

## **STSM Scientific Report**

### **1 Purpose of the STSM**

The group of Aquaculture and Biodiversity and a group of the Szent István university(Hungary) are working parallel for developing sperm freezing protocols of European eel. In fact, each group has established his own protocol, quite different in some aspects.

The whole project aimed at standardization of the cryopreservation procedures in fish gametes, with a special focus on the damages affecting the epigenetic characteristics of spermatozoa.

### **2 Description of the work carried out during the STSM**

We performed study the changes in DNA methylation level between fresh and cryopreserved spermatozoa. The methods used will be the restriction enzyme assay, and methylation will be assessed by image analysis, comparing cryopreserved samples of two different protocols.

### **3 Description of the main results obtained**

The results are important for a better future sperm cryopreservation protocol of European eel. The methylation degree of sperm DNA is a good indicator of sperm quality which is preserved after the freezing.

### **4 Future collaboration with host institution**

This stay intensifies the cooperation between the University Polytechnic of Valencia, Spain (Dr. Juan F. Asturiano), the University of Szen, Hungary (Dr Akos Horvath) and the INRA of rennes, France (Dr Catherine Labbé), opening the possibilities to new collaboration in future projects.

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