

## Didactic Plan

The aim of this course is to give basis of General Pathology of aquatic animals, both Vertebrates and Invertebrates in the context of aquatic environment.

**Approach to General Pathology:** Aetiology; Cellular Damage; Cellular Response to Stress; Cellular Death (Apoptosis, Necrosis, Autophagy). **Elements of Aquatic Vertebrates and Invertebrates Immunity:** Haematopoietic tissues in Teleosts and comparative immunology of Invertebrates (Cnidaria, Crustaceans, Molluscs). **Comparative Pathology of Inflammation:** involved molecules and processes. **Regressive Phenomena:** Atrophy and Cellular Degeneration; **Progressive phenomena:** Hypertrophy, Hyperplasia and Neoplasia.

Aquatic Animal Diseases and environmental factors: **Cnidarian Diseases:** Scleractinia and Gorgoniacea (Coral bleaching, Black Band Disease, Aspergillosis); **Crustacean Diseases** (Decapods); **Mollusc OIE listed Diseases** (Bivalves and Gastropods).

**Laboratory practice**-Animal disease and diagnosis: Animal Sampling; Histopathology; DNA isolation and PCR; Light microscopy.