

# STSM Scientific Report

## **1 Purpose of the STSM**

Study of gene expression of vitellogenin receptors (VtgR) in various tissues of European eel by quantitative real time PCR (qPCR). Comparison by qPCR of ovarian VtgR expression in females at two different life stages (sedentary yellow stage *versus* migratory silver stage)

## **2 Description of the work carried out during the STSM**

To deep in the study of vitellogenesis in the European eel, we focused on the VtgR gene, by studying its tissue distribution and expression in yellow and silver eels. Tissue screening was studied in 15 tissues of 8 female silver eels and in 4 testis of male eels. Regulation was studied in 8 yellow eels and 10 silver eels. The first week I performed retro-transcriptions of all the RNA samples, in order to analyse them by qPCR the second week.

## **3 Description of the main results obtained**

Tissue screening was studied in 8 female silver eels. The ovary is the predominant site of expression of VtgR mRNA. VtgR mRNA is also expressed in the brain, pituitary, gill, fat and heart. The regulation shows that VtgR mRNA is already expressed at the previtellogenic stage in yellow eel, and its expression does not increase in silver eels.

## **4 Future collaboration with host institution**

Currently, both institutions are partners in the European project: Reproduction of European eel: towards a self-sustained aquaculture (PRO-EEL). This stay intensifies this cooperation, opening the possibilities to new collaboration in future projects.

## **5 Foreseen publications/articles resulting or to result from the STSM**

Putting together these results with the gene expression of VtgR under three thermal regimes with hormone treatments, we consider that the experiment will be finished and ready to be published.

## **6 Confirmation by the host institution of the successful execution of the STSM**

Dr. Sylvie Dufour from the National Museum of Natural History, National Center for Scientific Research (MNHN, CNRS, Paris, France) certifies that Marina Morini visited her laboratory as a guest researcher from September 30th to October 14th of 2013 thanks to a grant awarded by Short Term Scientific Mission, COST Action FA1205. Marina Morini has been trained and successfully performed the analysis for VtgR mRNA quantification in eel tissues.



Signed: Sylvie Dufour



Signed: Marina Morini