

PROGRAMME OVERVIEW

SUNDAY, 25 SEPTEMBER 2016

16:00 - 18:30 Registration 19:00 Reception & Entertainment

MONDAY, 26 SEPTEMBER 2016

07:30 - 08:20 Registration
08:30 - 09:15 Welcome and Opening
09:20 - 10:40 **ORAL SESSION 1 - SEA LICE AND WILD FISH INTERACTIONS**
10:40 - 11:10 **POSTER SESSION 1 - Sea Lice Biology & Break**
11:10 - 12:50 **ORAL SESSION 2 - SEA LICE BIOLOGY I**
12:50 - 14:30 **POSTER SESSION 2 - ALL POSTERS & Lunch**
14:30 - 16:10 **ORAL SESSION 3 - SEA LICE GENETICS**
16:10 - 16:40 **POSTER SESSION 3 - Sea Lice General & Wild Fish Interactions & Break**
16:40 - 18:20 **ORAL SESSION 4 - CHEMOTHERAPEUTANTS**

TUESDAY, 27 SEPTEMBER 2016

08:20 - 08:30 Welcome
08:30 - 10:10 **ORAL SESSION 5 - SEA LICE BIOLOGY II**
10:10 - 10:45 **POSTER SESSION 4 – Sea Lice Molecular Biology & Break**
10:45 - 12:30 **SESSION 6 - BIOLOGICAL & PHYSICAL SEA LICE CONTROL METHODS**
12:25 - 13:30 Lunch
13:30 - 15:10 **ORAL SESSION 7 – MODELLING**
15:10 - 15:45 **POSTER SESSION 5 - Sea Lice Epidemiology, Management & Control & Break**
15:45 - 17:30 **ORAL SESSION 8 - SEA LICE MANAGEMENT**
19:30 Conference Banquet

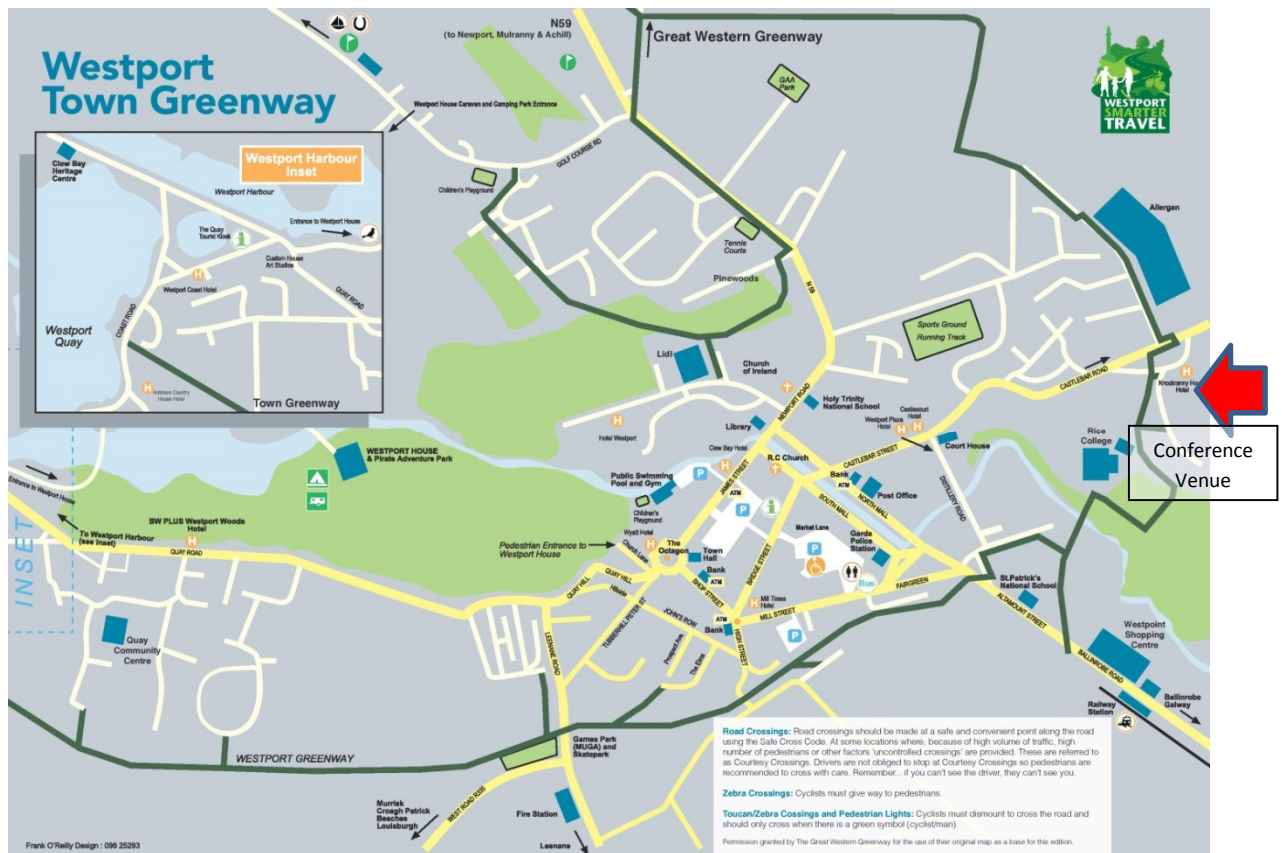
WEDNESDAY, 28 SEPTEMBER 2016

08:50 - 09:00 Welcome
09:00 - 10:40 **ORAL SESSION 9 – RESISTANCE**
10:40 - 11:15 **POSTER SESSION 6 – Sea Lice Modelling & Resistance & Vaccines & Break**
11:15 - 12:15 **ORAL SESSION 10 – IMMUNOMODULATION**
12:15 - 13:00 Conference Wrap up
13:00 - 14:00 Lunch
14:00 - 18:00 Excursions (*Pick up and drop off outside the Knockranny House Hotel*)

THURSDAY, 29 SEPTEMBER 2016

09:00 - 17:00 Bioassay Workshop

WESTPORT



CONFERENCE RUNNING ORDER

MONDAY, 26 SEPTEMBER 2016

08:30 Welcoming and Opening

09:20 – 10:40 SESSION 1 – SEA LICE AND WILD FISH INTERACTIONS

- 09:20 Evaluation of wild fish catches from Scottish rivers in relation to the presence of salmon farming
Dr Martin Jaffa, Callander McDowell, United Kingdom
- 09:40 The effect of salmon lice infections on wild caught Atlantic salmon (*Salmo salar*) and sea trout (*Salmo trutta*) postsmolts – a laboratory study
Dr Ørjan Karlsen, Institute of Marine Research, Norway
- 10:00 The effects of large-scale manipulation of salmon lice infestation pressure on the behaviour of sea trout
Dr Elina Halttunen, Institute of Marine Research, Norway
- 10:20 Scratching the surface: An exploration of sea louse infectious pressure in Cobscook Bay using sentinel cages and hydrodynamic models
Dr Catherine Frederick, University of Maine, United States

10:40 – 11:10 POSTER SESSION 1 – SEA LICE BIOLOGY & BREAK

11:10 – 12:50 SESSION 2 – SEA LICE BIOLOGY I

- 11:10 Parasitism perturbs the mucosal microbiome of Atlantic salmon
Dr Martin Llewellyn, University of Glasgow, United Kingdom
- 11:30 The nicotinic acetylcholine receptor in *Lepeophtheirus salmonis*
Mr Stian Mørch Aaen, Norwegian University of Life Sciences, School of Veterinary Science, Sea Lice Research Centre, Oslo, Norway
- 11:50 Long non-coding RNAs: Unexplored players during drug metabolism in the sea lice *Caligus rogercresseyi*
Mr Diego Valenzuela-Miranda, Laboratory of Biotechnology and Aquatic Genomics, Interdisciplinary Center for Aquaculture Research (INCAR), University of Concepcion, Chile
- 12:10 The effects of the secretory excretory products (SEPs) of *Lepeophtheirus salmonis* on Atlantic salmon immune response in vitro and in vivo
Ms Jessica Piesz, University of Maine, United States
- 12:30 Predicting the effectiveness of depth-based technologies to prevent salmon lice infection using a dispersal model
Ms Francisca Samsing, University of Melbourne, Australia

12:50 – 13:10 LUNCH

13:10 – 14:30 POSTER SESSION 2 – ALL POSTERS

MONDAY, 26 SEPTEMBER 2016

14:30 – 16:10 SESSION 3 - SEA LICE GENETICS

- 14:30 The emerging role of non-coding RNAs in the host/sea lice interaction
Dr Cristian Gallardo-Escárate, Laboratory of Biotechnology and Aquatic Genomics, Interdisciplinary Center for Aquaculture Research (INCAR), University of Concepcion, Chile
- 14:50 Salmon louse, *Lepeophtheirus salmonis* genes containing fibronectin type II domains
Ms Ewa Harasimczuk, Sea Lice Research Centre, Institute of Marine Research, Norway
- 15:10 Microsomal triglyceride transfer protein in salmon lice, *Lepeophtheirus salmonis*
Mr Muhammad Tanveer Khan, Sea Lice Research Centre, University of Bergen, Norway
- 15:30 Discovering of key molecules involved in host recognition mechanisms in the salmon louse *Caligus rogercresseyi*
Mr Gustavo Núñez-Acuña, University of Concepcion, Chile
- 15:50 Transcriptomic identification and characterisation of trypsin and prostaglandin E synthase 2 in the freshwater louse, *Argulus foliaceus*
Mrs Aisha AmbuAli, Institute of Aquaculture, University of Stirling, United Kingdom

16:10 – 16:40 POSTER SESSION 3 – SEA LICE GENERAL & WILD FISH INTERACTIONS & BREAK

16:40 - 18:20 SESSION 4 - CHEMOTHERAPEUTANTS

- 16:40 Supporting responsible prescription and achieving high clearance rates with Salmosan Vet
Rune Stigum Olsen, Technical Manager, Benchmark Animal Health, United Kingdom
- 17:00 AH-2178: A developmental product for the prevention and control of *Lepeophtheirus salmonis* and *Caligus* spp. infesting farmed Atlantic salmon – efficacy and safety from a study in Norway
Dr Barry Hosking, Elanco Animal Health
- 17:20 High level efficacy of Lufenuron against sea lice linked to rapid impact on moulting processes
Prof Mark Fast, Atlantic Veterinary College, University of Prince Edward Island, Canada
- 17:40 Transcriptomic responses of *Lepeophtheirus salmonis* to Lufenuron: A novel therapeutant for salmon lice control
Mr Jordan Poley, Atlantic Veterinary College, University of Prince Edward Island, Canada
- 18:00 Response of *Caligus rogercresseyi* (Boxshall & Bravo, 2000) to Hydrogen Peroxide: recover of parasites, fish infestation and egg viability under experimental condition
Prof Sandra Marin, Instituto de Acuicultura, Universidad Austral de Chile, Puerto Montt, Chile
- 18:20 End

TUESDAY , 27 SEPTEMBER 2016

08:30 - 10:10 SESSION 5 – SEA LICE BIOLOGY II

- 08:30 The sensory ecology of host finding in the free-living life history stages of the salmon louse, *Lepeophtheirus salmonis*
Dr Howard Browman, Institute of Marine Research, Norway
- 08:50 Investigating increased tolerance to decreased salinities by the salmon louse, *Lepeophtheirus salmonis*
Dr Melanie Andrews, Norwegian University of Life Sciences, Norway
- 09:10 Distribution and development of salmon louse *Lepeophtheirus salmonis* exocrine glands
Dr Aina-Cathrine Øvergård, Sea Lice Research Centre, University of Bergen, Norway
- 09:30 Uncovering species-specific iron regulation patterns in Atlantic and Coho salmon during the infection with the sea louse *Caligus rogercresseyi*
Ms Valentina Valenzuela-Muñoz, Laboratory of Biotechnology and Aquatic Genomics, Interdisciplinary Center for Aquaculture Research, University of Concepcion, Chile
- 09:50 Developing a practical condition factor for sea lice larvae (*Lepeophtheirus salmonis*)
Dr Shawn Robinson, Fisheries and Oceans Canada, Canada

10:10 – 10:45 POSTER SESSION 4 – SEA LICE MOLECULAR BIOLOGY & BREAK

10:45 – 12:30 SESSION 6 – BIOLOGICAL AND PHYSICAL SEA LICE CONTROL METHODS

- 10:45 The delousing efficiency of different species of cleanerfish, used alone in and various combinations
Ms Reidun Bjelland, Institute of Marine Research, Norway
- 11:05 An overview of lumpsucker production and use in Ireland
Dr Majbritt Bolton-Warberg, Carna Research Station, National University of Ireland Galway, Ireland
- 11:25 Evaluating the effect of lumpfish, *Cyclopterus lumpus*, as a cleaner fish in the Faroese salmon farming industry
Dr Kirstin Eliassen, The Aquaculture Research Station of the Faroes, Faroe Islands
- 11:45 Snorkel cages mitigate sea lice infestation
Dr Frode Oppedal, Institute of Marine Research, Norway
- 12:05 Shielding – a non-medical, preventive measure for the reduction of sea lice infestation of farmed salmon
Mr Andreas Myskja Lien, SINTEF Fisheries and Aquaculture AS, Norway

12:25 LUNCH

TUESDAY , 27 SEPTEMBER 2016

13:30 – 15:10 SESSION 7 - MODELLING

- 13:30 The benefits of coordination – Using models to optimise spatial management areas and treatment schedules for sea lice control
Dr Thomas adams, Scottish Association for Marine Science, United Kingdom
- 13:50 The Norwegian Veterinary Institute's model for salmon lice infestation pressure: a tool for sustainable growth in salmon farming
Dr Peder Jansen, Norwegian Vetrinary Institute, Norway
- 14:10 Statistical modelling of Sea Lice counting data from salmon farms in the Faroe Islands
Dr Hannes Gislason, University of the Faroe Islands & Fiskaaling - Aquaculture Research Station of the Faroes
- 14:30 Numerical modelling of sea lice (*Lepeophtheirus salmonis* Kroyer) dispersion in two Irish embayments with salmon farm sites and a comparison with previous modelled dispersal outcomes, in particular, in nearshore areas
Dr Neil Bass, Watermark Aqua-environmental, Ireland & Dr Naomi Shannon, RPS
- 14:50 Inhomogeneous geographical distribution of pelagic salmon lice
Dr Lars Asplin, Havforskningsinstituttet, Norway

15:10 – 15:45 POSTER SESSION 5 – SEA LICE EPIDEMIOLOGY, MANAGEMENT AND CONTROL & BREAK

15:45 – 17:30 SESSION 8 - SEA LICE MANAGEMENT

- 15:45 The drivers of sea lice management policies and how best to integrate them into a risk management based strategy: An ecosystem approach to sea lice management
Dr Dave Jackson, Marine Institute, Ireland
- 16:05 Coordinated sea lice (*Caligus rogercresseyi*) control plan in Chile 2013-2016
Mr Daniel Woywood, Aquabench S.A., Puerto Montt, Chile
- 16:25 Exploring the horizontal and vertical distribution of sea lice larvae (*Lepeophtheirus salmonis*) in relation to salmon farms in the Bay of Fundy, Canada
Ms Emily Nelson, Fisheries and Oceans Canada, Canada
- 16:45 The role of salmon lice data from salmon aquaculture in British Columbia in management, regulation and research
Dr Simon Jones, Fisheries and Oceans Canada, Canada
- 17:05 Dispersal of salmon lice in a tidal energetic island system: Faroe Islands
Mr Tróndur Kragesteen, Aquaculture Research Station of the Faroes/Technical Uni of Denmark, Faroe Islands
- 17:25 End

19:30 CONFERENCE BANQUET

WEDNESDAY, 28 SEPTEMBER 2016

09:00 – 10:40 SESSION 9 – RESISTANCE

- 09:00 Genomic selection increases sea lice resistance in Atlantic salmon
Dr. Borghild Hillestad, SalmoBreed AS
- 09:20 Organophosphate resistance- Where and when it began?
Dr Kiranpreet Kaur, Norwegian University of Life Sciences, Sea Lice Research Centre, Oslo, Norway
- 09:40 QTL mapping of emamectin benzoate resistance in the salmon louse (*Lepeophtheirus salmonis*)
Dr Armin Sturm, Institute of Aquaculture, University of Stirling, United Kingdom
- 10:00 Increased catalase activity in hydrogen peroxide resistant salmon lice (*Lepeophtheirus salmonis*)
Dr Kari Olli Helgesen, Norwegian University of Life Sciences, Sea Lice Research Centre, Oslo, Norway
- 10:20 RNA-sequencing reveals distinct gene expression patterns during the development of parasitic larval stages of the salmon louse (*Lepeophtheirus salmonis*)
Dr Christiane Eichner, Sea Lice Research Centre, University of Bergen, Norway

10:40 – 11:15 POSTER SESSION 6 – SEA LICE MODELLING, RESISTANCE AND VACCINES & BREAK

11:15 -12:15 SESSION 10 – IMMUNOMODULATION

- 11:15 Functional transcriptomic characterization of *Lepeophtheirus salmonis*, rejection by coho salmon (*Oncorhynchus kisutch*)
Dr Laura Braden, Atlantic Veterinary College, University of Prince Edward Island, Canada
- 11:35 In-feed additive with immunomodulatory effect on Atlantic salmon infested with sea lice *Caligus rogercresseyi*
Dr Jorge Pino Marambio, Cargill Innovation Centre, Chile
- 11:55 The development of assays for the discovery of anti-parasitic feed ingredients for farmed salmonids
Dr Stanko Skugor, Norwegian University of Life Sciences, Sea Lice Research Centre, Oslo, Norway

12:15 CONFERENCE WRAP UP

- Kabata Award
- Student awards

13:00 LUNCH

14:00 EXCURSIONS (pick up and drop off outside the Knockranny House Hotel)

18:00 CONFERENCE ENDS

THURSDAY, 29 SEPTEMBER 2016

BIOASSAY WORKSHOP

SENSITIVITY MONITORING IN SEA LICE

Chair: Dr Susie Mitchell *Vet Aqua International*

09:00 – 09:30 Introduction to Bioassays

Chris Finlay *Fish Vet Group*

BIOASSAY PROTOCOLS – EMAMECTIN BENZOATE

Standardization of traditional bioassay process by sharing best practices.

Chair: Dr Susie Mitchell *Vet Aqua International*

09:30 – 10:00 Traditional EMB bioassay

Elan Downey *CHAS*

10:00 – 10:20 F1 lice (*L. salmonis*) bioassay for Emamectin

Bill Roy *University of Stirling*

10:20 – 10:45 Break

10:45 – 11:15 Traditional EMB bioassay Vs 2-dose EB bioassay Tor Einar Horsberg *NMBU*

11:15 – 11:45 Discussion: Best practices in Bioassays

Chris Gould *MSD Animal Health*

11:45 – 12:15 Genetic methods

Vidar Aspehaug *Patogen*

12:15 – 13:15 Lunch

BIOASSAY PROTOCOLS – HYDROGEN PEROXIDE

Standardization of traditional bioassay process by sharing best practices.

Chair: Prof. Tor Einar Horsberg *NMBU School of Veterinary Science*

13:15 – 13:45 Hydrogen peroxide bioassays

Debbie Bouchard *UMaine*

13:45 – 14:15 *Caligus* bioassay for Hydrogen peroxide

Mary Ann Hausdorf *AVS*

14:15 – 14:35 Validation of F1 bioassay for Hydrogen peroxide

Bill Roy *University of Stirling*

14:35 – 15:00 Break

BIOASSAY PROTOCOLS – AZAMETHIPHOS & PYRETHROIDS

Standardization of traditional bioassay process by sharing best practices.

Chair: Prof. Tor Einar Horsberg *NMBU School of Veterinary Science*

15:00 – 15:30 Current bioassays and best practise

Sandra Marin *Uni Austral de Chile*

FURTHER PERSPECTIVES & DISCUSSION

15:30 – 16:00 Molecular methods

Kiranpreet Kaur *NMBU*

16:00 – 16:30 Discussion

POSTER SESSION

MONDAY, 26 SEPTEMBER 2016 10:40- 11:10

POSTER SESSION 1 - SEA LICE BIOLOGY

1. **Sea lice effect on body condition of wild Atlantic salmon**
Mr Roman Susdorf, University of Aberdeen, United Kingdom
2. **Metabolic plasticity in *Caligus rogercresseyi*: One key for successful infestation**
Dr Ana Gonçalves, Laboratory of Biotechnology and Aquatic Genomics, Interdisciplinary Center for Aquaculture Research (INCAR), University of Concepcion, Chile
3. **Early local and systemic immune responses in Atlantic salmon infected with *Lepeophtheirus salmonis***
Ms Helle Holm, Norwegian University of Life Sciences, School of Veterinary Science, Sea Lice Research Centre, Oslo, Norway
4. **Can stable isotopes indicate the geographical origins of sea lice?**
Ms Emma Taccardi, University of Maine, United States
5. **Effects of *Caligus rogercresseyi* infestation over the stress response in Atlantic salmon (*Salmo salar*) and Coho salmon (*Oncorhynchus kisutch*).**
Ms Julia Saravia, Instituto de Ciencias Marinas y Limnológicas, Laboratorio de Fisiología de Peces, Universidad Austral de Chile, Valdivia, Chile
6. **Comparison of early responses induced in skin and fin following sea lice infection**
Mr Amr Gamil, Norwegian University of Life Sciences, School of Veterinary Science, Sea Lice Research Centre, Oslo, Norway
7. **The impact of *Lepeophtheirus salmonis* parasitism on mucus microbial ecology of Atlantic salmon, *Salmo salar*.**
Mr Steven Leadbeater, Fisheries and Oceans Canada, Canada
8. **Physiological effects of adult sea lice on Pacific and Atlantic salmon**
Dr Amy Long, Fisheries and Oceans Canada, Canada
9. **A novel test system for the measurement of Atlantic salmon (*Salmo salar*) attractiveness for *Lepeophtheirus salmonis* copepodids**
Mr Cyril Delfosse, Research Institute in Semiochemistry and Applied Ethology (IRSEA), France
10. **Differences among Atlantic salmon biologies in their susceptibility and behavioural response to infective sea lice, *Lepeophtheirus salmonis*, and the retention of attached lice.**
Dr Samantha Bui, University of Melbourne & Havforskningssinstituttet, Australia
11. **Development times of sea lice *Lepeophtheirus salmonis* at different temperatures and its influence on dispersal patterns**
Ms Francisca Samsing, University of Melbourne, Australia

MONDAY, 26 SEPTEMBER 2016 13:10- 14:30

POSTER SESSION 2 - ALL POSTERS

MONDAY, 26 SEPTEMBER 2016 16:10- 16:40

POSTER SESSION 3 - SEA LICE GENERAL

12. Sea Lice management in organic aquaculture

Ms Regina Metzger, Naturland e.V. Germany

13. A screening program within SeaBioTech to address major parasitic problems in aquaculture

Dr Christer Wiik-Nielsen, PHARMAQ & Mrs Elin Aksnes, PHARMAQ, Norway

14. Red algae *Polysiphonia* sp. as an epibiont on *Caligus rogercresseyi* (Crustacea:Copepoda), in salmon farming of southern Chilean coast.

Prof Roberto Jaramillo, Instituto de Ciencias Marinas y Limnológicas, Universidad Austral de Chile, Valdivia, Chile

15. A novel framework for the identification of research gaps on sea lice in the salmon industry in Chile

Dr Rolando Ibarra, INTESAL, Chile

POSTER SESSION 3 - SEA LICE AND WILD FISH INTERACTIONS

16. Can a qualitative use of a hydrodynamic dispersal model for sea lice predict areas with high and low infestation levels on wild sea trout?

Dr Ørjan Karlsen, Institute of Marine Research, Norway

17. Effects of salmon lice on the survival and growth of sea trout

Mr Rune Nilsen, Institute of Marine Research, Norway

18. Sampling methods for monitoring sea lice on wild sea trout

Ms Kristine Marit Schrøder Elvik, Institute of Marine Research, Norway

19. Estimating the fjord migration of Atlantic salmon smolts and the potential temporal overlap between smolt migration and management actions by fish farms

Dr Knut Vollset, Uni Research Environment, Norway

20. Overview of Scottish Government project on the interactions and effects of sea lice on wild salmon.

Dr David Morris, Marine Scotland Science, Freshwater Fisheries Laboratory, Pitlochry, United Kingdom

21. Effects of salmon lice on sea trout - a review of current knowledge

Dr Bengt Finstad, Norwegian Institute for Nature Research, Norway

TUESDAY, 27 SEPTEMBER 2016 11:10- 10:45

POSTER SESSION 4 - SEA LICE MOLECULAR BIOLOGY

- 22. Cuticle formation and transcription level of chitin metabolism genes expressed during the molting process in *Lepeophtheirus salmonis***
Ms Hulda Maria Hardardottir, University of Bergen/Sea Lice Research Centre/ Institute of Biology, Norway
- 23. Functional assessment of the ecdysone biosynthetic genes in the salmon louse (*Lepeophtheirus salmonis*)**
Dr Liv Sandlund, Sea Lice Research Centre, Institute of Marine Research, Norway
- 24. Quantification of heme in *Lepeophtheirus salmonis* (Krøyer) copepodids**
Ms Erna Irene Heggland, Sea Lice Research Centre, University of Bergen, Norway
- 25. Characterisation of *Caligus rogercresseyi* acetylcholinesterases (The Azamethiphos target)**
Dr Celia Agusti, Norwegian University of Life Sciences, Sea Lice Research Centre, Oslo, Norway
- 26. Identification and characterization of genes exclusively expressed in male salmon lice (*Lepeophtheirus salmonis*)**
Dr Andreas Borchel, Sea Lice Research Centre, University of Bergen, Norway
- 27. Identification and characterization of three myosuppressin receptors from the salmon louse *Lepeophtheirus salmonis***
Dr Anna Komisarczuk, University of Bergen/Sea Lice Research Centre, Norway
- 28. LiceBase – a species focused resource for sea lice including an RNAi LIMS and tools for data analysis and genome annotation**
Dr Michael Dondrup, Department of Informatics & Sea Lice Research Centre, University of Bergen, Norway
- 29. Aquaporin family genes exhibit developmentally-regulated and host-dependent transcription patterns in the sea louse *Caligus rogercresseyi***
Dr Rodolfo Farlora, Laboratory of Biotechnology and Aquatic Genomics, Interdisciplinary Center for Aquaculture Research (INCAR), University of Concepcion/ Instituto de Biología, Facultad de Ciencias, Universidad de Valparaíso, Chile
- 30. Discovery and characterization of sex-related genes using high-throughput transcriptome sequencing from the salmon louse *Caligus rogercresseyi***
Dr Rodolfo Farlora, Laboratory of Biotechnology and Aquatic Genomics, Interdisciplinary Center for Aquaculture Research (INCAR), University of Concepcion/ Instituto de Biología, Facultad de Ciencias, Universidad de Valparaíso, Chile
- 31. Assessment of Hydrogen Peroxide treatment on the expression of reproduction-related genes in the sea lice *Caligus rogercresseyi***
Dr Rodolfo Farlora, Laboratory of Biotechnology and Aquatic Genomics, Interdisciplinary Center for Aquaculture Research (INCAR), University of Concepcion/ Instituto de Biología, Facultad de Ciencias, Universidad de Valparaíso, Chile
- 32. The function of Nanos in germ cell development and survival is conserved in *Lepeophtheirus salmonis***
Prof Rune Male, Sea Lice Research Centre, University of Bergen, Norway
- 33. Identification and 3D structural prediction of soluble proteins potentially related to chemical communication in Salmon louse, *Caligus rogercresseyi***
Mr Hector Jimenez, Laboratorio de Química Ecológica, Universidad de La Frontera, Chile
- 34. Transcription expression of immune-related genes from *Caligus rogercresseyi* evidences host-dependent patterns on Atlantic and coho salmon**
Mr Fredy Vera, Laboratory of Biotechnology and Aquatic Genomics, Interdisciplinary Center for Aquaculture Research (INCAR), University of Concepción, Concepción, Chile

TUESDAY, 27 SEPTEMBER 2016 11:10- 10:45

(CONTINUED)

POSTER SESSION 4 - SEA LICE MOLECULAR BIOLOGY (CONTINUED)

35. Switching responses in salmonids: Skin regions exhibit quantitative and qualitative unlike response to caligidosis

Dr Sebastian Boltana, Laboratory of Biotechnology and Aquatic Genomics, Interdisciplinary Center for Aquaculture Research (INCAR), University of Concepcion, Chile

36. Implication of lysozymes of the Atlantic salmon *Salmo salar* during the different stages of infection by *Caligus rogercresseyi*. A transcriptomic approach

Dr Camille Detree, University of Concepcion, Interdisciplinary Center for Aquaculture Research, Chile

37. Prophenoloxidase system in the sea lice *Caligus rogercresseyi*

Mr Fredy Vera & Dr Cristian Gallardo-Escárate, Laboratory of Biotechnology and Aquatic Genomics, Interdisciplinary Center for Aquaculture Research (INCAR), University of Concepcion, Chile

38. MicroRNA expression profiles in Atlantic salmon infected with *Caligus rogercresseyi*

Ms Valentina Valenzuela-Muñoz, Laboratory of Biotechnology and Aquatic Genomics, Interdisciplinary Center for Aquaculture Research (INCAR), University of Concepcion, Chile

39. Transcriptomics of Pacific salmon lice infected with the microsporidian *Facilispora margolisi* and exposed to emamectin benzoate indicates synergistic stressors

Mr Jordan Poley, Atlantic Veterinary College, Canada

40. Selective changes in pre- and post-treatment proportions of salmon lice alleles related to organophosphate resistance

Dr Peder Jansen, Norwegian Veterinary Institute, Norway

41. Investigating the local acquired immune response in *Salmo salar* to larval sea lice infection

Dr Sean Monaghan & Dr Carol McNair, University of Stirling, United Kingdom

TUESDAY, 27 SEPTEMBER 2016 15:10- 15:45

POSTER SESSION 5 - SEA LICE EPIDEMIOLOGY

- 42. In situ estimate on salmon louse nauplii production at a fish farm**
Dr Gunnvør á Norði, Fiskaaling-Aquaculture Research Station of the Faroes, Faroe Islands
- 43. Interpretation of connectivity patterns among farm management areas in Scotland**
Dr Alexander Murray, Marine Scotland Science, Aberdeen, United Kingdom
- 44. Spatial and temporal patterns of sea lice infestation on wild Pacific salmon along the British Columbia coast of Canada since 2001**
Dr Crawford W. Revie & Dr Thitiwan Patanasatienkul, Atlantic Veterinary College, University of Prince Edward Island, Canada
- 45. Using epidemiological and oceanographic information to define sea lice integrated control strategies in Chile**
Mrs Mary Hausdorf, AVS Chile
- 46. The effect of host-immunostimulation on the host-parasite relationship between the salmon louse, *Lepeophtheirus salmonis*, and Atlantic salmon.**
Dr Laura Braden, Atlantic Veterinary College, University of Prince Edward Island, Canada

POSTER SESSION 5 - SEA LICE MANAGEMENT

- 47. Official health management for the control of caligidosis in Chile**
Mrs Marcela Lara & Mrs Maria Gonzalez, National Fisheries and Aquaculture Service, Chile
- 48. Effects of different strategies for lice control, a simulation experiment.**
Dr Anja Bråthen Kristoffersen, Norwegian Veterinary Institute, Norway
- 49. Chemotherapeutant treatment strategies for sea lice (*Lepeophtheirus salmonis*) management currently employed in Atlantic Canada; How does resistance management inform veterinary treatment decisions in Canada and beyond?**
Ms Danielle Burnett, Atlantic Veterinary College, University of Prince Edward , Canada
- 50. Use of sentinel cages to monitor the effect of fallowing regimes on salmon lice infestations**
Dr Ørjan Karlsen, Institute of Marine Research, Norway
- 51. Clustering Norwegian salmon farms into production areas**
Dr Bjørn Ådlandsvik, Institute of Marine Research, Norway
- 52. Farming practices and sanitary management or environmental factors: What are the most relevant to explain variations in abundance of *Caligus rogercresseyi* (Boxshall & Bravo 2000)?.**
Mr Jorge Mancilla, Programa de Doctorado en Ciencias de la Acuicultura, Universidad Austral de Chile, Chile
- 53. Analysis of sea lice using data collected for management and regulatory purposes**
Dr Alexander Murray, Marine Scotland Science, Aberdeen, United Kingdom

POSTER SESSION 5 - BIOLOGICAL AND PHYSICAL SEA LICE CONTROL METHODS

- 54. The Green Wall: An Environmentally Friendly Solution**
Dr Nikhil Gunari, Garware Wall Ropes Ltd., Canada
- 55. Assessment of the application systems of antiparasitic treatments by bath for the control of sea lice in Chilean salmon farms**
Mr Juan Carlos Quintanilla, Instituto de Fomento Pesquero, Chile
- 56. Spectral sensitivity of cleanerfish**
Ms Anne Berit Skiftesvik, Institute of Marine Research, Norway
- 57. Delousing and AGD treatment of salmon with reverse osmosis produced freshwater**
Dr Zsolt Volent, SINTEF Fisheries and Aquaculture AS, Norway
- 58. Freshwater sensitive attached copepodids**
Dr Daniel Wright, University of Melbourne (Australia) & Institute of Marine Research Norway

WEDNESDAY, 28 SEPTEMBER 2016 10:40- 11:15

POSTER SESSION 6 - CHEMOTHERAPEUTANTS

59. **Sea lice (*Lepeophtheirus salmonis*) responses to concurrent drug treatments with Emamectin Benzoate and Cypermethrin**
Mr Jordan Poley, Atlantic Veterinary College, Canada
60. **The translocation of [14C]-lufenuron to *Lepeophtheirus salmonis* from treated Atlantic salmon (*Salmo salar* L.) and effect on egg hatching rates**
Dr John McHenery, Elanco Animal Health, United Kingdom
61. **AH-2178: A developmental product for the prevention and control of *Lepeophtheirus salmonis* and *Caligus* spp. infesting farmed Atlantic salmon – efficacy and safety from a pilot study in Canada**
Dr Barry Hosking, Elanco Animal Health, United Kingdom
62. **AH-2178: A developmental product for the prevention and control of *Caligus rogercresseyi* infesting farmed Atlantic salmon in Chile – dose titration and safety from a pilot study**
Mr Rodrigo Lewis, Elanco Animal Health
63. **Tissue distribution of multidrug resistance (MDR) proteins in *Caligus rogercresseyi*.**
Dr Juan Guillermo Carcamo, Institute of Biochemistry and Microbiology. Interdisciplinary Center for Aquaculture Research (INCAR). Faculty of Sciences, Universidad Austral de Chile, Chile
64. **Success of coordinated treatments: Importance of monitoring quality and its timing with the progression of developmental stages of the parasite (*Caligus rogercresseyi*, Boxshall & Bravo, 2000).**
Prof Sandra Marin, Instituto de Acuicultura, Universidad Austral de Chile, Puerto Montt, Chile
65. **Assessment of the sensitivity of *Caligus rogercresseyi* to azamethiphos, cypermethrin and deltamethrin using toxicological bioassays: A long-term study.**
Mr Pablo Cumillaf, Programa de Doctorado en Ciencias de la Acuicultura, Universidad Austral de Chile, Los Pinos s/n, Balneario Pelluco, Puerto Montt, Chile
66. **Effectiveness of field bath treatments with azamethiphos against *Caligus rogercresseyi* in Chile**
Dr Daniel Jimenez, INTESAL, Chile
67. **Factors affecting the efficacy of bath treatments for sea lice in four sites located in Southern Chile**
Mr Felipe Kauak, Universidad Austral de Chile, Chile

POSTER SESSION 6 - MODELLING

68. **Towards a model based prediction system for salmon lice infestation pressure**
Dr Anne Sandvik, Institute of Marine Research (Norway), Norway
69. **Modelling the integrated use of fish farming areas in Chile for delaying the infection of *Caligus rogercresseyi***
Dr Rolando Ibarra, INTESAL, Chile
70. **Using dispersal modelling connectivity outputs to produce a meta-population model of salmon lice on farms in Loch Linnhe.**
Dr Alexander Murray, Marine Scotland Science, Aberdeen, United Kingdom

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(CONTINUED)

POSTER SESSION 6 - RESISTANCE AND VACCINES

- 71. Breeding for increased sea lice resistance in Atlantic salmon**
Dr Borghild Hillestad, SalmoBreed AS, Norway
- 72. Using an Agent Based Model to Compare Strategies for Mitigating Evolution of Resistance to chemotherapeutants in Sea Lice (*Lepeophtheirus salmonis*)**
Dr Gregor McEwan, Atlantic Veterinary College, University of Prince Edward, Canada
- 73. Deltamethrin resistance; a hard nut to crack**
Dr Marit J. Bakke, Norwegian University of Life Sciences, Sea Lice Research Centre, Oslo, Norway
- 74. Dispersal of sea lice genes coding for resistance towards antiparasitic agents: Validation of a prediction model**
Ms Elena Jensen, Norwegian University of Life Sciences, Sea Lice Research Centre, Oslo, Norway
- 75. Novel candidate vaccine against sea lice based on Ribosomal p0 antigen**
Ms Yeny Leal, Center for Genetic Engineering and Biotechnology, Cuba
- 76. The problematic *Caligus rogercresseyi* genome – sequencing, assembly and preliminary results**
Shou Wang, Institute of Marine Research, Bergen, Norway