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Your Next Best Idea

Searching for clues about where the biggest opportunities in supplements and health/wellness lie? You might want to check out Pharmavite’s upcoming Innovation Day. For the company’s second annual Innovation Day, the vitamin, supplement, and health and wellness giant is calling for entries in two specific areas: 1) mental wellness, and 2) alternatives to over-the-counter (OTC) drugs. Here’s why Pharmavite believes these are two of the biggest category opportunities for the market going forward.

On mental health, says Andrew Lais, Pharmavite’s divisional vice president of new business ventures, “The last year has really laid bare for consumers how integral mental health is to their overall well-being, and we’re now seeing consumers taking a more holistic view of their health and seeking out solutions that support both their physical and mental well-being.”

Mental health is such a wide-ranging issue that when it comes to product solutions, the possibilities are many. “Mental wellness means a lot of different things to a lot of different people, so there’s an opportunity to expand offerings to cover all the consumer jobs to be done, including, but not limited to, mood, depression, stress, anxiety, concentration, learning, and alertness,” he says.

Innovation-wise, there’s still a lot of white space. Last winter, Pharmavite announced it had partnered with artificial intelligence firm Brightseed (San Francisco, CA) to discover and identify phytonutrients for human health. Some of those will likely hit on mental health. As Lais says, “99.9% of compounds in nature have yet to be discovered, and we believe many of those will positively impact sleep, stress, and many other areas.” In short, he says, there is still “a great deal of opportunity” to discover ingredients and develop solutions to serve a wide range of mental health concerns.

Another notable development Pharmavite is addressing this Innovation Day is the consumer’s move away from an “overreliance” on OTC drugs and instead toward “more natural, cleaner, ‘better-for-you’ alternatives,” Lais says—music to the ears of the natural product and supplement industry.

The evidence of consumers’ changing preference for natural products is as plain as day. Says Lais, “We hear this qualitatively from consumers, we see it in-store as traditional retailers are integrating more natural products into the OTC aisle to meet increased demand, and we see it quantitatively in the data. Pre-COVID, total OTC was growing in the low- to mid-single digits, while natural OTC was growing in the teens. Over the course of the pandemic, natural has outpaced the rest of the category. Moving forward, we expect that trend to continue, with natural solutions making up 10% or more of the total OTC category.”

Pharmavite is seeking suggestions of all kinds, including ingredients and delivery forms (pill and non-pill), as well as ideas ranging from technology and services and even to ways of educating consumers or encouraging compliance. Welcoming external ideas “reflect[s] our company’s curious nature and our desire to expand our understanding of human health and our ability to optimize wellness,” Lais explains. Innovation Day allows the company “to see the variety of opportunities out there and to identify new and improved ways to have a positive impact on consumers’ lives,” he adds. For OTC drug alternatives, for instance, “We’d love to understand what the start-up community is thinking in this area and explore where there may be good natural paths to maximizing the body’s ability to defend,” he says.

“If you have a novel idea, we want Pharmavite to be your first stop,” he adds.

While the deadline to enter Pharmavite’s Innovation Day (May 11) will likely have passed by the time this issue goes to press, it’s still a good idea to track what companies like this are working toward. This is a glimpse of where one industry leader is heading. What will your next best idea be?

Jennifer Grebow
Editor-in-Chief
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Are respiratory supplements getting their second wind?

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It’s conventional wisdom—and, at this point, a matter of fact—that consumers rewarded private-label brands for their “essential” service during the pandemic. Nielsen data provided to the Private Label Manufacturers Association show growth of 14.6% in dollar sales and 12.8% in unit volume for store brands across retail during 2020’s first quarter, compared to dollar and volume growth of 11.5% and 9.2%, respectively, for national brands.

But did this rising tide for private labels lift all boats—including those in the health-and-wellness aisle?

According to Andrew Moberly, director, category solutions, for private-brand development firm Daymon (Spencerport, NY), it did. Both during COVID-19’s early days and now, private-label nutrition is riding high. “Within the past year, significant private-brand trial across departments has let consumers experience private health-and-wellness brands’ benefits and their ability to deliver on nutritional needs,” Moberly says. “This is increasing private-brand trust and trial, and health-and-wellness is no exception.”

DOUBLE-BARRELED BOOM
House-brand health-and-wellness lines actually received something of a double-barreled boost last year when one accounts for both consumers’ newfound affection for private brands and their heightened attention to products that promote wellness in the face of a pandemic.

As Moberly observes, “Throughout 2020, private-brand health and nutrition sales skyrocketed as shoppers proactively looked for ways to protect their and their families’ health.” Per Nielsen data, private brands in the vitamin, mineral, and supplement (VMS) space saw sales grow nearly 11% over the year’s course, and, says Moberly, they continue to perform strongly.

“Initially, consumers were purchasing any immunity-boosting health-and-wellness products available,” he adds, “with zinc and vitamin C top performers.” In fact, 37%
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of vitamin users professed higher concern around general immune health than they had pre-pandemic, Nielsen reports.

"And along with the need for physical health," Moberly continues, "the pandemic elevated the importance of focusing on mental well-being, with consumers turning to products that improve sleep and mental performance to provide additional support during uncertain times."

OUT OF STOCK, OUT OF MIND

But heightened health awareness only tells half the story. Panic buying during COVID's early days led to out-of-stocks for national brands across categories, which left many consumers with no choice but to try something new—including private-label health-and-wellness products.

And according to internal Daymon research, Moberly adds, once consumers initiate this "significant new private-brand trial, they often continue shopping at specific retailers for their private-brand offerings."

Good thing, then, that retailers didn’t wait until shelves were empty to dedicate more space to private brands. In fact, Moberly points to a "significant" 44% increase in new product launches from private brands in the VMS category during 2020, “with retailers preparing for these launches before the year began.”

Shelley Balanko, PhD, senior vice president, The Hartman Group (Bellevue, WA), also applauds private-label brands for being ready to meet the moment when pandemic-driven purchasing began. Even before consumers started hunting in-earnest for health-and-wellness, she says, “Private-label brands had already made strong innovations in that direction.”

Private lines like Simple Truth, Kirkland Signature, 365, and others “had been innovating with more products aligned to contemporary premium health-and-wellness attributes,” she says—attributes like organic, non-GMO, and fair-trade certification among them. “So they had offerings ready that met consumers’ needs as they doubled down on wellness.”

THE PRICE IS RIGHT

Along with those valued attributes and the simple fact that they were in stock, private-label wellness products had another asset that they leveraged to their advantage last year: the right price.

“With the pandemic affecting nearly one-third of consumers financially,” Moberly says, “income constraints presented further challenges.” In fact, proprietary research and Daymon’s Private Brand Intelligence Report found that 70% of shoppers responded to price pressures by purchasing a different brand than they had pre-COVID. Given that nearly 30% also reported a positive experience from that switch, he adds, many likely plan to commit permanently.

Moberly concludes that by directing consumers toward more affordable supplement options, continuing price sensitivity presents ongoing opportunities for private brands. Case in point: 12% of current VMS users have already shifted to a more affordable brand in the past year, according to Nielsen.

QUALITY COUNTS

But price isn’t everything, Balanko hastens to note. Quality counts, too.

“For private label even to be considered,” she says, “it first has to meet consumers’ price expectations—costing the same as or less than name brands. But then it must also meet quality expectations.”

Even then, comparable quality may not suffice to lock in loyalty. “Rather,” she explains, “it’s the presence of those premium attributes, like high-quality ingredient-sourcing standards, that creates distinction and can foster loyalty.”

The Hartman Group will dig into this topic further in its upcoming Q2 syndicated research. Balanko notes, as it explores which value dimensions—low price or premium quality—drive private-label growth.

“We hypothesize that premium attributes have a greater pull than low prices,” she says. “For these reasons, we also hypothesize that younger consumers—who prioritize premium quality—and higher-income households with less price sensitivity are driving private-brand growth. We’d also contend that tapping into premium quality and health-and-wellness attributes has longer staying power than tapping into short-lived economic concerns. The U.S. is maturing as a health-and-wellness culture, and the pandemic accelerated that trend.”

ALL UPSIDE

As Balanko notes, part of that maturation involves prioritizing qualities like organic certification; and, indeed, Nielsen reports that while sales of natural and organic supplements overall grew more than 25% during the past year, private brands’ natural and organic offerings outpaced them, growing at a rate of 34%.

Adds Moberly, “With new product launches and increased private-brand trial, these brands are well positioned to be seen as category innovators, continuing to support the health-driven needs of consumers in this space.”

Private brands are also innovating online. The pandemic forced even reluctant shoppers to go digital, and Daymon’s research shows that seven out of 10 plan to keep clicking in the future. Thus, says Moberly. Retailers need to keep their private-brand health-and-wellness products front-and-center on their e-commerce platforms, websites, and apps. Highlighting these products on digital shelves will be crucial to initiating new trial for online shoppers, as will using the benefits of items already in shoppers’ digital carts to recommend additional supplements during checkout.

That will prove key to turning private label’s present appeal into a lasting advantage. “Shoppers new to the category haven’t yet established brand loyalty,” Moberly points out, “which puts private brands in a prime position to leverage their value proposition to capture first-time VMS shoppers. Consumers who once relied on national brands to meet their needs a few times a year will be looking for a value alternative as supplements become part of their everyday routine.”

So as the supplement space evolves along with its patrons, Moberly predicts, “Private brands have the opportunity to gain consumers’ loyalty with innovative launches and relaunches that call out product benefits on the label.”

Kimberly J. Decker writes for the food and nutrition industries from her base in the San Francisco area, where she enjoys eating food as much as she does writing about it.

References
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Influencer marketing for dietary supplements: What to know before you dive in

BY MIKE STRAUS

Business Insider predicts the global influencer marketing industry will be worth $15 billion by next year—and for good reason. Effective influencer campaigns can return up to $18 in earned media value per dollar spent. Numbers like these prompted Forbes to call influencer marketing “the biggest breakout star of 2020.”

To leverage influencer marketing effectively, brands need to understand what it involves and what pitfalls to avoid. Here’s a look at the influencer landscape and the key elements of influencer campaigns.

**INFLUENCERS OFFER GREAT CONTENT, LARGE AUDIENCES**

Influencer marketing has specific advantages. Vivien Garnès, cofounder and co-CEO of influencer marketing agency Upfluence (Lyon, France), says working with influencers enables companies to raise brand awareness among new audiences. Rather than build an audience from the ground up, companies can borrow an already established audience from an influencer.

“Influencers are expert content creators whose large social media reach will boost brand visibility and product awareness,” Garnès says. “Influencers can also help brands achieve their sales goals through affiliate or promo code campaigns. Creating long-term partnerships with top-performing creators will help brands maximize their return on investment.”

**TRAITS TO LOOK FOR (AND AVOID!) IN INFLUENCERS**

While influencer marketing’s ROI makes it an attractive strategy, Garnès cautions that not all influencers can fulfill their promises.
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Upfluence’s Vivien Garnès cautions that not all influencers can fulfill their promises. Sorting out good influencers from bad involves digging into the influencers’ data.

Sorting out good influencers from bad involves digging into the influencers’ data.

“One key factor to be aware of is fake followers,” Garnès says. “Working with influencers who have a high percentage of fake followers will lower your ROI. Social media platforms are doing a lot to combat fake followers, but brands can also turn to influencer platforms that show the percentage of engaged real audiences for each influencer.”

Fake followers are one reason why a large audience isn’t necessarily ideal. Upfluence’s internal data show that Instagram fitness influencers with fewer than 15,000 followers receive seven times more engagement than influencers with one million followers. Furthermore, not every influencer will be a good fit for every brand. Garnès says the right influencer is the one whose audience, niche, values, and content topics are already aligned with the company’s.

**FINDING AND SECURING INFLUENCERS**

There are several free and paid tools available online for finding influencers. Upfluence’s influencer database, for instance, contains over four million influencer profiles, complete with engagement statistics, audience demographics, and each influencer’s location. Influencer marketing firms can also curate a list of qualified influencers.

After identifying an appropriate influencer, the next step is to establish contact. Garnès says this process involves emailing the influencer with a campaign brief detailing the campaign’s parameters and expectations, as well as a compensation offer. There are several ways to pay an influencer, including flat fee, revenue share, or free product. Once an offer has been made and accepted, the final step is to sign a contract.

**ELEMENTS OF AN INFLUENCER CONTRACT**

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Garnès says a typical influencer contract contains certain key elements: the campaign start and end date, the number of posts, the content format, the social media channels the influencer will use, and a publication schedule. Furthermore, he says the contract should include an FTC guidelines reminder noting that all sponsored content must be marked as paid advertisements. Garnès says other important contract details include when and how the content will be approved, who owns the content, whether the brand will reuse the content in future campaigns, and how the brand will measure the campaign’s success.

“Brands should state if they don’t want influencers working with competitors or other brands for the duration of the campaign,” Garnès says. “[The contract should also] specify the payment amount, method, and terms, as well as any information the influencer needs to submit before [receiving] payment.”

The fee to hire an influencer will vary from one influencer to the next. Factors that determine the cost of working with an influencer include the volume of content, the influencer’s average engagement statistics, the influencer’s audience size, and the influencer’s compensation offer. Garnès says the final element of an influencer contract, apart from the date and signatures, is a performance and cancellation clause. This clause will explain how and for what reasons the contract can be cancelled, as well as what happens if the campaign performs poorly.

**INFLUENCER MARKETING’S RISE**

Influencer marketing has skyrocketed in popularity to become one of the top online advertising strategies for brands across industries. This strategy works because it leverages a preexisting audience, cultivates trust, and feels authentic. Brands that can foster genuine, productive working relationships with influencers stand to see a strong return on investment.

Mike Straus is a freelance writer living in Kelowna, Canada. He has written for publications including Canadian Chiropractor, Grow Opportunity, and Massage Therapy Canada.

**References**

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These days, when it comes to our health, the news is rightly centered around COVID-19 vaccines, signaling hope that the pandemic may soon be in our rearview mirrors. And while the vaccines are a breath of fresh air for the world’s population, responsible companies focused on the respiratory health category for dietary supplements are properly focused on areas where they can make a difference and more appropriately—and legally—market their products.

Although breathing issues are one of the most frightening aspects associated with the coronavirus pandemic—and responsible supplement companies understand that’s not a field they can play on—the fact is that, the pandemic aside, there are many other conditions that impact respiratory health.

According to the American Academy of Allergy, Asthma & Immunology, between 10% and 30% of the global adult population (ages 18+) suffer from allergic rhinitis, commonly known as hay fever. Sinusitis develops in an estimated 31 million Americans annually. The World Health Organization estimates more than 339 million people worldwide have asthma.

Sabinsa’s (East Windsor, NJ) President Worldwide Shaheen Majeed notes that in addition to allergies and infections, “We are continually being exposed to environmental pollutants.” He adds, “Our lungs and the respiratory system are constantly working to keep us alive and active. Eating healthy, maintaining a good BMI and an active lifestyle, and regular breathing exercises can all add to the functional improvement in respiratory health.”

If COVID-19 can be considered to have done anything positive, it’s that the ravages of the disease have pushed people to focus on the importance of taking care of their health, including how to protect their immune function. There’s a strong connection between the body’s immune and respiratory systems, and the two continuously intertwine.

Susan E. Hirsch, MS, CNS, formulation manager, Gaia Herbs, explains, “While the lungs are the main part of the respiratory system, this system is complex. The upper respiratory tract includes the mouth and nose, nasal cavity, throat, and voice box. The lower respiratory tract includes the lungs, trachea, bronchi, bronchioles, and alveoli. The respiratory system affects every aspect of our bodies and health, and a lot of systems play a role in keeping the lungs and respiratory system healthy.”

BY JUDY BLATMAN

Respiratory Health

Respiratory REBORN

Are respiratory supplements getting their second wind?

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Dietary Ingredients for Respiratory Health

"Dietary supplement ingredients can support respiratory health in multiple ways, such as decreasing inflammation triggered by an allergen," says pharmacist and author David J. Foreman, RPh, ND. "There's also a role, he advises, for dietary supplement ingredients in decreasing histamine release; thinning mucus secretions (because excess or thick mucus can lead to infections, congestion, and more); relaxing the smooth muscles of the bronchioles, the small air passages inside the lungs that deliver air to the alveoli sacs where oxygen and carbon dioxide are exchanged; and soothing irritated membranes such as lungs and sinus passages."

Sabin's Majeed, like Foreman, takes a holistic approach to respiratory health. He says that when it comes to interventions and respiratory health, "diet and nutrition are modifiable risk factors for the management of respiratory diseases such as asthma, chronic obstructive pulmonary disease (COPD), and seasonal allergies."

Majeed points to low levels of vitamin D as a risk factor for allergies, asthma, and respiratory infections. Foreman concurs. "I feel like a broken record, because vitamin D keeps coming up as a possible solution to many of the conditions we face. What I would like to see is more blood level testing and then specific doses based on a person's results, race, and lifestyle."

The Connection Between the Microbiome and Respiratory Health

"The microbiome," according to Foreman, who is known in the industry as "The Herbal Pharmacist," is another area where we need to look for more studies and use in respiratory health combination products."

According to Foreman, research is beginning to show that taking probiotics might help reduce respiratory infections and sinusitis and decrease common cold.4,5

Justin Green, PhD, director of scientific affairs, Cargill Health Technologies (Minneapolis), is all for the science. His company’s probiotic ingredient, EpiCor, acquired in 2018 from Embria Health Sciences as part of Cargill’s acquisition of Diamond V, has been on the market since 2006 and, according to Green, has a healthy portfolio of science backing up what he calls a "one-of-a-kind ingredient inspired by a real-life health discovery story."

"Packed into EpiCor’s rich, science-based history, more than a dozen published studies demonstrate the ingredient’s health benefits, including supporting the immune system and beneficially modulating the gut microbiota," Green says. "Among the findings, he claims, "these studies show EpiCor supports year-round respiratory and sinus health. In addition, EpiCor optimizes immune defenses to face daily challenges and maintain healthy gut function."

As an example, a 12-week, randomized, double-blinded, placebo-controlled trial used subjects that tested positive for grass allergies. A total of 78 subjects completed the study, with several positive conclusions, including significant reduction of nasal congestion severity and duration in the EpiCor versus placebo groups during the high-pollen-count period. In addition, the largest symptomatic impact was seen on nasal congestion, with EpiCor having a 43% reduction in the median number of days with nasal congestion (16.5 days) versus placebo (29 days).6

Green notes that, traditionally, supplements were the key vehicle for postbiotics, but given consumers’ increased interest in obtaining their health benefits through functional food and beverages, his company is partnering with food and beverage makers to develop delivery methods for EpiCor in chocolate bites, granola bars, gummies, dispersible powdered drink sticks, and more.

Black Seed’s Breathing Benefits

Foreman says that "Some clinical research shows that taking black seed extract for three months can improve symptoms such as wheezing and coughing compared to placebo in patients with moderate to severe asthma who already take conventional asthma medication.7"

Majeed points out another study—this one in vitro—with promising news for his company’s Nigellin Black Cumin Seed Extract. The findings identified the ability of Nigella sativa (also known as black seed or black cumin seed) to "suppress the release of the most active cytokines and identified a prostanoid with inflammatory properties which may possess a favorable effect in the context of asthmatic conditions," according to a company press release. The study researchers evaluated 10 Nigella sativa extracts, and Sabin’s ingredient ranked on top in terms of the active constituent thymoquinone, the company adds.9

Majeed explains the multiple mechanisms of action that may enable black cumin seed extract to potentially help asthma sufferers. "Asthma is a chronic inflammatory disease of the airways, with the involvement of various inflammatory cells like mast cells, eosinophils, T lymphocytes, macrophages, and neutrophils."

He continues, "Black cumin seed extract contains the active constituents thymoquinone and thymohydroquinone, which are flavonoids with antioxidant and anti-inflammatory properties. Thymoquinone suppresses the production of leukotriene B4, thromboxane B2, and inflammatory mediators. Black cumin seed extract exhibits spasmodic and bronchodilator activities mediated through the blockade of calcium channels. The extract significantly decreases airway hyperresponsiveness by reducing the infiltration of asthma-related inflammatory cells in lungs and by reducing interleukin 4 (IL-4) and nitric oxide (NO) production."

Gaia’s Hirsch also speaks to the complexities of herbs, explaining they do not have just one action in the body. "They wear many different hats," she says, "and contain different compounds that are balancing to different constitutions." Her company wants consumers to be aware that, as she says, "some herbs may work better for some people than others based on their individual constitutions. We advise people to listen to their body and to work with a health practitioner who is trained in herbs for the best results."

Gaia Herbs introduced a new line of plant-based respiratory health-supportive products last November, including three products: Mighty Lung, Sinus Comfort, and Black Seed Oil. With regard to the latter, Hirsh says, "This herb has a long tradition of use for supporting respiratory function,
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When it comes to respiratory conditions, history of use, some science, and calls for more science suggest that a number of dietary ingredients could be considered helpful for providing some relief.

as well as a small number of clinical studies that also support this."¹⁰

**Pycnogenol’s Potential Promise for Respiratory Health**

Foreman also sees potential for French maritime pine bark extract, branded Pycnogenol, for asthma sufferers. He advises that “Three small clinical studies show that taking a standardized extract of maritime pine bark (1 mg/lb body weight or 100 mg daily) in addition to conventional asthma medications increased peak expiratory flow, decreased asthma symptoms, and decreased the need for rescue medications in children and adults with asthma of varying severity.”¹¹,¹³

Franziska Weichmann, manager of scientific communications and product development for Pycnogenol’s maker, Horphag Research (Hoboken, NJ), says, “Our flagship ingredient, Pycnogenol French maritime pine bark extract, is shown to have histamine-inhibiting effects due to its ability to help modulate the inflammatory response, making it a great natural option for respiratory health.”

She points out that Pycnogenol originates from a unique source, a forest of mono-species pine trees grown exclusively in the Landes de Gascogne forest in southwest France. The patent-protected ingredient benefits from 40 years of research, including more than 450 scientific publications and 160 clinical trials on more than 12,000 subjects, according to Weichmann.

“Consumers are taking a more proactive approach to health and wellness,” says Weichmann. “With the heightened interest in respiratory-support products overall, Pycnogenol finished products continue to receive high demand, as consumers are seeking natural products that support overall health and are spending more time researching evidence-based, safe products and ingredients to meet their health needs.”

**Other Ingredients to Buzz About**

PLT Health Solutions (Morristown, NJ) has two branded ingredients for respiratory health with some interesting science and buzz. The company’s focus in this category is currently aligned around upper respiratory tract infections and anti-inflammatory support that relates to a broad range of factors under respiratory health.

Promunel Ultra Performance Propolis, launched in November 2020,¹⁶ combines, as the company’s tagline¹⁵ suggests, “a traditional ingredient made better by modern science.” Propolis is a resinous substance produced by honeybees as they gather pollen from trees and other botanical sources. The bees use it as a sealant to protect their hives, given that it provides antifungal and antibacterial properties to the nest.

As it turns out, it’s those same health-promoting properties that are the basis for Promunel’s benefits for humans. In a company press release¹⁶ announcing the launch of the branded ingredient, Jeremy Appleton, ND, director of medical and scientific affairs, PLT Health Solutions, said, “Propolis has been used medically since antiquity, and numerous mechanisms of action are well established in the literature, particularly regarding the individual polyphenols to which Promunel is standardized.”

Appleton said it was important to his company to have research that complemented the long history of use, conducted specifically on its branded ingredient. He reported that a randomized, double-blind, placebo-controlled clinical trial was recently published in Phytomedicine validating Promunel’s efficacy for upper respiratory tract health by showing “that Promunel cut two days off recovery time.”¹⁶

Specifically, the study was conducted on 122 adults with mild upper respiratory tract infections. Participants used either a Promunel oral spray or a matching placebo three times per day. A wide range of symptoms were evaluated, including sore throat, hoarseness, swelling, and redness.

For the group taking Promunel, 83% saw a remission of all symptoms after three days of use compared to the 72% of subjects in the placebo group who had at least one remaining symptom. And the healing took place in the Promunel population two days earlier than the five days recorded in the control group.

One more cool factor: The bees are part of the team. PLT’s partner in this innovative ingredient is the B Natural company (Corbetta, Italy), and according to the launch press release, B Natural has a “contract with the bees” to “go the extra mile to defend their colonies” by not over-sourcing and by “providing healthy environments, free of pesticides and other contaminants.”¹⁴

AlvioLife is PLT’s other branded ingredient designed to support respiratory health. It is a proprietary composition of extracts of *Boswellia serrata* gum resin and quince (*Aegle marmelos*) dried fruit.

According to Steve Fink, vice president of marketing, PLT Health Solutions, “The anti-inflammatory effects of acetyl-11-keto-beta-boswellic acid (AKBA) from *Boswellia serrata* are well known, having been shown in multiple clinical studies to provide 5-lipoxygenase (5-LOX) inhibition in people. The 1:1 ratio of *Boswellia* and quince fruit extract was shown in the
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.

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- Increases cGMP and cAMP for harder erections*

* 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.
AlvioLife clinical study to possess stronger 5-LOX inhibition activity better than either extract alone.”

The Complications of DSHEA
Foreman, The Herbal Pharmacist, says other ingredients with potential support for respiratory conditions such as bronchitis are NAC (N-acetyl cysteine) and English Ivy extract. Moreover, he would like to see more research with specific targets of COPD and asthma. “These are two huge areas of concern and cost the modern medical institutions billions of dollars annually,” he says.

But as dietary supplement companies are well aware, what the science suggests the product can do, and what can be legally communicated to consumers, can be two different things.

When it comes to respiratory conditions, history of use, some science, and calls for more science suggest that a number of dietary ingredients could be considered helpful for providing some relief. Certainly, the statistics for hay fever, sinusitis, and asthma sufferers point to the need for products that can help reduce some of the symptoms associated with respiratory conditions, such as inflammation. But even inflammation creates a tricky position when it comes to claims for dietary supplements.

Attorney Katie Bond, JD, partner at Lathrop GPM (Washington, DC), underscores the fact that there are inflammation claims that would be considered truthful but according to FDA’s most recent thinking on the subject might not be allowable. Although she’s not advocating for this position, Bond says, “It might at some point come down to companies being willing to sue the agency.”

Bond explains, “There are plenty of newer companies in this industry who are consistently surprised when a truthful claim is not allowable.” She explains that when a study is conducted on a diseased population, “the endpoints of the study may not fit the regulatory guidelines that allow them to be used in structure-function claims, even if they’re truthful.” That’s a difficult thing for some companies to swallow.

Companies are understandably expected to support more science but under the Dietary Supplement Health and Education Act (DSHEA) are not always allowed to communicate the results of that science in marketing or label claims. “A lot of the science is conducted in disease states; then you have to reword the results to make the language allowable from a legal standpoint. That’s complicated,” says Bond.

“That’s the state of where the industry is regulation-wise.

And while companies flirt from time to time with opening up DSHEA, no one has officially pulled the proverbial trigger yet, with some perhaps believing the devil you know is better than the devil you don’t.

For some companies, there’s great appeal in the Natural and Non-Prescription Health Products Directorate, the Health Canada regulatory system. 27

For example, PLT Health Solutions recently received a license from Health Canada to market AlvioLife in Canada for support of respiratory health. According to the company’s press release announcing the news, the approved claims include: 1) “AlvioLife helps to support lower respiratory tract health,” and 2) “AlvioLife helps to support lower respiratory tract health that includes the bronchial tubes and, the lungs’ health.”

PLT’s Fink says that recognition by Health Canada for AlvioLife reflects positively on the science that supports the ingredient. “Not only does the granting of this license open up the Canadian market for us, but it tells formulators around the world that a prestigious regulatory body respects our scientific support,” he says.

Bond advises that the Canadian regulatory system has some pros but also some cons. On the upside, she says, “There’s a little more assurance on what’s allowed when it comes to claims, and that allows a company to communicate more specifically with its consumers. The flip side of the coin is companies have to wait for approval, which can interfere with business fluidity.”

Under DSHEA, Bond says, “Having a system where [there isn’t] a preapproval process can be helpful in terms of getting the product to market, but the downside there is that the consumer may not understand what the science says the product does.”

Or even what the product is for.

Gaia’s Hirsch says that ever since three of the company’s new respiratory-support products launched in November on its direct-to-consumer website, gaiaherbs.com, sales have been strong through that channel. Black Seed Oil, however, wasn’t quite as popular as the other two new products, Mighty Lungs and Sinus Comfort, a factor potentially attributed to two things, says Hirsch.

Black Seed Oil’s product name doesn’t make it easy for customers to know what specific condition the product is formulated for. In addition, she says, while Black Seed Oil is “well known and used regularly in the Middle East and India to support respiratory health, this herb is not currently well recognized in the U.S. as a respiratory health–supportive herb.”

Although it’s still early to determine the staying power of the new respiratory-support products, Hirsch adds that “these new products have been well received by all of our retailers, with product acceptance rates and shelf placement tracking above average as compared to our typical new product launches.”
Marketing on the Right Side of Regulations

Consumer fear of the coronavirus may have pumped blood into the hearts of certain dietary supplement product categories as consumers sought to protect their general health—and, more specifically, support their immune function. But dietary supplement manufacturers are well aware of the illegibilities of selling products associated with coronavirus claims or even implied coronavirus claims. If not, they should be.

Regulatory and legal expert Bond, who was with Amin Talati Wasserman before joining Lathrop in January, has substantial experience representing clients in a range of industries, including those in dietary supplements and conventional food. She has a heads up for companies marketing products for respiratory health: Don’t take chances with claims for this category. In other words, don’t stop too close to the regulatory line.

“In my view, it would be hard for a regulator to argue that respiratory support alone conveys anything necessarily about a disease,” she says, as she considers that to be a pretty vague claim. “It’s probably not very risky.”

What does concern Bond, however, would be claims, both for the immune and respiratory categories, that would slip into shades of referencing COVID-19—even in an oblique way that would up the ante pretty quickly, just given the link between respiratory ailments and COVID.

She points out that while products specifically focused on respiratory health may be closest to the “immune support” category, the latter has been tested and is, at this point, a far more popular claim to make than those claims for respiratory health.

“At the time when FTC was going after Airborne and [it] went after all the store brand versions of Airborne for their cold-prevention claims, the FTC made it clear that immune support was not going to be held to the same standard as a preventative- or treatment-type claim for cold or flu,” she explains. “In the FTC’s view, the ‘immune support’ claim was more vague and unlikely to convey a disease-like claim that would be held to a higher substantiation standard. So, that sort of created that safe harbor for immune support that respiratory support doesn’t necessarily have.”

Not that she’s seen these examples, but it’s possible that it’s not just the obvious link like “wear your mask and take our supplement” that could serve as a red flag. Bond points out that even adding the word “now” to a claim—as in “support your respiratory health now”—could raise regulators’ eyebrows. “That risk will, of course, increase,” she advises, “as the likelihood of implying COVID-19 benefits increases.”

Importantly, companies are responsible for implied claims, not just those stated outright. “If regulators can argue successfully that even just 15% or 20% of reasonable consumers would take away a certain message,” says Bond, “then the company is responsible for the truthfulness of that message.”

“This is neither the time nor the category to take unnecessary risks. Says Bond, “There are lots of eyes on the entire immune supplement category at this point. I think most companies are doing the right thing and staying on the right side of the law.”

She believes there is a real place for responsible industry to serve consumers interested in staying healthy; however, making claims or producing ads with connections to COVID is not the right move.

It’s not surprising that Bond recommends companies “talk to your legal team early in building your ad campaigns.” But it is a smart strategy to consider all of that message. “As the likelihood of implying respiratory support to a claim—as in ‘support your respiratory health now’—could raise regulators’ eyebrows.”

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“Good gut bugs.” As a marketing moniker, the euphemism’s been pretty advantageous for probiotic bacteria. Summarizing their marquee benefit in a snappy shorthand, it gives consumers a tagline they can digest, commit to memory, and return to when deciding what sort of supplement regimen to adopt.

And make no mistake: Consumers are adopting probiotics. Meticulous Market Research projects compound annual growth of 6.7% for the category from 2020 to 2027, bringing the global market to an impressive $76.7 billion in value by 2027.

But by locating probiotics’ benefits solely in the gut, the good-gut-bug shorthand sells the microbes short. As George Paraskevakos, executive director, International Probiotics Association (IPA; Los Angeles), says, “While it’s true that much foundational probiotic research focused on digestive benefits, as scientists uncover more about the role of microbes in, on, and all around, they’re broadening their research scope to look into benefits beyond the gut.”

That’s a signal to supplement brands to broaden their understanding of just how much power probiotics have, and how much potential they have to revolutionize formulations, and human health, as the science unfolds.

It Begins with the Biome
As far as unfolding science goes, Vaughn DuBow, marketing manager for capsules and health ingredients, North America, Lonza (Greenwood, SC), believes that research around the human microbiome—all the microbial strains that reside within and function as part of us—has enabled “our entire understanding of probiotics.”

In fact, he credits microbiome research not just with “uncovering probiotics’ established benefits but uncovering the world of potential they may one day have.”
That potential, adds Jennifer Montgomery, probiotics marketing lead, Americas, for IFF Health (New York City), lies in the recognition that “almost every aspect of health is, in some way, connected to the bacteria in our gut, although their exact mechanisms of action are still under investigation.”

As research proceeds, she predicts, “We’ll understand the health benefits of our current strains even better and identify further probiotic strains that benefit health categories like metabolic health, brain health, vaginal and urinary-tract health, skin health, and more.”

**Our Strains, Ourselves**

Already, we’re learning how probiotics influence systems in ways that would have seemed unimaginable a few years ago.

For example, says Lucie Lingrand, international product manager, Lallemand Health Solutions (Mirabel, Canada), “The oral cavity, like the gut, harbors a rich and complex microflora unique to everyone.” Those resident oral strains can act as antagonists against opportunistic microorganisms, she continues, helping to maintain oral immunity and overall health.

Similarly, our dermal microbiota has attracted attention that’s generated evidence of how probiotics benefit skin health. “Specific strains in the gut,” Lingrand says, “trigger a chain reaction that communicates with the skin”—establishing, in effect, a “gut-skin axis.”

There’s even a gut-liver axis: When the microbiome is in a state of dysbiosis, Lingrand explains, “Metabolic reactions linked to liver health can be disrupted. More publications are showing a beneficial probiotic effect on liver health through the chain reaction that communicates with the skin.”

**Follow the Science**

To get a clearer picture of just how far these potential health benefits extend, Paraskevakos suggests looking at probiotic clinical-trial registries.

The development of new technologies and clinical endpoints has fostered a research environment wherein probiotic studies “are flourishing,” he says. Thus, it’s no surprise that an analytical review of two clinical-trial databases published last year found 1,600-plus clinical probiotic trials concerning more than 700 different indications, he says.

What’s more, of the 250 clinical probiotic studies registered between January and September 2020, Paraskevakos goes on, only 28% looked at gut health, and only 16% considered immunity—arguably the runner-up to gut health as probiotics’ highest-profile benefit. “The rest of the studies,” he says, “were divided between metabolic syndrome and other conditions, such as necrotizing enterocolitis, skin health, mental health, and women’s health—all of which are areas generating more studies and interest from health professionals and consumers alike.”

**Follow the Consumer**

And consumers are tuning into the research. As Elodie Ruffin, digestion and gut health market manager, Gnosis by Lesaffre (Lille, France), says, “Consumers today seek out the science behind everything they consume. With probiotics especially, they’re learning about specific strains’ health benefits, and they’re looking for those strains in products.”

Lingrand agrees, citing data from Lumina Intelligence Worldwide showing that 2020 saw a 244% increase in online reviews of probiotic products targeted at children’s health, and a 133% increase in reviews for women’s health products. Moreover, FMCG Gurus’ 2020 probiotic survey of 1,000 U.S. consumers found that 18.8% were in the market for products promising mental well-being, 15% had stress relief in mind, 17.1% turned to probiotics for heart health benefits, and 14.2% were choosing probiotics for vaginal health.

Sam Michini, vice president of marketing and strategy, Deerland Probiotics & Enzymes (Kennesaw, GA), notes that with COVID-19 heightening consumers’ health concerns overall, the market for probiotics’ wider-ranging benefits “has been booming” even more.

“Experts are urging probiotic supplement makers to tweak their messaging to open the doors to these emerging sectors,” he says. And persuading consumers to step through shouldn’t be a heavy lift. “Probiotics already have an outstanding reputation for digestion and immunity,” Michini says, “so when consumers see credible science backing up newer claims, they don’t need a lot of convincing to try them for other health and well-being needs.”

**A PARAPROBIOTIC EYE HEALTH INGREDIENT**

**By Sebastian Krawiec**

**KYOWA HAKKO (NEW YORK, NY) has launched a novel eye health ingredient called Eyemuse, which is a heat-killed probiotic referred to as “paraprobiotic.”**

The proprietary paraprobiotic, *Lactcaseibacillus paracasei* KW3110, was discovered by Kyowa Hakko’s parent company, Kirin Holdings Company, Ltd., to support eye health by reducing fatigue through its ability to support a balanced immune response. There are immune cells in the eye that respond to stressors. The retina, in particular, is made up of millions of immune cells.

“We are at a point in society where more and more adults are likely to face eye strain and fatigue from increasing reliance on technology and spending prolonged hours of the day staring at digital devices,” said Karen Todd, MBA, RD, vice president of global brand marketing at Kyowa Hakko USA Inc., in a press release. “This poses a real health and quality-of-life issue, so we are thrilled to be at the forefront of this scientific breakthrough that utilizes a novel mechanism of action that may help reduce digital stress–related eye fatigue and other ocular discomforts.”

The new ingredient can target a wide range of consumers, including the everyday professional as well as gamers, all of whom spend a lot of time in front of screens. “We envision Eyemuse to be geared toward the screen-glued multitaskers, young professionals who are always ‘on,’” and gamers, who are spending 14 hours a week playing video games, up from 12 hours a week in 2018,” said Todd. *In vitro* studies also suggest that the paraprobiotic may filter blue light, the company adds.

Eyemuse is non-GMO, vegetarian, and generally recognized as safe (GRAS).
Think About It

Consider claims around stress—which Montgomery notes is "a common occurrence for 65% of adults, who report experiencing some form of it in their daily lives."

To address the issue, IFF recently launched Howaru Calm (Lactobacillus paracasei Lpc-37), the latest addition to the company’s Howaru family of probiotics and its first marketed for brain health.

In a recent clinical trial, the probiotic helped significantly reduce perceived stress in adult subjects vis-à-vis a placebo. Moreover, Montgomery adds, the product helps balance mood and supports overall mental well-being.

"That’s a big development for dietary supplements—giving consumers a scientifically proven way to help manage daily stress by taking a probiotic," she says.

Meanwhile, the strain combination of Lactobacillus helveticus R0052 and Bifidobacterium longum R0175 that Lallemand markets as Cerebiome has been the subject of cognitive and mood-related research for years.

In a recent development, a post-hoc analysis published last year confirmed that the psychobiotic product significantly increased serum levels of brain-derived neurotrophic factor (BDNF) in human subjects relative to both a placebo and probiotic supplementation.

"Serum BDNF levels are lower in depressed patients and increase after a long course of antidepressant treatment," Lingrand notes. "So the results in the probiotic group inversely correlate with depression severity compared to placebo."

Good Sports

Sports performance is another active research area. In 2019, the International Society of Sports Nutrition even published a position statement recommending that athletes supplement with probiotics, "as the science has proven that they boost athletes' natural defenses, support gut-barrier integrity, increase antioxidant capacity, decrease occasional stress through the gut-brain axis, and improve amino acid absorption," Lingrand notes.

Several existing studies, for instance, show that Lallemand’s Lafti L10 (Lactobacillus helveticus Lafti L10) boosts biomarkers of improved immunity in athletes, she says, with results of another recent post-hoc analysis hinting at the strain’s antioxidant potential in 22 elite male athletes.

"Market trends report that it’s not just trained athletes but a growing number of active amateurs who include sports nutrition supplements in their diets," Lingrand says. "The science behind these ingredients has enhanced probiotics' popularity for these needs, as they confirm demonstrated health benefits for active people."

Lonza’s DuBow notes that research has demonstrated that the ratio of certain microbes in elite athletes differs not only from the ratio found in sedentary people but from that of “average” weekend warriors, too—and that these differences can be seen in countless groups, helping us understand how to effectively modulate the gut microbiome to impact a specific benefit," he says.

In response, Lonza launched TWK10, a novel probiotic (Lactobacillus plantarum TWK10) extracted from Taiwanese kimchi and supported by two clinical trials examining athletic performance.

"The studies found that participants receiving the sports probiotic increased exercise endurance by up to 75% while also improving body composition—more muscle, less fat," DuBow says. The results also revealed a relationship between the company’s probiotic and higher circulating blood glucose levels during exercise, indicating more energy available for performance.

Metabolic Matters

DuBow adds that the probiotic’s effect on blood glucose “suggests that there may be other benefits of the strain for us to research relating to glucose metabolism, insulin sensitivity, and more.”

And indeed, probiotics are building a track record for their effects on improved metabolism and even cardiovascular health. Case in point: After 43 healthy adult subjects in a recent clinical trial involving Deerland’s Bacillus subtilis DE111 strain consumed 1 billion CFU of the probiotic daily for four weeks, researchers observed a statistically significant 9.14% increase relative to placebo in their reactive hyperemia index—a measure of blood flow reflecting improved endothelial function.

According to Deerland’s Michini, researchers also observed reductions in total and non-HDL cholesterol levels, which they believe the probiotic may have altered via its production of beneficial short-chain fatty acids. "Propionic and butyric acid manage healthy cholesterol metabolism by inhibiting the synthesis of liver cholesterol," he says, "resulting in decreased LDL levels."

Best Defenses

What with all these new findings grabbing the headlines, it would be easy to assume that probiotic research into gut function and immunity had come to a stop. But it hasn’t.

Two recently published studies reported that children who took Deerland’s DE111 probiotic had statistically significant improvements in gastrointestinal outcomes like vomiting, hard stools, and discomfort compared to children receiving a placebo.

In another study, eight weeks of supplementation with the strain also produced "distinctive modulation" of the microbiome’s firmicutes/bacteroidetes ratio in young recipients, indicating healthy gut function.

"In 2019," Michini says, "children’s probiotics saw phenomenal growth of 24.6%, according to Nutrition Business Journal’s Condition Specific Report, and while this growth may be unsustainable in a category unto itself, there are huge opportunities for probiotics crossing into other categories."

Paraskevakos also follows the immune space. The International Probiotics Association recently funded a review published earlier this year exploring the connections between the microbiome, our immune systems, and viral exposure.

"Each of these themes is a complex topic to tackle," he says. "But the totality of evidence suggests that the microbiome and the tools we have to manipulate it—particularly probiotics—impact our vulnerability to, and the severity of, viral infections." In light of the recent pandemic, he says, the potential to position probiotics as adjuvants to vaccines and other treatments “is very promising.”

Are consumers ready for all this? "It can take time for scientific evidence to reach the mainstream," Paraskevakos says. "But we have no reason to doubt that as evidence for probiotic benefits expands, so, too, will demand for probiotics that provide those benefits."
**Kimberly J. Decker** writes for the food and nutrition industries from her base in the San Francisco area, where she enjoys eating food as much as she does writing about it.

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We’ve come a long way, baby, from when the grandaddy of sugar substitutes—saccharin—was first discovered in 1879. Saccharin wasn’t widely popularized until the 1950s when short-order cook Ben Eisenstadt and his son Marvin created Sweet’N Low tabletop sweeteners enveloped in the now-memorable pink packets. But saccharin’s journey was not an easy one, facing government bans, almost bans, and reversed bans, all due to alleged safety concerns. The artificial sweetener was joined in the market by its similarly controversy-coated competitors, including cyclamate (banned by FDA since 1969), aspartame, and sucralose, with others later joining the field.\(^1\)\(^2\)

As consumers became more concerned with questions surrounding sugar substitutes and enamored with the notion of “natural” across a number of product categories, marketers became more savvy about pushing zero-calorie, reduced-sugar, clean-label claims specifically in the sweeteners market.

Today, sweetener solutions are led by the natural plant-based sweetener stevia (Stevia rebaudiana), which created an alternative to the sugar substitutes of yore. Not without its own controversies, including an initially rocky relationship with FDA seemingly resolved more than two decades ago, stevia has helped drive the surge of the natural-sweeteners category thanks to companies who continue to find ways to make stevia more appealing to consumers through technologies that expand applications, reduce sugar, and improve taste.

Other companies have also developed additional appealing natural solutions, notably those using monk fruit, natural cane, and beet sugar, for example.

A Sweet Spot for Natural-Sweetener Companies

According to Global Market Insights, a global market research and management consulting company, the global natural-sweeteners market is expected to reach $12.5 billion in five years, with a 4% CAGR between 2020 and 2026.\(^3\)
"Governments continue to tighten regulations toward limiting sugar intake," says Lorraine Niba, vice president of sales, North America, for Israel-based food-tech firm DouxMatok. "As a result, we’re seeing new companies entering the sugar-reduction playing field regularly as there is increased demand for solutions that can help food manufacturers reduce sugar in their formulations and ultimately limit sugar consumption at the consumer level."

DouxMatok could be considered one of those newer companies. Co-founded in 2014 in Israel by a 96-year-old research chemist, the company started in R&D, working out of a sub-leased pharmaceutical research lab. But Professor Avraham Baneil was no run-of-the-mill research chemist, having spent 30 years as the managing director of Israel’s National Chemicals R&D Center, followed by his time as an industry consultant to leading sweetener ingredient companies such as ADM (Chicago), Cargill (Minneapolis), and Tate & Lyle (London). His cofounder was his son, Eran Baneil, now the company’s CEO. Today, DouxMatok is known as a global food-tech company on the move.

Fast-forward to 2020, when DouxMatok founded its flagship branded ingredient, Incredo Sugar, a real cane sugar product promising a 30%-50% reduction in sugar. Incredo Sugar earned a “Special Mention” on Time magazine’s list of “Best Inventions of 2020.”

Niba, who joined DouxMatok from ingredient supplier Ingredion Inc. (Westchester, IL) in January of this year, explains, “Incredo Sugar spent years perfecting the commercialization of its sugar-based sugar-reduction solution, which is not a substitute, and we’re thrilled to now be talking with U.S. consumer packaged goods, foodservice, and emerging brands in the North American market about incorporating our solution into their products.”

SweeGen (Rancho Santa Margarita, CA) is another relatively recent entrant to the natural-sweeteners market, founded about a year prior to DouxMatok. Its website draws you in with mouthwatering photos demonstrating the what-could-be-options for its stevia-based ingredients, branded under the name Bestevia.

Casey McCormick, SweeGen’s director of product development, states that his company’s "ability to produce multiple [stevia] rebaudiosides with unique sensory profiles in the stevia plant is truly revolutionary in sugar reduction," He adds, "The more rebaudiosides in our portfolio, such as Rebs B, D, E, I, L, M, and N, the more we can be innovative in collaborations with food and beverage manufacturers."

In fact, late last year and earlier this year, SweeGen announced the expansion of its natural-sweetener portfolio with the commercial production of Bestevia Reb I and Reb N. The company announced that SweeGen has already received an FDA Generally Recognized as Safe (GRAS) “no objections” letter for its Reb I ingredient and Reb B.

SweeGen is expanding its ingredients’ applications, having partnered with Blue California (Rancho Santa, CA) on a new line of beverage alcohol products that doubles down on two trends of interest to consumers: reducing the sugar while improving the flavor and adding functional ingredients. The new collection is called “Don’t Worry, Be Happy,” and, says McCormick, “SweeGen’s hallmark stevia sugar-reduction platform is the key to making the beverages zero- to low-sugar.”

He adds that “each of the nine beverages varies in alcohol beverage volume (ABV), from 5% to 35%, and includes 250 mg of Blue California Specialty Ingredients’ L-TeaActive L-theanine,” an amino acid thought to promote focus, aid in a healthy stress response, and support relaxation.

At the other end of the market, age-wise, are PureCircle and Cargill, both considered to be among the godparents of stevia sweeteners.

PureCircle was first incorporated in 2001, and since then the company has maintained a focused approach to its position as one of the leading producers and innovators in the global stevia market. An April 2020 press release announced an agreement that Ingredion Inc. would acquire a controlling interest and broad product portfolio, “leading to ‘growth synergies as well as significant savings to both [PureCircle and Ingredion].’

The deal was finalized last July, and Andrea Carlson, head of commercial, PureCircle, says, “The results have been strong. Our customers are responding positively to our expanded sugar-reduction toolkit and the wider and deeper formulation expertise now available to them.”

Carlson explains that the deal was the biggest news in a 12-month period for PureCircle and also included channel-approach revisions and leadership alterations. And, she says, “What hasn’t changed is our commitment to bringing the best-tasting stevia ingredients to consumers by working with food and beverage companies to help create healthful, great-tasting foods and beverages.”

Cargill is a business giant, a leader in agricultural, food processing, and industrial products and services. In the sweeteners market, its website lists six broad categories: corn, polyol, specialty, sugar, and zero-calorie sweeteners as well as sugar-reduction solutions. Cargill’s specialty stevia sweeteners are branded under the names EverSweet, ViaTech, and Truvia. Cargill is recognized for bringing Reb A stevia natural sweetener to the beverage market thanks to its partnership with Coca-Cola in 2007. The ingredient launched in 2008, branded as Truvia, was touted by the company as the first natural, zero-calorie, great-tasting sweetener.

Times and tastes have changed, yet Cargill has not wavered in its efforts to develop strong partnerships as well as stay on top of market trends.

To that end, in November 2019, the company announced a joint venture between Cargill and DSM known as Avansya. Carla Saunders, senior marketing manager for high-intensity sweeteners, Cargill, calls that joint venture a case of “bringing together two industry leaders to commercialize new technologies, pairing Cargill’s global footprint in sweeteners and large-scale fermentation capacity with DSMs leading biotech know-how.”

She claims the immediate impact on the marketplace was huge. “We had a long line of
customers interested in EverSweet. By partnering with DSM, we were able to bring out our first-of-its-kind, U.S.-based production facility online faster and deliver commercially viable quantities of EverSweet.”

Saunders notes that little more than a year later, “products sweetened with EverSweet are out in the marketplace, and brands are reimagining the possibilities for reduced-sugar products.” She looks forward to the partnership leading to more sweetener platforms and continued innovation.

**Let’s Talk Taste**

“The big driver today isn’t all that different than [when] we started this stevia journey more than a decade ago,” says Saunders. “It’s still all about taste.”

It’s hard to imagine anyone who would disagree that taste is not a key driver for this market. In fact, it may be the key differentiator between one ingredient and the next. As palates become more sophisticated, and an increasing number of consumers consider themselves foodies, taste can make or break even a natural-sweetener ingredient.

SweeGen’s McCormick references a December 2020 Mintel analysis that advised 58% of U.S. consumers agree that taste is one of the top three important factors when purchasing food or drink.

But taste is complex.

Says McCormick, “Flavors and taste drive purchases across all categories. While the [stevia] rebaudiosides today continue to taste better than the old generation, it’s not enough to just replace sugar in food and beverages.”

McCormick refers to a “design thinking approach” in which he says you need to look at all elements of a product when reducing sugar. “Formulating with flavors for taste modification to balance out flavor and sweetness, or texturants to round out the mouthfeel, coupled with unique stevia and other nature-based sweeteners, is very important to the overall success of product formulations,” he states.

DouxMatok also views sugar reduction as going beyond an ingredient; rather, it is a system that creates a full solution to the taste problem. The company works with a sensory market research firm, a Nielsen subsidiary, to uncover consumer insights based on utilizing the five senses, not just taste. According to Niba, “We conduct external consumer sensory market research and daily sensory tests with a professional tasting panel.” Her takeaway from the research is “not only do we deliver the sweetness levels at 30%-50% reduction compared to traditional white sugar, but consumers actually prefer” products made with the company’s ingredient.

Over at Cargill, Saunders believes the taste gap between sugar and next-generation stevia products has dramatically narrowed.

“The original stevia products were based on a single sweet component, Reb A,” she says. “Those early products struggled with bitterness and linger issues, resulting in real limits on how much sugar you could pull out of a formula. Today, we know there are dozens of sweet compounds in the stevia leaf, and they taste very different by themselves and when used in combination. Our next-generation stevia products are light-years ahead of where we started. Formulators who dismissed stevia even five years ago would be well-served to give our latest stevia sweeteners a second look.”

**What Else Do Companies and Consumers Value?**

“In addition to taste,” notes Saunders, “the other areas that are increasingly important to our customers and their consumers center on sustainability and traceability.”

When it comes to Cargill’s sustainability program, Saunders is proud of how comprehensive it is. “It includes a detailed agricultural standard, designed to minimize the environmental impact of production practices, as well as ethical requirements that cover worker safety and welfare and prohibit the use of compulsory, convict, or child labor,” she says.

She shares that “every spring, we meet with our growers and review those standards. Every fall, we assure compliance through an independent audit. That attention to sustainable, ethical practices extends to our manufacturing facilities, which are also audited annually by independent third-party organizations.”

And, Saunders adds, “We combine that commitment with unparalleled traceability. Every lot of stevia we sell can be traced back through our supply chain to the farmers who planted the crop and the cooperative where it was grown. These are growers we know and fields we’ve walked.”

PureCircle’s Carlson also highlights the need for sustainability and traceability. She says, “We value sustainable and ethical ingredient sourcing, which is of the utmost importance to our customers. This is why PureCircle has significantly invested in a vertically integrated supply chain. We offer our customers full confidence, integrity, and transparency with our non-GMO stevia ingredients.”

Transparency counts for DouxMatok, too. Says Niba, “We are committed to being transparent with both consumers and potential partners. Any external communications, including Incredo Sugar’s website and social media channels, will focus on that pillar of transparency and education to ensure both individuals and businesses understand the benefits of sugar reduction in the immediate and long-term.”

And no one is discounting technology. SweeGen’s McCormick credits today’s advancements in technology as improving stevia ingredients even from just a few years ago. He says his company’s zero-calorie, non-GMO, nature-based stevia sweeteners are “produced by a proprietary bioconversion process, which enables incredible flexibility and diversity in the sweeteners we can produce.”

He adds that SweeGen’s enzymatic bioconversion of stevia maximizes the efficiency of crop yield, “so we are only producing
the specific rebaudiosides that we need and not generating excess byproducts that could go to waste."

And, of course, shoppers are always, always scrutinizing the product label itself—meaning the ingredient list matters. This is where natural sweeteners have a leg up. Carlson cites Ingredion’s Atlas proprietary research when advising that “consumers across the world continue to rank the ingredient list as the most important driver when selecting packaged foods and beverages, with sugar reduction being one of the most important claims. Plant-based solutions also continue to be preferable to artificial ones, with stevia leading the way.”

“Transparency in nutritional and ingredient labels,” says Carlson, “paired with public demand to reduce the amount of sugars, and preference for simple, plant-based sweeteners, has fueled innovation with stevia leaf ingredients.”

What’s Next for the Natural-Sweeteners Market?

“Natural sweeteners have gained in popularity as consumers continue to move away from artificial sweeteners,” says Cargill’s Saunders. “Almost two-thirds of global consumers (61%) say ‘no artificial sweeteners’ is an extremely or very important statement on food and beverage labels. Nearly a third (30%) say they’d pay more for products made without them.12

As companies continue to uncover the different parts of the stevia leaf, combined with newer technology and tools, newer applications for sweeteners will follow.

Saunders advises, “Our journey with stevia is just beginning. There are more advances on the horizon, and they’re going to bring stevia to categories that previously weren’t able to fully tap into sugar reduction via natural sweeteners.”

She cites dairy as a great example. “Since we made it possible to access Reb M via our EverSweet stevia sweetener,” says Saunders, “the category has been on fire. As more tools and technology come online, tough applications like bakery may be the next space to discover stevia.”

PureCircle is eyeing many of the same categories. The company advises that being part of the Ingredion family provides the company with a “full portfolio offering taste and performance benefits for full sugar reductions in historically challenging categories for stevia, like bakery,” says Carlson.

She advises that “this year has shown us that consumers are increasingly interested in managing and understanding their own nutrition. Food and beverage companies will continuously look for ways to differentiate their products from the competition, and we anticipate that telling strong ingredient stories, like stevia’s natural origins, will be a vehicle for these brands to reach their consumers.”

According to DouxMatok’s Nibi, her company’s team is already working with diverse sweet snack manufacturers, food service providers, fresh bakeries, chefs, and chocolatiers to incorporate Incredo Sugar in their products. The company currently works with various bakery partners in Israel who already make use of Incredo Sugar.

And DouxMatok is already making good on at least one of its 2021 goals: launching products with its branded ingredient in the U.S. and European markets.

In a press release promoting its introduction of Incredo Sugar to the U.S. market, DouxMatok announced its limited edition of Incredo Spreads, available for purchase on shop.incredosugar.com. The Spread the Happiness campaign gives American consumers an opportunity to “taste a product made with its innovative ingredient for the first time ever and experience the wonders of how sugar can be used to reduce sugar.”

The limited consumer campaign features a consumer sweepstakes and a charitable donation to Common Threads, a nonprofit that provides children and families with the cooking and nutrition education to encourage healthy habits that contribute to wellness, according to the press release.13

What will natural-sweetener players need to do to keep their eye on the prize?

“On the horizon,” says SweeGen’s McCormick, “consumers will continue to demand great taste, lower sugar, and more nutrient-dense products. Natural flavors and modifying properties and functional ingredients will play a strong role in innovation.”

One thing is certain for this market category, and Saunders sums it up nicely: “The pressure to embrace sugar reduction shows no sign of easing. Consumer desire and government regulations will continue to push brands toward formulations with less sugar and fewer calories. It’s a huge challenge for the industry, but we are working hard to provide the tools and expertise necessary to help brands create the next generation of great-tasting, reduced-sugar products.”

For companies involved in this category, and consumers who reap the benefits, the natural-sweeteners market sounds like a sweet deal all around. N

References
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Plant-Based

PLANT PROTEIN: Success Doesn’t Grow on Trees

Its roots are fed by ingredient innovation, technology advances, and keen business strategies.

BY JUDY BLATMAN

There was a time when beef was king and vegetables were boiled to within an inch of their life. In recent decades, however, meat’s faced some negative associations with health concerns, environmental issues, and climate change. But meat-eaters worldwide aren’t putting down their steak knives anytime soon. According to one organization, people on earth still consume around 350 million tons of meat per year, and global meat consumption is estimated to reach between 460-570 million tons by 2050.¹

Why? Because meat tastes so darn good. With only 5% and 3% of the world’s population self-identifying exclusively as vegetarians and vegans, respectively², the plant protein market, and those who serve it, are burdened with a bunch of challenges.

Still, talk to any leading ingredient supplier tasked with encouraging the addition of plant protein to people’s diets, and what they see instead are opportunities. Those opportunities start with the notion that there’s room in the market for everyone—carnivores, herbivores, and especially omnivores.

Merit Functional Foods (Winnipeg, MB, Canada), a solutions-based food ingredients company, is a relative newcomer to the plant protein market, having stepped onto the playing field in the fourth quarter of 2019.³ Company co-CEO Ryan Bracken focuses on where the real market opportunity for growth lies: with flexitarians.

“Plant-based’ used to be synonymous with vegan and vegetarian diets, and that’s no longer the case,” he says. “With the rise of flexitarians—those who try to eat more plant-based foods but still consume meat and other animal-based products in moderation—we’re seeing the floodgates open when it comes to consumers making the switch to plant-based products.”

Jacquelyn Schuh, product marketing director, protein nutrition solutions, ADM (Chicago), agrees that by promoting a flexitarian lifestyle approach, brands can help ease people into more plant protein consumption by “starting small.” She suggests, “This could be offering hybrid foods or beverages that may not be purely plant-based, such as a dairy product that blends traditional dairy with plant proteins, or a black bean burger with dairy-based cheddar cheese on top.”

Yadunandan Dar, director, platform and business development, plant-based protein,
Super Reishi Tea Immune Support Formula is a ready-to-drink mix that contains a hot water extract of Reishi mushroom fruiting body and spore with other immune supporting herbs as follows: Black Tea, Astragalus Root, Goji Berries, Jujube Fruit, Turkey Tail Mushroom, Rhodiola crenulata, Glossy Privet, Poria cocos and Schisandra. The instantly soluble extract powder is mixed in a base of powdered honey and other natural flavors.

These botanicals are rich in powerful hot-water soluble polysaccharides which have strong immune stimulating and antioxidant effects. Unlike alcohol extracted Reishi, water extracted Reishi has been shown to increase numbers of natural killer cells and to stimulate their function. Reishi upregulates cell-mediated immune responses with gamma interferon. In studies, it helps restore normal cytokine function of older mice to those of young ones.

Astragalus Root polysaccharides can prevent the atrophy of immune tissues including the spleen, thymus and intestinal lymph nodes, and counteract low white blood cell count caused by immunosuppressive factors. Astragalus extract can increase interferon-alpha, and lymphocyte effector cell activity by 5- to 6-fold. Turkey Tail Mushroom has multiple immune-restoring properties, and is used for infections and inflammation of the upper respiratory and digestive tracts.

Super Reishi Tea Immune Support Formula has an energizing, restorative effect based on Black Tea, Astragalus, Rhodiola, Schizandra, and Goji Berries. Astragalus and Rhodiola are TCM vital energy tonics which are noted for their stress relieving and stamina improving functions. Call us today!
Goji Berries
Goji Berries are rich in carotenoids, flavonoids, immune active polysaccharides, and vitamins A and C. They promote splenocyte proliferation while increasing the ratio of T lymphocytes, CD4+ to CD8+ T cells; promote the cytokine secretion of macrophages; enhance IgG anti-body responses; promote Th1 cytokines (IFN-γ and TNF-α) and Th2 cytokine (IL-4) secretion.

Andrographis
This bitter leaf has powerful antimicrobial properties (antibacterial, antifungal, antiviral). Used internally and topically for sores and ulcers, ec-zema, candida, sinus dampness, shingles, acne, inflammation and swelling, and allergies; also for the common cold and other upper respira-tory tract issues. It also stimulates liver function helps with digestion and detoxification.

Gynostemma
The leaf of Gynostemma pentaphyllum (Jiaogulan) is an adaptogenic, immune, and energy herb that enhances the production of antibodies from B lymphocytes and cytokines from T cells, activating these cells. It also significantly enhances serum immunoglobulins IgM and IgG2a.

Chaga Mushroom
Chaga mushroom forms a large conk on the trunks of birch trees. Antibacterial, antiviral, anti-inflammatory; helps balance IFN-gamma/IL-4 ratio, reduces IgE levels and production of IgG1 in allergies; helps increase Th1 immune responses (IFN-γ production); helps with asthma and ulcers.

Reishi Mushroom
Adaptogenic tonic with complex, branched beta-glucan polysaccharides and triterpenes (ganoderic acid) that help increase B lymphocytes and cytokines from T cells, activating these cells. It also significantly enhances serum immunoglobulins IgM and IgG2a.

Turkey Tail
Turkey Tail Mushroom is used to reduce phlegm and to help clear upper respiratory tract infec-tions, as well as digestive and urinary infections. Helps increase energy, and support healing from chronic illness. Active polysaccharides PSP and PSK help boost immune cell production, including killer T cells, and help increase blood levels of alpha and gamma interferon.

Codonopsis
Contains immune enhancing tanshenosides that support the formation of lymphocytes and red blood cells, boosting serum IgG, while elevating secretory slgA. Its polysaccharides help restore the spleen index and immune cytokine levels. It has digestive tonic effects, and it can help with shortness of breath and chronic cough as a multi-functional lung support herb.

Dong Quai
Dong Quai is a powerful rejuvenating herb that helps to build red and white blood cell counts, enhance IL-2 activities, stimulate proliferation of splenocytes, augment production of IL-2 and IFN-gamma, activate macrophage and T lymphocytes, and regulate Th1/Th2 cytokines.

Astragalus
Astragalus is the most powerful immune system boosting herb in the TCM toolkit. It is an adaptogenic qi tonic that helps restore impaired T cells, activates antibody generating B lymphocytes, increases gamma interferon, and restores immune balance. (Th1/Th2)

Atractylodes
Atractylodes root is a potent TCM stomach and spleen tonic with polysaccharides that boost immunity, enhancing proliferation of T cells and spleen lymphocytes. It has been shown to activate immune cytokines.

Licorice
Licorice root supports immunity by inducing proliferation of interferon gamma. T cells IL-2, and IgG with a greater Th1 immune response than Th2 response. Glycyrrhizin helps boost immunity in dendritic cells. Antiviral activity against HHV-1, SARS related coronavirus, respiratory syncytial virus, and many other viruses has been reported.

Platycodon
Platycodon root is used to help with dry cough and lung irritation. It activates B lymphocyte cells, increases nitric oxide production in macrophages, and increases polyclonal IgM antibody production. Nitric oxide has been shown to have a virucidal effect.

From day to day, your immune system is constantly challenged to stay strong and effective. Factors like stress, anxiety, lack of sleep, poor diet, lack of exercise, aging, and environmental toxins can weaken immunity. We are not always aware that our immunity is not in balance until we actually feel under the weather. Many things can help restore immunity though, like a good diet and plenty of rest and fluids, followed by exercise and healthy self-care. Immunity can also be significantly enhanced by supplementing the diet with nutrients and botanicals shown by scientific research to bolster the immune system.

As lifeforms, plants have to protect themselves from disease and environmental threats in order to thrive, just as humans do, so they produce defensive phyto-compounds that we can also use for similar purposes. Each botanical species has a unique fingerprint of bioactive phyto-compounds, so there are a variety of mechanisms of immunity enhancement available to us from the herbal toolkit. An immune herb may stimulate the production or activity of T cells, NK cells, antibody producing B lymphocytes, interferon, or macrophages, or it may help balance and adjust ratios of cytokines. Complex polysaccharides play a major role in these mechanisms.

Draco is here for you to provide high quality, safe and effective immune supporting botanical extracts and custom formulas for your product formulations. Our exclusive Full Spectrum reiterative water only extraction process uniquely preserves the essential immune-active polysaccharides that are so important, and typically absent in most botanicals in the marketplace that are extracted with alcohol.
U.S./Canada, at Ingredion Inc. (Westchester, IL), points to data indicating that most consumers eating plant-based products are flexitarians or people eating plant-based foods part-time for health or sustainability benefits. “This data is important, as these consumers typically substitute animal protein–based meals with plant protein–based meals, or in some cases add plant-based protein to normal meals to increase protein content,” he says.

And there’s more good news, according to Schuh: “There’s certainly room for new plant proteins in the market, as consumer demand is booming. Our research shows that consumers have a higher affinity and are willing to pay a price premium for alternative products that have more plant proteins and wholesome ingredients on the label. In the consumers’ eyes, the more plant proteins, the better.”

Aurélie Mauray, PhD, market manager for pea and new proteins, Americas, Roquette (Geneva, IL), discusses how innovation is driving further usage. “The plant-based meat market is growing rapidly, showing a proliferation of formats, textures, and flavors on store shelves.”

In February 2020, Roquette expanded its Nutralys plant protein line with a specialty pea protein ingredient that helps reduce salt in plant-based meats. According to a press release, “Beyond new tastes and new textures that allow for delicious culinary experiences, Roquette [with Nutralys L85M] will now offer its customers the ability to create plant-based meats with less salt in order to meet consumers’ demands and expectations when managing their daily sodium intake.”

Mauray advises the new ingredient is “readily available for the EU market, and we are working on geographic extension for the Americas.”

**New Ingredients Are Hot, Hot, Hot**

For those customers and consumers looking beyond the well-established plant proteins like pea and soy, there’s room to educate and space to innovate. Schuh says her company’s proprietary research (ADM Outside Voice) found that the type of plant protein in a product is important to 88% of global plant consumers, with 92% of U.S.-based plant consumers feeling the same way.

“While mainstream plant protein sources like soy continue to grow in popularity, options like wheat and other wholesome ingredients like chickpea, navy beans, and quinoa are expanding in global use,” states Schuh. “This is being driven in part by consumer curiosity in an expanding range of plant protein sources and variety, in addition to reaching individual nutrition goals or motivational pursuit of a ‘healthy living and healthy aging’ lifestyle.”

According to Schuh, ancient grains are also emerging solutions for alternative offerings thanks to the health benefits linked to fiber and whole grains. She shares that 66% of U.S. consumers are likely to pay more for a product with ancient grains.

Bracken is keenly on the growth potential of canola protein, given his claim that Merit is the first-to-market in the world with its line of food-grade, non-GMO Puratein canola protein. He realizes there’s educating to be done about this innovative offering, and his company has started that process.

He says, “When you say ‘canola,’ most people—whether they’re in the industry or not—immediately think of canola oil.” But, according to Bracken, the canola oil seed contains substantial amounts of unique proteins that provide exceptional functionality. He cites two main proteins in canola as napin and cruciferin. Napin, he explains, is a highly-water-soluble albumin protein that has excellent whipping and foaming capacity, while cruciferin is a globulin with gelation and emulsification properties.

“As a new offering to the marketplace,” says Bracken, “canola protein is a white space generating a lot of excitement—especially for formulators.” Merit Functional Foods, says Bracken, has begun commissioning and producing its canola product and is excited to start collaborating with brands interested in utilizing canola protein in applications such as dairy alternatives, meat alternatives, baking and batters, and more.

There’s another reason for Bracken’s excitement. “By using canola as a source of protein, we’re creating an entirely new value-added revenue stream for growers in Western Canada, which was previously limited to the extraction and sale of canola oil.”

Ingredient’s Dar believes that innovation and development of new plant-based proteins with desirable flavor and texture characteristics are strong for target applications such as meat alternatives, dairy alternatives, and protein-enriched beverages. “Further developments include protein bases with increased consumer appeal, such as fava beans, lentils, and chickpeas,” he says.

His point about flavor and texture is well-taken, as that’s been one of the plant protein category’s main challenges.

Schuh says the same. “Beyond plant protein type, innovations around color, taste, and texture are ever-expanding and becoming more nuanced.” She adds that “Creating an alternative-protein application is like piecing together a puzzle. It’s important to see the entire picture first to help establish a game plan that will result in delicious, appealing offerings.”

Bracken agrees. “What’s critical is that plant-based products must meet the demands of consumers. No longer can there be a trade-off in taste, nutrition, or texture,” he says.

Dar is realistic when he advises that “although significant advances have been made, some barriers remain in overcoming taste and texture challenges in multiple plant-based applications.” But, he adds, “There is growing adoption of plant-based diets by more and more consumers in many types of food products, in part because of the availability of a variety of plant-based foods with significantly improved taste than was available just a year or two ago.”

ADM has been a leading supplier in this space for decades. Many recent innovations focus on solving texture challenges specific to meat alternatives, such as chicken and seafood, which are growing categories in plant-based, says Paula LaBine, marketing director for baking, milling, and starch, ADM.

Last September, ADM added two new versatile ingredients to its portfolio: a wheat protein and a textured wheat protein, both originally launched in ADM’s Prolite Line and now rebranded under ADM’s PurelyNature line. Says LaBine, “We’re thrilled with how positively our PurelyNature wheat proteins have been received since launching this fall. Our customers appreciate how easy it is to
use the new wheat proteins in formulation and processing on top of addressing texture challenges to meet consumers’ expectations for plant-forward applications.” In addition, LaBine states that the products deliver the right balance of taste, texture, and functionality—factors that are important as “our research finds that while more than 70% of consumers rate protein from plant sources as healthy, taste remains the number-one barrier for purchase behavior.”

Beyond the Ingredients

It’s not just the ingredients that are new. Innova Market Insights shared data during a webcast hosted by Nutritional Outlook last fall that provided some snackable tidbits about the plant protein market. For example, when Innova surveyed global consumers in 2019 and asked, “Which claim do you prefer when buying alternatives to meat and/or dairy?” six in 10 global respondents preferred the marketing term plant-based over vegetarian or vegan. Product marketing reflects this, with Innova reporting that average annual growth in global food and beverage launches with claims such as “plant-based,” “100% plant,” or “plant power” rose by a 57% CAGR between 2015 and 2019.

Innovia data, pulled from its Innova Database, also supports the idea that plant protein innovation is moving beyond the established categories, noting growing numbers of product launches containing plant protein especially in these categories, from 2015 to 2019, in the U.S.: dairy/dairy alternatives (+21%) and supplements (+18%), not surprisingly—but also bakery (+9%), snacks (+9%), and cereals (+4%).

The Innova Database also tracked the fastest-growing plant-based proteins in global meat- and dairy-alternative product launches from 2017 to 2019 (based on those categories with 20 or more new product launches in 2019), and fava bean protein came in on top (+439%), followed by hemp protein (+369%), rice protein (+105%), and potato protein (+38%). Pea protein, already one of the most popular plant proteins, demonstrated its staying power at 67% growth.

More-Discerning Customers

“Consumer acceptance of plant-based alternatives lies in the sensory experience, including aroma, appearance, taste, texture, functionality, and cooking attributes,” says Schuh. ADM’s research finds that 50% of flexitarian consumers agree that meat alternatives need taste improvements, and more than 20% say that texture needs to be improved. Plus, 70% of global plant consumers report taste and nutrition as equally important.

Suppliers are stepping up to solve problems. “At ADM, we focus on enhancing a product’s entire sensory experience well before the first bite or sip is taken,” Schuh asserts.

“While early adopters of the plant-based movement may have been more forgiving of a plant-based product’s taste,” says Merit’s Bracken, “today the consumer base has significantly grown, and with that growth has come the expectation of good taste and texture and the ability to move to a plant-based diet without trade-offs.”

The good news is that with the promise of improved tastes and textures, consumers may be more willing to try new forms of plant protein.

Bracken is betting that canola protein will appeal to a broad base in broad applications. “Whether it be whipping and foaming functionality for plant-based ice creams, or gelling characteristics in plant-based burgers, canola protein offers unique functionality to provide that meat- or dairy-like experience that consumers are seeking,” he says.

For his customers, Bracken adds, “Whether reformulating or developing a new plant-based or protein-fortified beverage, our high-quality plant proteins are game-changers as a result of our proprietary extraction technology and unique purification process.”

Schuh looks to plant protein diversity as another way to move the plant protein category mainstream. She advises that formulators can help the process along by blending the lesser-known plant proteins with recognizable ones. “Our research shows,” she says, “that 68% of U.S. flexitarians prefer a blend of two or more plant proteins in meat alternatives, and 52% prefer a blend in dairy alternatives.” An example, her company has ingredients that combine pea protein with chickpeas or navy beans, incorporated into a wide variety of food applications.

“Plant protein blends not only boost protein content and achieve dietary diversity, but specific combinations also may help round out taste and texture,” states Schuh.

Plants, Plants Everywhere

As the plant protein market continues to grow, companies are making sure they’re able to keep up with the demand through new, state-of-the-art manufacturing plants.

For example, Ingredion opened a new facility last September to manufacture pulse protein isolates and related products in South Sioux City, Nebraska. Dar says pea

“Consumer acceptance of plant-based alternatives lies in the sensory experience,” says ADM’s Jacquelyn Schuh.
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protein isolate and pea starch are the first ingredients being produced there because the North American market presents significant demand for both ingredients.

"Currently, the market imports most of its pea isolate and pea starch from overseas, with only very limited domestic supply. Ingredion’s U.S.-based facility will help fulfill the strong demand for a domestic supply of pulse protein isolate and starch, providing a significant improvement in supply chain as well as improved sustainability due to local sourcing and manufacturing," Dar says.

Merit Functional Foods announced the official opening of its 94,000-sq-ft plant-protein facility in Winnipeg, Manitoba, Canada, in February of this year. According to a press release, the project is the first commercial facility in the world with the capability to produce food-grade canola protein. It will have the flexibility to also produce pea protein.

As a new company in the space, it was important to Merit to find the right location to produce plant-based proteins with a scalable operation. Winnipeg fit the bill for a number of reasons. As a Canadian company and proud founders who are Manitobans, Merit wanted to support its local community, according to Bracken.

But the choice to build in Winnipeg was also a strategic decision considering its proximity to the company’s raw materials. Says Bracken, "All of our non-GMO pea and canola are grown right here in Western Canada." In addition, he says, "Winnipeg, Manitoba, utilizes sustainable hydroelectric power sources for water, power, and natural gas, which helped us support our project’s utility requirements, in addition to a high-quality source of water.”

Last but not least, the area provides access to skilled labor, notes Bracken, as well as plant-based food innovation support through regional universities and applied research centers.

Merit isn’t the only company keen on the benefits of Manitoba.

Roquette’s Mauray notes that in this booming plant protein market, the less-visible plant protein ingredient suppliers faced the challenge of making large-quantity protein ingredients available. Roquette answered that challenge with plans for increased capacity for pea protein with its brand-new pea-processing plant in Portage la Prairie, Manitoba. Says Mauray, ”This ensures a reliable supply to North American customers.” Sometime in 2021, she advises, Roquette will have the largest capacity worldwide, having a combined pea-processing capacity of 250,000 tons of peas per year between France and Canada. According to news reports, the plant expects to be at full capacity in 2022.4

"Sustainability and high-performance ingredients are our main pillars for developing new protein solutions to become the long-term leader in plant protein specialties for human nutrition and a reliable partner for our customers," states Mauray.

What’s Next for Plant Proteins?

“Performance-based plant ingredients are one part of successful development. Our application centers located in all major regions support product development for local customer expectations," says Mauray. “You would be amazed at how differently plant-based burger patties can be formulated depending on where the product is to be launched.” As an example, she advises that consumer expectations for texture in a plant-based burger in the U.S. are for more firmness versus what those in the European Union are interested in.

“The market’s going to continue growing. The passion behind the adoption of more plant-based products is undeniable," says Merit’s Bracken. “The world is hungry for change, and we’re here to make superior plant protein accessible on a global scale.”

ADM’s Schuh sees the market headed in a variety of directions as these solutions work to meet evolving consumer demands. “There will be a greater need for plant protein-forward offerings to also have additional functional claims, such as being fortified with fiber and gut microbiome–supporting ingredients,” she says. “We also anticipate new meat- and dairy-alternative formats to emerge especially as consumer desire expands beyond the bun to shellfish and shrimp, plant-based cheese, and ready-to-eat protein snacks. While new formats and greater accessibility of alternative options pop up, the consistent demand for clean and clear and shorter ingredient labels will not subside.”

Additionally, Schuh says that product developers will need to get creative when developing great-tasting products that also use fewer ingredients. “Next-generation technologies like 3D printing and protein fermentation will also be a major part of driving innovation into the future.”

Ingredion’s Dar advises there are still supply and demand challenges that need to be addressed, such as development of regional supply chains and stability of supply to positively impact the cost equation and ultimately the cost-to-serve. However, he is also optimistic about the future of plant proteins.

He says, “Eating plant-based is a long-term shift in eating habits of mainstream consumers. It is a new way to look at how to meet consumer protein needs without being disruptive to the environment. The demand for plant-based foods and ingredients is expected to continue to grow over the foreseeable future for current ingredients as well as ingredients providing new functionality and benefits over the next five to 10 years, especially as more and more consumers adopt products with improved taste and nutritional balance.”

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Weight Management

WEIGHT EXPECTATIONS

The COVID-19 pandemic slowed weight-management supplement sales. Are innovative ingredients the key to recovery?

BY MIKE STRAUS

Weight-management ingredient sales slumped last year during the COVID-19 pandemic. SPINS data¹ on the 52-week period ending November 29, 2020, show that the mainstream weight-management ingredients category contracted nearly 11%. It seems that weight loss has taken a backseat to other health concerns as the COVID-19 pandemic prompted gym closures and took fitness off consumers’ minds.

However, experts believe this precipitous sales drop should be only temporary. The weight-loss market is expected to recover somewhat when consumers are once again able to go to the gym and participate in team sports without fear of contracting a deadly virus. As vaccinations ensue, and with a return to normalcy somewhat in sight, hopes are high for longer-term growth.

Annie Eng, CEO of HP Ingredients (Bradenton, FL), says the weight-management category is beginning to show signs of uptick. “People are looking forward to being able to roam around in the warm summer weather. Shedding the extra quarantine weight will become a priority once again.”

Until the market recovers, brands still invested in the weight-management space can prepare by promoting research and development. Here’s a look at some of the new studies emerging on weight-loss ingredients. Could these innovations prime the category for success?

Fiber-Mineral Blend

New weight-management ingredients are demonstrating benefits for multiple dimensions of well-being. One clinical trial², a pilot study involving 11 overweight and

CAROB EXTRACT PREVENTS INSULIN RESISTANCE IN OVERWEIGHT MICE

An April 2020 animal study showed positive effects of Pharmactive’s (Madrid, Spain) branded CSAT+, a patented carob extract, on blood sugar and cholesterol in mice fed a high-fat, high-sugar diet.

Julia Diaz, head of marketing for Pharmactive, says the company will be investing in a new in vivo study this year to demonstrate CSAT+’s efficacy for weight management. “Weight loss is no longer about calorie counting but about achieving optimum health,” Diaz comments. “Supplement formulators are moving away from quick-fix miracle solutions to more scientifically sound ingredients.”
obese female subjects between ages 22 and 56, examined the effects of the patented fiber-mineral blend SlimBiome on weight loss, mood, gut microbiota, and satiety.

All participants had a BMI between 25 and 35. For four weeks, all participants replaced their normal breakfast and lunch with a GoFigure shake containing 3 g of SlimBiome, a blend of agglomerated glucomannan, oligofructose, and chromium picolinate. Participants also consumed one GoFigure snack bar containing 1.5 g of SlimBiome twice per day. The subjects followed the Eatwell Guide diet, and their total caloric intake did not exceed 1,500 kcal/day.

After four weeks, participants lost an average of 1.9 kg in body mass, decreased their BMI by 0.7, and reduced their waist and hip circumference. The intervention also caused a 1.2% reduction in body fat and a significant increase in self-reported mood scores.

While this pilot study lacked a placebo group, the authors say its findings will inform a future double-blind, placebo-controlled trial on both women and men.

Stephen O’Hara, CEO of OptiBiotix Health PLC (York, UK), SlimBiome’s maker, says a growing body of evidence shows that prebiotic fibers are effective for a wide range of functions related to weight management, including promoting gut and liver health. O’Hara says there is a growing subset of products that emphasizes a wellness-first, lifestyle-driven approach to weight loss, which is a perfect fit for multifunctional blends.

“Functional dietary fibers enhance the activity of bacterial groups to produce bioactive molecules that modulate gut health,” he says. “When used alongside prebiotic fiber, they feed the health of positive bacteria to increase microbiome diversity. Adding a trace mineral like chromium to the mix then creates an action that regulates insulin.”

Adaptogens

New research points to the potential promise of adaptogens in the weight-loss market. A 2021 randomized, double-blind, placebo-controlled clinical trial involving 81 obese individuals, HP Ingredients’ branded CitruSlim blend, a combination of Bergamonte-brand polyphenol extract (Citrus bergamia Risso) and LJ100-brand tongkat ali (Eurycoma longifolia), improved ghrelin/leptin balance, increased AMPK, and reduced cortisol levels. Annie Eng, CEO of HP Ingredients, says this effect was found in both a high-dose and a low-dose group. The study authors concluded that CitruSlim is effective at stimulating weight loss in obese participants.
Chili Pepper Extract
Red pepper extracts and their active constituent capsaicin have long been present in the weight-management category. Recent research indicates that a proprietary ingredient could be hot in more ways than one.

A yet-to-be-published post-hoc analysis of a randomized, double-blind clinical trial found that Capsimax, a branded capsaicinoid extract, reduced body fat and fat mass by inducing thermogenesis, says supplier OmniActive Health Technologies (Morristown, NJ). Unlike generic capsaicinoid extracts, Capsimax contains concentrated forms of capsaicinoids encapsulated in OmniActive’s patented OmniBead controlled-release coating to prevent oral and gastric burning sensations, the company claims.

Kimberly Smith, chief marketing officer for OmniActive, says previous clinical trials have shown capsaicinoids may be effective at increasing metabolic rate, boosting lipolysis, and reducing caloric intake by curbing appetite. These three functions, Smith says, together form the key to weight loss.

“Capsimax has been shown to boost resting energy expenditure equivalent to 130 kcal/day,” Smith says. “It has also been associated with an increase in free fatty acid and glycerol levels in the blood, an indication of increased lipolysis. It may decrease appetite and reduce caloric intake.”

Chromium Picolinate
Effective weight-management strategies often rely on multifaceted approaches, including formulas that influence more than one biological pathway.

Elyse Lovett, vice president of marketing for Nutrition21 (Harrison, NY), says the company’s chromium picolinate ingredient, branded Chromax, has developed a solid research base after 25 years on the market. According to Lovett, Chromax has a more stable chemical structure and a superior absorption profile relative to some other forms of chromium, which enhances the ingredient’s bioavailability by a factor of 15.

“Weight management is a complex benefit area that requires multiple approaches,” Lovett says, “which is why you’re seeing brands pivot to targeting other aspects, like metabolic health. Chromax chromium picolinate is a highly bioavailable form of chromium supported by over 100 research studies, 35 of which are human clinical studies affirming its benefits for weight management, body composition, appetite control, insulin function, and more.”

An ingredient like Chromax offers numerous benefits. One 2018 literature review of weight-loss ingredients, diets, and strategies, funded by Nutrition21, found that chromium picolinate aided weight loss while preserving lean body mass. Lovett says Chromax promotes optimal insulin
VIDYA’S GREEN COFFEE EXTRACT NOW GRAS

By Alissa Marrapodi,
Custom Content Editor

Vidya Herbs Inc. (Red Bank, NJ) recently announced it achieved self-affirmed Generally Recognized as Safe (GRAS) designation for its green coffee extract, CGA-7. The review was conducted by a qualified expert panel.

“CGA-7 achieving self-affirmed GRAS is a culmination of our company’s in-house R&D team efforts, spearheaded by K Shyam Prasad, Vidya Herbs’ founder,” said Steve Geiger, vice president of sales and operations for Vidya’s U.S. division, in press release. “The expert panel’s review of the proprietary ingredient was precipitated by the publication of trials supporting both safety and efficacy.”

He added: “CGA-7 is unique among green coffee extracts due to its complete supply-chain vertical integration as well as its constituent chlorogenic profile, both of which provide the brand marketer with powerful marketing points. The green coffee beans used are harvested from Vidya’s own coffee estate in Chikmagalur, India, and extraction occurs at in-house facilities in Bangalore.”

function, which in turn reduces caloric intake and improves carbohydrate metabolism. Recent research also shows Chromax can reduce carbohydrate cravings and has effects led Nutrition21 to position Chromax as a metabolic health ingredient early on in the product’s history.

Preparing for Recovery

The weight-management market is expected to recover when consumers once again prioritize weight loss. The category’s winners will be brands with scientifically proven ingredients as well as those that focus beyond just weight and on holistic concerns like metabolic health.

Weight-loss brands and ingredient suppliers should lay the groundwork for recovery now by investing in clinical research and seeking out safety, purity, and other certifications. When the pandemic ends, consumers will be looking for credible brands they can trust.

Mike Straus is a freelance writer living in Kelowna, Canada. He has written for publications including Canadian Chiropractor, Grow Opportunity, and Massage Therapy Canada.

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The Long View
Can supplement manufacturers and their research convince men to take control of their health?

BY SEBASTIAN KRAWIEC, EDITOR

The classic stereotype of the aging man is the mid-life crisis: he attempts to relive his youth and changes his behavior drastically—becomes restless, obsesses over his appearance, buys a faster car. And while this psychological reaction to the anxiety of getting older has become cliché, the fact is that there are real physiological struggles men can go through as they age that can indeed diminish their quality of life.

Luckily, there are supportive products on the market that can help men handle the bodily pangs of aging. And with that, we can flip the topic instead to one of “mid-life revolution,” in which, with the right lifestyle changes and nutritional support, men can head gracefully, and contentedly, into the years ahead.

Maintaining Vigor
When researching men’s health and healthy-aging products, one will find a good deal of overlap with sports nutrition products. That is because energy, muscle health, and physical conditioning are important for men of all ages.

“Men’s health issues center around energy, vitality, strength, and cardiovascular health. These are very consistent with sports nutrition endpoints and can be improved by the same nutritional compounds,” says Sara Perez Ojalvo, director of research and development for Nutrition21 (Harrison, NY). Two ingredients which Nutrition21 markets for both sports nutrition and men’s health are Nitrosigine and Velositol.

“Nitrosigine contains a highly bioavailable form of arginine and has been clinically shown to significantly increase nitric oxide levels and blood flow, which not only leads to increased muscle pump but also improved cardiovascular endpoints. Nitrosigine also increases perceived energy without negatively affecting heart rate or blood pressure as a non-stimulant source of energy and vitality,” explains Ojalvo.

“Velositol is Nutrition21’s perfect partner to protein powders as it significantly increases muscle protein synthesis—how our bodies build muscle—when added to protein and exercise.” She says that a new outcomes study showed that Velositol significantly increase strength, muscle endurance, and muscle power more so than protein and exercise alone.

The reason men experience declines in energy and muscle as they age is because of testosterone loss.

“Starting in one’s mid-30s, testosterone production begins to wane, and depending on the individual male, noticeable effects include flagging energy, easier weight gain, and more difficulty in losing weight/fat,” explains Annie Eng, CEO of HP Ingredients (Bradenton, FL). She notes that healthy men will typically see a
1% drop in testosterone each year starting at around age 40. For comparison: young men typically have testosterone levels of approximately 1,000 ng/dl, while the average level for an 80-year-old man is about 200 ng/dl.

Symptoms related to age-related testosterone loss include lethargy, loss of vitality, sexual dysfunction, and loss of muscle mass and strength, says Paul Clayton, PhD, chief scientific advisor at Gencor (Austin, TX). While it’s not uncommon for men to experience these symptoms, they can be rather disheartening.

Fortunately, there is medical treatment to help, called testosterone replacement therapy (TRT), but an estimated 87% of men with low testosterone unfortunately do not receive this therapy.1 Despite the use of TRT nearly tripling between 2001 and 2011, making it one of the fastest-growing pharmaceutical product categories, in more recent years the use of testosterone treatment significantly declined between 2013 and 2016.2

While reasons for TRT’s decline are not entirely clear, one possible reason may be the U.S. FDA attributing a potential increase of cardiovascular risk to TRT, with concerns compounded by fears that testosterone therapy may also increase prostate cancer risk. Socioeconomic factors may also play a role, as reimbursement and insurance practices for covering low-testosterone interventions are not often clear, therefore hindering patients from receiving appropriate treatment.

Put all this together, and the fact is that many men are now seeking alternative solutions for their low-testosterone symptoms.

Unfortunately, the demand also creates an opportunity for unscrupulous manufacturers to take advantage of vulnerable consumers. For example, one study evaluated the composition of 50 dietary supplements researchers found through Google using the search term “testosterone supplements,” but only 10% of the products even contained ingredients with data suggesting a negative effect on testosterone.3

No supplement has the authority to make claims to treat or prevent diseases, but certain ingredients have been shown in clinical research to support healthy testosterone levels in men.

Many men’s health ingredients on the market draw from the same ingredient source, but as the companies interviewed in this story explain, some proprietary extracts will have greater efficacy. Fenugreek extract is one example.

“Plain ol’ fenugreek won’t do much,” explains Clayton. “If you have a standardized fenugreek like our Testofen, standardized for a specific matrix of furostanol saponins, however, this will do two things: firstly, the Fenusides®—Gencor’s brand name for its saponin glycosides—displace testosterone from sex hormone–binding globulin (SHBG), thus raising levels of free (active) testosterone in the blood. Secondly, they slow down the action of 5-alpha reductase, thereby reducing the breakdown of testosterone.”

In one randomized controlled trial published in The Aging Male, 120 healthy men between the ages of 43 and 70 were given either placebo or 600 mg/day of Testofen for 2 weeks.4 The primary outcome measured was the score change based on the Aging Males’ Symptoms (AMS) questionnaire, which measures possible androgen deficiency symptoms. The secondary outcomes were sexual function and serum testosterone. Results showed that subjects taking Testofen had a significant decrease in AMS scores over time compared to placebo. The treatment group also saw a significant improvement in sexual function as well as a small but significant increase in serum testosterone, compared to placebo.

The ingredient’s benefits extend beyond symptoms of low testosterone to supporting muscle mass and strength. In a study published in Translational Sports Medicine, 138 male subjects between the age of 25 and 47 years were given either 1) placebo, 2) 300 mg/day of Testofen, or 3) 600 mg/day of Testofen, for eight weeks.5 Researchers measured muscle strength and endurance, functional threshold power, body composition, and sex hormones at baseline, week 4, and week 8. Results showed that while all subjects saw improvements in maximal leg presses, the Testofen-treated groups saw greater improvements compared to placebo. Subjects taking 600 mg of Testofen saw decreases in body mass of 1.2 kg, a 1.4% decrease in body fat, and an increase in lean mass by 1.8% at 8 weeks. This same group also saw increases in testosterone concentrations compared to baseline at 8 weeks.

Another ingredient associated with supporting testosterone levels and physical fitness is Eurycoma longifolia, known as tongkat ali. Like fenugreek, tongkat ali can pervade many different men’s health products, but not all ingredients are created equal. Standardized extracts supported by research offer more transparency and efficacy to the end consumer. For example, HP Ingredients’ tongkat ali extract, LJ100, is well supported by research.

“Studies on humans show that LJ100 supplementation aids in creating a favorable anabolic state (building up) while suppressing catabolic state (breaking down). This enhances performance,” says Eng. She says that, in tandem with exercise, LJ100 supplementation has been shown to increase fat free mass and decrease body fat in subjects, and increase muscle strength and size as well as endurance. “These desired benefits appear to stem from LJ100’s ability to encourage endogenous testosterone production,” she adds.

In one double-blind, placebo-controlled study published in Evidence-Based Complementary and Alternative Medicine, 109 men between the ages of 30 and 55 years were given either 300 mg of LJ100 or placebo for 12 weeks.6 The primary endpoints researchers investigated were quality of life (investigated by the SF-36 questionnaire) and sexual well-being (measured by the International Index of Erectile Function (IIEF) and Sexual Health Questionnaires (SHQ)). Results showed that subjects taking LJ100 saw significant improvements in several domains of the SF-36 questionnaire compared to placebo after 12 weeks. This includes the “physical functioning” (moderate and vigorous activities such as climbing, bending and kneeling, walking, and bathing/dressing) and “vitality” domains. Subjects taking LJ100 also experienced significant improvement in erectile function.

When it comes to physical fitness, tongkat ali may have a significant impact on endurance. For example, a study published in the Journal of the International Society of Sports Nutrition found that supplementation with LJ100 reduced cortisol levels and helped maintain high testosterone levels in cyclists.7 In the study, 30 men were given either placebo...
Men’s Health

Metabolic Health and ED

Major contributing factors to problems such as erectile dysfunction (ED) include metabolic conditions such as diabetes and cardiovascular disease, both of which can contribute to poor blood circulation.

“Erectile dysfunction is very common and impacts about 50% of men over the age of 40,” explains Franziska Weichmann, manager of scientific communications and product development at Horphag Research (Hoboken, NJ). “Men can develop ED at any age, but it is more common as men age. Older men are more likely to develop health conditions such as stress, anxiety, heart disease, and hypertension that are underlying contributors for ED. ED often correlates with other health issues, including stress and lack of sleep, and may be an indicator of a serious underlying condition such as hypertension and diabetes.”

According to Weichmann, Horphag’s French maritime pine bark extract, Pycnogenol, has consistently demonstrated in clinical research to have antioxidant and anti-inflammatory properties as well as the ability to promote nitric oxide production and improve blood circulation. In a recent study published in Bratislava Medical Journal, supplementation with Pycnogenol significantly increased erectile function in subjects with type 2 diabetes. Subjects without diabetes saw a significant increase in erectile function by 22% after three weeks of supplementation with Pycnogenol, but subjects with diabetes saw a 45% increase in erectile function as well as a 20% reduction in total cholesterol, a 21% reduction in LDL-cholesterol, and a 22% reduction in glycemia.

While supplements such as Pycnogenol and Nitrosigine may help manage symptoms such as ED, as they relate to poor blood flow from metabolic diseases, it’s important to emphasize that with a healthy diet and exercise, the risk of cardiovascular disease and diabetes can be significantly reduced. This not only reduces one’s risk of death but also improves one’s quality of life—the major irony being that perhaps more men would take their health seriously from an early age if they knew it could lead to ED later in life.

Enlarged Prostate

A common but insidious condition that men experience is benign prostatic hyperplasia (BPH), which is an enlarged prostate. An enlarged prostate can inhibit the flow of urine through the urethra, which can lead to frequent urination, difficulty urinating, and difficulty fully emptying the bladder. Unfortunately, these symptoms can impact many aspects of one’s quality of life.

“Many men with enlarged prostate experience the need to wake up frequently at night to urinate, and this disrupts a good night’s sleep and can lead to chronic fatigue,” explains Weichmann.

“Poor prostate health can also impact day-to-day life, such as engaging in social functions or attending special events when lack of urinary flow and control requires a man to gauge his comfort level based on proximity to a bathroom,” adds Margaret H. Dohnalek, PhD, chief science officer at Valensa (Eustis, FL).

Chronic fatigue associated with BPH can also impact work performance, and for married men, the constant nighttime trips to the bathroom have the potential to create strain in their marriage.

Drug therapies do exist to treat BPH, but for those who want to explore natural options before pharmaceutical solutions, which can have side effects such as sexual dysfunction, there are a few options. One herb that is commonly associated with supporting prostate health is saw palmetto.

“A high-quality, standardized lipid extract of saw palmetto, known as a lipidosterolic extract, has been shown to address key functional mechanisms associated with urinary flow and control, and support urinary and prostate health,” explains Dohnalek. “A lipidosterolic extract has important fatty acids that are preferentially taken up by prostate cells and influence biological processes that are the root cause associated with prostate enlargement. In addition, the fatty acids in a standardized lipidosterolic extract of saw palmetto also can influence inflammatory processes in the bladder and prostate, which is also an important mechanism associated with lower urinary tract symptoms.”

Emphasizing the importance of standardization, Dohnalek notes that in order for these fatty acids to play a role in supporting lower urinary tract symptoms, they need to be present in a certain ratio and taken at the clinically effective dose. “A standardized lipidosterolic extract of saw palmetto that meets the ‘fingerprint’ of authenticity for fatty acids and phytonutrients is the only saw palmetto prostate health product that has been shown to support men’s urinary and prostate health,” she explains.

A potential bonus benefit to saw palmetto supplementation may be hair health, which can be of particular interest to aging men.

“Clinical research has shown a role for saw palmetto in a common form of hair loss that is seen in both men and women: androgenic alopecia. This is an important area of science where the role of a standardized saw palmetto extract can address another important quality-of-life factor: hair loss and thinning,” says Dohnalek. “Unlike prostate enlargement that typically is seen in men 50 years of age and older, androgenic alopecia can affect young men and women, so the lifetime implications associated with how we view ourselves in younger years is an important emerging role for a standardized lipid extract of saw palmetto in the beauty-from-within category.”

Recently, the French maritime pine bark extract Pycnogenol has also been shown to support prostate health. A study published in Medica Minerva found that supplementation with the extract at a dose of 150 mg/day for 8 weeks by subjects with initial BPH symptoms was associated with significant improvements in BPH symptoms.9 More specifically, subjects saw a 51% reduction in residual bladder volume, a 42% improvement in bladder emptying, a 37% reduction in urination frequency, a 31% improvement in urinary straining, and a 24% improvement in weak flow.

Big Picture

The common theme for this article is “quality of life.” Good health means good quality of life, and that sometimes gets lost in translation when talking about health, nutrition, and supplementation. Consumers can be
shortsighted—particularly men who may choose to live life with a macho “carpe diem” attitude that is also cavalier about their own mortality. However, if they understood that certain decisions they make can negatively impact their ability to live life to the fullest later in life, it may change their tune. This is particularly true when it comes to topics such as ED.

For younger consumers, good health decisions may also be shortsighted and driven by vanity. Therefore, it may be useful for finished-product manufacturers to communicate the long-term benefits of good heart and blood sugar health outside of mortality. For example, Clayton explains that risk factors of prematurely falling testosterone include obesity, chronic stress, alcohol abuse, poor diet, and physical inactivity. All these risk factors are modifiable.

Among older consumers already experiencing symptoms of low testosterone and an enlarged prostate, the benefits of supplementation will take less convincing—but with the many products making claims related to testosterone and sexual health, it’s important to differentiate oneself without making irresponsible claims. The use of standardized extracts backed by clinical research is an important step in the right direction. These ingredients have established safety and efficacy that instill confidence in the consumer and, more importantly, the healthcare professionals they are consulting.

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Sparkling water is on the rise, now with a healthy, functional twist.

BY SEBASTIAN KRAWIEC, EDITOR

As summer approaches and the outdoors presents an opportunity to safely mingle with family and friends (in limited numbers, of course), there is one thing we can expect to find in the cooler besides a frosty brew: a refreshing sparkling water (spiked for adults, alcohol-free for kids and teens). Sparkling water, the artist formerly known as Seltzer, has experienced quite the revival in recent years as more and more products hit the market offering unique flavors and lower calories compared to other soft drinks. What’s driving this surge?

“Marketers deserve a lot of the credit for the sparkling water renaissance,” says Ilana Orlofsky, senior marketing manager for beverage developer Imbibe (Niles, IL). “Seltzer was invented, accidentally, in the mid-1700s, and while some brands maintain the original term, marketers realized that the designation of ‘sparkling’ makes nearly anything feel more sophisticated and premium, even though in this case it’s really just semantics,” she explains. Fast-forward to today, and “many brands have positioned themselves as young, fun, inviting, sexy, and ‘Instagrammable.’ These attributes will remain relevant for years to come and continue to contribute to the growth in this category.”

Besides fun and engaging branding, sparkling waters also need enticing flavors that not only scream refreshment but also stir a sense of adventure. According to Orlofsky, based on Imbibe’s proprietary product database, citrus flavors are the most common sparkling water flavor in 2021 so far—but these are not your run-of-the-mill citrus flavors. “They include both sexier/exotic citrus flavors like blood orange, yuzu, and pomelo, and traditional true-to-fruit profiles like grapefruit and lemon/lime/lemonade,” she explains. “We also expect botanicals—which we define as herbs, spices, and floral flavors—to pick up, as they’re still underrepresented in this space, although not all work as well in a carbonated environment.”

Additional unique and refreshing flavors you can spot in the sparkling water category are ginger, basil, and orange blossom—and the list continues to grow. “Other flavors we expect to pick up in water, still and sparkling, are guava, cucumber, lemongrass, and hibiscus,” adds Orlofsky.

Part of sparkling water’s appeal is the healthy halo around water generally, its ability to hydrate, and low sugar and calorie content. Orlofsky explains that while unsweetened products are common in the water segment, in order to deliver the desirable nutritional and sensory profile, natural, non-nutritive sweeteners are important tools for formulators. Imbibe, for example, offers Pre/Sense stevia, a line of flavor maskers called NonSense, and a clean-label ingredient called SweetSense that accentuates the inherent sweetness of non-nutritive sweeteners.

These tools will be particularly important as formulators increasingly choose to fortify their water and create functional beverages. It’s an area ripe for innovation especially because advancements in nutraceutical ingredients allow for a wider range of dosage formats.

“We have seen an increase in inbound inquiries and projects for enhanced or functional water,” says Orlofsky. “We do expect that because there’s such a strong health halo around water, this will become the platform for experimentation with many of the functionals and nutrients that consumers are after.”

The digestive health category, for example, provides a great deal of opportunity as understanding of the gut microbiome increases and more consumers become aware of the many benefits of having a healthy, balanced gut flora. A variety of innovative functional waters have already come to market fortified with both fiber and probiotics. “For gut health, there’s Hellowater with several fiber-infused SKUs, and Ocean Spray’s B1U line has an ‘I Need Rhythm’ variant with 8 g of corn fiber. The line also has a product fortified with protein, one for immunity, and one for energy,” says Orlofsky. “Karma Water has been a leader in probiotic-rich water and has a line of wellness waters with 110% daily value of seven vitamins. Huzzah, a probiotic seltzer, is a relatively new innovation especially in the non-alcoholic sector for Molson Coors.”

The energy category is also worth looking at as consumers seek healthier ways to get a boost. Natural sources of energy, such as yerba mate, L-theanine, and ginseng, continue to grow in popularity. Caffeine remains popular, and brand owners are recognizing opportunities to provide a healthier delivery vehicle for caffeine. A recent example, Orlofsky notes, is the launch by PepsiCo of Bubly Bounce, a line extension of its Bubly sparkling water, with 35 mg of caffeine.

The functional water market is rich with opportunities. Brand owners can leverage the success of the sparkling water category by building brands and products that evoke the sophistication consumers desire while also providing practical health benefits.
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1. American Psychological Association Survey, 2021

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