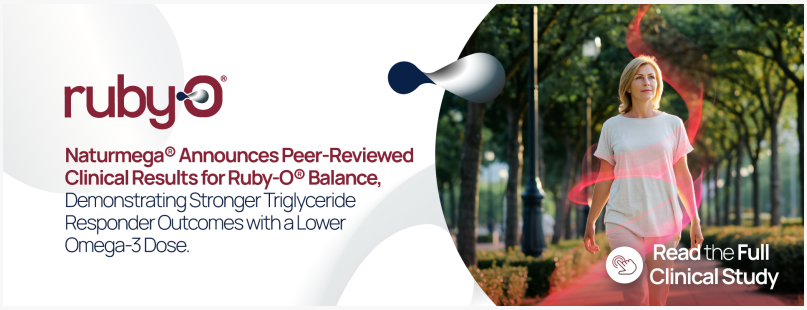
Peer-Reviewed Clinical Study Shows Ruby-O® Balance Achieves Triglyceride Response at Lower Omega-3 Dose

The study evaluates how omega-3 delivery architecture influences triglyceride outcomes and omega-3 incorporation in non-medicated adults.

Naturmega, a lipid science company specializing in advanced omega-3 solutions.



Visual highlighting the peer-reviewed clinical results for Ruby-O® Balance, demonstrating stronger triglyceride responder outcomes with a lower omega-3 dose.

BARRANQUILLA, ATLANTICO, COLOMBIA, January 20, 2026 /EINPresswire.com/ -- Naturmega, a pioneer in advanced lipid science, announced the results of its new clinical study evaluating Ruby-O® Balance, a next-generation omega-3 ingredient developed using its patented BPL-O3TM (Bonded Phospholipid Omega-3) molecular platform. The randomized, double-blind study, now peer-reviewed and published in BMC Complementary Medicine and Therapies, demonstrated clinically relevant triglyceride (TG) reductions and superior omega-3 efficiency in real-world, non-medicated adults with moderate hypertriglyceridemia, despite a lower daily dose compared to standard fish oil.

The findings reinforce a growing body of evidence suggesting that omega-3 efficacy is driven not only by dose, but by how lipids are structured, delivered, and utilized at the cellular level, a breakthrough in lipid science.

Achieving More with Less: A Cell-Oriented Approach to Omega-3 Delivery

The 12-week clinical trial compared Ruby-O® Balance formulation, providing 825 mg/day of EPA+DHA, to a conventional triglyceride-based fish oil delivering 903 mg/day of EPA+DHA. Participants were adults with elevated triglyceride levels who were not receiving lipid-lowering medication, reflecting a real-life population commonly targeted by dietary omega-3 supplementation.

Despite the lower omega-3 dose, Ruby-O® Balance achieved up to 3x greater triglyceride target attainment (≤166 mg/dL, ≤156 mg/dL, and ≤150 mg/dL) compared to standard fish oil (p = 0.035), indicating a higher proportion of responders reaching healthier triglyceride thresholds.

Visual representation of Naturmega's lipid science capabilities, including advanced processing technologies, laboratory research, and manufacturing infrastructure supporting omega-3 innovation.

Rather than increasing omega-3 dosage, the Ruby-O® platform is engineered to enhance biological efficiency through bonded phospholipid architecture, designed to more closely resemble the lipid structures naturally present in human cell membranes.

"From the outset, we challenged ourselves to rethink omega-3 dosing. We wanted to prove that smarter delivery, not higher doses, could drive real clinical impact," said Jorge Atencio, General Manager of Naturmega. "Ruby-O®'s BPL-O3 platform is proof of that vision."

Key Findings Include:
- Clinically meaningful triglyceride reduction in real-life, non-medicated patients.
- 34% greater efficiency in omega-3 incorporation (Omega-3 Index) per mg of EPA+DHA, validating BPLO3's superior bioavailability.
- Favorable trends in cardiometabolic biomarkers: blood pressure, glycemic control (fasting glucose, HOMA-IR, TyG), waist-to-hip ratio, and inflammatory markers (hsCRP, IL-6).
- A mild but significant increase in PTT (partial thromboplastin time), suggesting a potential antithrombotic effect for future exploration.

Together, these results indicate that Ruby-O® Balance supports broader cardiometabolic health pathways beyond triglyceride reduction alone.

Advancing a Broader Clinical Roadmap

This study represents a foundational milestone within Naturmega's expanding clinical roadmap for the Ruby-O® platform. Building on these findings, the company is actively advancing additional clinical research designed to include larger patient populations, longer intervention periods, and deeper exploration of cardiovascular and metabolic outcomes.

Ongoing and planned studies will further evaluate triglyceride responder profiles, extended cardiometabolic biomarkers, and the performance of Ruby-O® across different formulation formats and health applications. Additional data from these studies are expected to be shared later this year.

“This study was never intended to stand alone,” said Wilson Martínez, R&D+i Director at Naturmega. “It is part of a deliberate scientific strategy to understand how bonded phospholipid omega-3s interact at the cellular level, and how that interaction can translate into more consistent, real-world health benefits across populations, outcomes, and formulations.”

About Ruby-O®

Ruby-O® is a patented bonded phospholipid omega-3 (BPL-O3™) molecular platform developed by Naturmega, born from the idea of learning from biology itself. Inspired by how the human body naturally recognizes and integrates lipids, Ruby-O® applies a biomimetic design to omega-3 delivery, supporting more efficient cellular uptake and biological integration of EPA and DHA than traditional triglyceride-based fish oils.

Rather than relying on higher doses, the Ruby-O® platform focuses on delivery efficiency at the cellular level, translating into stronger clinical responses with lower amounts of omega-3. Beyond this study, Ruby-O® functions as a versatile molecular architecture capable of co-delivering additional bioactives, supporting expanded applications across cardiovascular, metabolic, cognitive, prenatal, and performance-focused nutrition.

This clinical study validates not only a formulation, but a delivery architecture designed to enhance cellular uptake and biological integration of omega-3s.

About Naturmega®

Naturmega is a lipid science company based in Barranquilla, Colombia, specializing in the development of advanced, clinically backed omega-3 solutions. Through its state-of-the-art Innovation Center, Naturmega is a pioneer in supercritical fluid fractionation technology, alongside multimolecular distillation, enzymatic processes, and proprietary lipid architectures. These integrated capabilities enable Naturmega to design highly differentiated, science-driven lipid ingredients for global health and nutrition brands.

Read the full clinical study published in BMC Complementary Medicine and Therapies
https://link.springer.com/article/10.1186/s12906-026-05245-1

ROSELLA DEL VECCHIO
Naturmega
roselladelvecchio@naturmega.com
Visit us on social media:
LinkedIn

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.