

COST STSM Scientific report

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COST Action: FA1205

STSM title: **Effect of different doses of commercial recombinant hCG on sexual maturation of male European eel**

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The purpose of this Short Term Scientific Mission (STSM) was to study effect of different doses of commercial recombinant hCG (human chorionic gonadotropin) on the sexual maturation of male European eels and make the evaluation of the *in vivo* response in terms of sperm production (both quantity and quality) using different techniques under the guidance of Dr. Juan F. Asturiano, Polytechnic University of Valencia, Spain.

During the visit I learned typical aspects of the work with eels (injecting of treatments, taking care of the fish, sperm collection, etc.). I collected more than 400 sperm samples fixed in perchloric acid (PCA) in different conditions: different periods after the beginning of spermiation, hormone treatments of different doses, different post-activation time, and different pre-incubation of sperm with storage at 4 and 20 C°. After fixation in PCA all samples are stored at -80 C°. Next step is quantification of adenylate- and creatine phosphates in fixed samples using liquid chromatography/high-resolution mass spectrometry (LC/MS/HRMS) at University of South Bohemia, Faculty of Fisheries and Protection of Waters (FROV JU) in the Laboratory of Reproductive Physiology in Vodnany, Czech Republic, where is all necessary equipment and developed method for this.

Main result of the visit is the collection of the huge set of sperm samples fixed in PCA under different conditions described above. The data produced after analyses of these samples after STSM are going to be used as a publication.

I would like to thank COST for the awarded STSM grant. Results obtained in STSM in the labs at ICTA-UPV, Valencia, Spain potentially will help in developing of effective method for improving spermiation and increasing sperm production in European eel and will be useful for my future laboratory work in FROV JU as well as for my PhD thesis.

Signed: Dr. Juan F. Asturiano
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Signed: Pavlo Fedorov

