



FONDAZIONE GUIDO BERNARDINI  
BETTER EDUCATION FOR BETTER SCIENCE

## Course Severity and humane endpoints in fish research

Bergen, Norway • October 4, 2019



How do we assess severity and humane endpoints in fish?

Fish in research are covered by the same regulations as mammals. However, applying the same principles for assessing welfare, endpoints and severity have some challenges

In this course we focus on examples of relevant studies, define severity level, and discuss what endpoints can be used to reduce severity.

This program has been developed in collaboration with:



Industrielaboratoriet



Opening registration	8.00
<b>Introduction and Humane endpoints</b> - Aurora Brønstad, University of Bergen, Norway	8.30
<b>Severity classification</b> - Anne D. Degryse, Institut de Recherche Pierre Fabre, France	8.50
<b>Why ethics also should apply to fish</b> - Trygve Poppe, Norway's Environmental and Life Sciences University, Norway	9.35
Coffee Break	10.15
WELFARE OF FARMED SALMON AND CLEANER FISH	
<b>Welfare status of farmed salmon</b> Inger Fyllingen, Norwegian Food Safety Authority, Norway	10.30
<b>Blue Planet Academy - welfare of farmed cleaner fish during production and treatments</b> Nils Frederik Vestvik, Blue Planet Academy, Norway	10.50
<b>Gill health in farmed fish – a welfare issue</b> Stine Kolstø, Fish Health and Environment AS, Norway	11:10
Lunch	11.30
HUMANE ENDPOINTS IN FISH RESEARCH	
<b>How to evaluate severity levels in fish trials</b> Dag Atle Tuft - Norwegian Food Safety Authority, Norway	12.30
<b>Prepare guidelines – How can they help to reduce severity in fish trials</b> Adrian Smith, Norecopa, UK	13.00
<b>Group size in fish studies matters (how many extra fish do you need)</b> Jonatan Nilsson, Institute of Marine Research, Norway	13.20
<b>Extreme environments, tolerance thresholds and large-scale trials with millions of individuals</b> Frode Oppedal, Institute of Marine Research, Norway	13.40
<b>Aquatic animal tag use in salmon aquaculture habitats. Challenges and data relevance</b> Daniel Wright, Institute of Marine Research, Norway	14.00
Coffee Break	14.20
WELFARE MONITORING TOOLS SESSION	
<b>Salmon Welfare Index (SWIM) guidelines</b> Lars Helge Stien, Institute of Marine Research, Norway	14.40
<b>Introduction to workshop on score sheet development</b> Linda Andersen, Industrial and Aquatic Laboratory & Anita Rønneseth, University of Bergen, Norway	15.20
<b>Summary of the day</b> - Aurora Brønstad, University of Bergen, Norway	15.45

## **Scientific Committee**

Linda Andersen - ILAB, Norway

Aurora Brønstad - University of Bergen, Norway

Anita Rønnesth- University of Bergen, Norway

## **Venue**

Auditorium - Vil Vite

Information on Public transport in Bergen can be found on  
<https://www.skyss.no/en/>

## **Hotel Information**

Hotel reservation is not provided by the conference organisation. Participants take care of their accommodation themselves. Recommended hotels are located near the venue