Curriculum vitae with track record (for researchers)

Role in the project **Project manager ☒** **Project participant ☐**

Personal information

First name, Surname:	Johanna Hol Fosse		
Date of birth:	01.07.1977	Sex:	F
Nationality:	Norwegian		
Researcher unique identifier(s) (ORCID, ResearcherID, etc.):	https://orcid.org/0000-0001-5837-5006		
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Education

Year	Faculty/department - University/institution - Country
2010	PhD: Faculty of Medicine, The University of Oslo (UiO), Norway: ISBN 978-82-8072-367-3: A study on sorting, storage and secretion of endothelium-derived CXC chemokines containing the Glu-Leu-Arg motif important for neutrophil recruitment
2002	Veterinary degree: Bachelor of Veterinary Medicine & Surgery, University of Edinburgh, United Kingdom (UK). Graduated with distinction/A

Positions - current and previous

(*Academic sector/research institutes/industrial sector/public sector/other)*

Year	Job title – Employer - Country
2019-	Senior scientist/ Veterinary Surgeon, Norwegian Veterinary Institute (NVI), Norway
2014-2018	Scientist, Department of pathology, Oslo University Hospital (OUH), Norway
2010-2014	Post-doctoral fellowship, Department of pathology, OUH, Norway
2005-2010	PhD scholarship, Department of pathology, UiO, Norway
2004-2005	Small Animal Veterinary Surgeon, Tromsdalen Dyreklinikk, Norway
2003-2004	Internship, Small Animal Medicine, Animal Health Trust, Newmarket, UK
2002-2003	Small Animal Veterinary Surgeon, Greenhalgh Veterinary Clinic, UK

Career breaks

Year	Reason
2009, 2012, 2018	Maternity leaves (3 children)

Project management experience and grant acquisition

(*Academic sector/research institutes/industrial sector/public sector/other. Please list the most relevant.)*

Year	Project owner - Project - Role - Funder
2020-2024	NVI - Endothelial programs that activate or blunt antiviral responses – **Project manager, acquired grant (9 million NOK)** – Research Council Norway (RCN), FRIPRO/young research talents
2023-2024	NVI – ISATTACH, establishing new methods to detect the ISAV receptor – **Project manager** – Internally funded pilot study
2019-2023	NVI - The interaction between ISAV and Atlantic salmon RBC and its relation to infectious salmon anaemia pathogenesis - **Project manager** – Research Council Norway (RCN), HAVBRUK2/researcher project (8 million NOK)
2024-2026	NVI- European Partnership in Animal Health and Welfare – Participant, lead activities in SOA18 that investigate crosstalk between common bacterial pathogens and ISAV.
2020-2024	NVI – Biosikkerhetstiltak mot ILA i settefisk (Biosecurity efforts against ISA in smolt farms) – Work package leader (WP3 aimed to understand virus-host interactions that influence the transition to virulent ISAV) – Norwegian Seafood Research Fund (FHF)
2014-2020	OUH - Targeting glycolysis to reduce vascular inflammation – **Project manager/Phd supervisor, acquired grant (3.1 million NOK)** – Regional Health Authorities South East Norway, PhD project (first as main supervisor)
2014-2018	OUH – The role of interleukin-33 in vascular activation – **Project manager, acquired grant (3.7 million NOK)** - Regional Health Authorities South East Norway, researcher project

Supervision of students

(Total number of students)

Master's students	Ph.D. students	University/institution - Country
3	3	UiO, Norway: 1 MSc (2016) and 1 PhD (2022) as main supervisor, 1 MSc (2008) and 1 PhD (2018) as co-supervisor. Norwegian University of Life Sciences: 1 MSc (2022) and 1 PhD (on-going) as co-supervisor.

Other relevant professional experiences

Year	Description - Role
2020-2024	National and international collaborations with relevance to current project: • Dan Maqueen (Roslin Institute, University of Edinburgh, UK): Investigation of single cell transcriptional responses in healthy and ISAV-infected Atlantic salmon. Output: Two joint publications (2024) and two in preparation. • Debes Christiansen (Torshavn, Faeroe Islands), Knut Falk (Norway): Monthly meetings to discuss ongoing research collaborations on ISA/ISAV. Output: Four joint publications (2021-2023) and one in preparation. • Espen Rimstad and Øystein Wessel (NMBU, Norway): MSc project on methods to study ISAV fusion, PhD project to study ISAV mRNA vaccine development. Output: One MSc (FBP), one joint publication (2024), and two in preparation. • Niccolo Vendramin (DTU, Denmark): Joint ISAV infection trial in 2020. Output: One joint publication (2022).
2022, 2024	Evaluation of international research grant applications (*e.g.* National Science Centre, Poland; Dutch Research Council/NWO, Netherlands, Natural Sciences and Engineering Research Council of Canada)
2022-	Responsible for serological investigation of avian influenza, NVI (including regular validation of haemagglutination inhibition test, which relies on interactions between the sialic acid virus receptor and viral glycoproteins)
-2024	Peer-review of scientific articles (e.g. BMC Biology, Frontiers in Immunology, FEBS Letters, J of Cellular Biochemistry, PlosOne, J Thrombosis and Haemostasis)
2013-2023	Evaluation of bachelor (NMBU 2019 and 2022), master (NMBU 2014, University of Bergen 2020 and 2023), and PhD theses (University of Oslo 2013, 2017, 2020)
2014-2017	Representative for temporary scientific employees, organiser of several workshops for postdocs and early career researchers, organiser of yearly research seminars for Department of Pathology (Oslo University Hospital, Norway)

Track record

32 scientific publications (31 primary, 1 review), including journals such as PLOS Pathogens (1), Atheroschlerosis, Thrombosis and Vascular Biology (3), Nature Communications (1), Cancer Cell (1), Am J of Pathology (1), J of Immunology (1), Scientific Reports (2), Fish Shellfish Immunology (3), and Frontiers in Immunology (2). **14 first or senior authorships**. Total citations: 1590, **H-index: 14**.

<u>10 selected publications with relevance for the current project:</u>

1. Benedicenti O, Dahle MK, Makvandi-Nejad S, Andresen AMS, Moldal T, Sindre H, **Fosse JH**. The Atlantic salmon gill transcriptional response to natural infection with HPR0-ISAV (Isavirus salaris) in three Norwegian smolt farms. Fish Shellfish Immunol. 2025 Feb;157:110096. doi: 10.1016/j.fsi.2024.110096. **(senior)**
2. Andresen AMS, Taylor RS, Grimholt U, Daniels RR, Sun J, Dobie R, Henderson NC, Martin SAM, Macqueen DJ, **Fosse JH**. Mapping the cellular landscape of Atlantic salmon head kidney by single cell and single nucleus transcriptomics. **Fish Shellfish Immunol**. 2024 Jan 3:109357. doi: 10.1016/j.fsi.2024.109357. **(senior)**

3. **Fosse JH**, Andresen AMS, Ploss FB, Weli SC, Heffernan IA, Sapkota S, Lundgard K, Kuiper RV, Solhaug A, Falk K. The infectious salmon anaemia virus esterase prunes erythrocyte surfaces in infected Atlantic salmon and exposes terminal sialic acids to lectin recognition. **Front Immunol**. 2023 April 25; 14. doi.org/10.3389/fimmu.2023.1158077. **(1st)**
4. Aamelfot M*, **Fosse JH***, Viljugrein H, Ploss FB, Benestad SL, McBeath A, Christiansen DH, Garver K, Falk K. Destruction of the vascular viral receptor in infectious salmon anaemia provides in vivo evidence of homologous attachment interference. **PLoS Pathog**. 2022 Oct 14;18(10):e1010905. doi: 10.1371/journal.ppat.1010905. *** = equal contribution (1st)**
5. **Fosse JH**, Aamelfot M, Sønstevold T, Weli SC, Vendramin N, Petersen PE, Solhaug A, Amundsen MM, Heffernan IA, Cuenca A, Christiansen DH, Falk K. Salmon Erythrocytes Sequester Active Virus Particles in Infectious Salmon Anaemia. **Viruses**. 2022 Feb 2;14(2):310. doi: 10.3390/v14020310. PMID: 35215905 **(1st)**
6. Wik JA, Phung D, Kolan S, Haraldsen G, Skålhegg BS, **Hol Fosse J**. Inflammatory activation of endothelial cells increases glycolysis and oxygen consumption despite inhibiting cell proliferation. **FEBS Open Bio**. 2021 Jun;11(6):1719-1730. Epub 2021 May 12. PMID: 33979025. **(senior)**
7. **Fosse JH**, Haraldsen G, Falk K, Edelmann R. Endothelial Cells in Emerging Viral Infections. **Front Cardiovasc Med**. 2021 Feb 24;8:619690. PMID: 33718448. **(1st)**
8. Wik JA, Lundbäck P, la Cour Poulsen L, Haraldsen G, Skålhegg BS, **Hol J**. 3PO inhibits inflammatory NFκB and stress-activated kinase signaling in primary human endothelial cells independently of its target PFKFB3. **PLoS One**. 2020 Mar 4;15(3):e0229395. PubMed PMID: 32130250. **(senior)**
9. Poulsen LC, Edelmann RJ, Krüger S, Diéguez-Hurtado R, Shah A, Stav-Noraas TE, Renzi A, Szymanska M, Wang J, Ehling M, Benedito R, Kasprzycka M, Bækkevold E, Sundnes O, Midwood KS, Scott H, Collas P, Siebel CW, Adams RH, Haraldsen G, Sundlisæter E, **Hol J**. Inhibition of Endothelial NOTCH1 Signaling Attenuates Inflammation by Reducing Cytokine-Mediated Histone Acetylation at Inflammatory Enhancers. **Arterioscler Thromb Vasc Biol**. 2018 Apr;38(4):854-869. Epub 2018 Feb 15. PubMed PMID: 29449332. **(senior)**
10. Pollheimer J, Bodin J, Sundnes O, Edelmann RJ, Skånland SS, Sponheim J, Brox MJ, Sundlisaeter E, Loos T, Vatn M, Kasprzycka M, Wang J, Küchler AM, Taskén K, Haraldsen G, **Hol J**. Interleukin-33 drives a proinflammatory endothelial activation that selectively targets nonquiescent cells. **Arterioscler Thromb Vasc Biol**. 2013 Feb;33(2):e47-55. Epub 2012 Nov 15. PubMed PMID: 23162017. **(senior)**

Invited speaker:

2024 International Conference on Integrative Salmon Biology, Seattle, USA. Title: How can single cell genomics help us understand the pathogenesis of infectious salmon anaemia and other viral infections?

Recent presentations selected from submitted abstract:

2024 Oslo Single Cell forum, Norway. Title: Using single cell transcriptomics to explore the pathogenesis of viral infection in a non-model species

2023 Gordon Research Conference on Glycobiology, California, USA. Title: The infectious salmon anaemia virus sialic acid 4-O-acetyl esterase extensively prunes target cell surfaces in infected hosts

2023 Biennial meeting of the European Association of Fish Pathologists, UK. Title: (1) The infectious salmon anaemia virus sialic acid 4-O-acetyl esterase extensively prunes target cell surfaces in infected hosts, and (2) Comparing single cell/nucleus genomics to study Atlantic salmon head kidney cellular heterogeneity.

Dissemination to the public:

Authored five popular science articles aimed at the aquaculture industry in the Norwegian Fish Farmers newsletter (www.kyst.no) since 2020.

Seven oral presentations aimed at the aquaculture industry (HAVBRUK, Frisk Fisk, different seminars organised by the industry and regulatory bodies) since 2020.