself beyond the products and services by upholding ethical values in relationships with customers, employees and partners as well as the way we respect our planet. The core of our sustainability strategy creates value through social, economic, and environmental means.

In the Factory
Located in Xi’an, China, JIAHERB’s production team uses innovative and high-tech extraction, purification, and spray-drying equipment to streamline the manufacturing process to allow for large batches with short lead times. The experience and reliability of our production team allows JIAHERB to produce thousands of metric tons of natural ingredients per year.

Reliability
Reliability is linked to every aspect of our business, from sourcing and regulatory, to technical services, sales logistics, and accounting. Our proactive approach allows our customers to achieve the trust needed with a supplier and deliver dependable customer service. Our technical and regulatory support teams are always available to offer technical product knowledge and regulatory guidelines to bring you a fully compliant product. Our experienced sales and customer service teams, offer timely and knowledgeable responses that help our customers get the competitive edge needed. Lastly, our logistics team is specially designed to deliver dependable product supply. We aim to significantly reduce any supply chain interruptions since we know how impactful such disturbances are on our customer’s production efficiencies and profitability.

Traceability
Traceability is your assurance that the products JIAHERB delivers are reliable and sustainable. Ultimately designed to improve product confidence, we have established programs that consists of an identification verification program and a program with tracking procedures that control and verify product characteristics at every stage of the manufacturing process, from arrival of raw materials through to storage, production, warehousing, and sales. Our advanced material management system allows us to precisely trace all products within the supply chain.

HERBALINK™ Botanical Identification Chain of Custody Program
Jiaherb recognizes that there is much uncertainty among manufacturers and consumers, about the integral quality of the botanical products they purchase. As a testament to our never-ending commitment to customer satisfaction, and to ease customer concerns about the integrity of our products, Jiaherb proudly introduces HerbaLink™.
KEB Nutraceuticals USA Inc.
Condensing Nature for Health.

Company Description
KEB (Inner Mongolia Ever Brilliance Biotechnology Co., Ltd) was founded in 2000, located in Inner Mongolia. KEB is a professional manufactory focusing on developing and supplying standardized plant extracts, functional sugars, natural pigments for dietary supplements, pharmaceuticals, nutraceuticals, cosmetic etc. KEB successfully listed on China National Equities Exchange and Quotations (NEEQ) on Oct, 2016 (Ticker: 839916).

- KEB achieves high vertical integration by building up its own farms, R&D center, manufactory and sales team.
- The main products include UClear® (D-Mannose), ThiLiver™ (Silymarin), ECare™ (Lutein & Zeaxanthin), UltraAsta™ (Astaxanthin), Sesapower® (Sesamin & Sesamolin) etc.
- KEB Group includes two factories, 12,000 aces of its own farmland, a wholly owned subsidiary company in USA (KEB Nutraceutical USA, Inc.) and a subsidiary in Beijing (Simplex).
- KEB has a professional R&D team including Professors and PhDs, and has achieved many authorized patents and innovation awards due to the breakthrough in technology.
- KEB has a superior quality control system, and been certified by NSF-GMP, Organic (USDA and ECOCERT), ISO9001, ISO22000, Halal and Kosher etc.
- Our idea is “Condensing Nature for Health.” We will always supply the excellent products for our customers

Featured Products
- UClear® (D-Mannose)
- ThiLiver™ (Silymarin)
- ECare™ (Lutein & Zeaxanthin)
- UltraAsta™ (Astaxanthin)
- Sesapower® (Sesamin & Sesamolin)
- Cistanche Extract

Major Markets
- Dietary Supplements
- Herbals
- Functional Foods
- Nutritional
- Pharmaceuticals
- Cosmetic

Major Products
- Herbal Extracts
- Functional Sugars
- Natural Pigments
- Nutraceuticals

Specialized Services
- Custom Made
- Technical Support
- New Product Development
- Testing Lab
Lonza Inc.

Company Description
Lonza is one of the world’s leading and most-trusted suppliers to the consumer health and nutrition market. Lonza harnesses science and technology to create products that support safer and healthier living and that enhance the overall quality of life.

Lonza Consumer Health & Nutrition combines expertise in high-quality, science-backed ingredients with formulation know-how and industry-leading capsule and encapsulation technologies to create innovative solutions for consumer health and nutrition companies. Our deep clinical knowledge supports specialty ingredients with proven performance, enabling customers to address consumer health concerns via new, differentiated health products.

We apply consumer market insights and our extensive experience in consumer product delivery science to help our customers improve bioavailability, targeted delivery, swallowability, taste and odor masking of their nutritional. Our technology enables unique combination products and provides visually appealing dosage forms that meet the expectations of today’s health-conscious consumers.

We also bring exceptional service capabilities, global regulatory expertise, and expert technical service to support our customers in quickly delivering differentiated nutritional products to market.

Services
- Multi-phase capsule options
- Non-GMO Project Verified Vegetarian Capsule Portfolio
- Custom color and printing
- Bench top and semi-automatic capsule filling equipment
- Formulation support
- Turn-key manufacturing for liquid supplements
- Technical training and support
- Marketing and business development support

Corporate Headquarters
Lonza Inc.
412 Mount Kemble Avenue
Morristown, NJ 07960

Toll-Free: 888/783-6361
Fax: 888/783-6360
Web Site: www.capsugel.com
E-mail: solutions@lonza.com

Key Personnel:
Beth Tormey
Vice President, Head of Business Unit

Vince Livoti
Senior Director, North America Sales

Peter Zambetti
Head of Business Development

Ingredients
- UC-II® Undenatured type II collagen
- Carnipure® L-Carnitine
- ResistAid® larch arabinogalactan
- Relora® plant extract blend
- Niacin™ vitamin B3
- ChromeMate® chromium and niacin mineral complex
- L-OptiZinc® highly absorbable zinc
- OptiBerry® proprietary blend of six standardized berry extracts
- Meratrim® plant extract blend

Industry Leadership
Lonza is committed to supporting the quality growth of the dietary supplement industry. We are active in associations such as the Natural Products Association (NPA), the United Natural Products Alliance (UNPA), the American Herbal Products Association (AHPA), the American Botanical Council (ABC), Council for Responsible Nutrition (CRN) and many other organizations globally.
UC-II® undenatured type II collagen delivers clinically studied joint-health benefits. Lonza’s UC-II® provides consumers healthy mobility and joint comfort by working with the body’s natural repair mechanism. UC-II® undenatured type II collagen is proposed to work in the immune system to support joint health in one, 40 mg dose. Feel empowered in your own body, regardless of age or ability.

Visit UC-II.com to learn more about the fastest-growing joint-health ingredient.*

*U.S. Food, Drug, Mass Channel | Source: Nielsen #4502 weeks ended 3/24/2018

These statements have not been evaluated by the U.S. Food and Drug Administration or any other regulatory authority. Lonza’s products are not intended to use to diagnose, treat, cure or prevent any disease. All product information corresponds to Lonza’s knowledge at the date of publication, but Lonza makes no warranty as to its accuracy or completeness and Lonza assumes no obligation to update it. Proper use of this information is the sole responsibility of the recipient. Information provided by Lonza is not intended and should not be construed as a license to operate under or a recommendation to infringe any patent or other intellectual property right. All trademarks belong to Lonza or its affiliates or to their respective third parties and are used here only for informational purposes. ©2018 Lonza.
Metabolic Technologies, Inc.
Dedicated to Research. Committed to Your Health.

Description
Metabolic Technologies, Inc. (MTI) is a research-driven company dedicated to the development of credible, safe, and effective nutritional products. The company was founded in 1990 by university professors Steven L. Nissen, D.V.M., Ph.D., and Naji N. Abumrad, M.D. Their research ultimately led to the discovery of beta-hydroxy beta-methylbutyrate (HMB) and its effects on health and performance. MTI continues to research new products that are consistent with their mission to develop natural products to help enhance health, performance, and well being. MTI also provides clinical and research analytical services through the affiliated analytical laboratory, Heartland Assays.

Products
MyHMB – scientifically known as beta-hydroxy beta-methylbutyrate (HMB) - is a metabolite of the essential amino acid leucine. This nutritional supplement works by improving muscle protein metabolism. MyHMB simultaneously decreases muscle protein breakdown while increasing muscle protein synthesis. These mechanisms have a positive impact on muscle health so that people of all ages and activity levels can increase lean muscle mass; improve strength, power, and endurance; and improve recovery from training, injury, or illness.

MTI has recently developed a liquid delivery form of HMB for both the sports nutrition and non-sports supplement market - BetaTOR and myHMB clear, respectively. This new delivery form is the pure, free acid form of HMB. Published studies on HMB in the free acid form have shown that this new delivery form is safe and has numerous benefits such as a quicker delivery to the body resulting in enhanced efficacy.

With this innovative form of HMB, MTI collaborated with TSI Group Ltd. to co-develop a new sports nutrition product myHMB + PEAK ATP. The powerful combination was awarded the 2015 NutraIngredients Sport and Energy Finished Product of the Year award. Research has shown that myHMB + PEAK ATP has a powerful, synergistic benefit on performance gains.

MTI now exclusively holds the patent to their newest formulation myHMB + Vitamin D. While the positive effects of HMB are well known, it has only recently become apparent that another nutrient, Vitamin D, is also essential in helping muscles reach their full functional potential. Continuing research is showing that together these ingredients are essential to optimizing muscle health and function.

For more information, please visit www.myhmb.com and www.betator.com.
Muscles, Meet myHMB®.

There are over 600 muscles in the human body that are responsible for all movement and support of daily activities. For people of all ages and activity levels - muscle is critical for our overall health and well-being.

Supplementing with myHMB® has been shown to help build and maintain lean muscle mass, increase strength, decrease recovery time, and improve body composition.

Proven benefits for:

Active Lifestyles
Healthy Aging
Sports Performance
Clinical Nutrition & Recovery

Athletes, aging adults, dieters, active individuals and persons recovering from illness or injury have used HMB for decades as a highly effective supplement for improving muscle health under a variety of external stressors. In fact, the beauty of HMB is that it performs best when stressors - such as strenuous exercise or injury - are introduced to the body.

Learn more at www.myHMB.com

TSI Group Ltd. and Metabolic Technologies, Inc. believe in the power of synergy which is why we have combined expertise to create the highest quality, clinically substantiated, nutritional products that maximize and maintain active, healthy lifestyles for consumers. These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.
Mineral Logic

Description
Mineral Logic was established in 1997 to mine (harvest) and manufacture a concentrated form of fulvic acid trace minerals for the health supplement industry. Our RO water extraction process preserves the co-resident organic acids, amino acids, antioxidants, and electrolytes, resulting in a very concentrated, highly stable, and biodiverse molecular product that provides essential trace elements and minerals.

Derived from one of the world’s rare prehistoric shale deposits of land, freshwater, and sea organic matter in the United States.

Manufacturing
Produced in a food-safe facility adhering to cGMP and FDA compliance practices. 2018 scheduled for cGMP certification. Safety, compliance statements, third-party lab analyses available upon request.

Services
Specialized formulations and product enhancement development

Products and Features
The MLG-50™ family of products:
Fine-grain powders, concentrated liquids, plus an alkaline version
- 100% soluble in wide pH range
- Pleasant taste and smell
- Product stability and consistency
- We own the source mine
- USA harvested and produced
- 2-4 week lead time
- Bulk and quantity pricing

Clients Served
Nutraceutical industry — probiotics, food enzymes, prebiotics, herbal, multivitamin and mineral supplements, beverages, sports nutrition and recovery supplements

Industry Message
Making great supplements even better!
SUPERCHARGE EVERY FORMULATION

Incomparable source of fulvic acid trace minerals plus naturally occurring organic acids and electrolytes. A known biostimulant that enhances supplements by chelating nutrients for better absorption and function. Promotes healthy immune response and protects cells against oxidative damage.

MLG-50™
Super concentrated 100% organic origin plant source.
Typical dose to enhance your product: 5 mg fulvic powder to 550 mg capsule.
Dosing available for smoothies, beverages, meal-replacement and pet products.

5 BENEFITS TO USING FULVIC ACID IN YOUR PRODUCT
• Super antioxidant capacity
• Supports immune response
• Supports metabolic processes
• Aids cell hydration

SUPPORTS IMMUNE RESPONSE
• Supports metabolic processes
• Aids cell hydration
• Super antioxidant capacity

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent disease.

2. Benefits of MLG-50 on Fryer-Broiler Chickens when Administered in Drinking Water - Hatching through Six Weeks of Age,
3. Naturally Occurring Organic Osmolytes: From Cell Physiology to Disease Prevention,

MineralLogic
FULVIC SOLUTIONS GROUNDED IN SCIENCE

7136 East ‘N’ Ave., Kalamazoo, MI 49048 269 373-2930 | 800 342-6960 minerallogic.com
For more than 30 years, MORRE-TEC Industries, Inc. (MTI) has been led by owner and founder, Leonard Glass. MORRE-TEC Industries, Inc. is a cGMP operating company with an FDA registered and inspected facility. The company is an ISO 9001-2015 certified manufacturer and distributor of unique products for the personal care, food, functional and nutritional, pharmaceutical and biotech industries. MORRE-TEC continues to experience rapid growth through increased market presence and acquisitions.

What started as an exclusive distributorship of Bromine based compounds MORRE-TEC expanded into natural products for personal care in 2000. In 2015, MTI acquired Vitacyclix, a Yonkers, NY based company known for its innovative manufacture of quality water soluble vitamins (A & D), nutrients and bioflavonoids for fortification.

It should also be mentioned that MTI produces and markets finely micronized powders using patented Vortex technology. These include calcium phosphates, micronized phytosterols, creatine monohydrate and other customized materials.
Mount Franklin Nutritionals

Leveraging the expertise of parent company Mount Franklin Foods, an award-winning manufacturer and distributor of gummy confections, Mount Franklin Nutritionals combines the best in gummy manufacturing with a top-quality nutraceutical facility and deeply committed, experienced staff.

Mount Franklin Nutritionals delivers better-for-you quality through the use of non-GMO, organic-compliant ingredients, including pectin and gelatin-based formulations with natural colors and flavors. Mount Franklin Nutritionals is geared up to run products that are fortified with multivitamins and other high-quality ingredients. With proprietary flavors, formulas, shapes and sizes, as well as extensive packaging capabilities that include bagging, bottling and bulk, we have the ability to create new, unique products designed to meet ever-changing customer demands.

Mount Franklin’s goal is to deliver innovative products that anticipate consumer demand, helping retail customers provide nutrionals that will be popular tomorrow versus what was possible yesterday. That innovation, combined with an unyielding commitment to quality, is what sets Mount Franklin Nutritionals apart and ensures a strong competitive edge for their customers.

Certifications:
CFR 111 FDA compliant through NSF, SQF Level III, Non-GMO, OU Kosher, Gluten Free and Organic.

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Toll-Free Number: 800/351-8178
Tel: 915/877-1173
Fax: 888/880-9154
Web Site: www.mountfranklinnutritionals.com

Key Personnel
Curtis Whetten,
Senior VP of Sales

Emily Vinik,
National Sales Manager

Let Our Team Help Yours!
Producing over 11 million gummies every day, Mount Franklin Nutritionals can create new and unique products to meet ever changing customer demands.

✓ Gummy Nutritional Supplements
✓ Organic Gummies & Fruit Snacks
✓ Custom Flavors, Shapes & Sizes
✓ Gelatin, Pectin & Starch-Based Formulas

For more Information: 915-877-1137
MountFranklinNutritionals.com
MISSION: To bring scientifically proven Ayurvedic products to the dietary supplement, personal care, food and beverage, and medical food industries worldwide.

HISTORY: Ayurveda means “Science of Life,” and it has been the traditional practice of medicine in India since 3500 BC. There are nearly 1500 herbal products in this system of medicine. Ayurvedic products did not gain much recognition in the western world until recently because these products have been made in the traditional way described in Ayurveda without any scientific standardization, safety studies, and clinical evidence. Natreon Inc. was founded by pharmaceutical scientists to bring Ayurveda to prominence in the world by using a scientific approach.

Natreon Inc. is an 18-year-old company located in New Jersey with a state-of-the-art R&D facility in Kolkata, India, and is focused on developing and marketing Ayurvedic products backed by extensive research, high degree of standardization, multiple clinical studies, safety studies, and intellectual property.

R&D TEAM: Professor Shibnath Ghosal, a Fulbright scholar and an eminent natural product chemist with hundreds of publications in scientific journals, leads Natreon’s R&D team comprising a group of scientists at the PhD and Master’s level. Natreon’s scientific research includes process optimization; development of chromatographic analytical methods such as HPLC, HPTLC, GC-MS, and LC-MS for standardization; development of marker compounds; and pharmacological studies. Safety studies are done in the USA, and clinical studies are conducted in reputed institutes in India as well as the USA.

Product Portfolio

<table>
<thead>
<tr>
<th>Product</th>
<th>Indication</th>
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</thead>
<tbody>
<tr>
<td>Sensoril®</td>
<td>Stress &amp; Cognition</td>
</tr>
<tr>
<td>Ashwagandha extract (<em>Withania somnifera</em>)</td>
<td></td>
</tr>
<tr>
<td>Capros®</td>
<td>Cardiovascular Health</td>
</tr>
<tr>
<td>Amla (<em>Phyllanthus emblica</em>)</td>
<td></td>
</tr>
<tr>
<td>PrimaVie®</td>
<td>Energy/Male Sexual Well-Being/Anti-Aging</td>
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<tr>
<td>Purified Shilajit</td>
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<tr>
<td>Crominex®3+</td>
<td>Blood Glucose Management</td>
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<tr>
<td>Trivalent Chromium</td>
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<tr>
<td>AyuFlex®</td>
<td>Joint Health</td>
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<tr>
<td><em>Terminalia chebula</em></td>
<td></td>
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<tr>
<td>Ayuric®</td>
<td>Healthy Uric Acid Levels</td>
</tr>
<tr>
<td><em>Terminalia bellerica</em></td>
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</tbody>
</table>
The system of natural, proven ingredients that finds another level.

Give your products the edge at NatreonOne.com
The Company
Natural Alternatives International, Inc. (NAI) is a leading formulator and manufacturer of customized nutritional supplements. The company’s comprehensive partnership approach to client servicing is unique within the industry, combining science-based formulation, advanced quality-assurance testing methodologies, and superior manufacturing and packaging capabilities to create nutritional products that are formulated to address specific customer product needs.

NAI has achieved a position of prominence in the natural products industry due to its commitment to quality and scientific integrity. NAI opened its doors 38 years ago and met cGMP compliance long before FDA implementation in the nutraceutical industry, ensuring that our customers’ products were safe, compliant, and made with scientific integrity. NAI provides a global presence with well-known manufacturing facilities in the United States (California) and Europe (Switzerland), as well as a presence in Japan.

NAI’s Founder, Chairman, and Chief Executive Officer, Mark LeDoux, is considered a pioneer of the modern dietary supplement industry. LeDoux has been a member of the Natural Products Association since 1980 and currently serves as its Chairman. He also serves on the Board of Nutrition Industry Association West. He previously served as Chairman of the Board and an Executive Board Member of the Council for Responsible Nutrition (CRN).

NAI’s regulatory review of formulation compliance along with international certifications makes it easy to register and distribute products across country borders and regional trade zones. NAI’s customers distribute nutritional products in more than 36 countries.

CarnoSyn® Brands
NAI is the exclusive supplier, patent holder, and trademark owner of CarnoSyn® instant-release beta-alanine and SR CarnoSyn® sustained-release beta-alanine. Both materials can be purchased as an ingredient or turnkey finished product. NAI can create your science-based, custom formulation for tablets and powders in a variety of packaging options. CarnoSyn® and SR CarnoSyn® beta-alanine have been scientifically proven to:

- Increase muscle carnosine for prolonged periods*
- Increase muscle buffering capacity*
- Decrease acidosis*
- Improve endurance*
- Delay muscle fatigue*
- Increase strength*
- Speed recovery from exercise*

NAI Licensing and Certifications
- NAI meets USP standards – U.S.
- NSF cGMP and Sport certifications – U.S.
- Australian TGA certification – U.S.
- Canadian cGMP certification by Health Canada – U.S.
- Medicinal Product license through SwissMedic – Europe
- Organic Processor and Handler certified by NFC – U.S.

* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.
Natural Alternatives International
World Leader in Nutritional Science

Contract Manufacturing Solutions for Over 38 Years

NAI provides a global presence with well-known manufacturing facilities in the United States (California) and Europe (Switzerland), as well as a presence in Japan. Driven to exceed customer expectations, NAI is dedicated to a world-class standard of excellence and is committed to building solid and enduring partnerships.

Contract Manufacturing - Tablets - Capsules - Powders
Packaging - Formulating - On-site Analytical Testing

Visit our website to take the virtual tour of our facility!

www.nai-online.com • 1-800-VITAMIN

Visit NAI & CarnoSyn® at Booth #4933
SupplySide West – November 8-9, 2018

Exclusive Supplier, Patent-Holder and Trademark Owner of CarnoSyn®

Backed by more than 55 independent, peer reviewed studies and NAI’s growing portfolio of 16+ global patents, CarnoSyn® instant release beta-alanine and SR CarnoSyn® sustained release beta-alanine can be purchased as an ingredient or turnkey finished product. NAI can create your science-based, custom formulation for tablets and powders in a variety of packaging options.

Scientifically Proven • Patented • SR CarnoSyn® GRAS Affirmation
Sports Nutrition • General Wellness • Healthy Aging

www.carnosyn.com • 1-844-CARNOSYN

CarnoSyn® and SR CarnoSyn® are registered trademarks of Natural Alternatives International, Inc.
Nexira

Description
Founded in 1895, Nexira is a global leader in natural, organic ingredients and botanical extracts for food, nutrition, and dietary supplements. Nexira built its reputation as the world leader in acacia gum and now manufactures a wide range of natural ingredients with proven health benefits. Non-GMO and available in organic grade, Nexira’s ingredients are suitable for the formulation of clean label products. Nexira offers global expertise, from raw material sourcing and proprietary processing technologies to formulation support.

Main Products
Nexira’s portfolio of products includes highly functional and nutritional ingredients, antioxidants, and active botanicals for digestive health, weight management, joint health, cognitive health, and so on. Nexira offers a large range of ingredients organic certified.
• Fibregum™: The natural soluble dietary fiber with proven prebiotic and health benefits. Fibregum™ is the first acacia fiber approved by Non-GMO Project
• Exocyan™: An extensive range of cranberry extract standardized in proanthocyanidins (up to 90% PACs content) and fruit solids.
• Cacti-Nea™: An organic prickly pear extract (Opuntia ficus indica), detox ingredient
• NeOpuntia™: An organic and patented healthy lipophilic fiber from cactus leaves (Opuntia ficus indica)
• ID-alG™: A brown seaweed extract which inhibits digestive enzymes and helps control caloric intake
• ViNitrox™: A nitric oxide booster and healthy performance enhancer

Locations of Other Offices/Facilities
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Franck Gillet,
Nexira Health U.S, Sales Manager
Jean-Philippe Allegre,
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Fax: +33 232 83 1919
E-mail: info-usa@nexira.com
Web site: www.nexira.com

DIGESTIVE HEALTH
Best Organic Acacia Fiber

• 90% soluble fiber
• Strong prebiotic properties
• Patent Pending on gut restoration
• Exceptional intestinal tolerance

Fibregum™ Bio
All-natural dietary fiber carefully selected and sourced from acacia trees, Fibregum™ products are perfectly suitable with clean labeling.

info@nexira.com
www.nexira.com

These statements are intended for manufacturers only, not consumers. Since the conditions of use are beyond our control, we suggest to evaluate these statements to be sure they comply with local regulations.
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Web Site: www.nulivscience.com
E-mail: richardw@nulivusa.com

Locations of Other Offices and Facilities
Taipei, Taiwan

Key Personnel
Michael Wang,
CEO & Chairman
Richard Wang,
President

Description
NuLiv Science specializes in the research and development of proprietary and clinically proven nutraceutical ingredients via traditional and dynamic scientific processes. Since 1997, we have been serving our customers’ sourcing and research needs with an emphasis on quality and efficacy. By combining the history of traditional Chinese medicine and the thorough analysis of modern science, we are able to deliver unique, validated compounds targeted toward everything from absorption enhancement, cognitive performance, sports performance, weight & glucose management, and more. Our clientele base, from large MLMs and global sports nutrition brands to natural health practitioners, are as diverse as our botanical ingredient portfolio. Whether you’re just starting out in the industry or are looking to expand into a new vertical, we’re here to help you bring the best products to market. Our experienced research team and network of scientific advisors can help with formulations, efficacy, standardization analysis, and production of high-potency extracts. The NuLiv Science branded ingredient portfolio includes AstraGin, ActiGin, InnoSlim, OsteoSine, Acteolin, Astrion, Verbasnol, and our Prime mushroom line.

AstraGin®—A U.S.-patented ingredient for enhanced nutrient absorption, AstraGin® has demonstrated in multiple studies to dynamically aid the uptake of amino acids such as arginine and tryptophan as well other as other vitamins and minerals. Included as a key ingredient by some of the biggest brands in the sports and bodybuilding category, AstraGin® will help energize the performance of your product lineup. Self-affirmed GRAS, kosher certified.

ActiGin®—A proprietary, high-sports performance nutraceutical ingredient that is the culmination of seven years of research. Multiple studies, including a randomized human clinical trial, have shown ActiGin® boosts glycogen storage and delivery to muscle tissue as well as reduce muscle inflammation in rats and humans during and after high-intensity physical activities.

InnoSlim®—is a safe & effective long-term weight loss management ingredient. 100% natural, InnoSlim® is derived from Panax notoginseng and Astragalus membranaceus using a pharmaceutical grade extraction and processing technology available only at NuLiv Science. InnoSlim® actively transforms the body by regulating glucose, fat cell, and muscle cell metabolisms; reducing glucose absorption in the intestine; increasing fat cell combustion, and increasing muscle cell glycogen synthesis.

Prime mushroom line—We have been marketing and supplying high-quality mushroom extracts since 1997. We thoroughly test each production batch for heavy metals, pesticides, and standardization levels to ensure it meets your specifications. Brands that want maximum efficacy and quality in their mushroom formulas choose NuLiv Science and stay with NuLiv Science.
Healthco

Description
Since 1991, Healthco®, a division of NOW®, has been providing health product retailers and manufacturers with superior bulk and raw materials, private label services, dietary supplements, and natural sweeteners. We offer an extensive selection of value-driven, science-based products and with reliable customer service.

Healthco believes that quality products begin with the best raw ingredients. From our GMP-certified facility, we manufacture and test all raw materials and finished products to ensure identity, purity, and potency. Many products utilize patented, trademarked, and branded ingredients. Direct importing, state-of-the art manufacturing technology, extensive quality control, and long-standing vendor relations allow Healthco to offer a wide range of nutritional products at competitive prices.

Whether you’re looking for bulk powders or finished, shelf-ready formulas, Healthco offers one of the industry’s most extensive inventories. Our highly-skilled QC/QA department holds all raw material providers to meticulous quality, safety, and purity standards, and all raw materials are thoroughly inspected upon arrival. Raw materials have to pass tests for microbial contamination in our on-site testing facility. This is one of the ways we ensure that customers are provided with products that are safe, highly stable, and fresh through the best-by date.

Healthco’s private label program makes it easy to tailor one’s own line of premium natural health products, and can be completely personalized to fit a company’s image. We offer hundreds of popular products to choose from. Creating one’s own line of products is easy to start. From choosing the best products and formulas, to developing a label that jumps off the shelf, Healthco’s team will guide customers through each step of the private label process.

Healthco offers a unique stevia extract, available in bulk or private label formats. Known as Stevia FSE™ or BetterStevia™, this raw material undergoes a natural debittering process, which yields a smoother and cleaner taste profile than any other stevia currently on the market. It is also one of the very few certified organic and GRAS (Generally Regarded As Safe) stevia extracts available for use in vitamin supplements, foods, and beverages.

Corporate Headquarters
Healthco®
244 Knollwood Dr.
Bloomingdale, IL 60108

Toll-Free: 800/477-3949
Tel: 630/545-9095
Fax: 630/942-8963

Web Site: www.healthco-intl.com
E-mail: info@healthco-intl.com

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Regina Flight
Private Label/Bulk Manager

Phil Tumea
Sales Executive

Dan Richard
National Sales Manager
YOUR BRAND
OUR SOLUTION

- Bulk Supplements
  Powders, Capsules, Tablets
- Raw Materials
  Single Ingredients
- Private Labeling
  Complete Product Lines
- Personal Care
  Essential Oils

“A” Rated GMP Manufacturing Facility

Stevia and Xylitol Packet Manufacturing

Certified Organic by QAI

Low Minimums

Large Selection of Finished Goods and Raw Materials

Liquid Supplement Manufacturing

Trademarked Quality Ingredients

Healthco
Offering: bulk ingredients, supplements, personal care and private labeling services
800.477.3949 healthco-intl.com
NP Nutra

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NP Nutra
15161-15171 S. Figueroa St.
Gardena, CA 90248

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Fax: 310/606-2069
Web Site: www.npnutra.com
E-mail: admin@npnutra.com

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Thomas Walton,
Founder & CEO
Mark Campbell,
Chief Operating Officer

Key Personnel
Eric Guggenheim,
Director of Sales
Helga Villanueva,
Quality Assurance & Regulatory Compliance Director

US and Global Markets
US Account Managers:
Andy Smith
Anna Matthews
Brandon Cone
Denise Guggenheim
Evette Shannon
Judith Champagne
Kris Fitzgerald
Lila Price
Marilou Grenier
Nanette Constantino
Sarah Dunlap
Trevor Hitch
Tyler Hitch
Virginia Agawin

Global Account Managers:
Ethan Gabriel, US & NZ
Michel Robichaud, US & South Korea
Narada Head, US & Australia
Peter Boebner, EU/India/US/ZA
Samaan Buisson, Asia

For an account manager in your region, contact:
Director of Sales
Eric Guggenheim
at 310/694-3031, ext. 831
or by e-mail at eric@npnutra.com

Description
For twenty years NP Nutra® has been supplying customers with the finest nutraceutical ingredients produced at our approved partner facilities around the world. Our ongoing commitment to purity, quality and reliability have earned the trust of a growing clientele, including the world’s leading functional food and beverage, dietary supplement, cosmetic and pet food manufacturers who have become loyal customers through the years.

Our renowned line of wholesale ingredients includes:

- Popular superfruits, including Açai, Goji, Pomegranate
- High-potency antioxidants
- Botanical extracts and herbs
- Certified Organic and Kosher products
- Hard-to-find ingredients

Major Markets
- Functional Foods
- Functional Beverages
- Dietary Supplements
- Pet Foods
- Cosmetics

Major Products
Acai, Acerola, Alfalfa, Ashwagandha, Barley Grass, Blueberry, Camu Camu, Chlorella, Coconut, Goji, Kelp, Maca, Mangosteen, Maqui, Moringa, Noni, Nopal, Papaya, Pomegranate, Schisandra, Spirulina, Strawberry, Turmeric, Wheatgrass, Yacon

Specialized Services
Formulation Development

Signature Ingredients
AçaiVida® – Açai juice powder rich in Omega 3-6-9, amino acids, and anthocyanins
BettaBerries™ Antioxidant Blend – A proprietary blend of the world’s most phytonutrient-rich berries
CocOrganic® – Outstanding organic Freeze-Dried Coconut Powder high in electrolytes
Green Balance Alkaline Blend® - A synergistic “green” formula of concentrated alkaline superfoods
MacaXtra® – Concentrated 100% Organic Maca Root Powder with approximately 1% Glucosinolates
MangosteenRoyale™ – Potent Whole-Fruit Standardized 10:1 Extract with exceptional ORAC content
MaquiForza™ – High-Potency Freeze-Dried Organic Maqui Berry with exceptional ORAC levels
NutraBrain™ – A unique proprietary Ayurvedic herbal blend of Ayurvedic ingredients designed to help promote brain health, improve cognition, memory and mental function.
NutraGrass™ – Premium Concentrated Wheatgrass Powder – up to 70% Chlorophyll
NutraLiver™ – A unique proprietary Ayurvedic herbal blend designed to support optimal liver health and function.
NutraProtein Power Blend® – Specially formulated organic mix of plant-based protein, amino acids, and nutrients
SachaOmega® – One of the richest plant sources of omega-3-6-9
XandraPure™ – Organic High-Grade Schisandra Extract – Exceptional Adaptogen – Water Soluble

Leading the world in Nutraceuticals
Leading the world in Nutraceuticals

Three Unique Coconut Products

Organic Vegan Coconut Juice Powder

Organic Vegan Coconut Milk Powder

Supply Side West: Booth 2263
www.npnutra.com • admin@npnutra.com • Ph: 310.694.3031 • 15161-15171 S. Figueroa St. Gardena, CA 90248
NSF International

Description
NSF International is an independent and accredited non-governmental organization whose mission is to protect and improve global human health. We do this by facilitating the development of public health and safety standards through our Standards group, and by testing and certifying products and systems to those standards through our service groups.

Certified products and systems earn the NSF mark, which is respected by consumers, manufacturers, retailers and regulatory agencies. Deeply rooted in science, we are widely recognized as the “gold standard” for quality in such areas as water systems, food safety and health sciences including dietary supplements.

NSF offers a comprehensive range of services to meet the needs of the dietary supplements industry globally. Our role is to ensure product and ingredient safety, giving both industry and consumers peace of mind through facility GMP compliance, product certification programs and testing services.

NSF’s Good Manufacturing Practice (GMP) registration assures companies are following a system of processes, procedures and documentation to ensure the product manufactured has the identity, strength, composition, quality and purity that appear on the product label.

NSF International maintains and helped to facilitate the development of NSF/ANSI 173, the nation’s first truly independent testing standard and product certification program strictly for dietary supplements, NSF/ANSI 173 and also tests and certifies products to this standard. Certification includes a toxicology and label review to verify product formulation and marketing claims, testing to identify and quantify dietary ingredients declared on the product label, testing to ensure the product does not contain unacceptable levels of contaminants, and twice annual GMP facility inspections. NSF has testing facilities for dietary supplements and ingredients in the U.S., China and Germany.

The NSF Certified for Sport® program builds on NSF dietary supplement certification by additionally screening for over 270 athletic banned substances to ensure the product is free of substances on the WADA, NFL and MLB prohibited substances lists.

Corporate Headquarters
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Fax: 734/769-0109
Web Site: www.nsf.org
E-mail: dietarysupplements@nsf.org

Locations of Other Offices and Facilities
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201112, P.R., Shanghai, China

Key Personnel
Lori Bestervelt
Senior VP and
Chief Technical Officer

Cheryl A. Luther
DC, MS, CCSP, CCEP, CSCS,
PES General Manager Dietary Supplements/Beverage Quality
NSF offers a comprehensive range of services to meet the needs of the dietary supplements industry globally.

- GMP Registration
- International Auditing Capabilities
- Product Testing and Certification
- Certified for Sport® Certification
- Quality Training both classroom and in-house

Our role is to ensure product and ingredient safety, giving both industry and consumers peace of mind through facility GMP compliance, accredited product certification programs and testing services.

Want to learn more? Contact us at supplements@nsf.org

NSF INTERNATIONAL | DIETARY SUPPLEMENTS
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T +1 734.769.8010 | E dietarysupplements@nsf.org | www.nsf.org
Nutraceuticals International Group
A Global Network For Your Ingredient Sourcing Needs

Industries we serve

About
Nutraceuticals International Group® is a global ingredient supplier with over 35 years knowledge and experience in the natural products industry. We have developed an extensive network of partners located all across the globe, including such diverse areas as India, Peru, and France. Our exclusive manufacturers allow us to provide our customers with unique and rare herbs and ingredients that are at the cutting edge of the nutritional market. We specialize in bringing traditional and ancient ways of healing to the forefront.

Products
Nutraceuticals International Group® offers a wide-ranging array of the highest quality ingredients including
• Botanicals
• Herbal Extracts
• Nutraceuticals
• Cosmeceuticals
• Amino Acids
• Fruit & Vegetable extracts
• Flavors

Natural ingredients for health, nutritional supplements, and sports industries

Services
Nutraceuticals International Group® is dedicated to sourcing and supplying the finest quality ingredients there is to offer. We will search the world over to find the newest, most innovative ingredients available. We have cultivated an extensive network of international partnerships that manufacture new functional ingredients and develop state of the art methods of production. Not only are we focused on maintaining outstanding levels of customer service, but we really do care about every stage of the process, from an initial enquiry to the final delivery.
**Nutralliance Inc.**

**Description**
Nutralliance is a supplier of premium ingredients to the nutritional, pet and cosmetic industries. Incorporated in 2002, the company is owned and operated by Brian Salerno, a veteran of the nutritional industry since 1989, and they have over 100 years of industry experience in their management staff combined. Nutralliance prides itself in the ability to cater to their customer’s specific needs while maintaining their focus on integrity, honesty and the commitment to high quality product standards delivered at a competitive price and in a timely manner.

**Proudly Representing**
Advanced Organic Materials (AOM) is an Argentine company dedicated to the extraction and purification of natural ingredients. Serving over 15 countries worldwide, AOM is well established as a leading player in the industry.

**SUN-E 900 Natural Vitamin E from Sunflower**
- Truly natural, exactly as produced by the plant, without undergoing methylation
- Clean Label, Allergen Free
- Non-GMO Project Verified

Also Available: Sunvolec™ Sunflower Lecithin Liquid, Mixed Tocopherols from Rapeseed, Sunvasterol™ Phytosterols and Sterol Esters from Sunflower

Bio-gen Extracts Pvt. Ltd., India is a GMP Certified company that specializes in the manufacture of nutraceutical raw materials and is a leader in the production of natural carotenoids.

**Lute-gen™ Natural Lutein**
- Derived from Marigolds
- Oil/Powder forms and a variety of potencies to suit your need
- Esters and Free
- Seed to Drum Transparency

Also Available: Beta Caro-gen™ Natural Beta Carotene, Lycopene, Fenugreek Fiber, Jaggery (Palmyra), Beetroot Extract, MCT Powder

Branded Products: SunE900™ Natural Vitamin E from Sunflower, Sunvitol™ Natural Vitamin E Powder, Sovitol™ Natural Mixed Tocopherol Powder, RavEtol™ 30P Natural, Non-Soy, Non-GMO Mixed Tocopherol Powder, Sunvolec™ Sunflower Lecithin, Sunvasterol™ 90 Phytosterols from Sunflower, BetaCaro-gen™ Natural Beta Carotene, Lute-gen™ Natural Lutein Beadlets, Ultra Caro-gen™ Natural Mixed Carotenoids

Major Markets: Non-GMO, Nutritional, Food, Pet Food, Animal Nutrition and Personal Care

Other Major Products: Natural Mixed Carotenoids, Agave Inulin, Glucosamines, Pea Protein Isolate, Gluconates, Fruit and Vegetable Powders, Organic B12, Calcium Citrate, and Hyaluronic Acid.

Non-GMO Products from Sunflower

Nutralliance is proud to announce our ingredients that have been **Verified**

The Non-GMO Project verification indicates that a product bearing the seal has gone through a comprehensive verification process and has been produced according to consensus-based best practices for GMO avoidance.

Consumer request for Non-GMO ingredients continues to rise and Nutralliance is your choice for clean label assurance to meet those demands.

Contact us to learn more about this exclusive line of Non-GMO ingredients as well as the other exceptional products we offer to help you keep your customer confident.

Visit us at Booth #5473

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**NUTRALLIANCE**  
info@nutralliance.com  
Toll Free: 844.410.1400 • Office: 714.694.1400  
nutralliance.com
Nutra Solutions USA
Solutions Toward a Naturally Healthy World

Description
Nutra Solutions USA offers direct manufacturing and private label packaging of all dosage forms for the dietary supplement industry. Our company is dedicated to science backed, evidence-based solutions for the industry that are designed to ensure potency, efficiency, stability, and safety of products. Our services include custom formulations, new product development, reverse engineering of existing formulations, private label manufacturing and packing under cGMP environment.

We deliver uniquely tailored and personalized services to all domestic and international customers. Product integrity is maintained by premier in-house quality testing, guided by NSF/GMP and FDA Standards. Services offered include bulk and finished packaging in the form of tablets, capsules, softgels, powder mixes, botanical extracts, and essential oils. Product identity, quality, purity and safety are maintained and guaranteed by in-house and third party testing.

Exclusive Services
Tablets
Regular, Coated, Chewable, Fast Melt, Sublingual.

Capsules
Gelatin, Veggie, Soft gel and Liquid Fill.

Custom Formulation, Product Development, Branding Human Nutrition and Pet Supplement Products Custom Manufacturing and Packaging
Bottles, Jars, Gusset Bags, Sachets and Stick Packs

Halal, Kosher, Organic and Natural Products Liquid Supplements
Herbal Extracts, Essential Oils, Sprays, Lotion, Topical Cream Homeopathic Mixtures.

Full Spectrum In House Lab Test NSF Certified Sports Nutrition Products In-House Graphic Design & Branding
Printing, Logo Design, Brochures, Flyers, Sale Sheets, Enhanced Branding Content, E-Mail Marketing, Amazon Content, Content Writing and Web Design

Corporate Headquarters
Nutra Solutions USA
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Web Site: www.nutrasolutions.com
E-mail: service@nutrasolutions.com

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Warehouse and Distribution
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Key Personnel
Latiful Haque, Chief Executive Officer
Tito Rahman, Chief Operating Officer
Sultana Haque, Technical, Formulation, R&D
Subhash Kekatpuray, Ph.D, QC&QA
Sherajul Islam Ph.D, Microbiology
Dr Imtiaz Ali, Liquid Formulations
Zenora K. Morris, Procurement
Moriah Gaffney, Creative Director
Nutra Solutions USA is a global supplier and developer of premium dietary supplements, nutraceutical, sports nutrition, and functional nutritional products. We are a US based direct manufacturing company located in Deer Park, New York. We offer a wide range of nutraceutical product support with world-class quality manufacturing and technical services.

Nutra Solutions USA offers uniquely tailored and personalized services to all of our domestic and international customers. Product integrity is maintained by premier quality testing, guided by cGMP and FDA standards.

Our highly trained production team has over 25 years of experience operating under strict cGMP guideline in our climate controlled facility. We use our experience, technology, procedures, and resources to meet the challenges of complex formulations.

Tablets, Capsules, Powders, Gummies, Liquids and Custom Formulation

Halal, Kosher, Organic and Natural Products

Human Nutrition and Pet Supplement Products Custom Manufacturing & Packaging

In-House Graphic Design, Branding, Web Design & Marketing Solutions

Request A FREE Quote
CALL 1-844-594-9333

nutrasolutionsusa.com
Nutrition 21, LLC has a longstanding reputation as a leading developer and marketer of clinically substantiated, efficacious, high-value ingredients. Nutrition 21’s branded ingredients are used in dietary supplements, medical foods, and nutritional bars and beverages.

Nutrition 21’s scientific platform has created unique, patented products that are safe and clinically effective. Rigorous preclinical and clinical trials are a key part of its product development strategy to ensure safety and consumer trust. Nutrition 21 currently holds more than 100 issued and pending domestic and international patents.

Nitrosigine® is a patented complex of bonded arginine silicate with FDA NDI notification status, affirmed as GRAS, and made in the U.S. Pre-clinical and clinical studies support the use of Nitrosigine as a highly bioavailable source of arginine and silicon. Consumer benefits include: enhancing key factors for increasing blood flow, boosting nitric oxide levels, increasing energy quickly, improving mental acuity and focus within 15 minutes, increasing muscle volume, and reducing muscle damage from exercise.

Velositol®, made in the U.S., is a patented amylopectin chromium complex with unique benefits when added to protein products. In a single dose, Velositol is clinically shown to double muscle protein synthesis when added to whey protein versus whey protein alone. Muscle protein synthesis is a key to both muscle growth and muscle recovery.

Chromax® chromium picolinate is U.S. manufactured, Prop 65 compliant*, and supported by more than 50 clinical studies involving 2,300-plus human subjects. Chromax is also affirmed GRAS for doses up to 2000 mcg chromium per day, has 35 non-rejected DSHEA claims, and has more than 20 active and pending composition and use patents. Several clinical studies have shown that Chromax is significantly better absorbed than other forms of dietary chromium.

Chromax provides Nutrition 21’s customers with marketable substantiated claims and numerous health benefits for the consumer. Chromax is a perfect nutrient to formulate into products positioned to address health and lifestyle issues that are of increasing concern to consumers, such as glucose metabolism, cognitive function, weight management including; food cravings, mood, and lean body mass.

*Proposition 65 compliance independently verified for arsenic, cadmium, hexavalent chromium, lead, and mercury levels. DRA726072216
PROTEIN'S PERFECT PARTNER
ADD VELOSITOL AND ENHANCE THE POWER OF PROTEIN & AMINO ACIDS

Velositol® a revolutionary nutritional ingredient from the makers of Nitrosigine®

- Velositol accelerates muscle protein synthesis (MPS), a key to muscle growth.

- A flavorless, water-dispersible powder, Velositol can easily be incorporated into various formats including powders, pills, bars or ready-to-drink protein or amino acid products.

- Learn more about our clinically substantiated claims and how incorporating Velositol can power up the sales of your next sports nutrition product!

**As shown with 6 grams of whey protein

LEARN MORE AT WWW.NUTRITION21.COM OR EMAIL INFO@NUTRITION21.COM

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.
Description
Organic Technologies is the producer of MSC-certified AlaskOmega® fish oil products, including omega-3 concentrates, natural fish oils, and newly launched 50% and 70% omega-7 concentrates. AlaskOmega® omega-3 concentrates are available up to 85% total Omega-3, in both EE and TG form. We start with wild-caught Alaska Pollock oil from the cold, pure waters of Alaska’s Bering Sea, which is then further refined and concentrated in our family owned and operated NSF-certified GMP facility in Coshocton, Ohio.

The company recently reduced the Total Oxidation (TOTOX) limit for its omega-3 concentrates to 5, more than a 5-fold reduction from the GOED industry standard of 26. The reduction more accurately reflects AlaskOmega’s market-leading position for oil freshness, with actual TOTOX values typically ranging between 0 - 3.

Products
AlaskOmega® Omega-3 Ethyl Ester Products (EPA/DHA)
- 30% Total Omega-3
- 100/500
- 360/240
- 400/200
- 460/180
- 400/300
- 460/240
- 570/230
- 600/200
- 700 EPA
- 800 EPA

AlaskOmega® Omega-3 Triglyceride Products (EPA/DHA)
- 050/250
- 320/210
- 100/460
- 420/210
- 400/300
- 550/220

Natural Alaskan Fish Oils
- Wild Alaska Pollock Oil

AlaskOmega® Omega-7 500 (50%)
AlaskOmega® Omega-7 700 (70%)
Orgenetics, Inc.
Changing the world of vitamins

**Description**
Since 2007, Orgenetics, Inc. has been changing the world of vitamins with the introduction of Orgen® brand ingredients as well as our clean, transparent, sustainable, and vertically integrated supply chain.

These are 100% USDA Certified Organic & All Natural vitamins/minerals/anti-oxidants, all water extracted from Organic fruits & vegetables. We were the first ones to innovate and introduce the concept of Organic and natural plant based vitamins, and continue that innovation today.

With full vertical integration by partnering with Green Chem in India, we are able to closely monitor the ingredients we supply, right down to which farm the fruit or vegetable was grown. Our stringent QA and QC controls ensure that our quality is guaranteed for all lots. As consumers worldwide rapidly shift away from synthetics, now is the time more than ever to use Orgen® brand ingredients in your formulations.

**Products:** Orgen® brand ingredients are 100% USDA Certified Organic & All Natural vitamins/minerals/anti-oxidants.

These are water extracted, meaning no synthetic solvents, excipients, carriers, or filler material is used. That also means that naturally occurring co-factors & co-nutrients of the Organic fruits and vegetables are preserved, which we believe allows for better regulated absorption into the body, as well as better efficacy of the vitamins/minerals.

Many of these ingredients are also GRAS Self-Affirmed, expanding usage opportunities into many different areas like foods and beverages.

**Clients Served:** We are proud to say that in our 10-year history, we have expanded our supply and operations across North and South American, European, Asian, and Australian markets, helping consumers around the world receive the healthy benefits of Organic & Natural plant based vitamins/minerals.

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**Corporate Headquarters**
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**Key Personnel**
Saumil Maheshvari
Business Development
Established in 1987, Overnight Labels, Inc. is an award-winning label and flexible packaging printing company. We provide a multi-tiered approach to your packaging needs – from prototypes and preproduction samples, to digital printing for smaller volumes and full production runs.

We have experience in a wide range of markets, including nutraceuticals and sports nutrition. Our technologies include embossing, rotary silkscreen, seamless cylinders, tactile varnishes and coatings, cold foil and other specialty varnishes.

We have very high standards and only use the best domestically sourced materials that are ISO compliant. We are proud to be a Blue Level Graphic Measures International (GMI) printer for Walgreens and CVS. Environmentally, we are a certified member of the Sustainable Green Printing Partnership (SGP).

With 11 flexographic and 2 digital presses, we have the capabilities to work with any size company. In addition to exceptional quality, we are best known for our low set up costs/minimum quantities, competitive pricing, and as our name implies…quick turn-arounds!

**PRODUCTS**

- Pressure Sensitive labels, including IRC Coupons and Peel-back
  - Shrink Sleeves and Tamper evident neck bands
  - Flexible Films for bags, sachets, pouches, stick packs and sample packets

**COMPANY INFORMATION**

151-15 West Industry Court  
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www.overnightlabels.com

**KEY PERSONNEL**

Don Earl: donearl@overnightlabels.com  
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**OVERNIGHT LABELS**

Always available. Always on time. Always high quality.

For your **FREE SAMPLE KIT** email: info@overnightlabels.com

**PLAYING SPIN THE BOTTLE WITH YOUR LABEL SUPPLIER?**

IT COULD GET UGLY
MAXIMUM BENEFITS FOR EYE HEALTH

A patented proprietary composition ZeaLutein is composed of 1% Zeaxanthin, 5% Lutein and 2% Piperine, blended in a ratio optimized to provide maximum benefits in eye health. This blend delivers a perfect 1:5 ratio as occurring in the human eye, and is a highly bioavailable form of Lutein and Zeaxanthin to help support vision health while offering free radical protection. ZeaLutein provides wholesome nutrition to the eye and promotes macular health, naturally.*

PATENTS: US 6,689,400; JP4227409

www.sabinsa.com | www.zaelutein.com
Pharmore Ingredients Inc.

Your Trusted Source for Joint Care Ingredients

About Us
• Supplier of ingredients to human and animal nutrition industries
• Global sourcing expertise with overseas staff to support quality initiatives
• FSVP Importer of Record
• Compliant with current USFDA Food Safety regulations
• Staff with 100+ yrs of industry experience

Accomplishments
• Major importer of Joint Care Ingredients
• Supplier to many of today’s largest companies
• NASC Preferred Supplier since program inception
• Multiple Supplier of the Year awards
• Proud Members of CRN, UNPA, and NASC

Commitment to Quality
• FSMA and FSVP Compliant
• Certified Documentation
• On-site Audits with 3rd Party Testing
• In depth manufacturing knowledge
• PCQI Certified

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Key Personnel
Allen Gritton,
Director of Sales

We Provide

FSMA and FSVP Compliant Ingredients
Certified Documentation
3rd Party Testing
On-Site cGMP Audits
Award Winning Quality & Customer Service

www.pharmore.com | 801-446-8188
QuickLabel®
The Labels You Want When You Need Them®

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Key Personnel
Troy Kent,
Director of Sales North America

Description
With decades of experience, QuickLabel® provides the best solution for tabletop label printing systems. Our label printers, software, media, inks, toner and supplies are all designed to work cohesively. From vibrant food labels to GHS-certified labels, we understand your labeling needs. Designed with ease-of-use in mind, our labeling solutions allow users to save time, gain flexibility and increase sales.

Products
• Kiaro!® K-120 Professional Digital Tabletop Label Printer
• QL-800 Wide Format Label Printer
• QL-240 Versatile Wide Format Label Printer
• Kiaro! K-50 Narrow Format Label Printer
• QL-111 Industrial Label Printer
• Kiaro! K-200D Durable Wide Format Label Printer
• QLS-4100 Xe Rugged Thermal Transfer Label Printer
• QL-30 & QL-60 Compact Monochrome Thermal Transfer Label Printers

Solutions
• Easily create custom labels in colorfast, photographic quality of up to 1600 dpi at 12 in/sec
• Instantly revise labels to comply with FDA and USDA regulations
• Produce labels for specialty foods, seasonal runs or year-round shelving
• Highlight ingredients for transparency to meet consumer demands
• Quickly create barcodes, nutrition facts, expiration dates, pricing and other variable data
• Generate highly durable and freezer-resistant labels that never peel, tear or fade
• Efficiently produce large or short runs to print only the exact quantity of labels you need
• Easily remain compliant and meet all stringent retail packaging specifications

Industries Served:
Labels for dietary supplements, nutraceuticals, probiotics, food and beverages, and more.

Effortlessly create professional eye-catching labels that stand out on the shelves

www.quicklabel.com
Rochem International, Inc.

Your Bridge to Quality

Description
Founded in 1994 by Mrs. Robyn Frisch as an importer of Nutritional and Pharmaceutical raw materials, Rochem has grown to become a leader in supplying and developing ingredients for the top Food & Beverage, Dietary Supplement, Sports Nutrition, Pharmaceutical and Animal Health companies in regulated markets. Our commitment to our customers is that we will provide value by helping reduce costs and achieve the highest standards of quality, all while securing the supply chain and providing a level of compliance that others cannot.

Facilities
Rochem’s global headquarters and main North American warehouse facility are located in Hauppauge, NY. As a result of having both the administrative offices and main warehouse under one roof we have the ability to provide same day expedited shipments. Rochem also maintains stock across the USA as well as in Canada and Europe. Rochem has sales office throughout North America and Europe, as well as a wholly owned office in Qingdao, China that is staffed with a well-trained regulatory and technical/logistics team which enables us to audit our manufacturing partners’ sites for compliance with GMPs, as well as effectively source new material.

Corporate Headquarters
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Web Site: www.rochemintl.com
E-mail: sales@rochemintl.com

Key Personnel
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Founder/CEO
Matt Thiel,
President
Charles Dods,
Executive Vice President
Rick Peterson,
Senior VP of Nutritional,
Food & Beverage

Products
• Nutritional Ingredients
• API’s: Rx – OTC – Vet
• Sweeteners
• Vitamins
Sabinsa Corporation

Our Innovation Is Your Answer®

Description
Sabinsa Corp., founded in 1988, is a manufacturer and supplier of herbal extracts, cosmeceuticals, minerals, and specialty fine chemicals. Sabinsa’s mission is to provide alternative and complementary natural products for human nutrition and well-being. Over the past 20 years, Sabinsa has brought to market more than 100 standardized botanical extracts and privately funded several clinical studies in conjunction with prestigious institutions in support of these products. Its present operations have grown to employ 1000 people worldwide in 10 manufacturing, R&D, and/or distribution facilities. Additionally, botanical cultivation efforts undertaken by the organization now total nearly 40,000 acres to ensure sustainable supplies of key products. All products intended for human consumption are certified Kosher and Halal.

Industries Served
Sabinsa’s mission is to be a responsible biotechnology-based research, manufacturing, and marketing company, supplying the finest raw materials to provide innovative solutions to the dietary supplement, cosmetic, specialty chemical, and pharmaceutical industries. Sabinsa’s specialized services include custom product development, technical support and testing lab facilities, assistance in clinical evaluation, and protocol implementation. Sabinsa has established offices in the United States, Australia, China, Europe, Japan, and South Africa. Sabinsa also has agents that represent its product line throughout South America and Far East Asia.

Science and Technical Merit
Emphasis on developing and bringing to market products with scientific and clinical substantiation is Sabinsa’s core business philosophy and is in large part responsible for fueling the company’s ongoing commercial success. With more than 100 scientists working full-time and conducting ongoing research both in India and the United States, Sabinsa continues to...
develop and patent beneficial nutrients for the world market.

**Proprietary/Intellectual Property**
Sabinsa currently owns over 175 U.S. & international patents and has 100 pending patent applications worldwide. The company is also a three-time recipient of the prestigious Thomas Alva Edison Patent Award, given annually by the New Jersey R&D Council in recognition of the most revolutionary product innovations and important scientific breakthroughs originating in New Jersey. The company also has many recognized trademarked ingredients such as Bacopin®, BioPerine®, Boswellin®, Citrin®, Cosmoperine®, Curcumin C3 Complex®, Curcumin C3 Reduct®, DigeZyme®, Fabenol®, FenuFibers®, Fenusterols®, ForsLean®, Gugulipid®, Gymnema Sylvestre GS4®, LactoSpore®, Momordicin®, Picroliv®, Resvenox®, Saberry®, Salaretin®, Selenium SeLECT®, Silbinol®, and Venocin®.

**Application Specialties**
Committed and dedicated to the principles of innovation, tradition, and research, Sabinsa supplies high-quality, innovative, and standardized herbal extracts, phytonutrients, probiotics, enzymes, spice extracts, minerals, specialty chemicals, and fine chemicals for applications in dietary supplements, functional foods, pharmaceuticals, and cosmetics. The natural extracts and phytonutrients are derived from botanicals with a long history of traditional food, medicinal, and cosmetic use. Every product is backed by application-oriented scientific research. Sabinsa Corp. has developed novel approaches to retaining the biological activity of these ingredients while simultaneously addressing formulation challenges and product safety criteria.
Sensient Global BioNutrients

Fueling business growth with BioNutrients

Description
Business and Innovation leaders turn to Sensient BioNutrients for solutions as they bring innovative products to market with increased operational efficiencies. Our innovative nutrient solutions and application expertise, combined with packaging and delivery solutions, help them achieve their business objectives. Our nutrient solutions consist of a portfolio of yeast extracts and peptones that have a wide range of applications in the fermentation and nutritional supplement markets.

Who We Serve
Our nutrient solutions have a wide range of applications in the fermentation and nutritional supplement markets. Our customers include producers of:

- **Live cultures** that are used in probiotics, dairy, and biocontrol applications
- **Fermented ingredients** such as enzymes, organic acids, amino acids, vitamins, biopolymers, and alcoholic beverages
- **Nutritional supplements** used in the animal nutrition and cosmetics industries

Our solutions are specifically designed to solve the growing challenges faced by fermentation experts. Every fermentation is unique, whether it is for the production of live cultures or for the production of fermented ingredients. The nutritional requirements of microbes can vary between and within species, and finding the correct mix of balanced nutrients can be challenging.

Innovative Nutrient Solutions
We offer yeast extracts and peptones for a wide range of applications with diverse nutritional needs, supported with technical and regulatory documentation:

- Broad product portfolio that provides peptides, amino acids, and other growth factors
- Yeast derivatives and vegetable-based peptones
- Allergen-free options - gluten, dairy, soy, and others
- Non-GMO, animal free, kosher, halal

Application Expertise
Our team of application experts can collaborate with you in providing the optimal nutrients for your application defined by your success criteria, all through our:

- State-of-the-art R&D facilities
- Deep microbial fermentation and animal nutrition expertise
- Ability to recommend nutrients that drive success criteria: Increase yield and viability, reduce fermentation time, and improve health

Packaging and Delivery Solutions
Our global supply chain and operations team can offer packaging and delivery solutions that meet your mission-critical production schedules with flexible ROI options:

- Presence in 35 countries in 6 continents
- Packaging options based on volume and warehouse constraints
- On-time delivery and customer service support
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IMPROVE Viable Biomass

MAXIMIZE Yield & REDUCE Cycle Time

INCREASE Purity & Quality

MINIMIZE By-Products

Feed them with tailored Sensient nutrients to see your desired fermentation results!
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Founded in 1993, Sirio Pharma Co., Ltd (Sirio) is one of the main dietary supplement CDMOs, located in China, specialized in developing and manufacturing quality products including softgel, capsule, tablet, powder, gummy, oral liquid, probiotics and other dosage forms. Sirio has been devoted to offer one-stop solutions including product developing, manufacturing, packaging and logistics to its customers. Sirio is approved by TGA-GMP, NPA/UL GMP, BRC: ISO 9001 certification and etc. Cooperating with many well-known dietary supplement companies, Sirio is dedicated to provide products and service to customers all around the world.

For more information, please visit Sirio’s website at: www.siriopharm.com
Delivering Tasty Nutrition

- Compliance with GMP standards
- Efficacy supported by stability testing
- 300+ innovative formulations
Soft Gel Technologies Inc.
Delivering custom and branded softgels, naturally.™

Description
Soft Gel Technologies Inc.® specializes in providing premium-quality dietary supplements in a soft gelatin capsule delivery system. We are a full-service contract manufacturer dedicated to the production and marketing of branded products and custom turnkey formulations. We have earned many U.S. patents, most of which are for significant technological breakthroughs in the area of nutrient bioavailability. We obtained GMP certification through the NPA/UL and NSF, including NSF’s GMP for Sport™. We are Halal certified by the ISA and are an approved foreign manufacturer by Health Canada.

Services
- Custom formulation and contract manufacturing
- Developing production technologies that maximize a formula’s effectiveness
- Accommodating small production runs
- Scientific verification, supplier qualification, label-claim assurance, and raw-material disclosure
- Part of a global network of companies, with an international sales team

Products
- **CoQH-CF®**: A clinically proven antioxidant solution providing a stabilized and protected form of reduced CoQ10 (Kaneka Ubiquinol™) in a softgel using our crystal-free technology that demonstrates superior bioavailability
- **GlucoHelp®**: A banaba leaf extract, standardized to 18% corosolic acid, for blood glucose support
- **Injuv®** softgels: A naturally derived, low-molecular-weight hyaluronic acid complex for skin and joint health with proven absorption and bioavailability, promoting beauty from the inside out
- **Perluxan®** softgels: An all-natural botanical extract derived from hops resin used to support joint health, providing a safer approach to soothing aches from overexertion of everyday activities and effectively calming the body’s minor pain cascade
- **EZ Mega 3™**: An easy-to-swallow fish oil concentrate softgel capsule that is neutral in taste and contaminant-free, providing omega-3 essential fatty acids

Clients Served
Customer care shapes every department; it is of utmost importance for our customers to receive prompt and courteous service. We take the guesswork and liability out of the GMP responsibility equation by ensuring that our softgels contain the intended ingredients and are absent of contaminants. We embrace corporate transparency through our meticulous quality-assurance procedures, comprehensive QC testing, and recordkeeping/documentation on all products for traceability purposes.
Suzanne’s Specialties

Description
Suzanne’s Specialties has been supplying alternative sweeteners to the health food industry, as well as the industrial and institutional food markets, since 1984. Our entire product line, including brown rice syrup, honey, tapioca syrup, and agave syrup, is available as Organic, with most offered in a conventional version as well. Suzanne’s promises that all of our products are made with only the highest-quality organic and all-natural ingredients, which will give your formulas and applications “Sweetness The Way Mother Nature Intended™.”

With distribution facilities on both the East and West coasts, along with a variety of pack sizes, Suzanne’s Specialties has a number of options available to serve your company’s specific needs.
Synergy Flavors
Inspiring Taste

Synergy Flavors® is a leading international supplier of flavors, extracts and essences for the global food and beverage industry. With over 130 years of flavoring expertise, Synergy combines a long heritage of flavor development with targeted investments in research and technology—blending art and science in creating an exceptional array of tastes.

**Flavor Trends**
Synergy Flavors has extensive knowledge and experience developing high quality taste solutions across the food and beverage industry that continually inspire innovation and deliver a competitive advantage. Taste innovations originate from consumer and market insights, which assist in the development of timely, on-trend and market-ready products. The added reassurance that product launches will resonate with consumers provide confidence that innovations can be quick, on-target and successful.

**Nature created it. We captured it.™**
Our passion for flavor is exhibited by the state-of-the-art processing for our Synergy Pure® product line. Our broad portfolio of tea, coffee, pure vanilla, botanical, herbal, and vegetable essences and extracts effectively maximize natural flavor impressions of horticultural products delivering only the freshest, highest impact tastes you’d expect from nature.

**Sports Nutrition**
Synergy Flavors is making advancements in the Sports Nutrition Market through research and collaboration with parent company Carbery, a leading innovator in the manufacture of whey protein. The collective knowledge and capabilities provide formulators an unrivaled ability to develop nutritional bars, beverages, and powders that strike the perfect balance of exceptional taste and performance.

**Global Expertise**
With facilities in US, Europe, Asia and South America, Synergy flavor experts are globally positioned to deliver market understanding and customer collaboration to develop flavor solutions for the Bakery, Beverage, Confection, Dairy and Nutrition industries.

**For more information contact:**
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Synergy Flavors
Email: PWerner@synergytaste.com
Phone: 847-487-1011
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EXPERIENCE THE BEAUTY FROM WITHIN

Sabinsa has developed a range of nature-derived ingredients that fall in line with “beauty from within” concept, a remark of beauty-seekers acceptance of nutricosmetics. Our ingredients are designed to deliver radiance and beauty benefits to your skin. More importantly, they are backed by scientific evidence to care for your skin, the natural way. Some of our nutricosmetic ingredients that are well-received by customers include Saberry®, Artonox®, Silbinol®, C3 Reduct®, Cococin™, Ellagic acid and Rosemary extract. Experience the beauty from within.

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TSI USA Inc.

Description
TSI Group Ltd. is a world-class manufacturer of innovative and functional health products. TSI strives to build the highest-quality products that maximize and maintain active, healthy lifestyles for consumers.

Since 1996, TSI has excelled in the innovative development of quality dietary ingredients and finished dosage products. We are committed to employing state-of-the-art operations and infrastructure to deliver best-in-class proprietary products that are functional, safe, and efficacious.

Services
• TSI offers customers the benefits of a vertically integrated supply chain: simplicity, innovation, and quality assurance. Exercising control over all aspects of production enables us to transform a concept or formulation into a finished product that is effective, quality tested and regulatory compliant. Through these unique activities, we deliver pioneering ingredients to our brand partners for increased growth, profitability and value.
• TSI also employs an international R&D team of renowned researchers and technical experts. Together, we combine proven science and modern technology to develop innovative solutions for the nutraceutical industry. Our innovation ingredient applications range from sports nutrition to healthy aging to bone & joint support.
• Our capabilities and services include formulation development, in-house manufacturing, analytical testing, custom blends and granulation, finished-dosage-form capabilities, as well as regulatory assistance.
• Specifically, our manufacturing capabilities include:
  o Proprietary and custom ingredient manufacturing
  o Premium botanical and natural product extraction
  o Granulation, chlsonation and custom blending for drum-to-hopper premixes
  o Finished-dosage manufacturing of tablets, two-piece capsules, stick packs, liquids, and creams
• International cGMP-certified production

Products
TSI offers a variety of high-quality, functional and proprietary ingredients. Please contact us directly or visit our website (www.tsiinc.com) for a complete product listing.

Nutraceuticals:
• PEAK ATP® Adenosine 5’-Triphosphate Disodium
• myHMB® 8-hydroxy-8-methylbutyrate
• myHMB® Clear 8-hydroxy-8-methylbutyrate free acid
• PUREFLEX® Chondroitin Sulfate
• Ostivone® Ipriflavone
• GlucosaGreen® Vegan Glucosamine
• Shellfish Glucosamine

Botanicals:
• Ginkgo 24/6/5™
• Opteava™ Green Tea

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Tishcon Corp. is one of a select group of manufacturers who actually produce everything in house. Raj Chopra, CEO and Co-Founder of Tishcon, has an extensive background in industrial pharmacy, having taught in that area at Columbia University in New York. The company produces various types of United States Pharmacopeia (USP) compliant supplements including: tablets, capsules, softgels and the best chewable supplements in the world.

Tishcon also produces Bio-Solv® - highly soluble softsules (patented), Rapid Solv® tablets and caplets, Snipcaps™, Snipgels™- Snipsules™ for topical skin treatments (Dermagen®) and bath oil softgels. The company features solvent-free, no-heat, cold compression technology, the taste masking of vitamins, minerals and pharmaceuticals, in-house testing laboratories for physio-chemical and microbiological analyses, and complete packaging and finishing services.
ANNUAL SUPPLIER PROFILE

Vesta Pharmaceuticals, Inc.

Committed to Innovative Products at Competitive Prices™

Quality and Reliability
As a leader in the nutraceutical industry since 1996, Vesta prides itself as a premier NSF cGMP certified and FDA-registered, full-service provider. Our broad selection of quality nutraceuticals coupled with our competitive prices and on-time delivery are certain to reduce your costs and escalate your customers' confidence in quality. You expect reliability, you demand quality. Vesta Pharmaceuticals adheres to the strictest industry standards with our rigorous QA/QC processes to guarantee the highest levels of quality, consistency, and reliability in every product and service we provide.

Services and Products
Vesta Pharmaceuticals is a full-service contract manufacturer of herbal, vitamin, mineral, and dietary supplements. Vesta’s services include packaging, manufacturing, technical support, and full-market support. We also offer a comprehensive packaging of nutritional products. In addition, Vesta’s capabilities include custom and stock formulations that satisfy the most discerning tastes. Our nutritional formations, specialized blending techniques, and high-speed, state-of-the-art packaging line are sure to please. Whether for tablets, capsules, powders, or blends – we have the experience to deliver them all. Our modern packaging equipment can supply your products in bottles, blister packs, or unit doses. Vesta Pharmaceuticals manufactures all products in house and guarantees quality and complete satisfaction.

Raw Material Sourcing
Vesta Pharmaceuticals has years of helping customers source their raw materials. We strive to find the best quality raw materials on the market. We can help with much sought after, quality products like SAMe (S-adenosyl-L-methionine), Natto MK7™ (Vitamin K2), Natto NSP-2™ (Nattokinase), Hyal-Flex™ (Hyaluronic acid), UltraFucoidan™ (Fucoidan), NADH, UltraPQQ™ (pyrroloquinolone quinone), β-ImmuneShield-85D™ (Beta Glucan 1,3 D)

Global Capabilities
Vesta is an Indiana company, but with international reach for nutraceutical contract manufacturing needs and logistics. We have strong relationships with 10 countries, to ensure that your product obtains a significant market share.
Vidya Herbs

Description
For almost two decades, Vidya Herbs Pvt. Ltd. has served the nutrition, food and beverage, nutraceutical, and cosmetic industries as a world-leading manufacturer of plant extracts, natural carotenoids, essential oils, and oleoresins.

The natural ingredients market is expanding rapidly. Vidya is able to meet growing demand and provide customers with high quality materials that are traceable, sustainable, and sourced through environmentally friendly farming practices.

The company now operates seven global extraction facilities, including supercritical CO₂. Vidya also has a 15,000 SF state-of-the-art R&D Center, which has been instrumental in running several clinical trials and securing US Application Patents.

Vidya Herbs offers a wide range of products including anti-inflammation, weight management, heart and skin health, and more. The company’s broad portfolio makes it easy for customers worldwide to find quality material for all of their needs.

Herbal Extracts:
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- Black Pepper*
- Boswellia*
- Coffee Bean Extract*
- Coleus
- Fenugreek
- Ginger*
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- Mucina
- Saw Palmetto
- Turmeric*
*available in Organic

Natural Carotenoids:
- Lutein
- Lycopene
- Beta Carotene
- Mixed Carotenoids

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Probiotic, Cranberry, Fenugreek Sybiont Supports Gut Health


Two new studies indicate that cranberry seed fiber and fenugreek are effective prebiotics when combined with Sabinsa’s (East Windsor, NJ) Bacillus coagulans MTCC 5856 probiotic strain. Together, these synbiotic formulations may boost digestive health. The studies found that cranberry seed fiber and fenugreek were able to resist gastric acid and pancreatic enzyme hydrolysis, as well as support the growth of probiotic bacteria B. coagulans MTCC 5856, the strain featured in Sabinsa’s LactoCran and LactoWise branded ingredients. Both of the studies were conducted by Sabinsa.

In the cranberry seed fiber study1, which was published in the International Journal of Food Science and Technology, researchers sought to further explore the mechanism by which cranberry fruit might act as a prebiotic for B. coagulans MTCC 5856. In the in vitro study, which mimicked in vivo conditions, the researchers sought to establish the prebiotic potential of cranberry seed fiber from cranberry supplier Fruit d’Or (Villeroy, QC, Canada) and its fermentability by B. coagulans MTCC 5856.

In the study, the authors wrote that cranberry is known to contain bioactive compounds that may help to prevent urinary tract infections, stomach ulcers, lipoprotein oxidation, cardiovascular disease, and more. However, they added, cranberry seed fiber has not been fully explored for its prebiotic potential. The researchers dissolved cranberry seed fiber in a sterile electrolyte solution containing lysozyme and pepsin to simulate a gastric acid environment. They determined enzymatic hydrolysis by dissolving pancreatin from porcine in a phosphate buffer containing bile salt. The researchers collected and analyzed samples at 0, 30, 60, 90, 120, and 180 minutes. Cranberry seed fiber was found to be resistant to gastric acid and non-digestible to pancreatic enzyme hydrolysis.

According to the authors, fermentation of prebiotic fiber by the probiotic is also "an important aspect for determination of prebiotic activity of a probiotic fiber." Thus, in the current cranberry seed fiber study, the authors evaluated the fermentation of the cranberry seed fiber by growing of B. coagulans MTCC 5856 in an aerobic environment. The researchers observed a significant amount of short-chain fatty acids produced by B. coagulans MTCC 5856 while fermenting the cranberry seed fibers anaerobically. The cranberry seed fiber supported the growth of B. coagulans MTCC 5856 while also inhibiting the growth of E. coli. The study authors write that the results provide evidence for “cranberry seed fiber as a prebiotic fiber and also its suitability with the probiotic B. coagulans MTCC 5856 for an ideal synbiotic preparation.”

In the fenugreek study2, which was published in Food Science and Nutrition, researchers evaluated the potential of a galactomannan extracted from fenugreek seeds (Trigonella foenum-graecum L.) as a prebiotic fiber, as well as its fermentation by B. coagulans MTCC 5856. As in the cranberry seed fiber study, this study was conducted in an in vitro model mimicking in vivo conditions. The researchers dissolved 2 g of galactomannan from fenugreek seeds in a sterile electrolyte solution containing lysozyme and pepsin to determine gastric acid hydrolysis. In order to determine enzymatic hydrolysis, the researchers dissolved pancreatin from porcine pancreas in a phosphate buffer. Galactomannan from fenugreek seeds was dissolved in the same pancreatic solution. The study authors collected and analyzed samples at 0, 30, 60, 90, 120, and 180 minutes.

To determine fenugreek's fermentation by B. coagulans MTCC 5856, researchers inoculated a single colony of B. coagulans MTCC 5856 and incubated it overnight. The researchers found that B. coagulans MTCC 5856 produced short-chain fatty acids while fermenting the galactomannan. In a press statement from Sabinsa, the company pointed out that these short-chain fatty acids are important for colon health and also have anti-carcinogenic as well as anti-inflammatory properties. Galactomannan from fenugreek demonstrated prebiotic activity, the authors, wrote, and is suitable with B. coagulans MTCC 5856 in a synbiotic combination. In addition, B. coagulans MTCC 5856 also inhibited the growth of E. coli when co-cultured with galactomannan.

Taken together, the results from both studies demonstrate that cranberry and fenugreek are ideal ingredients to pair with B. coagulans MTCC 5856 in a synbiotic combination.

Black Ginger Extract Improves Erectile Dysfunction, Sexual Satisfaction


Results from a new pilot study3 published in the Journal of Integrative Medicine indicate that a Kaempferia parviflora ethanol extract, KaempMax (Life Extension; Fort Lauderdale, FL), may improve sexual satisfaction and performance. In the study, KaempMax improved self-assessed sexual health in middle-aged men experiencing mild erectile dysfunction.

The study authors write that sexual health correlates with overall wellbeing. And, while there are existing drugs that purport to enhance male sexual health, like Viagra, many of those products may come with adverse complications.
Phase 2™ is a proprietary, natural ingredient derived from the white kidney bean that may reduce the enzymatic digestion of dietary starches and may assist in weight control when used with a sensible diet and exercise program.† Studied extensively, it has been the subject of more than 14 clinical trials and has two structure function claims. Unlike other products on the market, Phase 2™ is not a stimulant.

To get the skinny on carb control, contact us at ashland.com/noodle7
side effects, or simply be ineffective for some men. They add that, increasingly, erectile dysfunction is also considered an early sign of cardiovascular disease and may even precede the development of adverse cardiovascular events like heart attacks.

According to the researchers, various preparations of *Kaempferia parviflora*, a plant in the ginger family, have been shown to support cardiovascular health and potentially also improve erectile function. A 2012 study conducted in Thailand found that *K. parviflora* rhizome extract improved erectile response in older men. With this in mind, the study authors sought to evaluate whether KaempMax could provide a safe and efficacious non-prescription alternative to more common drugs targeting men’s sexual health.

The primary endpoint of the current study was to determine KaempMax’s effect on erectile function, which was determined via the International Index of Erectile Function (IIEF). The secondary aim of the study to determine subjects’ sexual satisfaction using the Global Assessment Questions (GAQ). In the study, researchers supplemented 13 men between the ages of 50-68 with 100 mg KaempMax for 30 days. Researchers evaluated subjects’ sexual health parameters once at baseline and then at the end of the 30-day study period.

According to the authors, supplementation with KaempMax resulted in "statistically significant improvements in erectile function, intercourse satisfaction, and total scores on the IIEF questionnaire." KaempMax was also found to be safe and well-tolerated.

While the effects of KaempMax supplementation were encouraging, they were not as pronounced as the results from prescription medications, say the researchers. However, most of the study participants reported being satisfied with the results. They add that additional, longer, and placebo-controlled clinical trials will be needed to more fully determine Kaemp Max’s efficacy for improving erectile dysfunction.

Richard A. Stein, PhD, MD, and the study’s lead author, commented on the results in a press release. “This exciting new pilot study lends support to traditional Asian medicinal uses of *K. parviflora* for male sexual function,” he said. “We are hopeful that these findings will spur larger trials exploring the potential of *K. parviflora* extracts to enhance men’s sex lives.”

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### Naticol Fish Collagen Ingredient Reduces Signs of Skin Aging at a Low Dose


A new study published found that a low dose of a type I fish collagen peptide ingredient, marketed as Naticol (Weishardt International; Graulhet, France), may reduce the appearance of wrinkles, fine lines, and dry skin in mature women. Results from the study indicate that even a low 2.5-g dosage of Naticol, with or without silicon, may visibly reduce signs of aging in skin. According to AIDP, Naticol’s U.S. distributor, the ingredient is now available in a 2.5-g formulation.

Type I collagen is a key protein that accounts for more than 75% of the protein found in connective tissues and skin, AIDP explains. The protein in connective tissues plays an important role in helping to maintain skin tone, suppleness, and elasticity. However, as skin ages, collagen synthesis decreases by roughly 1.5% each year after the age of 25. By the age of 45, the company adds, collagen levels may be reduced by as much as 30%.

With this in mind, researchers sought to assess the anti-aging skin-health potential of a low dose of specific fish collagen peptides in mature women. According to the study authors, there were two key reasons for examining the effect of a lower dose of fish collagen peptides on skin health. The first reason is that gummies, which are an increasingly popular delivery format for collagen, cannot be formulated with higher dosages of collagen peptides (no more than 0.5 g-0.8 g), they say.

The second reason, they add, is that prior to the current study, only two other clinical studies have investigated low-dose collagen peptide effects on skin health, and, in particular, "type I fish collagen peptides associated with silicon.”

The current double-blind, placebo-controlled, randomized study included 57 mature women. Over a 12-week study period, researchers supplemented the participants with a daily dosage of either 2.5 g Naticol, Naticol plus silicon, or the equivalent dosage of a maltodextrin placebo. At baseline, week 8, and week 12, researchers analyzed subjects’ facial skin and dominant forearms for skin elasticity using the cutometer SEM (Courage & Khazaka, Germany); skin hydration, using the corneometer CM 825 (Courage & Khazaka, Germany); skin thickness, using the Dermascan C (Cortex technology, Denmark); and skin color, via the Chromometer CR 400 (Konica-Minolta, Japan). The researchers also evaluated subjects’ facial wrinkles using the Bazin-Doublet’s atlas; and skin radiance and complexion homogeneity, both of which were assessed via a visual analogue scale. Finally, the participants were instructed to complete a questionnaire at the end of the study in order to evaluate the their satisfaction with the appearance of wrinkles, tone, firmness, brightness, and hydration.

By the end of the study period, both the Naticol and the Naticol-plus-silicon groups exhibited significant improvements in skin elasticity and firmness, while no significant improvements in elasticity and firmness were observed in the control group. Facial skin thickness and brightness likewise increased significantly in both the Naticol and Naticol plus silicon groups. By week 12, both Naticol groups also exhibited reduced appearance of wrinkles (-16.5%) compared to baseline measurements. The appearance of crow’s feet wrinkles, specifically, decreased in 74% and 60% of the subjects in the Naticol and the Naticol plus silicon groups, respectively. In addition, subjects in both Naticol groups reported brighter, more hydrated facial skin in the self-questionnaire by week 12.
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Collagen Cravings

How do you take your collagen?

By Jennifer Prince and Jennifer Grebow

Collagen has become one of the dietary supplement industry’s top ingredients to watch. Even though collagen is the most abundant protein in the body, accounting for around 25%-30% of its total protein count, supplemental collagen has only recently taken off stateside. Consumers in Asian countries like China, Japan, and Korea, however, have been reaping collagen’s skin-, nail-, bone-, joint-, and muscle-health benefits for decades.

Collagen still has mileage in Asia Pacific, where Euromonitor estimates an overall CAGR for collagen ingredients of 5.4% through 2021. Collagen innovation in this region is a well-established fact, and the ingredient can be found in a range of truly unique delivery forms, including in novel and indulgent foods and beverages.

A lot of the innovation is taking place in the confectionery aisle, says market researcher Innova Market Insights. Innova notes that in 2017, a whopping 28.4% of all new collagen food and beverage launches in Asia were confectionery launches. Gummies and jellies were the most popular product type, at 56.3% of the confectionery category.

Collagen innovation is also active in the general food and drinks market in Asia. Innova points to recent unique food and drink launches in Asia experienced rapid growth of 17.9% CAGR in 2015-2017.

In the U.S., consumers are more familiar with collagen in powder, topical, and capsule form. But recently, collagen firms have also been incorporating collagen in teas, bars, and even baked goods, perhaps taking cues from the creative Asian market.

NeoCell is one company popularizing collagen food and drinks here in the U.S. Isaac Jena Szapiro, general manager, NeoCell, says one reason collagen is gaining traction here is due to growing research. “Lately in the U.S., there have been more studies around collagen, which has provided consumers with more information about the benefits of collagen,” Szapiro says. NeoCell has already brought to market collagen cookie bars featuring its unique, hydrolyzed digestible collagen. Its latest launches include new powder and gummy products.

Consumers are more apt to consider collagen in foods and beverages that can be incorporated in their regular, daily routine, Szapiro points out. For this reason, coffee has become a sought-after vehicle. Innova reports that, in Asia, collagen hot beverages, including coffee and hot chocolate, are already on the market.

One U.S. company, Dr. Kellyann, offers its own Slim Collagen Coffee instant coffee. The coffee, which launched in September 2017, delivers consumers’ daily dose of collagen in a convenient, travel-friendly packet. David Urman, chief business officer for Dr. Kellyann’s parent company, Best of Organic, explains that coffee and collagen are a natural fit and that coffee’s antioxidant properties gel nicely with all of collagen’s potential health benefits. “[Collagen is] a clean protein that supports joint health, helps fill you up as part of our weight-loss programs, and is amazing as a supplement for beautiful hair, nails, and skin,” Urman says. (Szapiro says customers are adding NeoCell’s Super Collagen powder to coffee, as well.)

Collagen is easy to formulate in food and drinks because it is tasteless, suppliers point out. Heather Arment, marketing coordinator, North America, for collagen supplier Gelita (Sergeant Bluff, IA), says, “Collagen is a very versatile ingredient. It can be used in almost any application.” Gelita’s collagen peptides, for instance, are neutral in taste and odor, she says.

U.S. companies continue to seek new markets where collagen can play, and in combination with other healthy, and even indulgent, ingredients. At the recent Institute of Food Technologists’ Annual Meeting and Food Expo in July, supplier Prinova (Carol Stream, IL) distributed prototypes of a Chocolate Caramel Pretzel Collagen Protein Bar.

Targeting specific consumers is also an opportunity. In Asia, there are collagen products on the market especially for seniors, Innova reports. The men’s market is also growing. “We’re seeing the male interest in collagen continue to grow, as well as Millennial consumption,” Szapiro says. Innova reports that a collagen skin-health drink for men launched in Singapore last year. Look for more of these ongoing developments. If collagen’s success in Asia is any indication, U.S. collagen is in for an exciting future.
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