

Ahiflower® Oil Replaces Key Tissue DHA in Mice Comparably to Marine DHA

New research shows how a unique plant-based omega-3 source could be a game changer

WINSTON SALEM, NC, UNITED STATES, November 29, 2023 /

EINPresswire.com/ -- A globally leading brain lipid research team at the University of Toronto have determined that dietary [Ahiflower®](#) (*Buglossoides arvensis*) oil forms newly synthesized omega-3 DHA (docosahexaenoic acid) and replaces it in key tissues like liver, adipose, and the brain in mice with comparable efficiency as from 'preformed' marine-based DHA. The research team, led by Prof Richard Bazinet and Assistant Prof Adam Metherel, found that brain DHA synthesis and turnover rates in mice fed Ahiflower oil were not statistically different than in mice fed a purified marine DHA-only oil, consumed at realistic human-equivalent intakes that were matched for total

polyunsaturated fatty acid (PUFA) content. They concluded, "Our findings indicate that Ahiflower oil may be a useful plant-based dietary source for maintaining tissue DHA turnover comparably to dietary DHA."

In effect, dietary Ahiflower oil — despite containing zero DHA — is efficiently forming DHA in the tissues in which the mammal body naturally makes it, stores it, or deploys it from plant-based 'precursor' omega-3's to support key cell membrane, immune, and neurotransmitter functions. Due its highest-available omega-3 SDA (stearidonic acid) content, which bypasses a key rate-limiting step in the liver, this research indicates how regeneratively farmed Ahiflower oil can help



Ahiflower® (*Buglossoides arvensis*) oil



in the overall societal challenge of overcoming recognized omega-3 deficiencies but without harm to marine ecosystems or reliance on genetically modified crops. The study's authors observed, "Given the shift towards more plant-based dietary food choices and the potentially ecologically disastrous implications of current dietary DHA recommendations, Ahiflower oil may present an important dietary source of n-3 PUFA capable of supporting tissue DHA requirements in an environmentally sustainable manner."

This study, published in the journal BBA - [Molecular and Cell Biology of Lipids](#), helps concerned healthcare practitioners, nutritionists, and consumers seeking to rebalance their fat intakes understand how plant-based Ahiflower oil acts differently than any other plant-based or algal omega-3 oil. It also helps explain why the Omega-3 Index is not a useful metric for assessing how Ahiflower is metabolized to DHA. On this the researchers wrote, "Ahiflower oil feeding can supply DHA to tissues at similar rates compared to DHA feeding alone, and once again reveals a limitation of considering DHA levels only as a marker of DHA status in tissue. Conversely, flaxseed oil fed mice displayed significantly slower DHA synthesis/turnover kinetics compared to DHA feeding alone and may indicate flaxseed oil's relatively slower ability to supply DHA to tissues." Indeed, no dietary omega-3 precursor to DHA has been shown to boost circulating DHA significantly. Yet this research shows how Ahiflower oil will naturally form ('biosynthesize') and maintain all the DHA needed in key tissues like the liver and brain, yet with significantly faster DHA turnover than from flaxseed oil in the brain.

Dietary Ahiflower oil resulted in a richer and more diverse array of omega-3 fatty acids accruing — including ETA, EPA, and DPA plus anti-inflammatory omega-6 GLA and DGLA — in serum, adipose, and liver tissues than did pure marine DHA. Collectively, these are known as anti-inflammatory oxylipin precursors and show how Ahiflower oil may act differently than marine or algal EPA/DHA sources in supporting immune, gut-brain axis, and gut-microbiome balance in the body.

Commenting on this research, co-author Greg Cumberford, VP of Science & Regulatory with [Natures Crops International](#), the exclusive worldwide producers of Ahiflower oil observed, "For many decades, consumers and practitioners have been told that all plant-based omega-3 sources convert 'inefficiently' to longer-chain DHA. This new research indicates that the story with Ahiflower oil is more nuanced. Even though dietary Ahiflower oil does not raise circulating DHA levels, it is clearly forming liver, adipose, and brain DHA quite efficiently in mice, with comparable efficiency as purified marine DHA."

There is already well-established peer-reviewed published evidence that Ahiflower efficiently boosts circulating omega-3 EPA and anti-inflammatory interleukin-10 (IL-10) levels in humans. CEO and Founder Andrew Hebard stated, "We are excited by this and other forthcoming functional health science research findings with Ahiflower oil. We hope this new DHA biosynthesis research will add important momentum to Ahiflower oil being embraced as a distinctly complementary 'multi-omega,' with its own range of recognized anti-inflammatory cell signaling activities in the body, including a capacity to form as much EPA and DHA as needed in

healthy adults while providing a fully scalable, traceable, and climate-resilient source of balanced omegas.”

About Natures Crops International

A manufacturer of specialty oils for dietary supplements, nutraceuticals, food, personal care, and animal nutrition products, Natures Crops produces oils from the highest quality crops, produced by growers who follow strict management protocols for sustainability and identity preservation. Natures Crops ensures the crops produced are grown, processed, packaged, and delivered in a safe, sustainable, traceable, and cost-competitive manner. The company has operations in Prince Edward Island, Canada, and the United Kingdom, with headquarters in North Carolina. For more information, please write to info@naturescrops.com.

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