

7th call for STSM-Applications

COST Action FA1205: AQUAGAMETE - Assessing and improving the quality of aquatic animal gametes to enhance aquatic resources – The need to harmonize and standardize evolving methodologies, and improve transfer from academia to industry.

Name: Juan German Herranz Jurdado

STSM Title: Grant period 3, 7th call

STSM Reference: COST-STSM-FA1205-27548

Dates: 10.07.2015 – 10.11.2015

Location: Department of Production Biology, Division of Aquaculture at Nofima AS, Tromsø, Norway.

Host: Dr Helge Tveiten

STSM purpose

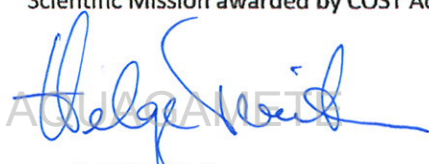
The objective of this STSM was to analyse plasma levels of the steroids testosterone, 11-ketotestosterone and estradiol of male European eels that were treated at different environmental conditions (temperature and salinity).

Work description

During the STSM we performed the analysis of steroid levels in plasma from 292 male European eels from two different experiments, Repro-Temp and Repro-Salt, where we tested the effect of environmental conditions in fish maturation. The plasma concentrations were analysed using radioimmunoassay (RIA) at the University of Tromsø with the help and supervision of Dr Helge Tveiten from Nofima. In the first experiment, 70 eels were kept at 20 °C, 10 °C or variable (daily changes between 10-20 °C) temperature. RIA analyses for testosterone and 11-ketotestosterone (11-kt) show that eels at 10 °C show higher plasma concentration of testosterone and 11-kt than control fish (at 20 °C), whereas eels kept at 20 °C or at variable temperature did not show any significant difference with the controls. In the second experiment, 222 eels were kept at four different conditions, i.e. two different temperatures (10 or 20 °C) and in salt or fresh water. RIA analyses show that testosterone and 11-kt levels are in general higher in sea water than in fresh water and at 10 °C than at 20 °C, but these differences varied during the experiment and not at all sampling time points were significant. The estradiol levels varied through the different sampling time points of the experiment reaching the highest peak at the first month in fresh water at 20 °C.

Confirmation by the host institution of the successful completion of the STSM

Dr Helge Tveiten certifies that Juan German Herranz Jurdado has completed a Short-Term Scientific Mission awarded by COST Action FA1205 in the period 10.08.2015 – 10.11.2015.


Dr Helge Tveiten
(Host institution)


Juan German Herranz Jurdado
(STSM applicant)