

Master thesis work in biotechnology company.

Area: MARINE BIOTECHNOLOGY
Title: Purification and characterization of lipids from sea cucumber
Firm: Pharma Marine AS
Gangstøvika, Ålesund
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About the company: Pharma Marine AS is a newly established entity located in the same facilities as Møreforsking dept. Ålesund. The company collaborates with Møreforsking on some projects. The competence in the firm rests on the founders and owner of the company: Leif Kjetil Gjendemsjø and Asgeir Sæbø. Leif Kjetil is an experienced industrial entrepreneur with experience in omega-3 companies and sold his omega-3 production company (Napro Pharma (www.napro-pharma.no) to Cognis in 2006. (www.cognis.com). Asgeir has been R&D manager in Omega-3 firms in the Ålesund area until 1996, and then R&D manager in the stock listed Natural ASA. Last year he has been Vice President R&D in Aker BioMarine AS, www.akerbiomarine.no (after Aker bought Natural ASA)

Pharma Marine AS is now engaged in several biotechnology projects on bioactive lipids. The firm is located in nice facilities close to the sea in Gangstøvika in Ålesund. The laboratory is equipped with 2 gas chromatographs (FID), glass reactor, molecular distillation plant and plans to invest in a supercritical extraction pilot plant.

Project: Pharma Marine do currently have 3 running projects on bioactive fatty acids. This student project is a significant part of one of the project. The work to be focused on is testing out purification technology in laboratory scale. The aim is to produce a high concentrate of a bioactive fatty acids and further characterize in details the fatty acids and lipid classes found in the parent oil from a sea cucumber. The purification process involves use of enzyme technology (immobilized enzymes), molecular distillation, low temperature crystallization among techniques. The analytical methods will include GC analysis, TLC, HPLC-MS-MS, and NMR. The purification process of the fatty acid will take place in the laboratories of Pharma Marine in Ålesund. Part of the analytical work will take place at the University. The estimated time to be spent in the laboratories of the firm is 6-8 months.

A product derived from sea cucumber oil will most probably be released on the supplement market within 1-2 years. An application for funding of the project has been provided to the Norwegian Research Council, but the project does not depend on the outcome of this application.

Skilled goal oriented students might down the road become a part of the team as an employee of Pharma Marine AS.

For more information, please contact the manager.