

## 2. THESIS OBJECTIVES

The objective of the present study is:

- Conduct a morphological and molecular characterisation of triploid rainbow trout (*Oncorhynchus mykiss*) and compare them to diploid trout and published data about transgenic models.
  
- Study the modifications in whole body mineral homeostasis in diploid and triploid trout that will be provoked by modifying availability of phosphorus by providing a deficient diet.
  
- Evaluate the effect of the challenge on the musculoskeletal system will be determined by:
  - 2.1 Assessing changes in external and internal morphology.
  - 2.2 Determining growth characteristics of whole animal and skeletal structures.
  - 2.3 Modifications in the biochemical characteristics of the skeleton
  - 2.4 Modifications in key skeletal molecular markers in response to modified mineral homeostasis.