## ahiflower ${ }^{\circ}$

The world's richest, most biologically advanced source of balanced omega-3 SDA and omega-6 GLA from a non-GMO plant source.

A truly unrivaled omega source. Ahiflower oil contains more and healthier omegas than any other natural plant or seed oil, delivering the health benefits associated with fish oil, evening primrose oil, olive and flaxseed oil.

All from a single plant.

The first plant-derived omega-3 source to show efficient DHA turnover in circulating cells. $\otimes$

## An unrivaled omega source

Ahiflower® is a proprietary, refined seed oil from the plant Buglossoides arvensis, in the Boraginacea family. Ahfilower oil contains more biologically advanced omegas than any other natural plant source. It is the richest naturally-occurring source of stearidonic acid (SDA) and an excellent source of gamma-linolenic acid (GLA).

Ahiflower oil is a powerful single-plant source of non-GM omegas with up to a 4:1 ratio of omega- 3 and omega- 6. Ahiflower omega oil offers consumers an optimum choice for cardiovascular and anti-inflammatory support!


## The SDA Story

Ahiflower oil has the highest omega-3 SDA (stearidonic acid) levels of any commercially available plant-based dietary oil.

SDA is the product of ALA metabolism in the liver, just as omega-6 GLA is product of LA metabolism, both occurring with varying efficiencies depending on one's genetics and overall dietary fat intakes competing for the liver enzyme delta-6 desaturase. Since SDA bypasses this rate-limiting step entirely, it is converted much more efficiently to longer chain omega-3 fatty acids, including EPA, DPA, and DHA.

Even though moderate DHA precursor intakes (including ALA, SDA, and EPA) have not been shown to elevate circulating DHA levels, emerging science in mammals now shows good fluxes from dietary SDA right through to circulating DHA using C-isotope ratio mass spec analysis. Since Ahiflower oil is the richest SDA source, it will achieve overall EPA, DPA, and DHA conversion more efficiently than flax, chia, and other ALA-only plant-based oils.

| EPA (\% total fatty acids) |  | Day 0 | SEM | Day 28 | SEM | $\Delta$ | AO-FO mult |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Serum plasm | AO | 0.45 | 0.04 | 1.34 | 0.13 | 0.89 | 2.6 |
|  | FO | 0.43 | 0.05 | 0.76 | 0.08 | 0.33 |  |
| Red blood cells (erythrocytes) | AO | 0.45 | 0.03 | 0.74 | 0.05 | 0.29 | 2.2 |
|  | FO | 0.42 | 0.01 | 0.55 | 0.03 | 0.13 |  |
| Polymorphonuclear cells (neutrophils) | AO | 0.15 | 0.01 | 0.24 | 0.03 | 0.09 | 3.0 |
|  | FO | 0.16 | 0.01 | 0.19 | 0.01 | 0.03 |  |
| Mononuclear cells (monocytes and lymphocytes) | AO | 0.20 | 0.01 | 0.48 | 0.03 | 0.28 | 4.0 |
|  | FO | 0.20 | 0.01 | 0.27 | 0.01 | 0.07 |  |

## A Sustainable and Traceble Vegan Omega

 Patiently developed over a period of 12 years■ 100\% Natural \& indigenous plant selection
■ Non-GM horticultural practices
■ Ecologically sound offering that enhances biodiversity

- Best complete omega 3-6-9 and SDA content from managed seed sources



## Traceability

Currently grown in the United Kingdom, Ahiflower is fully traceable through NCI's proprietary Crop Assured 365® system of quality control which monitors and documents the identity and purity of each harvest, "From soil to oil."

## Delivering what more consumers want... Optimal source of full spectrum omegas from a single plant-based source. <br> - No need for multiple and expensive sources

220 million consumers in 12 industrialized countries have already stopped taking fish oil due to sustainability concerns-a significant new trend. Source: GOED (2013)

A healthy source of anti-inflammatory omega-6 GLA
-Not available in fish or flax or algals
Meets growing demand for vegan/vegetarian omega fatty acids

## Advantages of Ahiflower® Oil

| vs. Flaxseed oil | - $75 \%$ greater adjusted ${ }^{*}$ total omega $3+6$ <br> - 18-20\% SDA (Flax 0\%) <br> - $5-8 \%$ GLA, comparable to Evening Primrose oil (Flax 0\%) <br> - Converts to EPA up to 4X more efficiently |
| :---: | :---: |
| vs. Chia oil | - $55 \%$ greater adjusted ${ }^{*}$ total omega $3+6$ <br> - 18-20\% SDA (Chia 0\%) <br> - 5-8\% GLA (Chia 0\%) |
| vs. Echium Oil | - $30 \%$ greater adjusted ${ }^{*}$ total omega $3+6$ <br> - 60\% more SDA <br> - More economical alternative <br> - More pleasing sensory properties |
| vs. Hemp oil | - $40 \%$ greater adjusted* total omega $3+6$ <br> - 10X more SDA <br> - 60\% more GLA <br> - More pleasing sensory properties |
| vs. Microalgae oil | - $18 \%$ total omega 6 (Microalgae $0 \%$ ) <br> - Complete and balanced range of omega fatty acids <br> - More economical alternative <br> - Like Ahiflower, sustainable, non-GM, land-based sourcing <br> - More pleasing sensory properties |
| vs. Fish or Krill oil | - 5-8\% GLA (Fish or Krill oil 0\%) <br> - Complete and balanced range of omega fatty acids <br> - Does not contribute to depletion of marine stocks <br> - No potential aquatic contaminants, heavy metals, or pollutants <br> - Neutral taste and smell-and no "fishy" burps <br> - Vegan/Vegetarian |

*Adjusted total omega 3+6 content. Content of SDA is multiplied to allow for increased conversion to EPA relative to ALA.

Ahiflower® oil is a proprietary, licensed ingredient, offering distinctive leverage for best-in-class brand owners and formulators. Careful attention has been paid to relevant regulatory processes, including:

- FDA GRAS (Generally Recognized as Safe) review status with no objections

■ EU Novel Foods and Canadian Novel Foods approvals

- NSF Non-GMO True North® Certified - Complies with EC Reg no. 182912003
- Health Canada NNHPD Approved - 1st NPN Issued February 2016

Ahiflower seeks global co-branding partners to formulate natural dietary supplement, functional food \& beverage, animal nutrition and skin care products with Ahiflower oil.

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[^0]:    *Metherel A (2021) "Determining plasma and tissue DHA turnover from Ahiflower® oil, flaxseed oil and DHA using compound-specific isotopic analysis", ISSFAL Poster Presentation \#202, 10-14 May 2021.

