

# BioGaia AB research confirms effectiveness of patented LongevityGuard<sup>®</sup> technology in extending probiotic shelf life

Researchers at BioGaia have published new scientific findings in the journal Food and Bioprocess Technology, demonstrating that BioGaia's patented LongevityGuard<sup>®</sup> technology significantly improves the stability and shelf life of probiotics. The paper, entitled "*A Novel Approach Using a Protective Desiccant Increases Shelf Life and Reduces Moisture in Oil Suspensions of Freeze-Dried Limosilactobacillus reuteri*", presents data showing how moisture control is critical to maintaining probiotic viability.

The study confirms that LongevityGuard<sup>®</sup>, a proprietary moisture-control technology designed to protect probiotics within the product, effectively preserves bacterial viability throughout storage by controlling moisture inside the packaging, even at room-temperature. Without this patented protection technology, probiotic viability declined rapidly, leading to loss of live bacteria. A statistically significant difference between products with and without LongevityGuard<sup>®</sup> technology was observed as early as after two months, and the internal quality threshold was breached already six months after the date of manufacture when LongevityGuard<sup>®</sup> was not present.

According to the established definition of probiotics, the bacteria must be alive in the product; therefore, this invention is essential to ensuring product performance. In clinical studies, performed by BioGaia, of the *L. reuteri* DSM 17938 strain in BioGaia<sup>®</sup> Protectis<sup>®</sup> drops, bacterial viability has been carefully monitored to ensure product quality and, consequently, the probiotic effect.

LongevityGuard<sup>®</sup> is exclusive to BioGaia and highlights the company's leadership in science-driven probiotic innovation. The study describes LongevityGuard<sup>®</sup> as a novel, formulation-level solution that can be implemented at scale and integrated into existing product formats. By protecting freeze-dried probiotics from moisture-induced cell death and product spoilage, the technology enables a longer shelf life for probiotic products.

Key findings from the study include:

- Moisture is a critical limiting factor for the shelf life of probiotic products and is a key driver of viability loss in unprotected products. LongevityGuard® effectively prevents moisture-induced cell death, eliminating the negative correlation between moisture levels and colony-forming units (CFU).
- The desiccant strip of BioGaia LongevityGuard® products effectively controls water content throughout storage and significantly improves survival of *L. reuteri* Protectis® (DSM 17938) and BG-R46®, both in glass bottles and EasyDropper formats. Oil suspensions containing the desiccant maintained high viable counts for more than 24 months at room-temperature, while products without the desiccant technology fell below the lower specification limit after just six months.

Gianfranco Grompone, Chief Scientific Officer at BioGaia, comments: *"This study clearly confirms how critical moisture control is for maintaining probiotic viability and validates the effectiveness of LongevityGuard®, a patented technology that BioGaia has used for years. By protecting live bacteria throughout the product's shelf life, LongevityGuard® ensures consistent quality and efficacy for consumers. This proprietary solution is unique to BioGaia and reflects our long-standing commitment to science-driven innovation."*

Study reference: Vikström, S., Lundqvist, C., Fajjerson Säljö, J. et al. A Novel Approach Using a Protective Desiccant Increases Shelf Life and Reduces Moisture in Oil Suspensions of Freeze-Dried *Limosilactobacillus reuteri*. Food Bioprocess Technol 19, 267 (2026). <https://doi.org/10.1007/s11947-026-04353-7>

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## About BioGaia

BioGaia is a Swedish probiotics company that has been at the forefront of microbiome research for more than 35 years. BioGaia develops, manufactures, markets, and sells probiotic products focused on gut health, immune health, and oral health. The products are sold through local distribution partners or via own distribution in over 100 markets. The class B share of the Parent Company BioGaia AB is quoted on the Mid Cap segment of Nasdaq Stockholm. [biogaigroup.com](http://biogaigroup.com)