

## STSM Scientific Report

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

Complementary study of the comparison of 2 protocols for the cryopreservation of European eel (*Anguilla anguilla*) sperm with the objective of its standardization. We studied the damages affecting the epigenetic characteristics of spermatozoa. We compared the degree of DNA methylation and histone modification between two methods of freeze-thaw, one led by Dr. Juan F. Asturiano (Universitat Politècnica de València, Spain) and the other led by Dr Akos Horvath (Sczent University, Hungary)

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

In order to study the degree of DNA methylation between the two protocols and fresh samples (snap freezing) as well as between animals, we performed DNA extractions of fresh spermatozoa and cryopreserved spermatozoa from the two methods, for 8 eels matured by weekly injection of cHCG. To observe the DNA methylation we used the restriction enzyme assay and analyzed the results by electrophoresis gel and LUMA.

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

We did not observe significant differences between the two cryopreservation methods and the fresh sperm. The cryopreservation procedure does not seem to affect the level of methylation in European eel gametes.

### **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.

Signed: Marina Morini

