

Cutting-Edge Compounds - Perna Canaliculus Extract Makes A Comeback - ETA Debuts

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I was in a recent clinical nutrition conference when a colleague pointed out a product that had helped one of his patients with arthritis. I looked at the label and told him the response was probably a placebo effect. I explained that years ago, researchers had shown that the glycosaminoglycans (GAGs) in *perna canaliculus* are not effective.

Perna canaliculus, also known as green-lipped mussel, was a popular product for treating arthritis that first appeared in the late 1970s and early 1980s. Marketers claimed that perna canaliculus worked because it was a source of mucopolysaccharides that we now refer to as GAGs. The popular supplement glucosamine is a GAG precursor. Although there was a positive human study in 1980,¹ numerous follow-up studies and trials were negative.^{2,3,4} Although *perna canaliculus* continued to show up in so called "cartilage regenerating" formulas, interest and sales declined.

The Green-Lipped Mussel Story

The reason people first marketed perna canaliculus stems from the observation that native New Zealanders (Maoris) who lived near the sea had a much lower incidence of arthritis than their relatives who lived inland.⁵ Their diets were similar with the exception that the Maoris on the coast consumed large amounts of green-lipped mussel.

A few scientists in Australia continued to experiment with perna canaliculus extract in the 1980s and identified some anti-inflammatory compounds. In the early 1990s, a lipid fraction of perna canaliculus was isolated and found to have a very powerful anti-inflammatory properties. This lipid extract, with a trademark name of Lyprinol, contains a variety of fatty acids, including eicosatetraenoic acid (ETA), which is an omega-3 fatty acid. The well-known omega-3 fatty acids are eicosapentaenoic acids (EPA) and docosahexaenoic acids (DHA). A patented manufacturing process (super-critical fluid extraction of stabilized perna canaliculus extract) may have solved the problem of previous reported inconsistencies using perna canaliculus extract. It appears the active compound in perna canaliculus is ETA and not its mucopolysaccharide content. (This is an example that quality control in supplement manufacturing is very important. More often than not, in this unregulated industry, you do get what you pay for.)

In a 1998, double-blind study of 60 patients with rheumatoid and osteoarthritis conducted over a three-month period, those who used 210 mg of the stabilized lipid extract of perna canaliculus showed a 70-percent improvement in their symptom complex in both groups. There was reduced pain and stiffness, along with an improvement in functional indices.^{4,6}

Another recent study of this novel compound showed that the stabilized lipid fraction of perna canaliculus may be a stronger antiinflammatory than flax oil, oil of evening primrose and fish oil.^{5,7}

Only one company (Tyler) has the rights to the patented technology to stabilize the lipid extract

from *perna canaliculus*. It is this author's opinion that the active compound in both fresh green-lipped mussel and the stabilized lipid extract is ETA, not the other fatty acids that are present. I am anticipating that other companies will figure out how to isolate ETA without interfering with the patented progress. It is good to see that practitioners of nutritional medicine may have another powerful weapon to naturally treat patients with both osteo-and rheumatoid arthritis.

References

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