



**COST Action FA1205: AQUAGAMETE – 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**

**Applicant:** M.Sc. Amin Golpour Dehsari, University of South Bohemia, Faculty of Fisheries and Protection of Waters, Laboratory of Germ Cells. Vodnany, Czech Republic. dehsari@frov.jcu.cz

**Topic:** Isolation of spermatogonial stem cell and its potential for spermatogenesis in European eel (*Anguilla anguilla*)

**Aims:**

- I. To optimize procedures of spermatogonia isolation from European eel
- II. Focus to study Eel spermatogonia stem cells and their characterization

**Work carried out:**

During my stay in the Instituto de Ciencia y Tecnología Animal of the Universitat Politècnica de València, under the supervision of Dr. Juan F. Asturiano (Professor), we performed different protocols for isolation of spermatogonia from eel testis. Finally, the optimized protocol was successfully established for isolation of spermatogonia from eel. In addition, the number of spermatogonia cells and their viability were checked.

**Results**

We investigated the find protocol for isolation of spermatogonia from eel. The results showed large amount of spermatogonia in different generations. The most interesting fact was the fact that viability of isolated cells was over 90 percent, which enable us to develop further research of basic regulatory aspects of the spermatogonia stem cells physiology in well-defined conditions, as well as to carry out *in vitro* amplification these rare cells in eel.

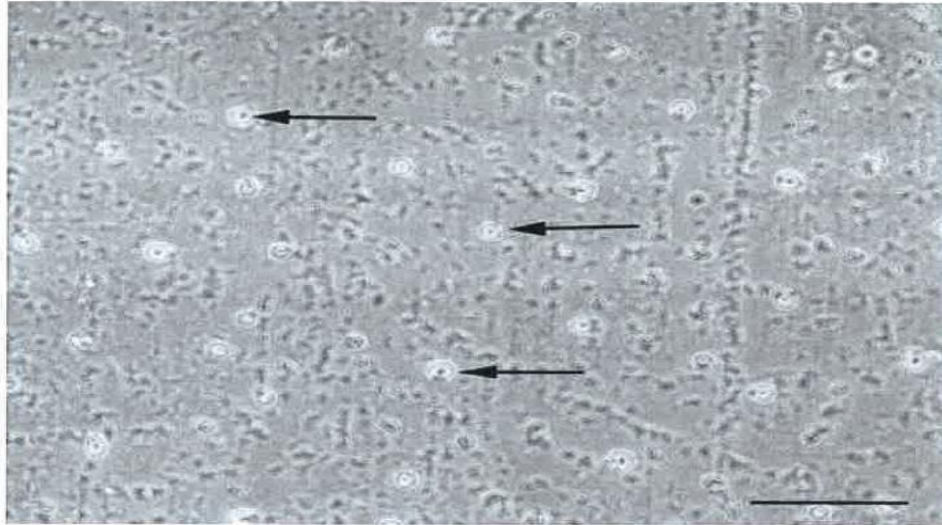


Figure 1. Early stages of European eel spermatogonia cells (arrows) isolated by 50% Percoll gradient. Scale bar = 25  $\mu\text{m}$

**Confirmation by the host institution**

Dr. Juan F. Asturiano, Profesor Titular at the Universitat Politècnica de València, certifies that Amin Golpour Dehsari visited his laboratory as guest researcher from 6<sup>th</sup> June to 6<sup>th</sup> July 2016. Thanks to a grant awarded by Short Term Scientific Mission, from AQUAGAMETE COST Action (FA1205).

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AQUAGAMETE

Dr. Juan F. Asturiano  
(Host Institution)  
Instituto de Ciencia y Tecnología Animal  
Universitat Politècnica de València  
Ext.: 79385; jfastu@dca.upv.es

  
AQUAGAMETE

M.Sc. Amin Golpour Dehsari  
(STSM applicant)