



Short Term Scientific Mission (STSM) Report

COST Action “Aquagamete”

Reference COST Action FA1205

Home institution: Hellenic Center for Marine Research, Institute of Marine Biology, Biotechnology and Aquaculture

Host institution: Israel Oceanographic & Limnological Research, National Center For Mariculture (Dr. Hanna Rosenfeld)

Period: 02/03/2016 to 03/04/2016

Reference code: COST-STSM-ECOST-STSM-FA1205-200316-070803

Scientific report

In order to reveal the obstacles along the reproductive axis, which arrest the occurrence of spontaneous spawning in captive greater amberjack, a Short Term Scientific Mission was planned with the following scientific objectives:

- To establish quantitative real-time PCR (qRT-PCR) assays to monitor expression levels of pituitary gonadotropin β -subunit genes (LH β and FSH β) in the greater amberjack.
- To establish hormone specific ELISAs for measuring LH and FSH in greater amberjack.
- To temporally profile transcriptional and hormonal levels of both gonadotropins in captive-reared and wild-caught greater amberjack, and correlate these levels with the reproductive state of the fish.

During my stay in Eilat, Israel, samples of plasma and pituitaries from wild and captive greater amberjacks, which were obtained at different periods of the reproductive cycle, were analysed.

The results showed variations regarding transcript levels of FSH β and LH β between both the different sampling periods and the different origins of the fish. The same was observed for hormonal profiles of LH both in pituitaries and plasma. Further investigation of the results will help to describe the endocrine cycle of this fish and plan better spawning induction treatments and broodstock management procedures.

Photo 1: Washing an ELISA plate

Photo 2: Preparing the vials for RNA isolation procedure

Photo 3: q-RT PCR plate before loading the samples

Confirmation of the successful completion of the STSM:

Dr. Hanna Rosenfeld from National Center For Mariculture, Israel Oceanographic & Limnological Research, confirms that Ioannis Fakriadis has completed a STSM, partially funded by the COST Action FA1205, between 02/03/2016 and 03/04/2016 in Eilat, Israel.

Eilat, 25/4/2016

A handwritten signature in black ink that reads "Hanna Rosenfeld". The signature is written in a cursive style. A faint watermark "ACQUAGAME" is visible in the background behind the signature.

Dr. Hanna Rosenfeld