Wellness-wise, this year’s IFT food expo made some statements about the growing protein market, the reach of probiotics and prebiotics, and the increasing strength of companies’ capabilities. Nutritional ingredients were spotlighted in food and beverage product concepts that targeted the prominent consumer trend of sustainable, wholesome health. Here is an overview of some of the healthful ingredient offerings and company news.

Pursuing the Power of Proteins

There is no doubt that the presence of protein is dominant in the industry. Dairy, primarily whey protein, is still a mainstay, while vegetarian sources or alternative proteins continue to offer ways to satisfy the protein trend.

The U.S. Dairy Export Council, Arlington, Va. (thinkusadairy.org), offered an impressive menu of protein-fortified prototypes. Each showed how dairy proteins can be used in diverse applications. A Savory Kimchee-se Pancake was packed with 12 g of protein and 25% Daily Value for calcium with dairy ingredients such as whey permeate, milk protein concentrate 70, and Monterey Jack pepper cheese. Moofa Meatballs were made with Moofa, a protein-rich meat alternative based on acidified skim milk. With up to 16 g of protein/serving, the meatballs also contained whey protein concentrate 80. Chai Protein Pudding was a nutritious treat made with 2% milk, milk protein isolate, micellar casein concentrate, and fiber. It contained 14 g of protein and was an excellent source of calcium.

Arla Foods Ingredients, based in Basking Ridge, N.J. (arlafoodsingredients.com), highlighted active nutrition using its whey protein ingredients. Arla’s HYDRO.365 is a whey protein hydrolysate that has been shown to lead to better performance and faster recovery following intense training compared with mainstream sports drinks. It offers 26.7 g of essential amino acids/100 g of protein and 21.7 g of branched-chain amino acids/100 g of protein. The company has also developed Lacprodan DI-3065, a fast-acting “predigested” whey protein hydrolysate for applications in the clinical nutrition sector. Lacprodan DI-3065 is suitable for use in ultra high temperature (UHT) processed applications at levels of up to 20% protein in drinks and gels and up
What's New in the World of Wellness Ingredients continued...

Davisco, Le Sueur, Minn. (daviscofoods.com), showed attendees a protein-packed nighttime beverage containing 20 g of high-quality alphalactalbumin/6 oz beverage with approximately 2 g of leucine and 1 g of tryptophan. It highlighted the unique nutritional profile of Davisco’s alphalactalbumin isolate. A trail mix bar highlighted two new ingredients that are suitable for snack foods. BioZate 7 is a high-purity hydrolyzed whey protein isolate that can be used at high levels while maintaining product and process-friendly texture and viscosity. BioZate 7 is not bitter, and it has a protein purity typically at 95% dry basis. Davisco’s WPC-80 Heat Stable and BioZate 7 were also used in a whey protein crisp that was extruded on a twin-screw extruder to highlight the light texture and air-cell stabilization that is possible in 50% and 60% protein crisps. The trail mix bar had 10 g of protein/40 g serving.

Milk Specialties Global, Eden Prairie, Minn. (milkspecialties.com), featured Organic MPC 85, a low-calorie, high-protein ingredient that helps reduce usage of stabilizers in formulating clean label high-protein beverages. The ingredient is also stable through UHT processing. The company also introduced BARsoft, a proprietary dairy protein mix designed for optimal sensory attributes in high-protein bar applications, especially in maintaining a soft texture over a long shelf life.

A Range of Alternative Protein Ingredients

Alternative protein sources varied from whole vegetable sources to pea, algae, rice, wheat, and even collagen. Parabel USA, Melbourne, Fla. (lentein.com), won the 2015 IFT Innovation Award for its protein ingredient, LENTEIN. This complete protein can be fully compared to whey protein in that it has a balanced amino acid profile with higher essential amino acids and branched chain amino acids than other plant proteins. Parabel’s technique to produce the ingredient includes a cold water extraction process that keeps functionality and nutrients in the protein. LENTEIN is a free-flowing powder typically containing 65% crude protein, which is extracted from plant species in the Lemnoidae family that are not genetically modified (GM).

Hinoman, Tel Aviv, Israel (hinoman.biz), introduced mankai, an all-natural, unprocessed protein- and vitamin-packed proprietary vegetable grown with sophisticated precision agriculture. The whole protein ingredient contains at least 45% protein on a dry-weight basis and boasts fatty acids, amino acids, iron, zinc, and other nutrients.

Terasante Whole Food Plant Proteins from FutureCeuticals, Momence, Ill. (futureceuticals.com), are carefully standardized to a

Video Viewing Guide

The following IFT video is available on a topic featured in this article.

Probiotics and Prebiotics at IFT15: http://bcove.me/8rv11fm8

Boost the protein content of pudding with milk and milk protein ingredients. Photo courtesy of U.S. Dairy Export Council
minimum of 20% plant protein in a natural, whole food matrix. Terasante is a balanced source of plant-based protein that also delivers intact levels of macronutrients and micronutrients found naturally in whole foods. All of the antioxidants, fiber, vitamins, minerals, and essential amino acids are there as well.

Profi is a proprietary blend of vegetable protein isolates from Dealers Ingredients, Brampton, Ontario, Canada (dealersingredients.com). The concentrated complete vegetable protein contains all of the essential amino acids and dietary fiber. The line includes Profi 100, recommended for adding plant protein and fiber to smaller serving sizes, and Profi 200 for serving sizes that are more than 100 g.

AlgaVia from Solazyme, South San Francisco, Calif. (solazyme.com), is a whole algal protein that is rich in protein, dietary fiber, healthy lipids, and micronutrients. The microalgae-based protein has high digestibility and contains all of the essential amino acids.

The use of pea protein continues to grow in popularity. World Food Processing, Oskaloosa, Iowa (worldfoodprocessing.com), featured PURISPea Proteins. Thai PURISPea Butter Stir Fry was a vegan stir fry featuring PURISPea TVP in a peanut-free Thai roasted pea butter sauce. Other product concepts served were PURISPea High Protein Smoothies, Vegan Cheesecake Bites made with PURISSoy TVP (for the cheesecake) and PURISPea (for the graham cracker crust), and Walking Tacos made with PURISPea TVP and PURISPea.

The versatility of Nutrals Pea Protein from Roquette America, Geneva, Ill. (roquetteamerica.com), was showcased in several unique applications. Chocolate Coconut Protein Bar was an excellent source of protein made with Nutrals S85XF Pea Protein and whey protein isolate. High-Protein Pretzels contained Nutrals BF Pea Protein, and a Protein Lemon Bar contained Nutrals S85XF Pea Protein. A Nondairy Chocolate Compound Coating boasted 17% protein from Nutrals-F85F Pea Protein.

The Scoular Co., Minneapolis (scoularfood.com), showcased its pea protein line. The ingredients included 85% Protein Isolate (non-GM), 80% Protein Isolate (non-GM), 80% Protein Isolate (Organic), and 60% Protein Crisps (non-GM).

Axiom Foods, Los Angeles, (axiomfoods.com), featured its growing alternative protein ingredients profile. VegOtein P80 is a new organic pea protein for bars, powdered and liquid beverages, and meat analogues. Cannatein Hemp Protein is another new ingredient. Axiom Foods also offers Oryzatein Rce Proteins.

BI Nutraceuticals, Long Beach, Calif. (binutraceuticals.com, botanicals.com), sampled two functional beverages and a fortified graham cracker, which utilized some of the company’s newest food and beverage ingredients. The company also introduced an 80% faba bean protein. A protein-packed chocolate coconut smoothie featured pumpkin seed protein. A cinnamon graham cracker contained the company’s kale powder and psyllium fiber. An energizing cherry limeade contained a water-soluble extract form of guayusa, a natural energy ingredient from South America and an alternative to caffeine.

Glanbia Nutritional, Fitchburg, Wis. (glanbianutritionals.com), expanded its HarvestPro line of vegan plant proteins with the introduction of Canada-grown pea protein ingredients. The new ingredients join the flax, chia, and ancient grain ingredients in the company’s popular range of vegetarian proteins said to offer significant flavor advantages over standard pea protein ingredients, relative to the desired application and desired flavor profile. HarvestPro PFC 75EF is a proprietary blend of pea, flaxseed, and chia proteins. HarvestPro Pea Protein 83EF is an 85% pea protein ingredient featuring the EasyFlav clean flavor technology. EasyFlav ensures a neutral-tasting pea protein ingredient with significantly fewer green/pea, green/pyrazine, bitterness, cardboard, and nutty notes than straight pea protein.

Glanbia’s Ignited Protein Ranger Cookie prototype demonstrated new levels of snack fortification in a protein-fortified cookie. It combined the clean-tasting vegan protein content of the new HarvestPro PFC 75EF protein system with the HarvestPro CA Crisp 60 protein crisp, adding the nutritional benefits of chia and amaranth in a crunchy texture. The cookie featured the advanced IGNITOR amino release matrix, a comprehensive blend of enzymes that efficiently breaks down proteins for faster absorption in the body and, according to the company, releases glutamine and branched-chain amino acids twice as fast as any other ingredient on the market.

Glanbia also announced the addition of OmniMEGA Advanced Omega-3 Powder to its growing portfolio of proprietary ingredients. OmniMEGA is a patented free-flowing omega-3 powder that offers multiple advantages over standard fish and krill oils with the ability to formulate into multi-ingredient tablet, capsule, melt, and powdered beverage applications.

OmniMEGA is made up of omega-3 fatty acids from fish oil that are bound to a beta-cyclodextrin backbone, making a compressible powder suitable for tableting and ready-to-mix formulations that is more shelf stable with less sensitivity to air and oxidation without the fishy reflux. »»
What’s New in the World of Wellness Ingredients continued...

MGP Ingredients, Atchison, Kan. (mgingredients.com), highlighted Arise wheat protein isolate, Optein lightly hydrolyzed wheat protein, Fibersyn RW resistant wheat starch, and TruTex textured wheat protein. High-fiber chocolate chip cookies made with Fibersyn and Arise, along with meatless chicken-flavored trumpets containing TruTex, were available for sampling. The protein content of MGP’s Arise 5000, 5500, 6000, and 8000 wheat protein isolates, which ranges from a minimum of 85% to more than 90%, stands out as an advantage for a wide range of bakery and other flour-based products. In the chocolate chip cookie samples, 100% of the egg whites were replaced with Arise. Among the more unique attributes of Optein are its nonbitter flavor profile and higher glutamine content compared to soy and whey proteins. Glutamine has been reported to be effective in the prevention of fatigue and overtraining syndrome among athletes and in the replenishment of the body’s glycogen. Fibersyn RW, a patented RS-4 type resistant starch, serves as a great solution for increasing dietary fiber in baked goods, pasta and noodles, snacks, and cereals.

Gelita USA, Sergeant Bluff, Iowa (gelita.com), highlighted GELITA Collagen Bioactive Collagen Peptides. Scientific studies with PEPTIPLUS show it positively influences body composition, supports body toning, and helps increase muscle mass while decreasing fat mass. VERISOL substantially increases skin elasticity and hydration and reduces the formation of wrinkles by stimulating skin metabolism and the creation of new collagen. FORTigel has been scientifically proven to stimulate measurable synthesis of extracellular matrix and therefore, the production of cartilage tissue. Thus it counteracts wear and tear on joints caused by aging and excess load. New studies published this year have shown the efficacy of 5 g of FORTigel on healthy individuals with joint discomfort. FORTIBONE stimulates osteoblasts in the bones to increase production of extracellular matrix, which is the essential framework for calcium mineralization.

Delivering on Digestive and Immune Health

Ganeden, Cleveland, Ohio (ganeden.com), a manufacturer of patented strains of probiotics, announced a strategic alliance with Lawrenceville, N.J.—based Sensus America, (inspireredbyinulin.com), a manufacturer of chicory root fiber ingredients. Through the alliance, the companies have created Frutalose PRO, a prebiotic chicory root fiber syrup blended with the highly stable probiotic, GanedenBC30 (Bacillus coagulans GBI-30, 6086).

Frutalose PRO was created by combining chicory root—based Frutalose SF75, which is a prebiotic liquid inulin fiber, with the probiotic GanedenBC30, allowing food and beverage manufacturers to design products that provide many health benefits. This highly stable ingredient combination is a low-calorie and low-sugar clinically proven symbiotic that is designed to maximize health benefits to the consumer, particularly in the areas of protein utilization and digestive health.

Wellmune from Biothera, Eagan, Minn. (wellmune.com), is a proprietary brand of baker’s yeast beta-glucan. It was recently shown to potentially help improve mucosal immunity postexercise among nonexercising adults. The study found that Wellmune supplementation caused a significant increase in salivary IgA, an antibody that plays a critical role in mucosal immunity, demonstrating that the yeast beta-glucan may have a positive impact on potential immunosuppression in a less active population. This study’s findings add to previous peer-reviewed studies that demonstrate how Wellmune can help marathoners and fit recreational athletes stay healthy before and after intense workouts.

Wellmune is a 100% natural food, beverage, and supplement ingredient clinically proven to help strengthen the immune system. The proprietary yeast beta 1,3/1,6 glucan has regulatory approval in major markets around the world, including GRAS status in the United States and novel food approval in Europe and China. Attendees were able to see a variety of commercial products that are formulated with Wellmune.

Immune Stix Chews from Complete Nutrition deliver immune benefits in a delicious soft chew; it can help ensure day-to-day health. FruitActiv Immuniboost from Sun-Rype Products is a fruit and whole grain bar that provides immune support to consumers in a convenient format.

At a press conference, Jennifer Gu, vice-president for research and development at AIDP, City of Industry, Calif. (aidp.com), introduced PeticX, a new nongluten prebiotic xylooligosaccharide that is free from GM organisms. She also discussed scientific research conducted at the University of California, Los Angeles (UCLA), on PeticX that adds significant new knowledge to the essential role prebiotics play by creating a diverse ecology in the gastrointestinal (GI) tract, the critical first step to optimal wellness. PeticX creates the right balance of good and bad GI tract bacteria, which enables probiotics...
to grow and flourish in the gut. It is backed by a UCLA “gold standard” study showing its effectiveness on balance in the microbiome when used in small amounts. AIDP sampled lemonade formulated with PreTicX at its booth.

**Clasado**, Lake Success, N.Y. (clasado.com), highlighted *Bimano GOS*, a patent-protected galactooligosaccharide mixture produced from dairy lactose utilizing a proprietary enzyme system derived from the *Bifidobacterium bifidum*. The ingredient exhibits benefits in digestive and immune health. The unique structure of *Bimano GOS* produces additional functionality not demonstrated in other prebiotics, including immune-enhancing and antipathogenic properties.

A video that features more about prebiotics and probiotics is available at http://bcove.me/8rvl1fm8.

**All About Energy**

**BENEO**, Morris Plains, N.J. (beneo.com), showcased natural energy-management options. Derived from beet sugar, Palatinose delivers energy in a balanced and sustained way naturally. Palatinose, a low-glycemic sugar, provides body cell energy and promotes enhanced fat oxidation during physical activity. Palatinose, a next-generation sugar, is a fully available but slowly released sugar that supplies the body with energy in a more balanced and sustained way than other sugars. Being low glycemic and low insulimenic and contributing to better fat oxidation in energy metabolism, it potentially provides benefits for glucose control, body composition, and weight management. A U.S. Food and Drug Administration health claim also confirms that Palatinose does not promote tooth decay.

Palatinose is non-GM and is derived from beet sugar. In nature, it can also be found in honey and sugar molasses.

Expo attendees had the opportunity to speak to endurance athlete Stefan Schlegel, who is using Palatinose as his main source of carbohydrate energy during training and competition. He cycled on a stationary bike at the BENEO booth on the first two days of the expo. Schlegel successfully finished the 3,000-mile nonstop Race Across America (RAAM) in 2012 and 2014. He will team up with BENEO again for RAAM 2016 as well as for the 6-12-24 hour world time trial championships in November 2015 in Borrego Springs, Calif. According to Schlegel, during RAAM 2014, “I did not experience a single hunger pang during the race, never felt a lack of energy, and my blood glucose level remained constant, which is crucial for endurance races.”

BENEO featured samples of a breakfast cookie that combined Palatinose and the chicory root fiber *Orafi Inulin*. The cookie claimed “source of fiber” and “reduced glycemic.” Gluten-free muffins were also available for tasting. They were formulated with BENEO’s rice starch, rice flour, and prebiotic fiber oligofructose. They retained moistness and freshness and were also a good source of fiber. Additionally, a market sample of Nth Degree’s low-GI drink was featured; it utilizes Palatinose as the low-glycemic carbohydrate in its formula.

**A Full Array of Functional Fibers**

The joint venture between Archer Daniels Midland, Matsutani Chemical Industry, and Matsutani America, Decatur, Ill. (fibersol.com), supports the worldwide sales and marketing of Fibersol, a line of soluble dietary fiber ingredients that can be used in food and beverage applications as well as in dietary supplements. Fibersol provides solutions to many formulation challenges in areas, including sugar and calorie reduction, clean labels, and digestive health.

The company featured several product concepts formulated with Fibersol ingredients. A Good Morning AM Fiber Shot had a natural citrus flavor and provided a shot of caffeine, ginseng, and fiber. Fibersol-2 added dietary fiber and enhanced sensory benefits by masking bitter notes and improving mouthfeel. Each 3 oz serving contained 10 calories, had zero sugar, and provided 5 g of dietary fiber. Maple Chipotle Cheddar Flavored Oat Clusters used Fibersol to enhance sensory benefits with a crispy texture and added dietary fiber. Fibersol-LQ was used in the binding system of the oat cluster and was a solution for formulators who are trying to develop a savory binding system. This application highlights the use of the Fibersol line of soluble dietary ingredients to improve flavor and texture and extend shelf life. Each 1 oz serving contained 120 calories and provided 5 g of dietary fiber, 2 g of protein, and 3 g of sugar. *Art Decolates* were 70% dark chocolates infused with heart-healthy olive oil and soluble dietary fiber. Fibersol-2 enhanced sensory benefits with a rich, creamy texture and added dietary fiber. This showcased how formulators can improve flavor, mouthfeel, and sweetness. A two-piece serving contained 70 total calories, 3 g of sug-
What’s New in the World of Wellness Ingredients continued...

The health and nutrition ingredient offerings from Ingredion, Westchester, Ill. (ingredion.com), provide a variety of solutions to support bone, heart, immune, glycemic, and digestive health. Ingredion’s full line of nutrition solutions includes prebiotic fibers, resistant starch, soluble fibers, plant-derived calcium and minerals, and inulin fibers. Fructooligosaccharide (FOS) is a natural prebiotic fiber that supports immune health and calcium absorption. Ingredion’s London, Ontario, facility is home to the only FOS channel in North America. Galactooligosaccharide (GOS) is a prebiotic fiber naturally found in breast milk that supports immune and digestive health. Resistant starch (RS2) is a natural dietary fiber that has proven benefits for supporting blood sugar health and weight management. Earlier this year, Ingredion introduced a new line of pulse proteins and flours. VITISSERTS pulse-based proteins and HOMECAST pulse flours are plentiful, sustainably sourced proteins that are non-GM and gluten-free. They are often used to replace allergens in pasta, batters, and coatings.

Some of the innovative formulations on display at Ingredion’s booth included Beet Carrot Apple Juice With Fiber; Beet, Strawberry, Pomegranate, and Faba Protein Spread (with pulse protein); Coffee Almond Nutritional Beverage (with prebiotics and pulse protein); Non-GMO, Gluten-Free Mini Bagel (with pulse protein); Gluten-Free Pita Bread (with pulse protein and fiber); Protein & Fiber Enriched Banana Pecan Bread (with pulse protein and fiber); and Soft Flour Tortilla (with fiber).

The fiber portfolio from Tate & Lyle, Decatur, Ill. (tateandyalefibers.com), includes PROMITOR Soluble Corn Fiber, PromOat Beta Glucan, and STALITE Polydextrose. PROMITOR unlocks superior digestive tolerance in high-fiber and sugar-reduced products while maintaining sensory expectations and ease of use. Expo attendees experienced how PROMITOR imparts additional mouthfeel and helps reduce calories and sugar in Root Beer Craft Soda. It provided bulk and texture and maintained great taste in Gluten-Free German Chocolate Bundtini Cake. PROMITOR helped with sugar reduction and texture in Reduced-Calorie, Soft-Serve Ice Cream.

Fibregum from Nexira, Somerville, N.J. (nexira.com), is an all-natural and GM-free source of 90% soluble dietary fiber from carefully selected acacia tree gum. Fibregum is clean label and appeals to consumers because of its 100% vegetable origin and availability in organic grades. Clinical studies have demonstrated the health benefits of consuming 5–10 g of Fibregum/day.

Fiberstar, River Falls, Wis. (fiberstar.net), showcased Citri-Fi, an all-natural, highly functional fiber produced sustainably from orange pulp, rags, core, and peel using a patented process.

J. Rettenmaier USA, Schoolcraft, Mich. (jrsusa.com), displayed its new ingredients. The company’s VITACEL brand now includes Organic Oat Fiber, Soy Fiber, Organic Soy Fiber, and Rice Fiber. It also debuted its new brand, Canadian Harvest, from the company’s recent acquisition of the SunOpta fiber-based ingredients.

**Fruit and Vegetable Ingredient Options**

PLT Health Solutions, Morristown, N.J. (plthealth.com), highlighted Vibrant Harvest Whole Food Powders. The powders are designed to effectively incorporate servings of high-quality fruits and vegetables into consumer products. A variety of factors contribute to the overall sustainability of these ingredients, which are manufactured by Columbia Phytotechnology, The Dalles, Ore. The Radiant Zone Drying process used to remove liquid from fruits and vegetables is highly efficient—between 73% and 88%—rapidly creating a powder with moisture levels less than 3%. The energy used to power the process is renewable; more than 95% of the power used by the facility is provided by solar and hydroelectric sources. High-quality powders like Vibrant Harvest can reduce packaging, handling, transportation, and storage inputs associated with raw or frozen foods. They can also extend shelf life and preserve the nutrients present in fruits and vegetables, limiting food spoilage and waste. Vibrant Harvest powders taste and look great and have strong nutrient retention from the original material. These ingredients allow food and beverage producers to create products that have good sensory appeal while delivering nutritional value. As an example, as little as 3 g of Vibrant Harvest spinach or as little as 5.5 g of strawberries can deliver a serving size via a finished food or beverage product.

NutriFusion, Hilton Head, S.C. (nutrifusion.com), a provider of natural nutrition and phytconutrient products for food manufacturers, announced an.
agreement with Amazing Grains, a Canadian cereal supplier and mix-blend food company. Amazing Grains is incorporating NutriFusion’s whole organic, non-GM concentrated nutrient-rich food blend, GrandFusion, into its products. GrandFusion is sourced from fresh fruits and vegetables void of any synthetic additives, excipients, or preservatives. Using GrandFusion in this way will allow Amazing Grains to provide nutrition-enhanced products to food processors throughout North America, adding natural nutrients to a wide variety of finished food products. The products will be licensed to a variety of food manufacturers who will use the brand in conjunction with their own private label brands and offer products ranging from breakfast cereals, grain blends, muffins, granola bars, brownie bars, energy bars, pita bread and chips, crackers, cookies, pizza, salad dressings, yogurt, and pet food snacks.

**Carolina Innovative Food Ingredients (CIFI), Nashville, N.C.** (cifingredients.com), created a menu of healthy and clean label application prototypes that highlighted its unique line of sweet potato ingredients. These ingredients provide nutritional and clean label benefits, including replacing high fructose corn syrup. CIFI staff offered a 100% fruit and vegetable juice blend; a nutrition bar featuring a unique dehydrated sweet potato crumble; marinated sliders and condiments, including a ketchup formulated with sweet potato juice concentrate to remove sugar and high fructose corn syrup; and *Eli’s Cheesecake* topped with a vegan caramel sauce.

CIFI proposes to educate the food industry about the formulation potential of sweet potato ingredients as the company prepares for the imminent launch of its new plant in September. The new plant, located in Nashville, N.C., will produce sweet potato juice in both concentrated and single-strength forms, as well as dehydrated sweet potato granules and flour, all sourced from the abundant sweet potato farms of eastern North Carolina.

**Naturex**, South Hackensack, N.J. (naturex.com), displayed several on-trend prototypes. A natural and refreshing ready-to-drink beverage for postworkout recovery helped restore electrolyte and antioxidant balance thanks to rosemary leaf and acerola extracts. Ginger root extract played a role in relieving joints after demanding training. Cucumber juice and lime and lemon powders offered a fresh and well-balanced sweet taste. A berry smoothie for kids provided one vegetable serving and one fruit serving per 8 oz beverage. A date powder together with specific types of raspberry and lemon powders standardized to 40% dietary fibers were chosen to help reach the claim “source of fiber.”

**Strength and Savviness of Suppliers**

**DSM**, Parsippany, N.J. (dsm.com, dsm.com/human-nutrition), featured more than 60
functional food, beverage, and dietary supplement concepts. Consumer appetite for great-tasting, better-for-you products is reframing the types of items that make their way into today’s grocery store shopping carts. The numerous prototypes were designed to meet consumers’ evolving preferences.

Some of the product concepts were fortified market-ready powdered beverages, a beauty-from-within drink, and a liquid stick pack from Fortitech Premises, DSM’s custom nutrient premix service. Greek-style yogurt utilized various next-generation cultures from DSM’s Greek Legends toolbox, which support product differentiation in taste, texture, and appearance, all of which are well maintained throughout shelf life. Clarified apple juice was enhanced with DSM’s life’s DHA clear omega-3 emulsion. This shelf-stable beverage contained 32 mg of docosahexaenoic acid (DHA) without any fishy taste or added turbidity. The Great Start Breakfast Biscuit utilized OatWell oat beta-glucan, which may help to reduce the risk of heart disease by lowering cholesterol as part of a diet low in cholesterol and saturated fat. The biscuit was positioned for sustained energy and contained hearty whole grains, OatWell, and a good source of Quali-B vitamins to help support energy production. DSM also featured its BioFit Pro-Muscle Workout Bar, a high-protein bar with added nutrients to help power performance. In addition to being an excellent source of protein, the bar contained PeptoPro, the performance peptide that may help the body fuel and recover during and after exercise, and added Quali vitamins (vitamins B, C, D, and E) for energy production, bone health, and antioxidant protection.

BASF Nutrition & Health, Florham Park, N.J. (basf.com), targeted consumers’ evolving palates and hectic lifestyles with healthy, innovative concepts from new breakfast options to semihomemade treats. The company highlighted several trends that are transforming consumers’ food preferences: healthy concepts to break the breakfast barrier and “winning” wellness ingredients to fortify sports nutrition products.

Convenience, portion size, flavor preferences, and health benefits are driving demand for new breakfast products. Whether it’s coffee on the go or new versions of “milk,” BASF offered solutions to make each sip healthy and tasty. Almond milk with naturally sourced plant sterols helped enhance heart health, an increasingly popular option considering that one in every six adults has high cholesterol. Almond milk accounts for more than 70% of sales within the plant-based, nondairy milk alternative category. Plant sterols have an FDA-approved health claim for the reduction in risk of cardiovascular disease, allowing brands to state these health benefits on product labels.

Research finds that children and young adults are the most likely to skip breakfast. BASF offered solutions targeting this market and other busy consumers to help them start their day off right. Smart Crunch Granola Plus DHA was a portable option that may be enjoyed on its own or as a topping for foods such as yogurt. The granola was formulated with BASF’s omega-3 DHA powder, which is essential for brain and visual development.

For coffee drinkers looking for the perfect pick-me-up for breakfast or anytime, BASF’s iced meal replacement beverage with Tonalin Conjugated Linoleic Acid (CLA) combined caffeine and protein in a satisfying drink with fewer than 180 calories. Different from other meal replacement beverages, the added Tonalin CLA and protein is designed to help consumers reduce body fat, maintain lean muscle, and achieve fitness goals. Tonalin, naturally sourced from safflowers, is the most clinically researched CLA brand for body composition.

BASF’s sports nutrition prototype in a chewable format was made with caffeine, B vitamins, and carotenoids for stable color, offering a quick and portable way to boost energy and endurance. As sales of endurance sports products continue to climb dramatically—up by 64%—it’s no surprise that a majority of consumers surveyed said they are interested in products that improve energy. B vitamins increase endurance by aiding energy metabolism.

Adding Grains and Flours Into the Mix

SK Food International, Fargo, N.D. (skfood.com), introduced AncientGrisps to its extensive line of Premium Quality Ingredients. Milled and extruded from a custom blend of ancient grains, including amaranth, quinoa, sorghum, and millet, they are whole grain and naturally gluten-free. AncientGrisps have a neutral flavor profile with a sweet, nutty taste that complements many applications, including cereals, snack foods, confectionery, energy bars, granolas, and as a topping for salad or yogurt. The size is approximately 5–7 mm.

The United Sorghum Checkoff Program, Lubbock, Texas (healthysorghum.com), educated attendees with several events. A Cooking Up Science demo with Iron Chef Marc Forgione featured sorghum as a key ingredient. The demo was moderated by nutritionist Jane Dummer, who discussed the nutritional benefits associated with sorghum. Sorghum, an ancient whole grain, is naturally high in fiber, iron, and protein and is also rich in antioxidants and policosanols that may have an impact on heart health. It is great for those requiring a gluten-free diet. Sorghum is commonly eaten with the hull, which retains the majority of the nutrients. Wondergrain provided a variety of creative sorghum dishes using its high-quality ingredient line. White, food-grade sorghum can be milled directly into whole grain flour to produce cookies, cakes, brownies, breads, pizza dough, and pastas.

Blue Diamond Almonds Global Ingredients Division, Sacramento, Calif. (bdingredients.com), featured its new line of almond flour. Attendees sampled the ingredient in different applications, including lemon-almond pound cake and chocolate chunk cookies. Blue Diamond has three almond flour options available. Extra-fine natural has an exceptionally fine granulation and is as versatile as blanched flour while maintaining a natural light tan color. Extra-fine blanched is the finest granulation almond flour available with a powder-like consistency that is perfect for delicate cookies, breads, and cakes. Fine blanched provides texture and...
nutrition to everyday baking and cooking and toasts to a rich golden color. Each quarter cup serving of almond flour contains 6 g of protein, 3.5 g of fiber, and 75 mg of calcium. Additionally, almond flour is low on the glycemic index, is naturally gluten-free, and is a great source of vitamin E. Blue Diamond’s almond flour offers versatility to food manufacturers in a wide array of applications, from cakes and crusts to breading and sauces. In addition to versatility, product longevity, and nutrition, the almond flour can be easily substituted for traditional flours in existing recipes without compromising taste or texture.

**Pumping It Up With Vitamins and Minerals**

**Watson**, West Haven, Conn. (watson-inc.com), hosted roundtable discussions at its booth, allowing attendees to ask questions, gain expertise, and enjoy some refreshments. Each roundtable discussion accommodated up to 10 participants. Topics included choosing the right nutrient forms, microencapsulation, and what to look for on a certificate of analysis. Watson manufactures nutrient ingredient systems to improve the nutritional value of foods and beverages. The company also microencapsulates vitamins, minerals, and botanicals. Its custom formulated nutrient systems are used to improve the nutritional value of foods and beverages.

**Jungbunzlauer**, Newton Centre, Mass. (jungbunzlauer.com), promoted two fun product concepts described as “boost your mind” shots and fortified gummies. The shots promoted cognitive function, reduction of tiredness and fatigue, and energy-yielding metabolism. Jungbunzlauer added 50% of the Recommended Daily Allowance (RDA) of magnesium and 50% of the RDA of zinc in each 2 oz shot by using fully reacted and non-GM trimagnesium citrate anhydrous and zinc citrate dihydrate. The gummies were fortified with micronized tricalcium citrate, providing 25% of the RDA of calcium per gummy.

**Balchem Corp.**, New Hampton, N.Y. (balchem.com), offers *VitaCholine*, its branded choline ingredient that provides a nutrient that is essential for all life stages. *VitaCholine* consists of USP-grade choline for use in both medical nutrition and infant formula products. Kristine Lukasik, director of scientific and regulatory affairs, pharma, and nutrition at Balchem, helped moderate a scientific session on choline called “Choline: An Important Nutrient Often Overlooked.” Choline plays a role in cognition, prenatal nutrition, liver health, heart health, and sports performance. More than 90% of the U.S. population does not meet the Adequate Intake recommendation for choline, which is 550 mg/day for men and 425 mg/day for women. In addition, consumer awareness of choline is low. Lack of adequate choline may have a role in dementia and loss of memory in aging, fatty liver disease, and high levels of homocysteine, contributing to heart disease.

In addition, information from The Choline Council, Escondido, Calif. (cholinecouncil.com), discussed recent research that clarified the relationship between choline deficiency and nonalcoholic fatty liver disease (NAFLD) and provided details about how choline affects liver health. Choline is an essential nutrient that supports normal liver function and helps prevent NAFLD and fatty liver. Choline influences the metabolism of fats in the body and helps manage the circulating level of cholesterol and bile.

**ChromaDex**, Irvine, Calif. (chromadex.com), featured NIAGEN, nicotinamide riboside, a vitamin B3 metabolite that offers many health benefits, including endurance, performance, weight management, cardiovascular health, antiaging, cognitive function, and neuroprotection. ChromaDex is a natural products company that discovers, acquires, develops, and commercializes proprietary-based ingredient technologies. In addition to NIAGEN, the company’s ingredient portfolio includes *pTeroPure* pterostilbene; *ProC3G*, a natural black rice containing cyanidin-3-glucoside; PUREENERGY, a caffeine–*pTeroPure* cocystal; nutraGa, a powder made from the gac fruit; and curcumin.

Vitamins, minerals, and botanicals are offered by **Pharmachem Laboratories**, Kearny N.J. (pharmachemlabs.com). The company is an international innovator, manufacturer, and supplier of high-quality ingredients. From manufacturing standardized extracts and custom ingredients to developing original solutions for process problems, Pharmachem’s technologies offer unique options for its customers. _FT_

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