

# dsm-firmenich at ESPEN 2023

Powerful trends informing innovation in the medical nutrition market

In the ever-evolving world of medical nutrition, progress never stops. Discover four transformative trends from ESPEN 2023 that are set to propel innovation in the medical nutrition – and wider human nutrition – landscape.

## 1. From soil to solution to sustainability: the rise in plant-based proteins

Interest in plant-based proteins is on the rise, with leading players in the medical nutrition arena launching the first wave of plant-origin oral nutritional supplements (ONS).

The current plant-based protein landscape is dominated by soy and pea protein. However, some ingredients – notably soy – are linked to concerns like allergenicity and deforestation, whereas others do not provide complete nutrition.

This is driving demand for second-generation products that are more nutritious, sustainable and accepted by the end user.

**Does your product meet the following criteria?**



**Targeted**



**Sustainable**



**Evidence-based**



**Pleasant taste**



**Appealing texture**

## Introducing dsm-firmenich's Vertis™ CanolaPRO®

A sustainable, plant-based protein isolate sourced from the canola (rapeseed) plant that has a complete amino acid profile, is easy to digest and delivers a clean taste, good texture and smooth mouthfeel. Can be used to support protein demands during aging and illness.

## 2. Omega-3 fatty acids stand the test of time

Eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) omega-3s are enduring ingredients in the realm of medical nutrition. The anti-inflammatory properties of omega-3s – and their effect on muscles and immunity – were especially highlighted.

### Did you know?

1. Uncontrolled inflammation influences muscle breakdown (loss).
2. EPA and DHA are incorporated into skeletal muscle when supplemented at higher doses.
3. They alter the expression and activation of different signaling proteins, including specialized pro-resolving mediators (SPMs) and mammalian target of rapamycin (mTOR).
4. When stimulated, mTOR enhances muscle protein synthesis rate, whereas SPMs help to resolve inflammation

To unlock the benefits of omega-3s, a key opinion leader recommended: 1 g/day EPA&DHA for healthy populations; 2-4 g/day for diseased individuals with inflammation; supplementation beyond four weeks to continue experiencing benefits.

## Seize new opportunities with life's™ OMEGA

To take innovation to the next level and meet supply demand, more sustainable omega-3 sources are needed. Our 100% algae-derived life's™ OMEGA is the first commercially available plant-based omega-3 oil to deliver the benefits of EPA and DHA fatty acids in a single, quality source.

### 3. Support muscle health through the gut

Supporting muscle mass remains a key focus for medical nutrition developments. However, a new concept is arising — the gut-muscle axis — and targeting the gut microbiome to support muscle health is emerging as an exciting avenue for innovation.

- Evidence demonstrates a positive relationship between balanced gut microbiota and muscle health — including the maintenance of skeletal muscle mass.<sup>1</sup>
- Science suggests a relationship between gut health and sarcopenia — the age-related loss of skeletal muscle mass and function.<sup>2</sup>

Our **Health from the Gut** solutions are based on a deep understanding of the complex and interdependent interactions within gut ecosystems, and their links to holistic wellbeing. Our portfolio is expanding to offer science-supported, multi-ingredient solutions that will help to unlock the true power of the microbiome and support individuals in specific disease states. This includes investigating human milk oligosaccharide (HMO)-based solutions for healthy aging applications.

### 4. One size does not fit all

The importance of a tailored, multimodal approach to patient care was emphasized because addressing individual needs in a more holistic way improves clinical outcomes.

#### A multimodal strategy case study

Optimizing nutritional status before surgery boosts nutrient stores and metabolic reserves that can be impaired by disease and/or treatment. This creates an adequate buffer to compensate for catabolic response following surgery or critical illness. Pair with exercise and psychological care to provide complete support for optimum recovery!

At dsm-firmenich, we strongly believe that medical nutrition is a fundamental pillar in fostering holistic patient care. We can help to formulate tailored medical nutrition solutions to address the complex nutritional needs of not only the aging population, but in patients of all ages.

1. Lustgarten. The Role of the Gut Microbiome on Skeletal Muscle Mass and Physical Function: 2019 Update. *Front Physiol.*, 2019.

2. Chew et al. Gut-muscle crosstalk. A perspective on influence of microbes on muscle function. *Front Med.*, 2023.

## Discover industry-leading medical nutritional insights and solutions

Connect with dsm-firmenich to explore how our leading-edge products, customized solutions and expert services can help you navigate the human health arena to meet the ever-changing and complex nutritional needs of consumers, older adults and patients.



**Connect with an expert**

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