

8th Call for STSM - Scientific Report

COST STSM reference number: ECOST-STSM-FA1205

Period: from 19th to 30th of June 2016

COST action: FA1205 (Assessing and improving the quality of aquatic animal gametes to enhance aquatic resources. The need to harmonize and standardize evolving methodologies, and improve transfer from academia to industry)

STSM applicant: Vanesa Robles

Host: Elsa Cabrita, University of Algarve, Faro, Portugal

STSM Topic: Determination of ROS species in *Solea senegalensis* sperm

Purpose of the STSM

Reactive oxygen species have a great impact on spermatozoa function. The main objective of this STSM was to evaluate ROS in fresh and cryopreserved *Solea senegalensis* sperm samples using fluorescence microscopy and flow cytometry.

Results

Our results demonstrated that DCFH-DA can be successfully used to detect ROS in Senegalese sole sperm. We have observed that WT fresh samples presented high levels of DCF+ cells. No statistical differences were found between wild-capture males and F1 males in fresh samples. Interestingly F1 cryopreserved samples presented lower levels of ROS but lower viability. We speculate that cells with high peroxide levels in cryopreserved F1 samples are not able to survive and therefore decrease in viability is coming together with a decrease in DCF+ cells.

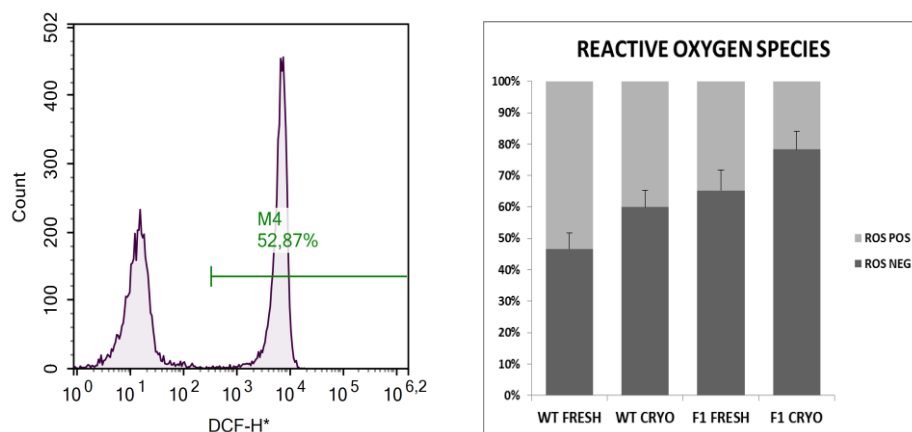



Figure 1. Flow cytometry histogram and percentage of DCF+ cells in the different experimental groups: Wild type fresh (WT FRESH), wild type cryopreserved (WT CRYO), F1 fresh (F1 FRESH), F1 cryopreserved (F1 CRYO).

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

Dr Elsa Cabrita certifies that Dr Vanesa Robles has completed a Short-Term Scientific Mission (STSM) awarded by the COST Action FA1205 AQUAGAMETE during the period from 19th to 30th of June 2016.




Elsa Cabrita
(Host institution)


Vanesa Robles
(STSM applicant)