# New Clinical Study Confirms Optifolin+® Delivers Superior Folate Bioavailability and Rapid Absorption Compared to Folic Acid

**Montvale, New Jersey (November 3, 2025)** – A new clinical study published in Food & Nutrition Research has revealed that Balchem's choline-enriched L-5-methyltetrahydrofolate (L-5-MTHF) folate ingredient, Optifolin+®, is 2.6 times more bioavailable and absorbed 3.5 times faster than standard folic acid in healthy adults.[1] These findings highlight several key benefits that give manufacturers a clear advantage when developing innovative, bioavailable and effective solutions, optimized to support cellular health at every stage of life.

**Superior Bioavailability, Faster**

The randomized, double-blind, controlled crossover study aimed to evaluate the relative bioavailability of Optifolin+® versus standard folic acid, comparing their pharmacokinetic profiles over 24 hours in healthy men and women aged 29-40 years. Researchers found that plasma concentrations of L-5-MTHF, the bioactive form of folate that is used by the body to support vital cellular functions, was significantly higher following Optifolin+® intake compared to that after folic acid.[1] This superior absorption was seen in both healthy men and women.[1] Optifolin+® also increased folate status (as 5-MTHF) by over 240% more than folic acid, and significantly faster, reaching maximum plasma levels of L-5-MTHF in under an hour compared to 2.8 hours with folic acid.[1] Additionally, Optifolin+® did not increase blood levels of unmetabolized folic acid (UMFA), unlike folic acid.[1] This is an important finding, as UMFA has no known biological function[2] and high levels of UMFA have been linked to health risks.[3]

**Delivering Bioactive Folate the Body Can Use**

Also known as vitamin B9, folate is an essential nutrient that supports fundamental cellular functions and the production of key molecules such as DNA and RNA, amino acids, neurotransmitters and hormones.[4,5] Well established for its benefits in prenatal nutrition,[4,6] the vitamin's role providing methyl (CH3) groups for DNA methylation, homocysteine metabolism and other crucial reactions in the body means that folate as L-5-MTHF also plays a key role in the lifelong support of brain health and cognitive function,[7] cardiovascular health[6] and epigenetic health.[5]

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[2] Obeid R, et al. (2013). Is 5-methyltetrahydrofolate an alternative to folic acid for the prevention of neural tube defects? *J Perinat Med,* 41(5): 469-83.

[3] Troen, A. M., *et al.* (2006). Unmetabolized folic acid in plasma is associated with reduced natural killer cell cytotoxicity among postmenopausal women. *The Journal of nutrition*, *136*(1), 189-194.

[4] Menezo, Y., *et al*. (2020). Methylation: an ineluctable biochemical and physiological process essential to the transmission of life. *International journal of molecular sciences*, *21*(23), 9311.

[5] Office of Dietary Supplements (2022) *Folate – Fact sheet for health professionals*. Available at: https://ods.od.nih.gov/factsheets/Folate-HealthProfessional/

[6] Code of Federal regulations, Section 101.79: Folate and neural tube defects. (Updated 02 Dec 2024) Available at: https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-101#101.79

[7] Moretti, R., & Caruso, P. (2019). The controversial role of homocysteine in neurology: from labs to clinical practice. *International journal of molecular sciences*, *20*(1), 231.

Currently, many supplements and fortified food and beverages rely on folic acid as a source of folate. However, folic acid is a synthetic form of vitamin B9, which must undergo several enzymatic conversion steps within the body to become the biologically active form, L-5-MTHF. This process is inefficient for a large proportion of consumers – up to 31% of the European population and 40% of the U.S. population for example – who carry variations in the MTHFR gene that can reduce the activity of the enzymes responsible for the final conversion of folic acid into L-5-MTHF.[8,9,10] For these individuals, traditional folic acid supplementation may not provide optimal folate status. Plus, with excessive intake of folic acid, the enzymatic metabolism also risks becoming overwhelmed, leading to UMFA build-up in the bloodstream.[11]

**Folic acid vs. folate: Debate Solved With Optifolin+®**

"*Optifolin+® is the bioactive, choline-enriched L-5-MTHF form of folate, meaning it bypasses the metabolic bottlenecks and genetic hurdles that folic acid faces entirely,*" comments **Eric Ciappio, PhD, RD, Senior Manager, Nutrition Science, Balchem HNH**. "*These new study findings demonstrate how leveraging the bioactive form translates to real bioavailability advantages for consumers. Optifolin+® also goes a step further – providing seven times the methyl groups found in standard folate forms for methylation support, as well as excellent solubility and stability for ease of formulation. We are thrilled to see these benefits in action as part of our ongoing commitment to opening up innovation opportunities with this crucial vitamin.*"

"*Another exciting element of this trial is the broad demographics of participants,*" adds **Lauren Eisen, Sr. Marketing & Business Development Manager, Minerals and Nutrients at Balchem**. "*While many studies have previously focused on women – due to the prominence of folate in prenatal nutrition – this new study expanded the scope to include healthy men and women across a wide age range and saw significant benefits. Now, with clinically-backed superior bioavailability in this wider population, as well as a seven-times methyl group advantage, Optifolin+® offers a powerful tool for supplement brands to create next-generation solutions to support health at all stages of life.*"

For more information about Balchem and its choline-enriched folate, Optifolin+®, visit: https://balchem.com/hnh/mn/optifolinplus/

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**Notes to Editors:**

**About Balchem Corporation**
Balchem Corporation develops, manufactures, and markets specialty ingredients that improve and enhance the health and well-being of life on the planet, providing state-of-the-art solutions and the finest quality products for a range of industries worldwide. The company reports three business segments: Human Nutrition & Health; Animal Nutrition & Health; and Specialty Products. The Human Nutrition & Health segment delivers customized food and beverage ingredient systems, as well as key nutrients into a variety of applications across the food, supplement and pharmaceutical industries. The Animal Nutrition & Health segment manufactures and supplies products to numerous animal health markets. Through Specialty Products, Balchem provides specialty-packaged chemicals for use in healthcare and other industries, and also provides chelated minerals to the micronutrient agricultural market.

**About Optifolin+®**
Balchem's first-of-its-kind, choline-enriched folate, Optifolin+® delivers seven times the methyl groups found in other folate products. This bioactive folate (L-5-MTHF) is complemented with Balchem's leading brand of choline (VitaCholine®), Optifolin+® provides a 98% methylating capacity – uniquely positioning this supercharged folate to support epigenetic and cellular health at every stage of life.

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