Nofima, Department of Fish Health

Contact persons Bente Ruyter main supervisor BioVit and Co-supervisors:	
	
Dr. Elisabeth Ytteborg	**Dr. Lene Sveen**
elisabeth.ytteborg@nofima.no	lene.sveen@nofima.no
Mob: 90095122	mob: 97938784

The fish health department has 9 researchers, 1 master's student, 2 engineers and one research director, all of whom work with medical issues related to fish health.

Who are we looking for?

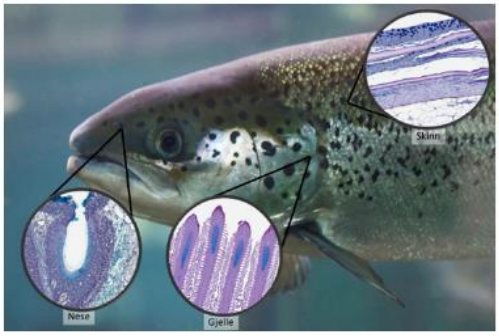
We are looking for engaged student (s), with background in biotechnology/microbiology/cell biology/biostatistics/animal science. We can offer different master's thesis and adapt the content to the applicant's background. Preferably the student has basic understanding in cell/molecular biology.

Techniques which the student may work with:

Microbiology, histology, artificial intelligence, immunohistochemistry, gene transcription, field sampling

Suggested master thesis

- Heart morphology in farmed vs. wild salmon, implication on health
- Environmental conditions and their effect on gill health
- Early sexual maturation in Atlantic salmon, with emphasis on immunity and structural changes in mucosal tissues
- Early development in Atlantic salmon with focus on connective tissue and neural tissue




Immunmerking - *Tenacibaculum finnmarkense*


Christian Karlsen, dyrking av bakterier

Contact person, main supervisor BioVit

Prof. Øivind Andersen
oivind.andersen@nofima.no
Mobile: 930 60 248

Master thesis suggestion

Undersøkelser av muskel-hormonet irisin hos laks

Irisin er et nylig oppdaget hormon som øker i muskulaturen ved trening hos mennesker og som regulerer hjertefunksjonen hos sebrafisk. Irisin har tidligere ikke vært undersøkt hos laks, hvor dette hormonet kan ha betydning for velferden til oppdrettslaks.

Masteroppgaven vil bestå av *in vitro* studier av irisin i stimulerte hjerteceller hos laks og undersøkelser av irisin i laksehjerter etter svømmetrening. Oppgaven vil involvere flere forskere ved Nofima med Øivind Andersen som hovedveileder.

Studies of the muscular hormone irisin in salmon.

Irisin has recently been shown to increase in muscle during exercise in humans, and this hormone regulates the heart function of zebrafish. Irisin has not previously been studied in salmon. The master thesis will consist of *in vitro* studies of irisin in salmon muscle cells and molecular studies of irisin in salmon from feeding trials and exercise studies. The thesis will involve several researchers from Nofima with Øivind Andersen as the main supervisor.