STSM REPORT

COST-STSM-FA1205-24056

Work description at the host institution

We studied the evolution of the European eel (*Anguilla anguilla*) sperm quality through the spermiation period.

Sperm cryopreservation

Samples with motility higher than 75% were chosen for cryopreservation experiment. Freezing diluents were prepared with Müller *et al.* (2004) (Tanaka´s medium) and Asturiano *et al.* (2003) protocols. The sperm was diluted being the final concentration of cryoprotectant 10% for DMSO (Asturiano *et al.*, 2003) or MeOH (Müller *et al*., 2004). Samples were frozen in the vapor of liquid nitrogen in an insulated Styrofoam box for 3 min (with a 1.5 cm of distance of the liquid nitrogen), being plunged directly into liquid nitrogen. CASA software was used for sperm analysis.

Description of preliminary results of the experement

It was not possible to test the samples frozen with the Müller et al. (2004) protocol, apparently due to an error during medium preparation.

Comparing total motility (TM), progressive motility (PM), curvilinear velocity (VCL), straight line velocity (VSL), average path velocity (VAP) of fresh and cryopreserved sperm samples of eel, using the cryopreserved method of Asturiano et al. (2003) a decrease of the parameters was noticed between fresh and cryopreserved samples. Graphs were made by using Microsoft Excel 2014 and statistical analysis was carried out with IBM SPSS Statistics 19.

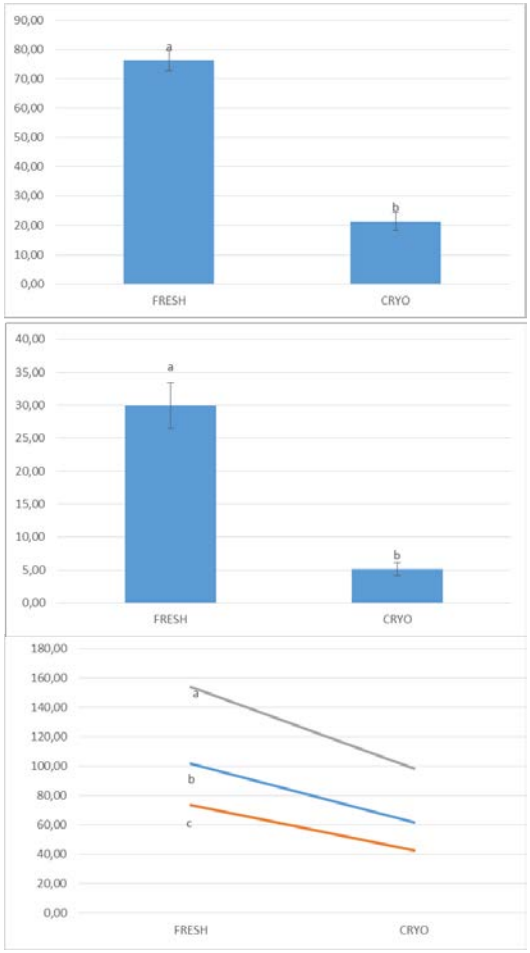

Figure 1. Total motility (A), progressive motility (B) and velocities (VAP, VSL, VCL) of cryopreserved an fresh sperm samples (C). Results are showed as mean ± SEM. N =9 all with a p-value <0.0001.

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