

A woman with long, dark hair is shown in profile, facing right. She is wearing a bright blue long-sleeved top and matching pleated trousers. Her eyes are closed, and she has a serene expression. The background is white with large, blue, stylized graphic elements that resemble a DNA helix or a series of connected loops.

HEALTH FROM THE GUT STARTS HERE

**Rethink the gut microbiome's
potential with dsm-firmenich**

Unlock the true power of the gut microbiome with
dsm-firmenich's Health from the Gut solutions.

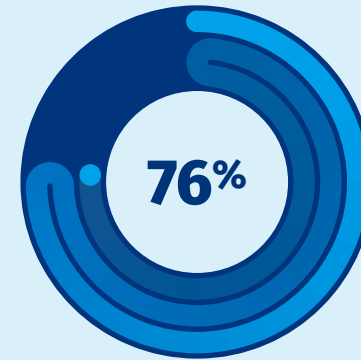
Consumers want more from gut health products

It's time to revolutionize how we think about gut health to resonate deeper with today's consumer.

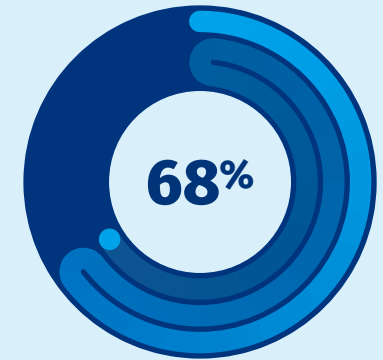
The human gut microbiome plays a pivotal role in the maintenance of human health and pathogenesis of multiple diseases. Once understood to support healthy digestion only, promising research continues to demonstrate the gut microbiome's wider health benefit for immune function, brain health support, mood and more.^{1,2,3,4}

Many consumers are recognizing the connection between a healthy gut microbiome and its role on overall health and wellness – powered by increasing evidence and growing interest from the global scientific community.

This is creating a space for innovative gut-focused solutions that look beyond digestion to support health more holistically. As new insights and discoveries emerge, the market is set to flourish – and there is huge potential for products that take a different approach to innovation to support Health from the Gut by leveraging the power of our own unique microbiome.



of consumers **recognize the link** between good gut health and overall wellness⁵



of consumers are interested in **digestive health maintenance** even when not suffering from specific issues⁵

HEALTH FROM THE GUT STARTS WITH **dsm-firmenich**

Take advantage of the holistic health benefits that start in the gut. dsm-firmenich can help you thrive in this booming market with unmatched scientific expertise, multi-ingredient solutions and appealing concepts that address the needs of consumers today and tomorrow.

Connect with an expert



dsm-firmenich is re-imagining gut health

We can help you navigate the Health
from the Gut market with confidence.

It takes a curious mind and a science-based partner to push boundaries in an established space and create real transformation. That's where dsm-firmenich can help. We've reimagined the approach to gut health innovation; combining unmatched scientific capabilities and deep consumer insights with established knowledge about the trends, market opportunities and formats fueling the space forward.

When you partner with dsm-firmenich you get a global, end-to-end expert inspired by consumers' most pivotal health needs to deliver your next product with purpose. We harness a deeper understanding of how the gut microbiome functions; a profound knowledge of the key pillars influencing the natural gut ecosystem – and the scientific expertise to balance it.

We don't focus on 'good' and 'bad' bacteria alone; because we know it requires more than a single ingredient approach to help the gut function in perfect harmony. It requires a science-based approach powered by experts.

A new way of thinking: the gut fingerprint

The gut is a complex, highly interdependent system comprised of trillions of microorganisms. And each human's gut composition is distinctive as a fingerprint – not only in terms of viral populations, but on a bacterial and metabolic level as well.

This gut 'fingerprint' is unique to every body. Yet every 'fingerprint' must work in careful harmony within the wider gut ecosystem and its key pillars – the gut environment, gut barrier, keystone species and natural modulation – to deliver the holistic health benefits the gut is capable of.

As a result, there is no 'one size fits all' approach to supporting health from the gut. That's why we're taking a different approach to gut health innovation. A new method which seeks to support and preserve the key pillars of a healthy ecosystem to maintain its natural balance and function.



The Health from the Gut ecosystem

We take an 'ecosystems' approach to support the gut's natural function.

1 Healthy gut environment

Like any natural ecosystem, a healthy and well-nourished gut environment is essential for the microbiome to flourish. When microbiome balance is disrupted, the physical environment impacting on bacterial metabolism is also disrupted – under these conditions, it can be difficult to restore balance through single biotic solutions.

dsm-firmenich's microbial nutrients directly support bacterial metabolism to foster resilience and protection from oxidative stress, allowing full performance and ecosystem function.

2 Keystone species

A keystone species is an organism that holds together the complex web of relationships in an ecosystem – much like the ochre starfish, which keeps populations of mussels and barnacles in check to enable healthy populations of seaweed and the communities that feed on them.

In the gut, this includes specific microbes – which have evolved over time to play a critical role in microbiome balance and functionality. Without its keystone species, the bacterial ecosystem would not function optimally.

dsm-firmenich's ingredients are designed to selectively support keystone species to foster network performance and preserve microbiome ecosystem function.

3 Gut barrier integrity

Just as the ozone layer protects life on earth from harmful radiation, a strong gut barrier helps to maintain the homeostasis of the gut network and prevent the onset of uncontrolled inflammation and subsequent disease.

dsm-firmenich has the expertise and ingredients to strengthen the intestinal barrier and therefore facilitate balanced gut functions.

4 Microbiome-independent mechanisms

Similar to how the moon influences ecosystems on Earth, there are a range of independent factors in the microbiome that indirectly impact health from the gut.

The moon's effect on tides, light and circalunar rhythms occurs indirectly from a distance. Likewise, microbiome independent mechanisms play an indirect role in wider health and wellbeing, for example improving digestion, nutrient absorption and receptor signaling communications along the gut-immune axis.

As well as illuminating the unique role of the gut microbiome for our health, we continue to hone our understanding of mechanisms independent of the gut microbiome and how they impact overall gut and human health – so that we can mimic and strengthen the entire network of mode of actions.



Pioneering the Health from the Gut space

dsm-firmenich understands the complex interactions of a healthy and balanced gut ecosystems; and how this is consequently linked to human wellbeing.

Backed by our strengths in data management, preclinical and clinical capabilities, our precision scientific approach modulates the gut environment, restores network functionality through keystone species support and mimics or strengthens natural modes of action in the microbiome.

To further unlock the health potential of the gut microbiome, we continue to spearhead research in this space; remaining at the forefront of new developments targeting the gut's natural ecosystem in its entirety.

Our recent research includes trials exploring how to re-establish the microbial balance of ecosystems in various disease states that are suffering from dysbiosis – an instability of the microbial community. We believe this can be achieved by leveraging the power of our own natural and unique microbiome community via next generation dietary supplement solutions.



70% of **immune cells** are found in the gut⁶



Growing **positive research** on the **gut-brain axis**



Diet has been shown to influence the gut microbiome's impact on **cognitive function**⁷



Several **mood disorders** have well-established links to functional **gastrointestinal disruptions**^{8,9,10,11}



The composition of the **gut flora** influences **neurological development** during **infancy**¹²



Science behind the **role of the microbiome** in supporting **women's health, skin support** and **oral health** is growing but yet to be fully explored

Ready to thrive in the Health from the Gut market?

Explore dsm-firmenich's leading-edge Health from the Gut (HfG) offering.

[Start here](#)

Reimagine gut balance with dsm-firmenich's Health from the Gut platform

dsm-firmenich delivers Health from the Gut solutions powered by combinations of proven, gut-supporting ingredients, custom solutions and expert services to unlock the holistic health benefits that come from a balanced gut ecosystem.

HEALTH FROM THE GUT

Products

Probiotics

Digestive enzymes

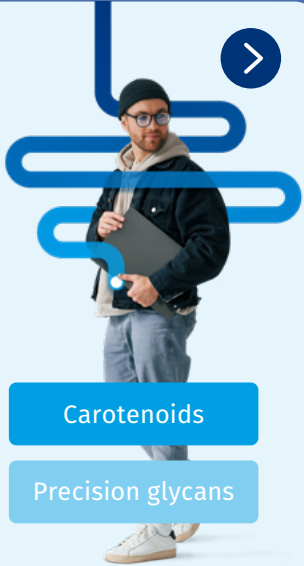
Human milk oligosaccharides

Vitamins

Postbiotics

Carotenoids

Precision glycans



Customized solutions

Premix Solutions

Market-ready Solutions



Expert services

Application & Technical

Innovation and R&D

Insights and Marketing

Regulatory and Quality

Scientific Services



High quality products

Leverage our portfolio of premium ingredients targeted towards healthy gut function: Tolerase® digestive enzymes, GlyCare™ HMOs and Quali® vitamins.

With our large portfolio of products and expertise, you can overcome any issues that arise with product development and launches. Together, we'll look at your consumers from a lifestyle, health condition or age demographic perspective, then deliver products that support their health from the gut.

Our premium Health from the Gut products feature on-pack brands to help you stand out on shelves with a mark of distinction and amplify health benefit claims to resonate with consumers.





Customized solutions

Developing and launching stand-out solutions can be time-consuming and complex.

That's why we go beyond ingredients to offer quality customized solutions designed to help bring your HfG product to market faster, more efficiently and with enduring success. Explore our multi-ingredient solutions and finished products powered by our Premix and Market-ready Solutions.

**Customized from the start,
consumers at the heart.**

Premix Solutions

dsm-firmenich continues to monitor the pulse of today's health trends. Leveraging global consumer research specific to the Health from the Gut market, we can help you understand consumers' needs today while anticipating their demands of tomorrow.

Our Premix Solutions take market insights to the next level by combining proprietary products addressing the latest consumer health goals with a curated selection of third-party ingredients, backed by science. It's a single solution with multiple advantages. A specialized blend of ingredients that work in harmony to modulate the microbiome; delivering solutions that bring benefits to the gut and beyond – all while reducing the complexity of your value chain.

With the largest premix footprint in the world, you also get the full force of a global organization with the precision that comes from local expertise – opening you up to markets that you may not even have considered within your reach. Plus our premixes are manufactured with unrivalled quality at every step of the product lifecycle; meeting or even exceeding industry standards for greater peace of mind.



Multi-ingredient solutions in innovative formats that appeal to both gut and overarching health concerns are key to capturing the attention of today's consumer.



Market-ready Solutions

Want to go beyond multi-ingredient premix solutions and get to market even faster? Our all-in-one, finished Market-ready Solutions offer fast-tracked innovation that will push your gut-supporting product to the next frontier.

Customizable to any consumer group, our 100% finished products use novel ingredients for the future of the Health from the Gut market. Backed by a network of strategic partners that help to fast-track insights into action, it's a smarter and brighter approach to product co-development.

From ideation to store shelf, our Market-ready Solutions deliver the full service needed to design, build and distribute finished gut-supporting products anywhere in the world.

Expert services

dsm-firmenich's HfG platform is championed by a team of passionate experts and scientists that know it takes more than just delivering an ingredient to be successful – it takes a team with know-how, experience and a deep understanding of how our products and solutions impact the market.

Our dynamic expertise and understanding of the gut modulation elevates our product and customized solution offering to guarantee the success of your product in constantly evolving, complex markets. We're paving the way in science-led, gut-powered health via research-tested formulations expertly tailored to win in the Health from the Gut arena.

Get support along your entire product development cycle – from concept to launch, and beyond – with our unique expert services; including application and technical, innovation and R&D, insights and marketing, regulatory and quality and scientific services.

Our end-to-end expert support is what defines true partnership and is what you need to get ahead and stay ahead.



Want to learn more about Health from the Gut?

Watch the video



Next level innovation shaping the future of Health from the Gut

dsm-firmenich is known for pioneering scientific innovation in the nutrition space – and now we’re bringing this approach to microbiome modulation too. Probiotics will remain essential to Health from the Gut solutions. But dsm-firmenich has the scientific and technical capabilities to take this category further and restore balance of our own unique microbiome.

Our dedicated team of world-renowned scientists and robust network of external research partners keep us at the forefront of innovation and new discoveries in the Health from the Gut space – insights which we translate into leading consumer products.

We’re exploring new developments in pre- and postbiotics as well as glycans – with improved stability at low doses to improve the consumer experience. At the same time, we’re investigating novel product formats and advanced delivery systems that can coat and release active ingredients in specific regions of the gut – enabling the delivery of targeted efficacious doses for holistic health benefits.

Customers can harness our science-backed expertise and early-stage development capabilities through cutting-edge centers of excellence worldwide which facilitate clinical testing, fermentation and processing, R&D and more. Plus, we bring advanced scientific and clinical data insights so that you can make health claims that will attract the evolving Health from the Gut consumer.



HEALTH FROM THE GUT STARTS WITH dsm-firmenich

Together, we're excited to push new boundaries in the fast-growing Health from the Gut category with a new way of thinking to support the gut in becoming a highly functional ecosystem with holistic health benefits.

Partner with dsm-firmenich to create brighter lives for all – one Health from the Gut solution at a time.

Connect with an expert

YOUR END-TO-END PARTNER

PRODUCTS | CUSTOMIZED SOLUTIONS | EXPERT SERVICES



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