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PRESS RELEASE

Study indicates benefits of EPAX 4020TGN for muscle function and recovery

EPAX 4020TGN can help improve muscle contractile function and post-injury muscle recovery, a pilot study has found. The pre-clinical *in vivo* and *in vitro* research indicates that Epax's highly concentrated, marine-derived triglyceride oil offers potential benefits for healthy aging and sports recovery.

Researchers at the University of South Florida carried out an eight-week dietary intervention on adult and aging rats.* They were assigned either a control diet or one containing EPAX 4020TGN.

The results showed that inclusion of EPAX 4020TGN in the diet inhibited age-related loss of muscle strength. Additionally, the study demonstrated that EPAX 4020TGN significantly improved muscle strength following injury after a seven-day recovery period.

Furthermore, the investigators looked into the effects of Omega-3 on membrane damage using an *in vitro* analysis of muscle cells in culture. Cell membrane damage can occur after a fall, reducing mobility and exacerbating physical inactivity, even if there is no fracture. Damage can also occur as a result of compression injuries, or with regular training in athletes. The study showed that incubation of cells with EPAX 4020TGN improved cell membrane repair after damage.

The findings suggest that EPAX 4020TGN may aid recovery of muscle function that is impaired as a result of aging or injury. They also indicated that repair of cell membrane damage may be a common mechanism for muscle repair.

Part of Epax's extensive range of Omega-3 ingredients, EPAX 4020TGN offers a 2:1 ratio of the EPA and DHA Omega-3 fatty acids. It is ideal for use in supplements.

Dr Derek Tobin, Clinical Research Manager at Epax, said: "These findings describe a novel means by which EPA and DHA supplementation can support muscle cell repair after injury, and help reduce the muscle decline that occurs as a result of aging. Additionally, in a sports nutrition context, they demonstrate the potential benefits of Omega-3 for the improvement of muscle recovery after hard training."

*Russ DW, Sehested C, Banford K, Weisleder NL. Fish Oil Supplement Mitigates Muscle Injury In Vivo and In Vitro: A Preliminary Report. *Nutrients*. 2024 Oct 16;16(20):3511. doi: 10.3390/nu16203511. PMID: 39458505; PMCID: PMC11510179.

About Epax

Part of Norwegian fishery giant Pelagia AS, Epax Norway AS is a leading manufacturer of concentrated marine oils.

Epax® has been an innovator for over 180 years. Since 1838, when it began producing premium quality cod liver oil, Epax has transformed the marine ingredients sector. It invented the technology to concentrate fish oil as an ethyl ester, and to re-esterify oils back to TG-form. It was also the first company to create condition-specific EPA/DHA ingredients backed by science. Today Epax continues to deliver Omega-3 products of unmatched purity and quality.

The Epax production facility in Ålesund, Norway has, in addition to all standard manufacturing certifications/approvals, been approved by the US FDA for manufacture of Pharmaceutical Intermediates and by the Norwegian Medicines Agency (Legemiddelverket) for the production of Active Pharmaceutical Ingredients (APIs).

Epax Contact

Sarah Christianslund

sarah.christianslund@pelagia.com

Tel. +47 70 135960

Ingredient Communications Contact

Steve Harman

steve@ingredientcommunications.com

Tel. + 44 7538 118079