

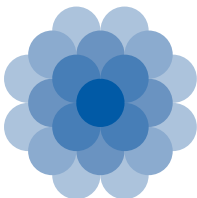


Generalitat  
de Catalunya

TECHNOLOGY  
PRODUCT  
SERVICE



# NUTRITION AND PHYSIOLOGY



## XRAQ

XARXA DE REFERÈNCIA D'R+D+I EN AQÜICULTURA  
DE LA GENERALITAT DE CATALUNYA

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# DESCRIPTION AND EXPERIENCE

- ✓ Scientists in this program investigate the metabolism and the endocrinology of aquaculture commercial species (trout, sea bream, sea bass) looking for sustainability and quality, analyzing metabolic pathways, principal composition and intestinal absorption and transport.
- ✓ Target species: Seabass (*Dicentrarchus labrax*), Sea bream (*Sparus aurata*), Rainbow trout (*Oncorhynchus mykiss*)
- ✓ Collaboration with companies: Skretting, Biomar, Sparus...

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# BENEFITS AND APPLICATIONS

- ✓ In vitro culture of: fish intestinal membranes; hepatocytes; adipocytes; myocytes; osteoblasts.
- ✓ Nutrients trazability by stable isotopes.
- ✓ Protein turnover by silac techniques.
- ✓ Fish hormones determination.
- ✓ Fish genomics and proteomics of skeletal, adipose and liver tissues. Real-time PCR analysis
- ✓ Hormone signaling characterization.
- ✓ Identification of biomarkers in epidermal mucus as non-invasive welfare indicators.
- ✓ Uptake and metabolism of radiolabeled metabolites in vitro.
- ✓ Metabolites and enzymes determination related to intermediary metabolism and redox system.