Novofeed

Novel feed ingredients from sustainable sources

MarineBiotech

PROJECT FACTSHEET

CALL 2 | DECEMBER 2016

ABSTRACT

The European aquaculture industry holds great promise as a provider of nutrient rich food to an increasing population. To ensure a sustainable and continued growth of the production, there is a need for an increased focus directed towards the development of effective approaches to prevent and control diseases in aquaculture species. One possibility is to develop functional feed ingredients that provide specific benefits to the fish. Such ingredients may be biologically active compounds, recovered from seafood processing by-products. This project aims to develop novel functional feed ingredients for the aquaculture industry through facilitating the recovery and utilization of valuable bioactive peptides from the salmon industry in Norway and the sea bass/sea bream industry in Italy. State of the art techniques within peptidomics and bioinformatics (often referred to as the in silico approach) will be used to identify peptides with predicted anti-inflammatory, immunostimulatory or anti-microbial properties in the different fractions of by-products. Based on the results, targeted hydrolysis and processing of the by-products will be performed to obtain fractions enriched in the relevant bioactive peptides. Assessments will be made of the degree of purification and up-concentration required before inclusion of these fractions in the feed formulations. The efficacy of the compounds as health promoting and disease-preventing ingredients will be assessed through in vitro studies and in vivo fish feed trials.

Fiona Provan, Project Coordinator
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Topic:

- Novel feed ingredients

Marine biomass:

- Fish

Source of marine biomass:

- from fishery or aquaculture activity
- marine biomass processing by-products and waste fractions

Keywords:

peptidomics, bioinformatics, peptides, bioactive, functional feed ingredients, aquaculture, value creation, in vitro, in vivo trials

Total costs*: € 1.421.000

Funding granted*: € 1.283.000

Duration: 3 years (2017-2019)

** Exact amount may change after completion of national contracts*

CONSORTIUM

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Marine Biotechnology ERA-NET (ERA-MBT) is funded under the European Commission's Seventh Framework Programme. | Grant Agreement Number 604814
December 2013 - November 2017