



ONE DAY COURSE

Anesthesia for fish in aquaculture research

Aquaculture, probably the fastest growing food-producing sector, now accounts for nearly 50 percent of the world's food fish. Research is necessary to assure a sustainable development of this business. Fish are vertebrate animals that should be given the same considerations to welfare and protection from harm as all other research animals. Anesthesia in fish can seem complicated as the fish live in water and they are poikilotherm with more complex metabolism adapted to surrounding temperature. We do not recognize facial or body expressions of pain as easily as in land living animals and their perception of pain can be difficult to evaluate. This course will focus on anesthesia of fish and research activities related to farm fish.



Welcome

Aurora Brønstad
DVM - PhD



This course is organised in collaboration with



Fondazione Guido Bernardini

- The Fondazione Guido Bernardini (FGB) was established in 2009 as an independent, non-profit organization in memory of Guido Bernardini.
- FGB is devoted to continuing education and training of professionals involved in the care, welfare and use of laboratory animals; the overall mission is to support the **humane and responsible use of animals** in science and to **promote the quality of biomedical research** by encouraging **high standards of knowledge and competence** in scientific and technical staff.



6th of March

Registration09:00 - 09:30

Welcome and opening addresses09:15 - 09:30

The importance of using anaesthesia and analgesia
in improving fish welfare09:30 - 10:30
Lynne Sneddon

Coffee Break 10:00 - 10:30

Development of anaesthetic protocols for lumpfish (*Cyclopterus lumpus* L.):
Effect of anaesthetic concentrations, sea water temperature
and body weight 10:30- 11:15
Ole Samuelsen

Anaesthesia of farmed fish: implications for welfare, 11:15 - 12:00
Solveig M. R. Nygaard

Lunch 12:00 - 13:00

Different anesthetic, use and mode of action:
Benzokain, Trikain, Isoeugenol and Metomidat 13:00 - 14:00
Lars Speilberg

General information regarding legislation and legal status of medicinal
products used in fish,
Norwegian Medicines Agency frequently 14:00 - 15:00
Tonje Høy

PROGRAM



EVALUATION FORMS

**please fill inn and
return to me**



COURSE CERTIFICATES



UNIVERSITY OF BERGEN

