

**Rey Campos, Magalí**

University of Santiago de Compostela

Nationality: Spanish

Orientation: Sustainable Use of Marine Resources

Specialization Area: Aquaculture

Research Area: 2.15 Pathology and immunology of cultured organisms



**PhD project: Variability and function of immune genes of the mussel *Mytilus galloprovincialis***

**Supervisors:** Dr. Antonio Figueras Huerta (Marine Research Institute-CSIC)

Dr. Beatriz Novoa García (Marine Research Institute-CSIC)

**Summary:** The main objective of the project is to improve the knowledge about the immune response of the cultured mussels in Galicia. These animals lack antibodies and the adaptive response of the immune system of the vertebrates; they do not have immune memory so prevention of disease is not possible using vaccination. They nevertheless have an efficient non-specific immune system.

In the group, sequencing of the mussel genome has been carried out in recent years. This will allow to study their genes and deepen those related to the immune response, specifically antimicrobial peptide genes such as myticins. Within this family of bioactive peptides, Myticin C is described by our group and shows antiviral and antibacterial activities and the ability to activate the bivalve immune system, which could be considered "invertebrate cytokines." Thus, it is intended to exploit the possible biotechnological application of AMPs in the field of aquaculture.

