



# SupplySide<sup>®</sup> Supplement Journal

November 2025

## Meta-morphosis

Biotics boom evolves  
into **metabolites**

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## Biotic changes coming in body and bottle

**T**he biotic revolution that the health and wellness industry has revered in recent years just might not be about the pre-s, pros and posts as much as people have thought.

Science and industry are redefining the rulers of the gut – literally examining prebiotic definitions – and refining understanding of the mechanisms of microbiome function as more is learned about the most common biotics: prebiotics, probiotics and postbiotics.

SupplySide Supplement Journal examines the evolution in this edition.

A rainbow of possibilities emerges as research rethinks the role of polyphenols for their prebiotic potential. And what's good for the gut has great potential for formulators seeking to solve high dose delivery system challenges.

Get all the angles in [“Are polyphenols ready to redefine prebiotics?”](#)

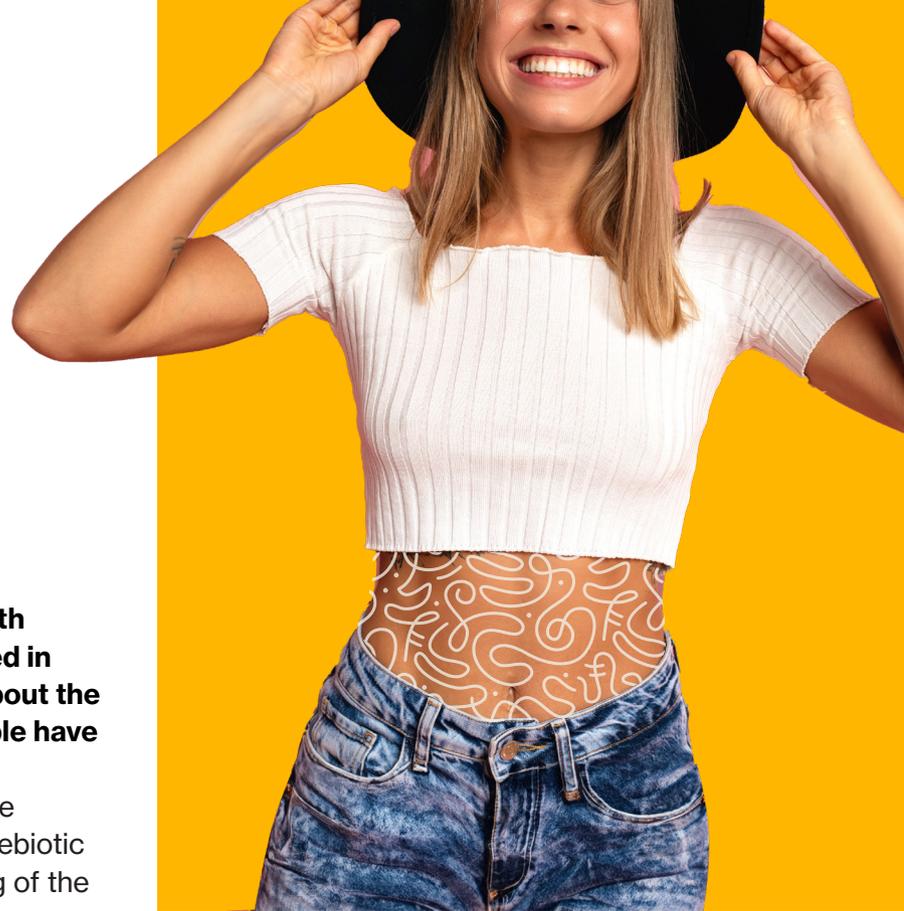
Don't knock biotics out just yet, though.

Another transformation for dosing and delivery – to shelf and gut – emerges as the understanding of postbiotics grows.

Even more exciting are the categorical potentials as research digs into the role of the nonliving metabolic products and cellular components of probiotics. It turns out going beyond the gut has been the promise of microbiome research all along.

Now, postbiotic ingredients are coming to market that expand biotics beyond gut and immune health to core and growing categories like stress, mood and sleep.

Find the latest with [“The afterlife advantage of postbiotics.”](#)



Meanwhile, the exciting gut-brain axis keeps on turning with some of the most encouraging biotic findings to date and a microorganism almost reaching celebrity status.

Cue your favorite buzzword: psychobiotic.

And the buzzy biotic behind it: *Akkermansia*.

The trials for it and others linking the gut microbiota to mental wellness provide promise for an era in which mood occupies the minds of younger and older consumers (just count the number of apps addressing the topic).

We [“Get psyched about psychobiotics”](#) with a look at the landscape.

Even as we get enthusiastic about what's new, knowing the pros of probiotics as a foundational ingredient for health and exploring the unfound frontiers remain important for ingredient science and innovation.

I have a gut feeling, anyway.

*Christine*

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# Are polyphenols ready to redefine prebiotics?

Think you know what a polyphenol is or does? You might be living in the past. Emerging science is showing how phenolic compounds might have powerful prebiotic capabilities, and at surprisingly small doses.

by Nick Collias

Give most consumers a word-association test, and the answers would be predictable: “Prebiotic?” Fiber. “Polyphenol?” Antioxidant. But according to a growing number of microbiome experts, those quick-fire associations are due for a serious rewrite.

Len Monheit, executive director of the Global Prebiotic Association (GPA), explained, “We’re seeing now how polyphenols are so much more than just antioxidants.” Several of them from familiar sources like elderberries, curcumin and green tea may also have potent prebiotic potential, so much so that it’s calling into question the definition of a “prebiotic” itself.

While experts insist we’re still in the early stages of the discovery process, they agree that this is the most exciting prebiotics development in years. And the implications could be huge for gut health, immunity and more.

## Have we been wrong about polyphenols?

Polyphenols have been a staple in anti-aging, immune support, and countless superfood and



wellness products for decades. But what if the benefits that were linked to them were gut-derived all along?

Hannah Ackermann, registered dietitian and VP of marketing and nutrition affairs at ingredient supplier Comet, noted, “Antioxidants are where your mind immediately goes. Like, they help with aging and maybe oxidative stress. “But we’re learning that the [mechanisms of action](#) probably have more to do with the microbiome than what previously people thought.”

Ackermann pointed to the work of Michael Gaenzle, who has a German doctoral degree and is a professor at the University of Alberta – not to mention one of the leading voices on phenolic compounds. He argues that the benefits attributed to polyphenols have long been mischaracterized. “The antioxidant capacity is essentially irrelevant for each and

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**ISAPP definition:**  
“A selectively fermented ingredient that results in **specific changes** in the composition and/or activity of the gastrointestinal microbiota, thereby conferring a health benefit on the host.”

**GPA’s definition:**  
“A compound or ingredient **utilized** by the microbiota producing a health or performance benefit.”

## Definition of a prebiotic

every health benefit,” Gaenzle said in a [recent article](#) from Comet. “It’s something that’s easy to measure, but I don’t think it has any relationship to their biological function.”

Instead, Gaenzle and a growing number of researchers believe the real power of polyphenols lies in their influence on the microbiome. “Many of the health benefits of phenolic compounds are not mediated by the phenolic compounds themselves,” he contended, “but by microbial metabolites.”

That interaction takes multiple forms. While some polyphenols act as more traditional prebiotics – feeding beneficial bacteria and stimulating the production of short-chain fatty acids (SCFAs) – others may work more like antimicrobials, suppressing pathogenic species to restore microbial balance. (For study cites, see the links that follow.)

It’s a gut-centric mechanism, but not an entirely microbial one. Monheit and Ackermann pointed to research outlining broader functional benefits of polyphenols, including:

- Antimicrobial effects: Inhibiting harmful gut bacteria (examples include [cranberry](#) and [curcumin](#)).
- Metabolite influence: Transforming into beneficial compounds like SCFAs

([bilberries and blackcurrants](#)).

- Lowering [gut inflammation](#).
- Digestion modulation: Phenolic acids can bind to starch, slowing digestion for sustained glucose release and satiety.

### Redefining prebiotics and what can be said about them

This new dimension of polyphenols doesn’t just have implications for biology. It’s also forcing the industry to rethink what “prebiotic” means, and what claims brands can confidently make about them.

GPA and the International Scientific Association for Probiotics and Prebiotics (ISAPP) currently have slightly different definitions of “prebiotic,” (see *graphic atop this page*) and this divergence is driven in part by emerging work around polyphenols.

That difference – “specific changes” versus “utilization” – matters when talking about polyphenols, since many of their effects may be indirect (via metabolites, antimicrobial activity or gut barrier interaction) rather than direct fermentation.

And it’s not surprising that this can create confusion around messaging, both on-pack and in marketing materials. Ackermann said,

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## Category focus

“In terms of structure/function claims right now, we only feel comfortable with recommending ‘contains polyphenols.’” For suppliers and brands, that basic phrasing gives a health halo without stepping into overpromised territory. The only downside? It likely links back to antioxidants in consumers’ minds.

Marla Cunningham, executive director at ISAPP, added that any claims need to be specific to a phenolic compound, which is no small feat across a vast range of nutrients. She noted that because the polyphenol family includes over 10,000 structures, “ongoing research and conclusions about the prebiotic nature of polyphenols will need to be compound-specific.”

So how can a brand make this make sense to consumers? Lean into a familiar nutritional trope: “Eat the rainbow.”

Ackermann explained, “We’re always told to get as many colors on your plate as you can when it comes to fruits, vegetables and plants. As a registered dietitian, I translate that advice as: eat more polyphenols. These naturally colorful compounds are intrinsic to plant foods, and they bring health benefits that you simply can’t get from a standard multivitamin. When someone skips fruits and vegetables, they’re not just missing fiber; they’re missing these unique phenolic compounds. So, bringing polyphenols into supplements can help recover some of that lost plant nutrition.”

### Smaller dosages, different formats

For years, the biggest knock against prebiotics was quantity: Many ingredients required 5 to 10 grams (or more) to be effective. That made formulation tricky and occasionally messy. Think bloating, digestive discomfort and “fiber sodas” with pixie-dusted doses. Polyphenols could change all that.

Because many phenolic compounds are active at much lower doses – sometimes under a gram – they open the door to cleaner labels, better tolerability and a much wider range of delivery systems. This can help consumers get more



## Two big takeaways for claim and marketing strategy

**Be specific, not sweeping.**  
Focus on individual compounds and ingredients, not the entire class of polyphenols, since effects and mechanisms vary dramatically.

**Celebrate diversity.**  
Emphasize a broad spectrum of polyphenol sources and mechanisms. It’s not just good for gut health. It also helps connect with consumers in familiar, intuitive ways.

## Category focus

benefit from less fiber. Monheit suggested, “The demand for smaller doses – and the availability of smaller doses – is going to increase formats. “We’re talking capsules, gummies, chews and little shots. All of those formats now become viable.”

Lower dosages also create the potential to build multiple tiers of prebiotic ingredients, depending on their polyphenol content. Comet’s upcycled arabinoxylan fiber, Arrabina, is one example. The company currently commercializes two grades of the product: Arrabina-P, with higher polyphenol content, and a more neutral-tasting Arrabina L with lower phenolic load. The former, Ackermann said, is a more natural fit for capsules, gummies and darker flavors like chocolate or coffee. The latter is better suited to clear beverages and lighter applications where taste or color could otherwise be a barrier.

The added versatility speaks to a shift in what both brands and consumers are looking for. Devon Gholam, Ph.D., a food scientist and formulator at industry accelerator Step Change Innovations, said, “A lot of what we’re seeing in the supplement industry is a move toward a more holistic approach. Consumers like formulas that don’t just solve one problem but help on multiple levels. Let’s say you’ve got a fruit extract that’s rich in polyphenols, has a prebiotic effect, can help with something else and can add color as well. Why would you not use that?”

In other words: the smaller the dose, the bigger the opportunity. ■

## Polyphenols with prebiotic potential

Several superfood staples have been shown to be rich in phenolic compounds that may support gut health and microbial balance. New research will likely expand this list dramatically in the coming years.



### **Pomegranate:**

Ellagic acid, punicalagins



### **Curcumin (turmeric):**

Curcuminoids



### **Elderberry:**

Anthocyanins



### **Currants and cranberries:**

Proanthocyanidins



### **Blueberries:**

Flavonoids, anthocyanins



### **Green tea:**

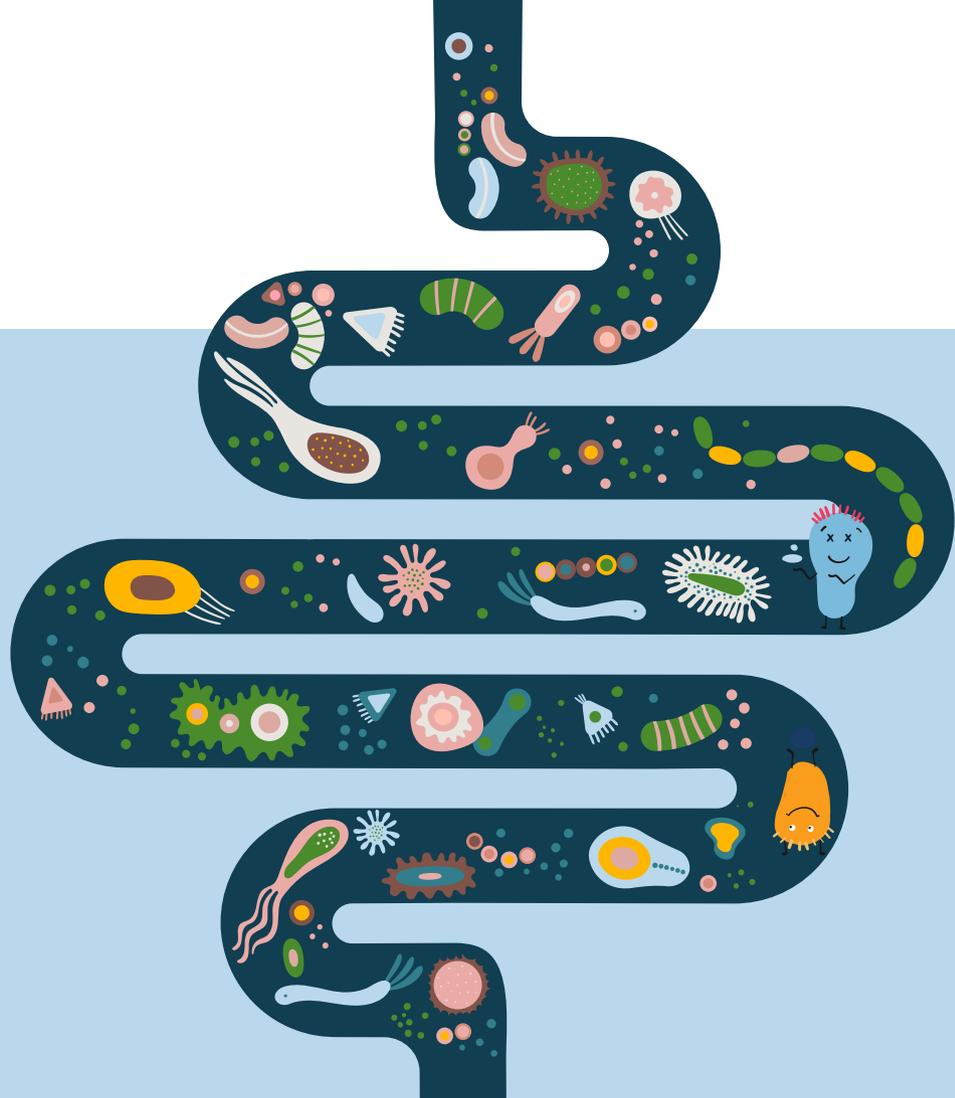
EGCG (epigallocatechin gallate), catechins



Nick Collias is a writer and editor with over a decade of experience working in the health and fitness industry. From 2016 to 2021, he was the host of the Bodybuilding.com Podcast, and he has worked for the last 20 years as a longform print and online journalist, as well as a book author, ghostwriter and editor.

# Post-mortem benefits: The afterlife advantage of postbiotics

by Rachel French



**A** new culture is taking root in the supplement aisle, where consumers are already giddy for gut health, but this time it's not about live bacteria.

Postbiotics – the nonliving metabolic products and cellular components of probiotics – are cultivating excitement among formulators who have come to realize that sometimes the best microorganisms are the ones that have already clocked out.

Blake Ebersole, president of dietary supplement consultancy NaturPro Scientific, explained, “While a lot of research on live microorganisms as probiotics has been done in recent years, we have realized that the composition of microorganisms and their metabolites have bioactivity, even when they don't have the ability to procreate.”

Much postbiotics research has focused on gut and immune health, Ebersole continued.

But the body of evidence supporting this emerging class is growing. Sandra Saville, director of education and communication at the International Probiotics Association (IPA), said research across the entire postbiotics category – comprising nonviable microbial components and/or their components and/or their metabolites – “has expanded considerably in recent years, demonstrating promising clinical outcomes across many health areas.”

## The gut and beyond

The gut-boosting potential of postbiotics is well documented. One of the “most compelling aspects” of postbiotics, Saville said, is the ability to “shape microbial balance” in the intestines.

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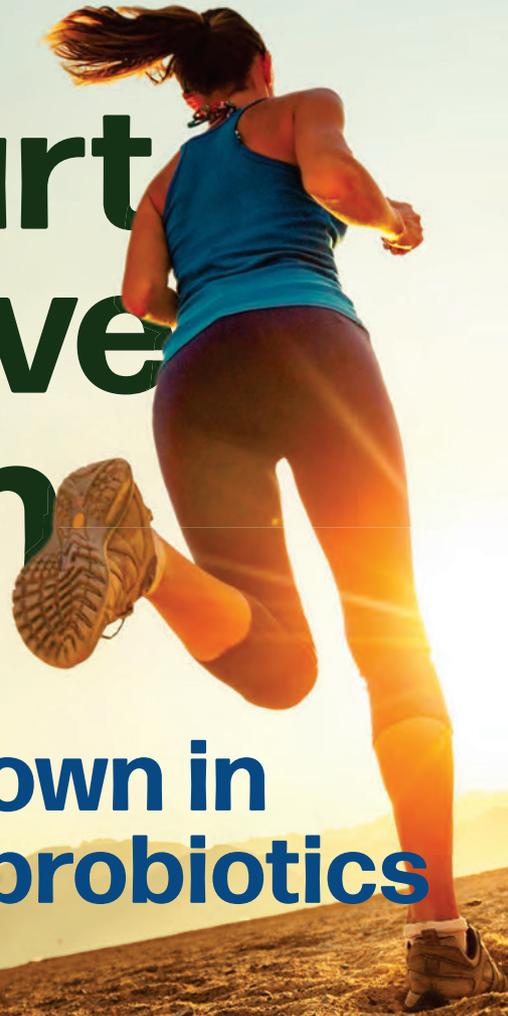


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†Based on in vitro germination analysis in the INFOGEST static gastrointestinal model (BIO-CAT Microbials Data on File).

††Paulussen, K. J. M., ... Burd, N. A. (2024). Acute Microbial Protease Supplementation Increases Net Postprandial Plasma Amino Acid Concentrations after Pea Protein Ingestion in Healthy Adults: A Randomized, Double-Blind, Placebo-Controlled Trial. *The Journal of Nutrition*, 154, 1549–1560.

## Ingredient trends

“Studies have shown that [inactivated bacterial cells](#) and their components can help to foster a favorable microbial profile and promote the production of metabolites such as short-chain fatty acids [SCFAs], which are central to gut health,” she explained.

In addition to microbial modulation, certain components of postbiotics, like peptidoglycans and surface-layer proteins, [play key roles in signaling pathways](#) that regulate immune responses, contributing further to a healthier intestinal environment, Saville said.

Beyond the gut, a growing body of research supports various postbiotics for specific, targeted health effects.

For instance, Vaughn DuBow, senior director of product portfolio marketing for health and wellness at ingredient supplier ADM, said the company’s heat-killed *Bifidobacterium animalis* subsp. *lactis* CECT8145 (also known as BLP1, a trademark registered for Biopolis S.L. in the EU and other countries) targets aspects relevant to metabolic health. One [study](#) of 135 abdominally obese individuals found that compared to baseline, one capsule/day containing 10<sup>10</sup> colony-forming units (CFU) of the postbiotic improved anthropometric adiposity biomarkers, such as decreases in waist circumference, waist circumference/height ratio and conicity

index (a measure of body fat and the related health effects). The results of the three-month study were more significant in women.

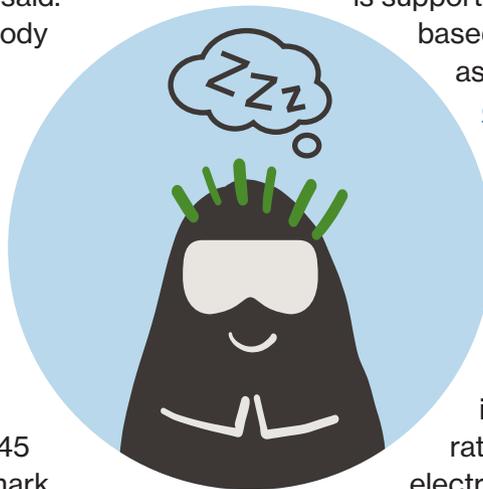
New to ADM’s postbiotics lineup in 2025 is *Lactobacillus gasseri* CP2305 – which DuBow described as a “game changer” for products supporting wellness via the gut-brain axis. Several of the eight human clinical trials evaluating the effects of *L. gasseri* CP2305 are relevant to stress, mood and sleep, he said.

The postbiotic’s potential to improve sleep is supported by [exploratory research](#) based on validated questionnaires, as well as [research using objective measures](#).

A [study](#) of 60 Japanese medical students found daily supplementation with *L. gasseri* CP2305 for 24 weeks significantly shortened sleep latency and wake time, while increasing the delta power ratio in the first sleep cycle, per electro-encephalograph (EEG), a measure of electrical activity in the brain.

Fecal testing further showed the postbiotic moderated both stress-induced decline of *Bifidobacterium* spp. and stress-induced elevation of *Streptococcus* spp. in participants’ stool, indicating improvement of the gut microbiota under stressful conditions.

“Sleep, alongside stress and mood management, is a substantial unmet consumer



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### Study cites weight-management potential of prebiotic blend

A prebiotic fiber blend enhanced with chromium showed blood glucose control and satiety benefits in a recent study.



## Immune health is another area ripe with postbiotic potential.

need, underlining the immense opportunity for resilient solutions like postbiotics to support this space,” DuBow said.

Immune health is another area ripe with postbiotic potential, and the focus of a number of studies featuring ingredient supplier Cargill’s EpiCor – a postbiotic made via fermentation of *Saccharomyces cerevisiae*, or baker’s yeast.

Justin Green, Ph.D., scientific affairs lead for EpiCor at Cargill, pointed to what he called “one of the most compelling examples” of clinical research supporting EpiCor’s immune health benefits: a [trial](#) of 256 children spanning 84 days during flu season. The study found participants who received 500 mg EpiCor versus placebo had significantly milder cold and flu symptoms, fewer instances of sore throats and muscle aches, and nearly twice the likelihood to avoid the use of prescription or over-the-counter (OTC) medications during the study.

“Beyond its findings, the study broke new ground in several ways,” Green said. “It was among the first to assess the health benefits of postbiotics in a pediatric population and one of the few to use a gummy supplement format. That last point is an important consideration given the popularity and compliance advantages of gummies among children.”

Similar [research](#) showing EpiCor’s potential to reduce cold- and flu-like symptoms has been conducted in adult populations, as well as a [study](#) that showed EpiCor helps reduce the symptoms of seasonal allergies such as nasal stuffiness and congestion.

Homing in on the gut is research demonstrating the potential of branded Pylopass *L. reuteri* DSM17648, a postbiotic from ingredient supplier Novonesis that’s made using microbial fermentation.

According to Anuska la Rosa Egeskov-Madsen, global scientific advisor at Novonesis, the company’s Pylopass postbiotic [supports microbial balance](#) by reducing levels of unwanted bacteria, specifically *H. pylori*, “contributing to overall digestive comfort.” *H. pylori* is a type of bacteria that can infect the stomach and cause inflammation and ulcers, among other issues.





As nonliving structures, postbiotics may **offer greater stability** compared to many probiotics, and **additional flexibility in formulation**.

Also supporting the gut is ADM's heat-killed *Bifidobacterium longum* CECT7347 (also known as ES1 – used by ADM Biopolis under license from CSIC). In recently published [research](#), the ingredient was found to significantly improve the severity of diarrhea-predominant irritable bowel syndrome (IBS-D) as soon as day 28 of supplementation. The study of 200 adults spanned 12 weeks.

### Diversity in delivery

As nonliving structures, postbiotics may offer greater stability compared to many probiotics, and additional flexibility in formulation – a key perk for brands looking to tap into the budding category.

Ebersole suggested, “There’s no reason for manufacturers, brands and retailers not to love postbiotics, relative to probiotics. Because we aren’t concerned with CFU counts and viability, cold chain storage, contaminating our entire facility or shelf stability of the product, then we can focus on other ways to innovate that are actually value-adding for brands and consumers.”

Sky Dailey, marketing manager for the Americas at ingredient supplier Novonesis, agreed that postbiotics allow for more creative delivery systems, including certain gummy matrixes. However, he cautioned product

developers to consider production parameters like heat, which can affect the mechanism of action of postbiotics. This is especially true for postbiotics that involve surface structures like surface proteins, polysaccharides, peptides or metabolites.

“For instance, prolonged exposure to heat can disrupt cells and then reduce the efficacy of postbiotics,” he said.

Other potential formats for postbiotics, per DuBow, include snack packs, protein bars, frozen yogurt bites, powdered beverage sticks, wellness shots, carbonated soft drinks (CSDs), ready-to-drink (RTD) teas and more.

Plus, postbiotics typically use a low-dose rate, Green said. “EpiCor’s clinical dose is just 500 mg, an amount easily formulated into one or two capsules, tablets or gummies,” he explained. “By comparison, prebiotics often require multi-gram doses, which can limit format options.”

### The best biotic?

Equipped with an expanding research portfolio and greater formulation flexibility, it’s worth considering whether postbiotics have taken the spot as the “best” biotic.

Saville contended postbiotics will not replace probiotics. “They work in different ways, though there is overlap in the mechanisms of action that they both employ,” she explained.



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## Ingredient trends

Among consumers, proprietary data from the ADM Outside Voice 2024 Postbiotics Survey showed awareness of postbiotics is growing, although it falls far behind consumer awareness of probiotics. Per the survey, 58% of consumers are moderately, very or extremely aware of postbiotics.

DuBow commented, “While this is lower than probiotics (at 91%), it demonstrates burgeoning recognition. Plus, when consumers are provided with a clear definition of both postbiotics and probiotics, 81% of U.S. consumers believe postbiotics can offer similar health benefits to probiotics.”

A key differentiator between probiotics and postbiotics is scientific support. While research supporting the effects of postbiotics is growing, Ebersole said the science is “still nascent compared to probiotics.”

Jessica Younes, Ph.D., scientific director at IPA, agreed that more clinical trial evidence could be helpful. “Given the multiple terms and definitions that exist for postbiotics,” she added, makes the comparison between probiotics and postbiotics “challenging ... in terms of beneficial physiological effects.”

“Nonetheless, as long as postbiotics (and probiotics) demonstrate a positive effect, this comparison may actually be irrelevant,” she said. ■



Rachel French joined Informa's Health & Nutrition Group in 2013. Her career in the natural products industry started with a food and beverage focus before transitioning into her role as managing editor of SupplySide Supplement Journal (formerly Natural Products Insider), where she covered the dietary supplement industry.



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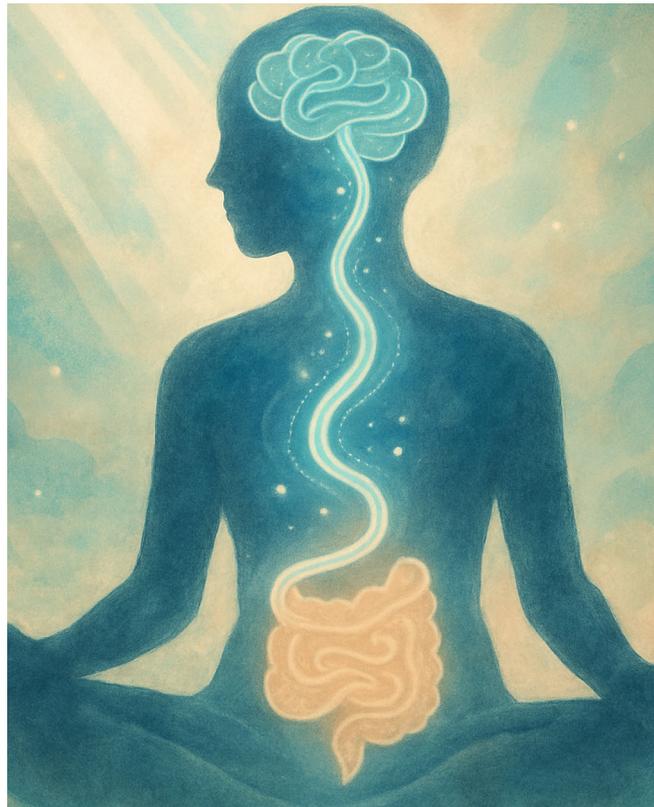
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### Prebiotics and probiotics have something to prove in menopause research

There's a bit of promise in a recent review that assessed the state of research for prebiotics and probiotics for ameliorating menopause symptoms.

# Get psyched about psychobiotics

by Lisa Schofield



The biotic-sphere is seeing robust growth in mental health support, an appealing component of the trillion-dollar-plus global wellness market.

**S**trong emotions are often felt in the gut. Depressed mood and anxiousness can seem like a storm cloud swirling and churning in the stomach. There’s a reason that science is now focusing on balancing the microbiome to support the gut-brain axis. A balanced microbiome can help break up the clouds to let the calming sunlight stream in.

In 2025, the global “wellness” market – driven largely by Gen Z and Millennials – is [set](#) to exceed \$2 trillion, and the [market](#) for mental wellness supplements is estimated to reach approximately \$11.5 billion. Of this, another [source](#) valued the psychobiotic category at approximately \$151 million in 2025.

“The connection between the gut microbiome and mental wellness has moved from hypothesis to a credible, evidence-based area of research,” Lauren Clardy, Maypro’s senior director of branded ingredients, stated. “We’re now seeing well-designed human studies that link specific microbial metabolites – like short-chain fatty acids [SCFAs], tryptophan metabolites and GABA [gamma-aminobutyric acid] production – to neurological pathways that influence mood, stress response and cognition.”

In recent years, researchers have identified how the gut-mind duo interacts, with a focus on the vagus nerve, which links the central

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Stress intensity **alters gut microbiota composition,** which influences mental health.

nervous system (or CNS, the processing center that regulates cognitive function) and the enteric nervous system (or ENS, the neuronal network that regulates gastrointestinal [GI] processes), creating a constant bidirectional communication. Meanwhile, the gut microbiota plays a significant role in producing high amounts of neurotransmitters such as serotonin, dopamine and GABA, which are essential for mood regulation.

Samantha Ford, business director at AIDP, explained that specific bacterial strains of species such as *Lactiplantibacillus plantarum*, *Levilactobacillus brevis* and *Bifidobacterium breve*, have [demonstrated](#) the ability to synthesize GABA via gut-related pathways.

“These microbial metabolites can influence brain function and emotional behavior, with studies showing mood-boosting properties in preclinical models,” she said. “Gut bacteria can also convert neuroprotective compounds into bioactive forms that can cross the blood-brain barrier and exert stress-reducing, mood-lifting effects, further supporting the gut’s role as a ‘second brain.’”

According to a 2024 [review](#), numerous published studies confirm that stress intensity alters gut microbiota composition, which influences mental health. Clardy maintained, “Probiotic strains are a particularly promising avenue because they offer a direct, biologically active way to modulate the gut-brain axis.



These benefits make probiotics a feasible and science-driven strategy for supporting mental wellness – especially when paired with advances in precision strain identification.”

### Scientific evidence

When it comes to examples, Clardy suggested, “Overall, *Akkermansia* represents a compelling frontier in mood/emotional health and mood regulation.”

A recent [clinical trial](#) on AKK PROBIO *Akkermansia muciniphila* (from Maypro) has garnered attention for its reported benefits in weight management, metabolic health and notably, emotional wellness. In the eight-week study, 130 overweight participants were randomized into three groups: live probiotic



Given their **safety profile**, **ability to survive GI transit** and **targeted bioactivity**, probiotics represent a natural, non-invasive approach to enhancing psychological resilience.

strain, its postbiotic counterpart and placebo. Of particular interest, Clardy noted, the live probiotic group reported significant alleviations in anxiety, depression and sleep disturbances, alongside increased levels of serotonin (5-HT, or 5-hydroxytryptamine) and dopamine.

“As human trials expand, we’ll gain a clearer view of how targeting *Akkermansia* levels could complement broader mental wellness strategies alongside its metabolic benefits,” she said. Future studies planned by Thankcome (which produces AKK PROBIO) are underway in diverse populations.

In 2021, researchers [identified](#) the mechanisms of action of *Akkermansia muciniphila* in improving mood. *A. muciniphila* was found to increase the expression of two metabolites – edaravone and beta-

alanyl-3-methyl-L-histidine (also known as anserine) – both of which exhibit a tendency to restore brain-derived neurotrophic factor (BDNF) expression in the hippocampus. In the study subjects, *A. muciniphila* significantly ameliorated depressive-like behavior and restored abnormal variations in corticosterone, dopamine and BDNF. The probiotic also altered chronic stress-induced gut microbial abnormalities.

Other commercially available strains have also been shown potentially beneficial to mental wellness.

A six-week [study](#) of *Bifidobacterium longum* NCC3001 on stress-related psychological and physiological parameters in 45 healthy adults with mild-to-moderate stress found that the probiotic exerted a reduction in perceived



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### GLP-1 opportunity: Ethical responsibility and legal risks – video

Experts discuss responsible advertising and potential regulatory consequences of GLP-1 marketing in the health and nutrition industry.

## Probiotics 2.0

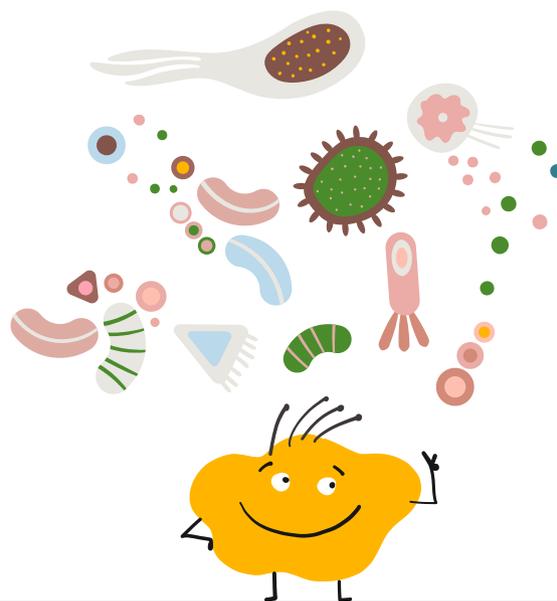
stress correlated with a reduction in anxiety and in depression. The authors concluded that their findings “support the potential of nutritional solutions including probiotics to improve mental health.”

AIDP’s *Bifidobacterium breve* LMG 13208 is a strain that [demonstrated](#) in vitro a high conversion of albiflorin (a natural compound with mood-enhancing properties) to benzoic acid in the gut. GABA-producing *Lactobacilli* has been linked in [animal studies](#) to changes in GABA receptor expression in brain regions associated with mood regulation. These effects are often mediated via the vagus nerve – again highlighting the importance of gut-brain signaling.

Probiotal S.p.A.’s blend of four probiotic strains – *Limosilactobacillus fermentum* LF16, *Lacticaseibacillus rhamnosus* LR06, *Lactiplantibacillus plantarum* LP01 and *Bifidobacterium longum* 04 – may lead to “widespread improvements” in measures of mood, anxiety and depression in healthy young men and women, according to a [clinical study](#). Seventy healthy adults took the probiotic blend for six weeks. The

supplementation led to increases in serotonin; further, the subjects’ blood concentrations of serotonin remained higher than baseline when measured three weeks after the study concluded.

Ford concluded, “Given their safety profile, ability to survive GI transit and targeted bioactivity, probiotics represent a natural, non-invasive approach to enhancing psychological resilience – especially relevant in the context of modern stressors and the Western lifestyle.” ■



Lisa Schofield is a veteran writer and editor who got her start interviewing rock stars for national music magazines. She now writes and edits content for B2B media and suppliers in the natural health product industry. She has served as editor for Vitamin Retailer and Nutrition Industry Executive, and prior to that as associate editor for Whole Foods.

  
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