



The Norwegian Society for Immunology hereby announces the September Guest Lecture:

Challenges in development of cost-effective fish vaccines

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Date: Wednesday 15th of September

Venue: Seminarrom 3213

Dept. of Molecular Biosciences,
Biology building, UiO, Blindern

Time: 15.00-16.00

Program

15.00-15.15: Refreshments

15.15-16.00: Guest Lecture and discussion

During the past 20 years fish vaccines have become an established, proven, and cost-effective method of controlling certain infectious diseases in aquaculture worldwide. Fish vaccines can significantly reduce specific disease-related losses resulting in a reduction of antibiotics use. The final result is the decrease of overall unit costs and more predictable production. Fish vaccines are licensed by the federal government and closely regulated in the same manner as all other veterinary vaccines to ensure safety, potency, and efficacy.

PHARMAQ is recognized as the world's leading pharmaceutical company specialized in aquaculture and the main products are vaccines for farmed fish. Last year 55 % of all salmon and trout vaccinated were injected with a PHARMAQ vaccine. Approximately 20% of the revenue is reinvested in R&D.

We operate in a complete value chain from collection of fish pathogens through to the research, development, manufacture and licensing of vaccine

Challenges during the development phase from idea to product;

- Time to identify the pathogen
- Choose the right technology to develop a cost/effective vaccine
- Develop a reproducible challenge model
- Authorities requirement to documentation

References

Schrøder MB, Ellingsen T, Mikkelsen H, **Norderhus EA**, Lund V. Comparison of antibody responses in Atlantic cod (*Gadus morhua* L.) to *Vibrio anguillarum*, *Aeromonas salmonicida* and *Francisella* sp. *Fish Shellfish Immunol.* 2009 Aug;27(2):112-9.

Madetoia J, Lönnström LG, Björkblom C, Uluköv G, Bylund G, Syvertsen C, Gravningen K, **Norderhus AE**, Wiklund T. Efficacy of injection vaccines against *Flavobacterium psychrophilum* in rainbow trout, *Oncorhynchus mykiss* (Walbaum). *J Fish Dis.* 2006 Jan;29(1):9-20.