

International Conference and Exhibition on **Tissue Preservation & Bio-banking**

July 20-22, 2015 Barcelona, Spain

Biobanking of sea urchin embryos: Applications in ecotoxicology

E Paredes and J Bellas

University of Tennessee-Knoxville, USA

The sea urchin embryo has long been used as a model organism in developmental biology and for the assessment of marine pollution. The aim of this work is to provide an insight on the applications of cryopreserved sea urchin embryos in marine water quality assessment. A cryopreservation protocol for sea urchin embryos was developed, and results are presented about the use of the cryopreserved embryos in ecotoxicological toxicity tests. The bioassay using cryopreserved sea urchin embryos was compared with the standard bioassay, and trends were obtained for selected chemical compounds relating both standard and new developed protocols. Results support our idea developed in 2007 that creating a bio-bank of sea urchin embryos would help overcome one of the main constraints of the applications of embryo-larval bioassays to the assessment of marine water quality. We have developed a bioassay using cryopreserved sea urchin embryos and probed that our banked biological test model could be used for ecotoxicology. This is the first time such technique is applied to sea urchins in the context of ecotoxicology and this work refers to the only protocol published for *P. lividus* cryopreservation.

Biography

E Paredes holds a degree in Ciencias del Mar (2008) at Universidade de Vigo-Spain with a specialization in Marine environment conservation and marine pollution. She obtained her PhD in 2014 at the Universidade de Vigo with the thesis entitled "Cryopreservation of marine invertebrate early life stages: Applications in marine water quality assessment and aquaculture" work which was awarded by Universidade de Vigo as outstanding Thesis 2014. She spent some time working in several international research centers during her doctoral studies and currently holds a Postdoctoral research associate position in Dr. Peter Mazur's lab at the University of Tennessee-Knoxville working on Vitrification.

Eparedes@utk.edu

Notes: