

NemaLife Receives Grant from the National Institute of Health to Develop Probiotics and Postbiotics for Human Health

Funding supports NemaLife's development of new microbial products by harnessing its AI-powered high throughput in vivo discovery platform

LUBBOCK, TX, UNITED STATES, October 22, 2024 /EINPresswire.com/ -- NemaLife Inc., a TechBio company specializing in nutritional bioactive asset development and pre-clinical research, has received a grant from the National Center for Complementary and Integrative Health (NCCIH), part of the National Institutes of Health (NIH), to support development of bioactive solutions based on beneficial microbes.

Gut microbiome dysbiosis has been linked to numerous health conditions, including obesity, leaky gut syndrome, and neurodegeneration. Probiotics and postbiotics are gaining traction as potential treatments for these gut-related disorders. Probiotics introduce live bacteria into the gut to actively colonize and deliver health benefits, while postbiotics use inactivated bacterial strains or their by-products to confer similar health advantages. However, given the immense diversity of bacterial species in the human gut, identifying specific strains that can positively impact human health is a considerable challenge.

This non-dilutive funding leverages the transformative advances made possible by NemaLife's patented AI-powered organism-on-chip platform that integrates *C. elegans*, microfluidics, and visual AI providing living proof of the health outcomes of nutritional bioactives. *Caenorhabditis elegans* (*C. elegans*) is a microscopic nematode that has been recently recognized as a [Nobel-prize](#) winning tool. The worm naturally feeds on bacteria and is thus an ideal model organism for gut microbiome studies. The simplicity of *C. elegans*' gut maintenance and microbiome

NemaLife Discovery Flywheel



NemaLife Discovery Flywheel - Comprehensive parallel profiling of bioactives for diverse human health benefits.

colonization makes it a powerful tool for large-scale bacterial strain screening. This approach is not only faster and more cost-effective compared to rodent models, which require complex and expensive gnotobiotic setups, but it also offers more relevant insights than traditional in vitro models.

With \$300k in funding from the National Center for Complementary and Integrative Health (NCCIH), part of the NIH, NemaLife will leverage its proprietary [Discovery Flywheel](#)—a platform capable of screening biotics for several key health benefits concurrently, including stress resilience, cognitive health, gut health, metabolic health, muscle performance, and longevity. Probiotics and their heat-inactivated versions will be screened on a unique discovery pipeline that combines natural and accelerated aging in *C. elegans* with a tech stack of AI models tracking organ-level and whole-organism phenotypes.

“This external funding is exciting news as NemaLife moves into its next growth phase. We have been offering preclinical services to the functional ingredient industry and witnessing commercial success with our platform to deliver in vivo data at un-matched scale and speed. Building on this success and knowledge expertise, we will leverage this funding to launch internal discovery programs to create new bioactive assets that can be commercialized. Probiotics and postbiotics is a natural place for us to start due to the immense [recognition](#) and traction we have received in this market segment”, said Siva Vanapalli, Ph.D., CEO of NemaLife.

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