

STSM Scientific Report

The purpose of the STSM was to continue some joint experiments developed in May-June 2014 regarding the design of extenders for the sole (*Solea senegalensis*) sperm, as well as developing some trials of sperm cryopreservation.

Moreover, one experiment testing different cryoprotectants for zebrafish (*Danio rerio*) sperm was carried out. Post-thawing viability was determined using live/dead fluorescent stainings as well as CASA evaluation.

Both types of experiments are related with *WG2. Gametes storage and preservation.*

Experiments for the development of extenders for sole sperm

Samplings were developed, obtaining sperm samples from the Senegalese sole broodstocks reared at the CCMAR-University of Algarve facilities at Ramalhete station.

Immediately after getting the sperm by abdominal pressure it was diluted in the different extenders assayed (using variations of extenders previously used in turbot and eel, as well as sucrose solutions). Then, samples were transported to the Campus of Gambelas (15 min) under refrigeration. Once there, the sperm quality was evaluated by CASA after activation with sea water. Samples showing the highest parameters of motility were selected.

Sperm motility was evaluated again after 24 h to know which the best sperm extender was.

Experiments to improve the freezing sperm media

With the rest of the samples obtained during the samplings we carried out experiments trying to improve the freezing media. Pooled samples (sperm from several males) were used after selecting them by CASA analysis of motility. Several cryoprotectants were tested.

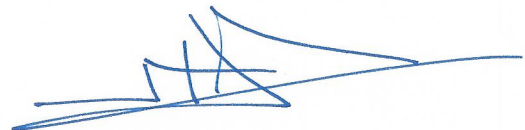
After 24-48 h samples were thawed and the spermatozoa viability was determined using live/dead fluorescent stainings as well as CASA evaluation.

Confirmation by the host institution of the successful execution of the STSM

Professor Elsa Cabrita, as responsible researcher at the Aquaculture Research Group (Aquadgroup), at the Centre of Marine Sciences (CCMAR) certifies that Dr. Juan F. Asturiano visited us as a guest researcher from 21th September to 4th October, thanks to a Short Term Scientific Mission funded by AQUAGAMETE COST Action FA1205.



Professor Elsa Cabrita



Dr. Juan F. Asturiano

Faro, 4th October, 2014