

Report

of Short-term Scientific Mission

STSM Title	Cryopreservation of <i>Solea senegalensis</i> sperm
STSM Applicant	Ákos Horváth PhD
Home Institution	Szent István University, Gödöllő, Hungary
Host Institution	Spanish Institute of Oceanography, Santander, Spain
Period	September 26-30 th , 2016
WG(s)	WG 2. Gamete storage and evaluation

A Short-term Scientific Mission of the COST Action FA1205 AQUAGAMETE was conducted on September 26-30th, 2016 at the „El Bocal” research facility of the Spanish Institute of Oceanography in Santander, Spain in order to investigate the possibilities of applying two cryopreservation protocols to the sperm of the Senegalese sole (*Solea senegalensis*). During the course of the mission, the applicant was acquainted with the culture conditions and status of the Senegalese sole, the facilities of the host institution and the experimental broodstock. Sperm was collected in anesthesia from 10 male individuals of and F1 generation born in captivity from a wild parent stock into 1-ml syringes. Sperm was stored in 1.5-ml centrifuge tubes until use. Sperm was diluted in two different extenders: the one described by Chereguini et al. (1997) for the turbot (*Scophthalmus maximus*) using 10% DMSO as a cryoprotectant and modified Tanaka's extender (Szabó et al. 2005) originally developed for the sperm of the European eel (*Anguilla anguilla*) using 10% methanol. Sperm was loaded into 0.5-ml straws and frozen in the vapor of liquid nitrogen. Frozen samples were thawed in a 40°C water bath and motility parameters were analyzed using an ISAS CASA system. For motility analysis the system had to be set up for both fresh and cryopreserved sperm using ISAS Disposable slides. System setup was successfully accomplished and readings were performed. According to our results, the protocol described for the turbot results in higher motility percentage than the one described for the eel, although freezing conditions were not identical to those described in the original protocols.

References

- Chereguini, O., Cal, R.M., Dreanno, C., deBaulny, B.O., Suquet, M., Maisse, G., 1997. Short-term storage and cryopreservation of turbot (*Scophthalmus maximus*) sperm. *Aquat. Living Resour.* 10, 251–255. doi:10.1051/alr:1997028
- Szabó, G., Müller, T., Bercsényi, M., Urbányi, B., Kucska, B., Horváth, Á., Kucska, I.B., Horváth, a, 2005. Cryopreservation of European eel (*Anguilla anguilla*) sperm using different extenders and cryoprotectants. *Acta Biol. Hung.* 56, 173–175. doi:10.1556/ABiol.56.2005.1-2.18



Ákos Horváth PhD

Applicant



Vanesa Robles Rodríguez PhD

Host