

STSM Report

The objective of this stay was to set up the explant testis culture in European eel, but this objective was modified by the lack of males. Therefore, we decided to develop an explant ovary culture instead to testis culture. This work was carried out together to Christoffer Rozenfeld, also granted by 8th call of STSMs. Both, we set up the protocol to perform ovary explant culture in European eel. A brief description of the results can be found as following.

In total, 3 cultures of 6 days were performed. The 1st culture aimed test i) best culture medium ii) use of Ultroser iii) most suitable storage solution. The 2nd culture aimed to test i) culture insert ii) effect of estradiol on specific gene expression. The 3rd culture aimed test i) effects of European eel recombinant LH and FSH on specific gene expression, with CHO cell medium as control ii) effects of salmon and carp pituitary extracts, on specific gene expression.

The results show that the optimal culture conditions are: M199 medium without Ultroser, without inserts and storing samples in RNALater.

QPCR revealed a specific decrease of aromatase expression after culturing. This indicates that a factor present *in vivo*, actively stimulates aromatase expression, which decreases *in vitro* without this factor. This decrease was more pronounced after estradiol treatment. In contrast, slight increases in expression of LHR1 and FSHR after estradiol treatment were seen.

3rd culture samples and samples for histology, will be shipped to Valencia for RNA extraction, qPCR and histology.

This topic is related to working group 3: “Basic and applied research on gametes and biochemistry and physiology, including OMICS” of COST action FA1205.

Dr. Sylvie Dufour certifies that Dr. David Sánchez Peñaranda visited us as a guest researcher from 11th April to 12th June, 2016.

Paris, June 13, 2016



Sylvie DUFOUR, Director BOREA



David Sánchez Peñaranda, postdoctoral