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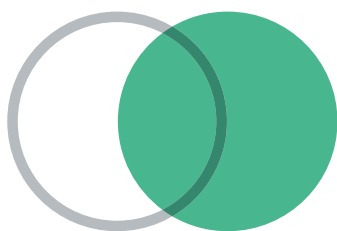
Immunity's rise

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Viewpoint: Immune health an explosive segment for supplement industry

Editor in Chief **Steve Myers** explains our approach to the current immunity claims minefield.



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The proven potential of botanicals in boosting immune health

A host of natural compounds offer a complementary solution to challenged immune systems, writes **Kristen McPhee**, whether they're taken for prevention, symptom management or long-term support.



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Immune health ingredient research drives market vibrancy in 2021

Looking for silver linings to come out of sheltering in place, lockdowns and quarantines? **Joy Choquette** argues that consumers' piqued interest in immune health and immune support products is one shiny spot in dark times.



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Cause and effect: Immunity demand and new innovation

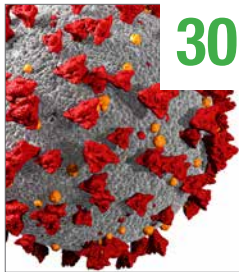
The consumer-driven ascension of immune health support supplements has been met with innovation from formulators and contract manufacturers, Assistant Editor **Duffy Hayes** describes.



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Immune health supplements on Amazon: Tracking elderberry, zinc, vitamins C and D

ClearCut Analytics' **Dan Harari** details Amazon.com top performers in the immunity supplement category, which has seen tremendous growth during COVID-19.



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Immune supplements during COVID-19: High demand, high scrutiny

The surge in consumer purchasing has driven innovation and research, but it also has highlighted the need for careful scrutiny of illegal claims, contends **Susan Hewlings** of Nutrasource/GRAS Associates.



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As awareness of the benefits of immune health in the pandemic age has increased, writes Lief Labs' **Meg Ligot**, so has knowledge and discernment of higher-quality ingredients.

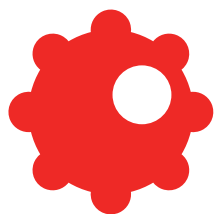


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Launching products in an immune-conscious post-2020 world

The market for immune health is ripe for new products, but PharmaLinea's **Matevž Ambrožič** advocates for communicating specific benefits for specific users based on science and clinical research.

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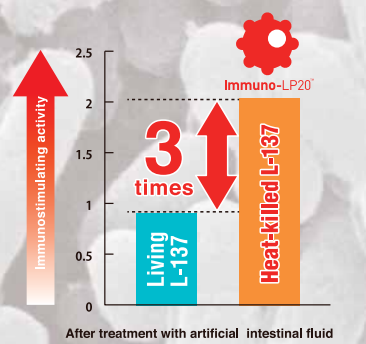
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Immuno-LP20 contains heat-killed *Lactobacillus plantarum* strain L-137(HK L-137). HK L-137 is an Immunobiotic bacteria which promotes immunity.



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- ⚙️ High immunostimulatory potential
- ⚙️ Easy handling and wide application
- ⚙️ Proven ability with small dosage
- ⚙️ No taste, smell and color



What

⚙️ What are the “Immunobiotics”?

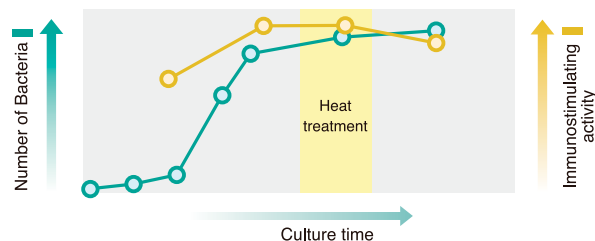
Immunobiotics are the microbes which promote immune system through activation of gut immunity.

	Immunobiotics	Probiotics
Key advantage	Immunomodulating property	Regulation of the intestinal functions

Why

⚙️ Why heat-killed ?

It promotes the immune functions more strongly by heat-treatment.



Biosci Biotechnol Biochem 76: 918-922, 2012

Easy

⚙️ Various applications

Immuno-LP20 can be easily added to a wide variety of foods and supplements.



House Wellness Foods Corporation

Immune health an explosive segment for supplement industry



When putting together this immune health issue, we noticed many articles came in with variations of the words “prevent,” “treat” and “cure,” and/or mentioned disease states such as cold, virus and chronic inflammation. As responsible members of the natural products industry know well, these words and phrases are on FDA’s naughty list and have been the focus of or contributed to warning letters sent by the agency to companies for making claims that cannot be used for dietary supplements.

Of course, immune health is a minefield for this industry, and the ongoing COVID pandemic has seen more than its share of illegal claims, as did Ebola and swine flu years ago. Knowing this, we asked our frequent collaborators at Nutrasource to focus their article on immune claims, which you can read on [page 30](#). Still, we worried this magazine would be saying one thing (“No illegal immune claims!”) on one page, while allowing no-no words and claims on other pages.

As third-party literature, we are free to discuss market data, trends and clinical research about ingredients and diseases. In fact, we find such research often informs readers about an ingredient’s mechanism(s) of action relative to various categories of health (immune, cognitive, digestive, etc.). Further, consumers are free to purchase a dietary supplement or food product for any purpose, and it is valuable for brands to know why consumers are buying certain products. Supplement brands may recognize that many consumers are buying elderberry with the intention to help stave off viral infections such as the common cold and even COVID; they may even formulate dietary supplements with dosages reflecting studies on disease-related endpoints. But these products can’t be marketed as such.

Ultimately, responsible companies in this industry engage the services of regulatory and legal consultants, including attorneys experienced in FDA’s oversight of dietary supplements and foods. Ideally, all communications—including social media—should be run through this important filter.

This special digital issue on immune health, which is the hottest category in health during this pandemic, is packed with great information. Our hope is for brands and others to use this information to develop and deliver better products to the growing natural products consumer base. However, we also want the industry to improve its reputation and avoid the negative media attention that can whip up over noncompliance such as with illegal immune claims. We will continue to do our part.

Healthily yours,

Steve Myers
Editor in Chief

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GnosisByLesaffre.com



The proven potential of botanicals in boosting immune health

by Kristen McPhee



A healthy immune system is paramount for living one's best life. A strong immune system exists in surveillance mode, identifying and eliminating pathogens when they arise without any signs or symptoms of sickness appearing.

This first-line of defense is referred to as the innate immune system response. When a pathogen continues to proliferate, the immune system responds by replicating and activating immune cells, including secreting inflammatory cytokines.¹ This temporary inflammatory state is part of a healthy “adaptive” immune response and is essential to pathogen elimination. Once the pathogen is successfully eliminated, the immune system returns to surveillance mode and the inflammation subsides.

However, an unhealthy chronic inflammatory state develops when the immune system cannot return to surveillance mode due to a weakened or prolonged threat to the immune system. Many diseases are associated with a weakened immune system and chronic inflammation, including atherosclerosis, arthritis, cancer, diabetes, hyperglycemia, metabolic syndrome, obesity and prediabetes.¹

Certainly, adopting a healthier lifestyle, including diet and exercise, is fundamental to good health and the prevention and management of many diseases. In addition, mounting scientific evidence has evaluated the potential of various botanicals for immune health, often validating traditional uses in the process.

Andrographis (*Andrographis paniculata*) is a bitter ayurvedic herb traditionally used to reduce symptoms of upper respiratory tract infections (URTIs) and colds.² In fact, a 2017 systematic review and meta-analysis of 33 randomized controlled clinical trials concluded andrographis significantly improved these symptoms.³ In one randomized, double-blind, placebo-controlled clinical study, andrographis (as AP-Bio from AIDP) reduced URTI symptoms by 52.7% compared to placebo after five days of supplementation with a 200 mg daily dose.⁴ Earlier preclinical studies showed that the mechanisms of action involve stimulating immune cells, or phagocytosis, and inhibiting inflammatory mediators in cases where a weakened immune system has compromised a healthy inflammatory response.^{5,6}



A 2019 meta-analysis of four randomized controlled clinical trials found that black elderberry (*Sambucus nigra*) supplementation was effective in substantially reducing upper respiratory symptom severity and total duration, particularly when used at the onset.⁷ A greater reduction of symptoms was seen in individuals with the flu compared to those with the common cold. These findings support elderberry's traditional uses and earlier preclinical studies. According to Melanie Bush, director of science, Artemis International, “Mechanistic studies have identified the ability of black elderberry actives to inhibit the attachment of influenza hemagglutinin glycoproteins to host cells,⁸ as

well as interfere with the release of viral particles from host cells via influenza neuraminidase enzymes⁹ ... high-molecular-weight polysaccharides in black elderberry help to mount an immune response by increasing virus-neutralizing antibodies.”^{10,11}



Aged garlic (*Allium sativum*) extract involves soaking the sliced cloves in an aqueous ethanol solution for up to 20 months. Two randomized, double-blind, placebo-controlled clinical trials showed that 2.56 g per day of aged garlic extract enhanced immune cell function by significantly increasing natural killer (NK) and gamma delta T cells, lymphocytes involved in innate and adaptive immunity, and significantly reducing cold and flu symptoms in healthy subjects after three months.^{12,13} More recently, 3.6 g per day of aged garlic extract reduced obesity-associated chronic inflammation in 51 healthy adults by reducing inflammatory cytokines and modulating the aforementioned lymphocytes (NK and gamma delta T cells) after six weeks.¹ Altogether, these findings suggest that aged garlic extract supports immune health, including cold and flu recovery, at least in part by reducing chronic inflammation.

Preclinical studies have shed light on the mechanisms of olive leaf's (*Olea europaea*) traditional use in lowering fever while further validating its antiviral potential for combating the flu.¹⁴ Olive leaf extract (as Isenolic from Pharmactive Biotech Products) was as effective as the standard pharmaceutical treatment, oseltamivir, in inhibiting the influenza A virus in vitro, with 65% inhibition. Similar to black elderberry, the mechanisms involve inhibiting the neuraminidase enzyme, which ultimately prevents the virus from spreading.

Another olive leaf extract (as Olivactive from Pharmactive Biotech Products) inhibited alpha-glucosidase and alpha-amylase enzymatic activities in vitro, showing its candidacy in balancing glucose levels.¹⁵ This is key to immune health since elevated glucose places individuals at a higher risk of infection.¹⁶ Antioxidants, specifically bioflavonoids, present in olive leaf are thought to play a role.¹⁵

Aligned with olive leaf, citrus flavonoids (as Eriomin from Ingredients by Nature) significantly improved glucose tolerance in 103 prediabetic individuals after 12 weeks in a randomized, double-blind, placebo-controlled clinical trial.¹⁷ Other research has shown that high blood sugar decreases the function of white blood cells and NK cells, both critical to immune health.¹⁸ Further, Eriomin reduced systemic inflammation by reducing multiple inflammatory cytokines.¹⁷



Mark Blumenthal's top 10 botanicals for immunity and vitality – podcast

The American Botanical Council (ABC) founder identifies the botanicals that are key for vitality and immune health.

naturalproductsinsider.com/herbs-botanicals/mark-blumenthals-top-10-botanicals-immunity-and-vitality-podcast



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Sevanti Mehta, president of Unibar Corp., pointed to the potential of nutrient-rich maitake mushrooms (*Grifola frondosa*). “What sets them apart from other antioxidant-rich natural ingredients is that they are a unique source of 1,3-1,6 beta-glucans, powerful compounds for immune support,” he stated.

In one clinical study, a maitake 1,3-1,6 beta-glucan-rich extract (3 mg/kg twice daily) demonstrated immune health benefits by significantly increasing neutrophil and monocyte function in 18 subjects with cancer after 12 weeks.¹⁹ A similar maitake preparation showed immunomodulatory effects in 34 postmenopausal women recovering from breast cancer treatment, in part by increasing interleukin (IL)-10 anti-inflammatory cytokine production.²⁰ These findings suggest that maitake may reduce systemic inflammation when a chronic infection, autoimmune state or allergy is present.

Turkey tail (*Trametes versicolor*) is another mushroom of interest for enhancing innate and adaptive immune responses. To understand its unique immunological properties, a 2019 study evaluated the mycelium and the fermented rice flour-based substrate on which it grew, using human peripheral blood mononuclear cells.²¹ Since the fermented substrate is often consumed with the fungal mycelium, it is pertinent to understand the immune health benefits of both.

“Our team found that Turkey tail mycelium had a greater effect on CD69 activation [an early activation marker involved in NK cell function] in lymphocytes and monocytes. The fermented substrate only demonstrated a minor effect on CD69 activation, but had a stronger impact on the induction of several cytokines (including modulatory cytokines, IL-10 and IL-1ra),” concluded Renee Davis, research and development (R&D) director of Fungi Perfecti LLC. Also, both the insoluble beta-glucans and water-soluble components of Turkey tail showed immune-activating effects. Although additional studies are needed, the results suggested the immune health effects of Turkey tail are associated with the whole mycelium and the fermented substrate.

AstraReal astaxanthin is a carotenoid from the alga *Haematococcus pluvialis* that has been shown to support robust immune health through several mechanisms in a number of human and preclinical studies. In one randomized, double-blind, placebo-controlled clinical trial, 8 mg of astaxanthin improved both adaptive and innate immune functions by significantly increasing B and T lymphocyte proliferation and NK cell activity, respectively, after eight weeks in healthy college students.²² In the same study, anti-inflammatory and antioxidant effects were shown by significantly decreasing the chronic inflammation marker CRP, and the DNA oxidative stress marker 8-OHdG, with a 2-mg dose.

Tinofend (from Verdure Sciences), a *Tinospora cordifolia* extract, showed potential for supporting immune health associated with histamine in two randomized, double-blind, placebo-controlled trials. One 300-mg capsule administered three times daily significantly decreased allergic rhinitis

symptoms in as early as 15 days in 75 adults.²³ Tinofend supports the immune system and combats allergic rhinitis symptoms primarily by stimulating white blood cell activity and reducing eosinophil count, or immune cells which release histamine.²⁴

Although Tinofend has benefits to immune health specifically associated with histamine, Verdure Sciences' Kristen Marshall, marketing, noted "the complexity of the immune system, as well as adaptive and innate responses, challenges the notion that one product or nutritional component will offer the required support for all immune related concerns." As such, Verdure offers additional botanical ingredients like WokVel, a *Boswellia serrata* extract, to use in tandem for robust immune support.

These are but a handful of botanicals offering a complementary solution to a challenged immune system in both healthy and immunocompromised individuals, whether for prevention, symptom management or long-term support. ✨

Kristen McPhee (forwardbotanicals.com) is a published writer and experienced substantiation researcher and technical writing consultant. She is regularly contracted by dietary supplement and raw ingredient supply companies to deliver qualitative documents and comprehensive reports that contribute to product development and marketing content.

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Immune health ingredient research drives market vibrancy in 2021

by Joy Choquette



At perhaps no other time in history has immune health been of such importance to so many people. With the outbreak of COVID-19 and the length of time the pandemic has lasted, individuals around the world are looking for ways to support and strengthen their immune systems.

Silver linings can be hard to find during sheltering in place, lockdowns and quarantines—when stress levels and fears about at-risk friends and family members run high. If one could be found, perhaps it is the new awareness of many individuals regarding their health and how to better support it. Immune health, in particular, is key to overall health, a fact that more people are learning.

Immune health: Fixed or flexible?

“There is no such thing as being ‘stuck with a bad immune system,’” said Mark Menolascino, M.D., medical advisor at MitoQ. “We know that lifestyle choices greatly impact the strength and vitality of your immune system.”

Menolascino pointed to things like nutrition, getting enough sleep, social supports and body movement as key elements of a healthy life. However, even with the best preventive measures, most people get colds, flu viruses and other minor illnesses. “You will hear people say, ‘I never get sick, so my immune system is great.’ This actually concerns me,” Menolascino shared. “It is just impossible to avoid the germs in our world, and we want the immune system to respond; if your immune system doesn’t respond—ever—then maybe it is not as dynamic as it should be.”

Similar to the way some children are encouraged to get dirty by playing in clean soils with friends, Menolascino explained, adults should also experience a degree of germ exposure to help keep the immune system strong and functioning well. “We know that there is literally no aspect of your health that is set at birth,” Menolascino stated. He noted that while some genetic disorders (such as Down syndrome) are fixed, most illnesses are chronic disease illnesses largely affected by lifestyle choices.

That said, certain disorders or deficiencies may contribute to one’s overall immune health. Menolascino noted people with weakened immune systems due to age—either the elderly or younger children—or those who suffer from autoimmune disorders, cancer, diabetes, heart and lung disorders, and other issues, need to be extra vigilant in order to protect their more delicate systems.

Niklas Larsson, Ph.D., research director at Probi AB, shared similar beliefs as Menolascino regarding immune health. “The complexity and severity of the area will always require the use of current and new drugs, but innovative research on other ingredients is opening opportunities for complementary approaches,” he said. “We are still learning about the importance of all the human microbiotas [such as in the gut, skin, mouth, vagina, etc.], and we are optimistic and confident that new probiotic strains will continue to be isolated, identified and proven to support our health.”

Trends in immune health products

Shinji Murosaki, research advisor at House Wellness Foods Corp., mentioned inflammation as a chronic condition associated with many issues such as heart disease, cancer, diabetes, mellitus, liver disease and neurodegenerative conditions. “Low-grade chronic inflammation is also known to impair normal immune function and increase susceptibility to infections,” he said.

A heat-killed (HK) *Lactobacillus plantarum* strain, HK L-137, is one such probiotic. “HK L-137 has been shown to have beneficial effects on liver inflammation in humans, in addition to its immune-enhancing property,” Murosaki stated.¹ He suggested the ingredient could be helpful for elderly consumers, who often battle inflammation that could be contributing to decreased immune function.²

Julie Lemahieu, wellness and immune health market manager for Gnosis by Lesaffre, pointed to the hectic pace of life as an important part of the immune health equation. “The stress and fatigue of modern life can weaken our natural defenses,” she said. “Because of this, consumers are now aware that optimizing their immune system is key to staying healthy and optimizing their performance every day.”

Lemahieu stated the company’s LifeinU BSCU1, which contains a patented strain of *Bacillus subtilis*, may have potential for immune health formulations. She referred to it as “one of the most stable probiotics on the market,” making it suitable for both dietary supplements and functional foods like sport powders, cereals or bars.

“The efficacy of LifeinU BSCU1 is supported by a clinical study conducted for four months with a dosage of 2x10⁹ CFUs [colony forming units] of LifeinU BSCU1,” she said.³ “During this study, the marker analyzed the level of secretory immunoglobulins A (sIgA), which are antibodies of the immune system secreted by the mucosal surfaces.” The probiotic strain, she explained, works by significantly increasing sIgA in the intestine and saliva, and strengthening natural defenses to fight infections. “LifeinU BSCU1 supplementation is associated with a 31% reduction of the relative risk to report an infectious episode,” she added.

The elderly and young children aren’t the only populations looking for an immune support boost. Millennials and middle-aged individuals, some of whom do strenuous exercise on a regular basis, are also looking to bump up their immune health. Likewise, individuals who are dealing with more than one health condition—such as diabetes and asthma, or heart disease and liver problems—often seek ways to improve their immune status. Supporting this complicated system is essential, and several fundamental ingredients can play important roles.



Jeff Bland gets big and bold about immune health – podcast

Insider Senior Editor Todd Runestad rethinks the future of nutrition with Jeffrey Bland, Ph.D., founder of the Personalized Lifestyle Medicine Institute and president of Big Bold Health.

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Key ingredients in immune health

Probiotics

A review published in the journal *Current Opinion in Gastroenterology* noted, “The beneficial effects of probiotics have been demonstrated in many diseases.⁴ One of the major mechanisms of probiotic action is through the regulation of host immune response.” Although further research on this relationship is needed, the article concluded, “Probiotics may provide novel approaches for both disease prevention and treatment.”

Vitamin C

“Vitamin C helps to mature and activate T-cells,⁵ leading to increased numbers and functional capacity of natural killer (NK) cells with optimal viral immune response,”⁶ Menolascino said. He added vitamin C has been “clinically shown to prevent and treat systemic and respiratory infection in several clinical trials.”⁷

Vitamin D

Potential links between an individual’s immune health and their vitamin D levels are being studied. Information on [Harvard’s School of Public Health](#) website noted one such positive correlation. A randomized controlled trial in Japan tested whether taking a vitamin D supplement would prevent seasonal flu.⁸ The results of the study were encouraging; children who took vitamin D supplements were 40% less likely to experience the seasonal flu than those who didn’t.

According to the article “[Understanding the Role of Nutrients in Human Immune Response Metrics](#)” from Natural Alternatives International (NAI), significant research has been done on vitamin D and immune function. Co-author and NAI CEO Mark A. LeDoux wrote most immune cells express vitamin D receptor and some can produce 1-alpha-hydroxylase (an enzyme that enables vitamin D conversion to its active form).

“The result of this unique situation is both systemic and locally generated vitamin D in a biologically active form can act on VDR [vitamin D receptor] expressed by immune cells in endocrine, paracrine and autocrine manners,” the article explained. The authors noted vitamin D has shown a great impact on immune cells in both the innate and adaptive immune system, as well as the antigen-presenting cells that link both arms of immunity.⁹

Zinc

The relationship between immune health and zinc is interesting. One study comparing zinc-deficient individuals with those who had proper levels of zinc stated, “Zinc is a potent mediator of host resistance to infection.”¹⁰ The researchers went on to mention that zinc affects multiple areas of immune health, from the barrier of the skin to gene regulation.

Colostrum

According to a 2018 review published in *Frontiers in Nutrition*, “It was first shown in the 1960s that bovine colostrum immunoglobulins protected calves against gastrointestinal [GI] bacterial and viral infections.”¹¹ That discovery led to human clinical studies, a large number of which the review noted “have now shown efficacy of bovine immunoglobulins in preventing natural infection in humans as well as in animal infection models.”

Yeast and beta-glucans

Beta-glucans and yeasts—often found in foods like shiitake mushrooms, cereals and baker’s yeast—are proving useful in supporting a healthy immune system. A 2021 study from *Molecular Nutrition & Food Research* concluded, “There is emerging evidence that dietary components, including yeast-derived beta-glucans, can aid host defense against pathogens by modulating inflammatory and antimicrobial activity of neutrophils and macrophages.”¹²

Omega-3s

A 2019 review noted that a healthy and balanced diet is important to help support the immune system—calling out the benefits of omega-3s specifically.¹³ It elaborated, “The impact of dietary polyunsaturated fatty acids (PUFAs) on the immune system has been investigated for decades, with special focus on the omega-3 PUFAs alpha-linolenic acid (ALA), eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA)... Both omega-3 and omega-6-derived metabolites have important immune-regulatory functions.”

Hopeful new human clinical research

While more information is available to consumers than ever before, the sheer amount of it—some of which is difficult to translate into laymen’s terms—can quickly become overwhelming. Still, many individuals are seeking alternatives to traditional medications and therapies, particularly products offering scientific support to back their claims.

According to the proprietary “Kerry Global Consumer Survey – Digestive & Immune Health, 2019,” individuals are significantly more likely (39%, on average) to purchase a health-promoting product if it’s based on research or clinical studies. That number was slightly higher at 40% in Asian countries.

Larsson and the team at Probi AB are strong supporters of science-backed ingredients. “We have been developing strain-specific probiotics for the last 30 years,” he said, “and although the science still is emerging, there is a clear link between the intestinal microbiota, specific probiotics and immune health.” Larsson pointed to one study he said indicated “a combination of the probiotic strains *L. plantarum* HEAL9 and *L. paracasei*



8700:2 can support the immune system, thereby reducing the incidence of common colds, as well as alleviating common cold symptoms and shortening common cold episodes.”¹⁴

Murosaki said House Wellness Foods Corp.’s product Immuno-LP20, which contains HK L-137, may offer a stimulating effect on the immune system by improving inflammation and lipid metabolism in subjects at risk of inflammation.¹

Menolascino mentioned two murine studies using MitoQ, an enhanced version of CoQ10, for its antioxidant properties.^{15,16} He added, this type of ingredient helps “give the immune system its best chance to have the oxidative firepower to help the immune system do its job.”

Outlook for immune health products

Larsson asserted, “There is a growing interest among people to improve/support their immune health.” As such, for 2021 and beyond, the outlook for immune health products is strong.

Larsson concurred, stating, “Immune health research is of global interest, not only for infectious diseases, but also for ‘lifestyle’ disorders.” ♦



Content writing and journalism are high on the list of Joy Choquette’s interests. Writing professionally for the past 12 years, her work has appeared in national magazines, regional newspapers, and on lots and lots of websites. She specializes in health and wellness, business, and environmental topics. Learn more by visiting her [website](#) or find her on [LinkedIn](#).

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Cause and effect: Immunity demand and new innovation

The consumer-driven ascension of immune health support supplements, and the industry's inventive response

by Duffy Hayes

The pandemic-propelled explosion of the immune health category has been met with a bevy of fresh supplement SKUs and ingredient offerings, to meet incredible new demand.

But, alas, it would be a mistake to confuse popularity with effectiveness. Quality-focused brands and ingredient companies are creating innovative, efficacious immunity products that embrace novel delivery formats and unique combinations of proven vitamins and botanicals.

And the category is stronger for it.

Ingredients on fire, delivery on point

It's likely no ingredient resonated with supplement buyers during the pandemic as much as elderberry, as brands raced to secure ever-more-scarce supply of the red-hot botanical.

Formulation innovator Cymbiotika approached the powerhouse ingredient in a number of ways, according to company founder Chervin Jafarieh, starting with utilizing a freeze-dried version of organic elderberry juice.

"Unlike syrups, concentrates and powder extracts that require excessive heat in processing, with freeze drying, we can preserve more of the medicinal properties of this powerful plant," Jafarieh said.

The brand also touts bioavailability advantages by incorporating liposomal delivery technology.

"Simply put, we encase the nutrients inside of phospholipids (healthy fats). These fats protect the nutrients as they bypass the digestion process and make their way into the large intestine, fully intact. This provides maximum absorption to the cellular level," he wrote in an email.^{1,2,3}

Vitamin C has always been the consumer go-to when it comes to boosting immunity, and it's no different in the current pandemic-based buying environment.

Innovation in delivery of vitamin C is the hallmark of another original product, Neuro-C from BrainMD, which also leans on liposomal delivery.

"Vitamin C is essential not only for immunity but for brain health. Vitamin C is more highly concentrated in the brain than the other organs, and it is an essential requirement for the various brain enzymes that make the vital neurotransmitters dopamine and norepinephrine,⁴ as well as peptide hormones



and the myelin electrical insulation for nerve cells,⁵” explained Parris Kidd, Ph.D., chief science officer and director of quality at BrainMD.

“On the other hand, it’s not easy to supply the brain with vitamin C. Taken by mouth, it isn’t always well absorbed,” Kidd continued. Enter liposomes, whose exterior shell composition enables docking with the outer membranes of intestinal lining cells, enabling easier transmission into the bloodstream,⁶ as Kidd described.

“Unlike many nutritional ingredients that claim to be liposomal, Neuro-C contains actual liposomes,” said Jim Springer, BrainMD’s general manager. “Powerful microscopes were needed to verify that the technology produced authentic liposomes, and absorption studies were done with human volunteers to document that Neuro-C raised vitamin C blood levels higher than achievable using non-liposomal vitamin C.”⁷

Cymbiotika leans on micelle delivery technology in another of its immune plays, a supplement combining CoQ10 with vitamins D3 and K2. Through micelle delivery, nutrients are encased within a fat, protected throughout the process of digestion, and can then be absorbed through the large intestines.⁸

“You are what you eat. Better yet, you are what you absorb,” Jafarieh quipped.

While ingredients like elderberry, zinc and vitamins C and D have won the lion’s share of recent attention, the complexity of the body’s immune response system means many compounds are in play for supplement makers looking to dent the burgeoning market.

On the leading edge of immune innovation

The rash of immunity demand also has led formulators and product developers to think about immune system support in new ways.

○ Beyond “boosting” the immune system, HTB Rejuvenate powder from Big Bold Health aims to refresh the systems of the body that help overcome stress, lack of sleep and low vitality. Its backbone ingredient is an ancient one: Himalayan Tartary buckwheat (*Fagopyrum tataricum*), which the company says contains unique nutrient characteristics, including health-promoting phytochemicals. The formulation also includes pea and rice protein, and the flavonoids rutin, quercetin, hesperidin, luteolin and diosmin.

○ Bacteria don’t necessarily need to be alive to be effective. That’s where paraprobiotics (“dead” or “ghost” probiotics) enter the immune health picture, connecting the IMMUSE ingredient from Kyowa Hakko USA with immune system support. The company reported multiple human trials and more than two dozen published papers support the finding that the ingredient’s *Lactococcus lactis* strain plasma directly activate plasmacytoid dendritic cells (pDC),^{1,2,3} a critical subset of the immune support system.

○ Perhaps there’s immune system magic in psilocybe mushrooms. It’s at least being investigated.

“Functional mushrooms have long been used for their immunomodulating properties,” explained Ivan Casselman, Ph.D., chief psychedelic officer at Havn Life, the biotechnology company that’s root-deep in the research and development (R&D) of psychopharmacological products from plants and fungi.

“Our team is developing a study that looks at the relationship between psychedelics and the immune system to determine if a single dose of psilocybin extract can influence the body’s inflammatory response,” Casselman said.

○ Can we measure the health of our immune system? Specialized testing from OmegaQuant Analytics, specifically its Vitamin D Test and Omega-3 Index, could narrow the focus.

“Higher vitamin D blood levels are related to having less upper respiratory infections,⁴ and a higher Omega-3 Index is related to improved inflammatory status⁵ as well as overall longevity and wellness,⁶” explained Becky Wright, vice president of marketing at OmegaQuant.

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“It’s important to recognize that the immune system is exactly that—a system, not a single entity— perhaps the single most important and complex system in the body,” described Mike Uckele, CEO of Uckele Health & Nutrition. “The immune system has many different pathways consisting of organs, glands, lymphatics, specialized white blood cells and antibodies. Each has a different responsibility, but they all function together.”

The breadth of ingredients is notable in Uckele’s VRL-Shield, a blend of 11 herbs, amino acids and trace minerals that includes selenium, N-acetylcysteine (NAC) and the plant extracts astragalus and milk thistle (*Silybum marianum*).

Further, Uckele’s Glycophagen product targets immune issues stemming from the gastrointestinal (GI) tract and includes *Lactobacillus* and *Bifidobacterium* probiotics; the prebiotics mannanoligosaccharides (MOS), fructooligosaccharides and arabinogalactan; bioactive whey protein; and beta-glucans.

Indeed, the links between probiotic use and immune support are still emerging and encouraging, and often are being marketed in children’s products.

IFF, formerly DuPont Nutrition & Biosciences, as an example, promotes a study in which kids received 30-day doses of the company’s HOWARU Protect probiotic ingredient (which contains patented *Lactobacillus acidophilus* and *Bifidobacterium animalis* strains).⁹ The children saw beneficial change in immune marker levels related to cytokines and peripheral blood monocyctic cells (PBMcs), and a resultant anti-inflammatory effect.

Daily boosts, convenient formats

One of the outgrowths of pandemic buying as it relates to immune health is consumer desire to make immune system support more of a regular ritual, and less dependent on seasonality, as was previously the case. In that vein, products that provide daily immune support across numerous delivery formats have found their lane.

Daily ritual as it relates to immunity is the impetus behind some trendy “shot” products, which combine convenience with powerful formulation.

“Wellness shots are an easy way to incorporate important vitamins, nutrients and probiotics into your everyday routine without needing to consume a large quantity of liquids or swallow a bunch of pills,” suggested Rita Katona, co-founder and board chair of shot maker So Good So You.

The brand’s first immunity-centric product, Immunity Powered by Ginger, includes 1 billion colony-forming units (CFUs) of GanedenBC30 probiotic, which is naturally protected in the stomach due to its spore-forming nature. For 2021, the company’s proposed lineup of immune support shots is expanding to include more functional ingredients—Immunity Powered by Elderberry, to neutralize free radicals;¹⁰ Immunity Powered by Camu, which includes an additional vitamin D punch via plant-based vitamin D3; and Immunity Powered by Turmeric [*Curcuma longa*], which incorporates cinnamon to support curcumin absorption, according to the company.



“It’s important to recognize that the immune system is exactly that—a system, not a single entity—perhaps the single most important and complex system in the body.”

Mike Uckele, CEO of Uckele Health & Nutrition

Vive Organic is another player in the daily shot category and focuses on formulations with functional ingredients like ginger (*Zingiber officinale*), turmeric, echinacea and elderberry, in their most potent, non-powdered form, explained Monse Cruz, brand manager for Vive.

“Many of these ingredients can be hard to find in fresh formats, and not an easy or enjoyable routine,” Cruz described. “Vive’s mission is to spark the holistic wellness journey and make it accessible to all. The shot is easy to grab and go and is full of fresh functions with no additives.”

Also on the regular-routine trend are Daily Immunity Packs from Zuma Nutrition, a tailored formulation of nutrients and compounds aimed at this newly energized consumer segment.

“The immune system doesn’t just show up for work each day. Just like the other systems in the body, the immune system requires a lot of daily support in order for it to function efficiently,” contended Jordan Dorn, Zuma Nutrition co-founder.

The nutrient-rich packs are a blend that includes organic tapioca-based vitamin C, a co-enzyme vitamin B formula, a therapeutic extract of ellagic acid, monolaurin from lauric acid found in coconut milk, and R-isomer alpha-lipoic acid.

If anything, the surge in immune health demand has led to product development across a wide range of delivery formats. Natrol’s line of immunity products is but one example of that. “People are looking to avoid pill fatigue, which is why we came up with a dissolvable powder and a gummy, a consumer-preferred form,” said Harel Shapira, head of marketing at Natrol.

The on-the-go Immune-Biotic stick pack Shapira mentioned is a gut-centric approach to immune health, containing the prebiotic PreforPro and the probiotic *Bacillus subtilis* DE 111 in a powder mix. Natrol’s Elderberry Gummies are a combination of elderberry fruit extract, vitamin C and zinc, and the brand’s Easy-C Tablets are made with stomach-friendly esterified vitamin C and contain added bioflavonoids. The line fits a trend: multiple formats for an eager consumer market, regardless of delivery type.

Offering immune support products across multiple delivery formats is a widely held strategy in the current market, and many contract manufacturers are embracing the variety in demand.

With the immune system support surge, SIRIO Nutrition has noticed an uptick in demand for gummies, softgels, chewables and effervescent tablets, noted Karla Acevedo, key account manager. The company’s capabilities when it comes to immune support format include gummies, softgels (under the VeggieSoft label), capsules, tablets, powders and functional beverages, she said.





“One of the key considerations is the suitability of the delivery format for the target consumer. Gummies are convenient and provide a pleasant experience for consumers when formulated correctly, (and) children particularly enjoy them,” Acevedo explained. “Another consideration is the desired volume of ingredients a customer wants in a single dose for their immune support product. Softgels, tablets and powders are a good solution for customers that want to pack large amounts of materials in a single dose.”

Colombia-based contract manufacturer Procaps is promoting new gummy formats aimed at the immune support category, according to Rosella Del Vecchio, marketing director for the company’s Softigel line. Procaps’ Chewgels and Funtrition gummies aim to improve the experience of taking vitamins, minerals, supplements and other bioactive compounds, Del Vecchio said, and are a perfect match for immune support products.

“Chewable soft capsules and gummies are soft, easy-to-swallow dosage forms that do not stick to the teeth nor leave any residues in the mouth. They offer a fast-oral release, taste masking and convenience,” she described.

Procaps’ unique Unigel format—a tablet, softgel or hard capsule is included inside a soft gelatin capsule—could meet demand for new combination ingredients that target immune system support. Del Vecchio referenced combinations of vitamin D with ingredients such as B complex, *Rhodiola rosea*, peppermint (*Mentha piperita*) and acerola (*Malpighia emarginata*), or even high-concentration omega-3 eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) plus vitamin D3 in the liquid phase and vitamin C plus zinc in the inner tablet, as new options.

“The possibility of having a liquid and solid phase in the same product allows us to combine ingredients that were previously incompatible in other conventional formats, or combinations that were not even thinkable in bringing them together in one product,” she said.

It’s new thinking about format, to meet new demand, and is emblematic of the many innovations happening across the immune health category. ✨

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Immune health supplements on Amazon: Tracking elderberry, zinc, vitamins C and D

by Dan Harari



The “Immunity Supplement” category saw tremendous growth on Amazon over the last two years, posting an astonishing 165% growth rate from 2019 to 2020 to reach US\$623 million in 2020 revenue. This was in large part due to the pandemic.

Immune support supplements saw a very sharp increase during the initial months of the pandemic, followed by a sharp correction, and then leveling off in the summer months. This is in line with the usual performance of immune-related products—which are quite seasonal, declining in the summer months. However, since the correction, the category as a whole bounced back, and after a low point in August 2020, has seen month-over-month increases every month since. The category revenue for December 2020 was more than 2.5 times that of December 2019.

The supplement with the highest market share among immune health supplements was vitamin C, which saw 155% growth in the same period. Zinc, on the other hand, had the lowest market share at 11.5%, but this was more than double its market share in 2019, which was only 5.6%. This represents an incredible 442% growth year over year.

As the category with the most growth by far among immune-related supplements, zinc offered some interesting analytics. The top 30 brands in the category accounted for 75% of the category’s revenue. Of these 30, nine of them had no sales in the zinc category in 2019. When it came to delivery methods within zinc, tablets overtook capsules as the top delivery method based on 2020 revenue. The third-ranked delivery method in 2020 was liquid, which saw growth of seven times year over year from 2019 to 2020.

Looking at delivery method among immune-boosting supplements as a whole, capsules remained the top-selling delivery method; however, their growth was overshadowed by that of gummies and tablets, which saw 206% and 212% growth year over year, respectively.



Amazon top 5 immune supplements

ASIN	Brand	Product
	Nature's Way	Sambucus Black Elderberry Gummies with Vitamin C and Zinc (60 gummies)
	NatureWise	Vitamin D3 5000iu (125 mcg) (360 mini softgels)
	Sports Research	Vitamin D3 (5000iu/125mcg) Infused with Coconut Oil (360 mini liquid softgels)
	Dakota	Elderberry Gummies with Zinc, Vitamin C (2 pack)
	Nature's Bounty	Zinc 50 mg Caplets (100 count)

In 2020, the top 10 brands saw their market share diminish slightly within the immune supplements category. The top 10 brands went from over 42% market share to just below 41% market share. The distribution of revenue within the category stayed relatively steady, with 38 brands having more than half a percent in market share (compared to 40 in 2019).

In terms of top products, a marked increase occurred in the number of high-selling products from 2019 to 2020. In 2019, only 36 products had more than \$1 million in annual sales—in 2020, that number spiked to 132. ♦



Dan Harari is vice president of business development for [ClearCut Analytics](#), a retail analytics company and e-commerce services provider based in Chicago.

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Immune supplements during COVID-19: High demand, high scrutiny

by Susan J. Hewlings



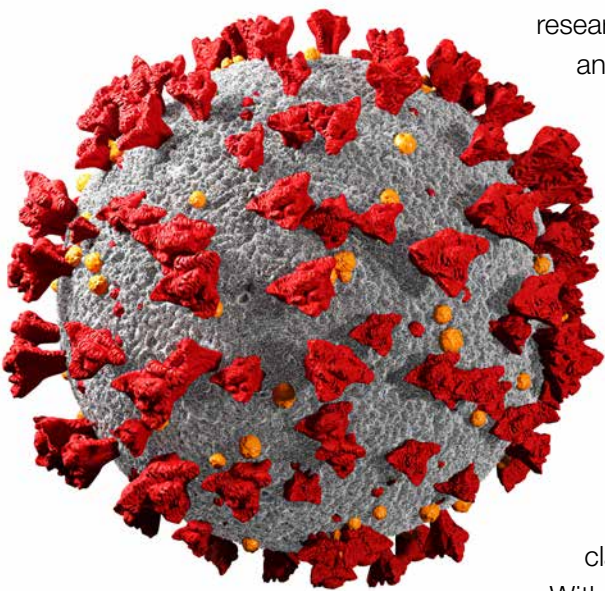
A ccording to the report “[Immune Health Supplements Market Size, Share & COVID-19 Impact Analysis](#)” by Fortune Business Insights, the immune health supplements global market size is projected to experience a 7.4% compound annual growth rate (CAGR) from 2019 to 2027. The report also indicated increased demand globally for products associated with immune health, such as elderberry, zinc and vitamins C and D.

Probiotics, prebiotics and omega-3s are also in high demand. With vaccine availability limited at best for most consumers, the quest to protect one’s self and family against illness is at the forefront in the minds of consumers, driving growth in the sector.

“COVID-19 and related immune function focus has re-energized innovation in our industry in somewhat lapsed ingredient categories such as vitamin C, zinc and others. This is further fueled by the massive paradigm shift in the global consumer consciousness around taking charge and proactively managing one’s own wellness,” suggested William Rowe, CEO and co-founder of global contract research organization (CRO) and regulatory consultant Nutrasource. “As such, consumers are looking for immune function solutions backed by real science and regulators are carefully monitoring to ensure claims are not offering false or misleading hopes.”

The surge in consumer interest and purchasing has driven innovation and research, but also highlighted the need for careful scrutiny of unfounded and illegal claims. While it can be acceptable for a dietary supplement to claim to support a healthy immune system, the brand cannot overtly state or imply the product cures or prevents a disease such as COVID-19 or the flu.

In the rush to provide products to meet the increased consumer demand for immune products, many companies have unknowingly—or knowingly, but hoping to miss detection—suggested their products cure or mitigate COVID-19. As a result, FTC and FDA have issued many warning letters for products such as “Corona Destroyer Tea.” The company claimed its product could be used for the “prevention” and “reversal” of COVID-19, and therefore was claiming to mitigate, prevent, treat, diagnose or cure a disease. With this, the company was in violation of section 505(a) of the Federal



Food, Drug and Cosmetic Act (FD&C), 21 U.S.C. § 355(a). In accordance with section 502 of FD&C, 21 U.S.C. § 352, the product is considered a misbranded drug.

Many companies have made similar claims and received similar letters, which are public knowledge and can be found on the FDA and FTC websites. While it's easy to suggest companies were trying to take advantage of the emotional state of consumers regarding COVID-19 to increase revenue, one must also consider how challenging it can be to make claims about the immune system while avoiding any reference to disease. The challenge is even more heightened considering the urgent nature of making products available immediately to meet consumer demand.

Resources are available to help brands ensure claims are accurate and within regulatory compliance. Aligning with a well-known, reputable regulatory firm as a third-party partner to assist in reviewing the scientific substantiation behind any marketing claims—and to assure claims are in regulatory compliance—is highly recommended, especially when a category like immune supplements is under increased regulatory scrutiny. Avoiding any reference to disease or conducting studies on diseased subjects, and instead focusing on words like “supports immunity” and “supports the immune system” are highly recommended.

As the industry moves forward in a new era of consumer awareness and concern for well-being, everyone benefits when brands provide accurate, compliant claims and product information. ♦



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The pandemic's influence on immune health product development

by Meg Ligot

The coronavirus pandemic impacted contract manufacturing for the nutritional supplement industry and the thinking around product formulation and development. The impact is particularly evident in formulating for immune support products, as consumers have become more actively aware of their overall health and immune support needs, and the potential for nutritional supplementation to positively affect their health.

According to the Council for Responsible Nutrition, an [Ipsos-CRN survey](#) showed 43% of dietary supplement users changed their intake routines since the start of the pandemic. Nine out of 10 users (91%) reported increasing their supplement intake, which included adding new supplements to their existing routines (46%), taking the same supplements more regularly (25%) or increasing dose(s) (22%).

In order to meet this significantly growing consumer demand, as a contract manufacturer working with nutrition brands, together, we have learned to be more adaptable and creative in our approach to immune product formulation. This includes broadening the scope outside the traditional confines of immune health, and understanding it isn't just about taking vitamin C and zinc, but about adopting a healthy lifestyle overall, and providing a broader range of supplements to consumers that fit into that lifestyle.

Boosting immune support with bioavailable ingredients

As consumer awareness of the benefits of immune health in the pandemic age has increased, so has their knowledge and discernment of higher-quality ingredients in these products to help improve their overall health. One of the more significant trends that evolved to help meet the needs of these savvy consumers was an increase in client requests for more bioavailable ingredients for their formulations to make them more readily absorbed by the body. Among the key bioavailable ingredients of which we have increased usage to enhance product formulation are liposomal vitamin C and mineral amino acid chelates.

Liposomal vitamin C

The liposomal vitamin C product we developed combines the immune-boosting properties of vitamin C with the enhanced bioavailability effects of liposomes (Pharmaceutics. 2020;12[3]:264). The natural encapsulation of lyophilic and hydrophilic nutrients within liposomes safeguard the ingredients through the destructive elements of the gastric system, ensuring delivery to the cells and tissues.

The encapsulation technology has allowed us to avoid over-formulation to make up for potential gastric loss. Instead, we can formulate products with a lower input of vitamin C, confident that the formula is delivering that reduced amount without any degradation of the nutrient. The lower input of the material also has allowed product developers to add more ingredients in the formula with fewer capsules. We use less vitamin C material since the liposomal technology allows for enhanced bioavailability to support that ingredient, along with other immune category ingredients like echinacea, ginger, etc.



Amino acid chelated vitamins and minerals

Amino acid chelated micronutrients are chemically combined to amino acids to form complexes. As a result of this binding, some of these types of compounds may improve mineral absorption (J Nutr. 2014 Feb;144(2):132-6.)

Since the human body cannot produce minerals, they must be obtained through the diet. However, many are difficult to absorb. For example, a [chromium fact sheet](#) for health professionals on the National Institutes of Health (NIH) Office of Dietary Supplements (ODS) website notes dietary chromium absorption only ranges from about 0.4 to 2.5%. Chelating these micronutrients may help boost their absorption rate.

Expanding and diversifying brand portfolios

Another important way we've seen the influence of the pandemic on product development and formulation is through brand expansion, with companies adapting to the changing marketplace by broadening their product ranges.

To better meet the consumer's growing demand for products that fit into an overall immune-supportive healthy lifestyle, we've helped many clients branch out of their typical categories into new product areas. In working with clients to facilitate a more seamless product diversification strategy, we guide them not only in product formulation, but through a holistic approach outside the typical contract manufacturing scope. This includes providing support in areas such as marketing, packaging and regulatory compliance to ensure any product expansion is strategically aligned with their core branding.

Two examples of the categories in which we saw brand expansion during the pandemic include diversification into gut health and "greens and fruits" supplement formulations, which can provide valuable boosts to the immune system.

Gut health

Gut health has become a major area of importance in health and wellness, as brands and consumers have begun to increasingly understand the direct connection that a healthy gut has to a stronger immune system.

As a result, we've helped clients whose core niche is in sports nutrition—traditionally offering things like performance and bodybuilding supplements—diversify their portfolios to offer new products that support gut health. These new product formulations include ingredients such as probiotics, prebiotics and digestive enzymes designed to promote a healthier gut.

Greens and fruits supplements

Greens and fruits supplements form another category in which we've helped introduce product diversification for many brands who would not traditionally be associated with these product types.



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As consumer awareness of the benefits of immune health in the pandemic age has increased, so has their knowledge and discernment of higher-quality ingredients in these products to help improve their overall health.

Utilizing antioxidant-rich ingredients, such as açai, pomegranate or turmeric, and microbiome-targeting raw materials, including prebiotics like chicory root or inulin, we've helped clients develop greens and fruit powders and other immune-focused products for their lines.

Getting creative and giving back

The pandemic has also inspired industry to be more creative in product development and formulation to rise to the unprecedented challenges of the times. Among the initial challenges contract manufacturers and others in the industry encountered was a shortage of raw materials and ingredients to meet the explosive demand for immune support products.

Manufacturers like Lief were able to manage many of these early supply chain issues due to strong relationships and long-term contracts already in place with suppliers. But initially as we worked to address those supply challenges, the need for creativity helped to generate new ideas and ways to better serve our clients, their customers and our communities with immune and nutritional supplements to better maintain their overall health during this critical time.

As the go-to immune support ingredients—like vitamin C, zinc and elderberry—were in short supply, the industry turned to quality alternative raw materials which were more readily available. Apoptogenic mushrooms are a great example of an alternative immune-boosting ingredient (J Fungi [Basel]. 2020;6[4]:269) we were able to use creatively in formulating products during the initial raw materials supply shortage.

Closer to home, we also saw our ability to produce immune support products as an opportunity to give back, internally and externally. We began formulating our own in-house vitamin C blend to provide immune health support supplements for our company's employees, as the firm continued to operate as an essential business during the pandemic. We then expanded our reach and began formulating our in-house immune support supplements to donate to other frontline workers in the community, including first responders and field workers, through a program we developed called Lief Cares.

As the nutritional supplement industry works to formulate and provide immune support products for the evolving needs of consumers during the pandemic and beyond, we will need to continue to remain consistently adaptable and creative. ♦



Meg Ligot is the product development manager at [Lief Labs](#). With a background in biochemistry, she contributes to sales and marketing by overseeing the entire development process, from concept ideation to execution. She oversees both the product development and research and development (R&D) departments. Based in Valencia, California, Lief Labs is an innovator in product ideation and formulation for the dietary supplement market, driven by a passion for collaboration, a determination to offer only the best ingredients, and an innovative and adaptable mindset. The company also houses a state-of-the-art, full-service cGMP (current good manufacturing practice) manufacturing facility, which offers custom solutions for a multitude of supplement categories.

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Launching products in an immune-conscious post-2020 world

by Matevž Ambrožič

At what is hopefully a turning of tides for COVID-19, much of the supplement industry is looking toward the immune health segment, wondering where it is headed. Whether it still makes sense to launch products is subject to individual company strategy, but one thing is certain—an abundance of 2020 market data can help guide those decisions.

Booming immune health market

Since the start of the pandemic, interest in immune support dietary supplements surged globally. According to proprietary Euromonitor data, immune health represented 15% of the global vitamins and dietary supplements marketplace in 2020, and it “carried” the growth of the entire industry. Growth of immune support vitamins and dietary supplements was remarkable in some cases—well over 25% in North America and 53% in Latin America.

Increased demand for immune health products is likely to persist in 2021, as the world continues its fight against the virus, and consumers are still bombarded with the topic. In January 2021, Google searches for “immunity supplement” were three times higher than the same period last year, and at 84% of the average level of 2020.

Euromonitor found consistent users of immune-positioned supplements exhibit specific behaviors. For example, they are more consistent users of dietary supplements—47% claim usage daily or almost every day, as opposed to just 26% of consumers overall. Targeting users of immune support supplements with at least one product could thus create loyal and frequent customers for other products under a brand.

Based on this data and our experience in the market, we expect interest to remain at an increased level well after 2021, as such a long-lasting shift in mindset is likely to result in a permanent change in consumer purchasing behavior. We also see a ripe opportunity for companies to consider launches in the immunity segment, because now product foundations can be tied to and benefit from the multiple sources that collected data on immune health in 2020.



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Proactive vs. reactive

The first thing to consider is the basic positioning of consumer immune products—often, consumers use supplements proactively to strengthen their immune defense in hopes of avoiding illness or improving recovery to homeostasis, while drugs are often used after an illness or disease has manifested.

Euromonitor data show that, historically, growth in the immune health supplement segment has correlated strongly with growth in cough and cold remedies. Interestingly, the pandemic has had an opposite effect on the categories. While cough and cold remedies saw an even steeper decline in growth during the pandemic than in recent years, immune health supplements turned sharply skyward in 2020, climbing to 17% growth. Clearly, 2020 has brought outstanding focus on proactive self-care to boost health, but much less so on treating health problems.

This was also reflected in the B2B nutrition segment, based on our experience recently with B2B clients, as interest in our reactive product line (>Your< Immuniq Acute) didn't grow nearly as much in the past year as did interest in our proactive, regular immune maintenance line (>Your< Immuniq).



Ingredients to consider

Although vitamins C and D were the clear winners of 2020, the numbers suggest looking more broadly when considering ingredients for formulations.

FMCG Gurus data in Vitafoods Insights' "[State of the Nation Report 2020](#)" showed that when it comes to ingredients beyond those traditionally associated with immune health, consumers were most aware of iron, omega-3s and probiotics as potentials for the category.

Further, proprietary Euromonitor research indicated even the most popular ingredients, such as vitamins C and D, are being consumed by less than 40% of global immune support supplement users. The implication that these consumers think of immune wellness in wider terms is crucial. Launching products with several diverse ingredients—and possibly even broader positioning—may appeal to a larger spectrum of supplement consumers.

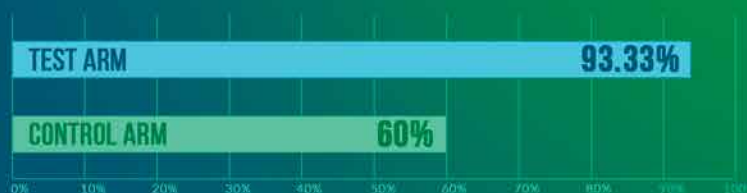
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Combined positioning of immune support products

Euromonitor added that immune health supplement users are only slightly less engaged with other benefits aside from immune support, as 82% of them also requested general health benefits. Additional areas of focus—bone strength, energy, joint health, digestive health and anti-inflammatory effects—came in with slightly lower percentages, creating many options for combined or multiple positionings of immune-related products. It also makes sense to look at 2020 sales of dietary supplements by positionings; besides immune support, the categories that grew more than the total market average in 2020 global sales were digestive, joint, eye health and mood/relaxation supplements.

Quality, branded ingredients and clinical support

Supplement consumers are getting smarter and more dogged about their health and the products they buy to support it. In an EIT Food [COVID-19 survey of European food behaviors](#), 24% of consumers said a good knowledge of nutrition would be more important post-pandemic and only 4% said it would matter less.

What's more, in its [Top 10 Trends for 2021 webinar](#), FMCG Gurus reported 57% of European consumers, 58% of North Americans and 64% of consumers globally regularly research ways to improve their health. When it comes to purchasing habits, a [survey](#) by Trust Transparency Center among consumers in the U.S., U.K. and Germany showed that 35% to 40% of supplement users appreciate branded ingredients when they find them, and 12% to 18% always look for them. Added-value ingredients will resonate with these consumers.

Focusing back on immune support, proprietary Euromonitor data showed the leading source of information for these supplement users is doctors and medical professionals.

All told, it may be favorable to launch clinically supported products based on branded and studied ingredients, as opposed to products that are based on commodities and lack direct scientific substantiation. Immune health is a crowded space with many products finding success due to above-the-line marketing activity, which speaks to or appeals to the mass market. However, some of our partners' successful immunity product launches have shown market penetration can also be achieved through medical detailing, which involves communicating specific benefits for specific users based on science and clinical research. ✨



Matevž Ambrožič is the marketing and public relations director at [PharmaLinea](#). He has an academic background in biochemistry, with a specialty in protein biochemistry. After finishing at the top of his master's degree class at Stockholm University, Ambrožič was recruited for a research and development (R&D) position by the pharmaceutical industry giant Novartis. He later decided to apply his knowledge of life sciences to the food supplement industry, joining PharmaLinea.



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