

Nutraland USA Publishes Miricell™ Clinical Study: First to Show Dose-Specific Increases in Autophagy Biomarkers

Pilot study demonstrates beneficial effects on cellular recycling pathways linked to healthy aging, while also supporting cognitive and cardiometabolic health.

IRVINE, CA, UNITED STATES, September 4, 2025 /EINPresswire.com/ --

Nutraland USA Inc., a leading provider of plant-based, science-based nutritional ingredients, today announced the publication of a proof-of-concept pilot study investigating the effects of its proprietary Miricell™ rice

germ extract on biomarkers of healthy aging. The manuscript is now available online in the peer-reviewed journal *Alternative Therapies in Health and Medicine* and will appear in the November/December 2025 print edition. It can also be found on PubMed:

<https://pubmed.ncbi.nlm.nih.gov/40862848/>.



This publication marks a pivotal moment for spermidine research"

Gene Bruno, Chief Scientific Officer, Nutraland USA, Inc.

The study is significant as it is the first human clinical trial to the authors' knowledge to demonstrate that a specific dosage of supplemental spermidine can increase key biomarkers of autophagy.

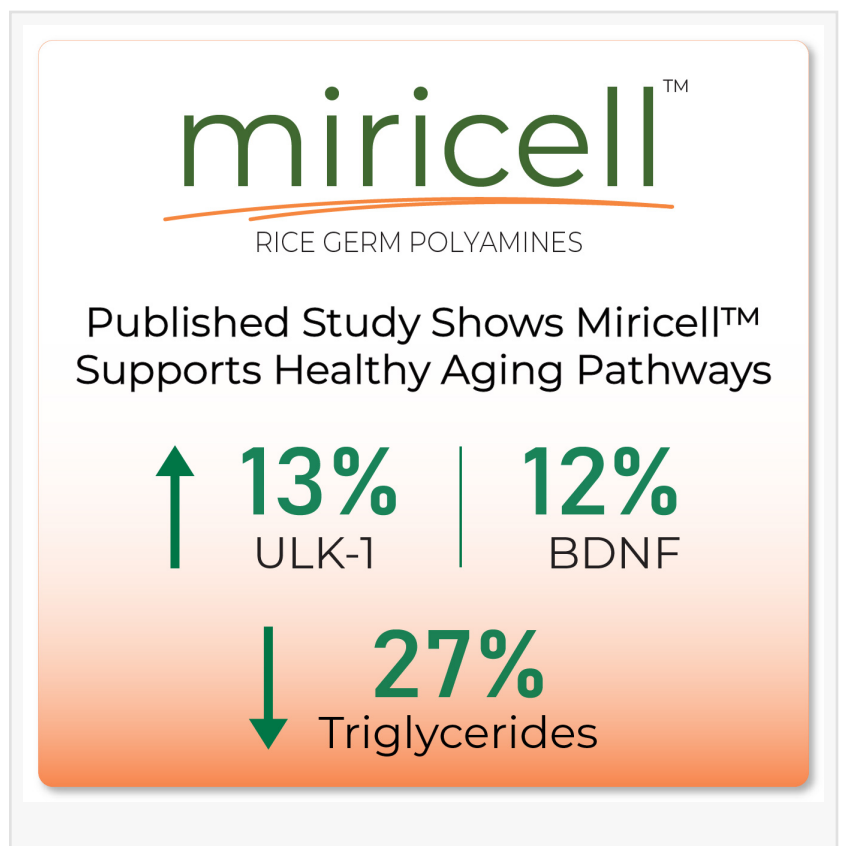
The 56-day, single-blind, interventional trial evaluated daily supplementation with Miricell™ (1.5 mg or 3.3 mg spermidine) in twelve healthy adults. Participants in the 3.3 mg/day group experienced:

- Autophagy: A 7.3% increase in Beclin-1 and a 13.4% increase in ULK-1, which are critical biomarkers of autophagy.
- Cognitive Health: A 12.1% increase in brain-derived neurotrophic factor (BDNF), a biomarker associated with neuronal health and cognitive function.



- Cardiometabolic Health: Reductions in hs-CRP (20.8% decrease), VLDL (20.1% decrease), and triglycerides (26.9% decrease).

"This publication marks a pivotal moment for spermidine research," said Gene Bruno, DBM, MS, RH(AHG), Chief Scientific Officer of Nutraland USA and study co-author. "While previous research has highlighted the benefits of polyamines through epidemiological studies, this is the first study we're aware of to demonstrate an effective dose for a spermidine supplement in a human clinical setting. These findings, while preliminary, open the door for future research and suggest that Miricell™ may play a meaningful role in supporting healthy aging."



The study, titled "Effects of Spermidine-Rich Rice Germ Extract Supplement on Biomarkers of Healthy Aging and Autophagy—Proof-of-Concept Pilot Study", was conducted at The Center for Applied Health Sciences (CAHS) in Ohio and approved by Advarra IRB. To further validate these preliminary results, a randomized, placebo-controlled clinical trial is scheduled to launch later in 2025.

For more information about Miricell™ and Nutraland's ingredient portfolio, visit www.nutralandusa.com.

About Nutraland USA, Inc.

Nutraland USA is a leading supplier of sustainable, plant-based, science-based nutritional ingredients for food, beverage, and supplement products. The company is focused on clean-label, responsibly and ethically sourced, innovative products that meet the highest quality standards and serve the evolving needs of health-conscious consumers.

Sales

Nutraland USA, Inc.

+1 949-988-7615

sales@nutralandusa.com

Visit us on social media:

[LinkedIn](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/846092681>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.