



Preen Oil: The Nutritional Approach to Chronic Inflammation

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WARF: P160017US01

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing new methods and food additives based on preen oil to reduce chronic inflammation.

Overview

Low-grade chronic inflammation underpins many diseases affecting both human and animal health. It remains largely undiagnosed and undertreated worldwide.

Preen oil, secreted by the uropygial gland of many bird species, is a readily available product commonly discarded in the meat processing industry. Preen oil contains fatty acids such as nonadecanoic acid (NA), which have anti-inflammatory activity.

The Invention

UW–Madison researchers have developed methods of using preen oil as a food supplement to treat chronic inflammation in human and non-human animals, birds and fish.

Preen oil may be given orally as a pharmaceutical composition, added to human food products or included in animal, bird or fish food. The fatty acids in the oil accumulate in tissues where they inhibit the pro-inflammatory cytokines IL-1 and IL-6 and reduce chronic inflammation, including chronic joint inflammation associated with rheumatoid arthritis and other diseases.

Applications

- Animal feed supplements
- Human food additive
- Fish growth stimulation in aquaculture
- Oral treatment for chronic inflammation in the digestive tract and arthritis

Key Benefits

- Reduces pro-inflammatory IL-1 and IL-6 associated with inflammation and joint destruction
- Decreases incidences of gastrointestinal inflammation, enhancing feed/nutritional efficiency in commercial animals
- Stimulates growth in larval and growing fish species
- Allows for use of inexpensive fish feed while shortening growth cycles
- Uses a natural and available substance that would otherwise be discarded, adding a new revenue stream from meat processing
- Low-cost development

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Stage of Development

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The inventors have demonstrated lowered proinflammatory cytokine levels and increased growth rate without fat deposition in arthritic sham mice and increased larval growth in fathead minnows.

The development of this technology was supported by WARF Accelerator. WARF Accelerator selects WARF's most commercially promising technologies and provides expert assistance and funding to enable achievement of commercially significant milestones. WARF believes that these technologies are especially attractive opportunities for licensing.

Additional Information

Related Technologies

- [WARF reference number P03399US describes methods of reducing gastrointestinal inflammation and increasing feed efficiency in animals.](#)

Related Intellectual Property

- [View Divisional Patent in PDF format.](#)

Tech Fields

- [Animals, Agriculture & Food : Animal health](#)
- [Animals, Agriculture & Food : Aquaculture](#)
- [Animals, Agriculture & Food : Food ingredients & additives](#)

For current licensing status, please contact Emily Bauer at emily@warf.org or 608-960-9842

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