

Short CV – Jakob Hemmer-Hansen

Degrees

- PhD (Population genetics), Department of Genetics and Ecology, Aarhus University, Denmark (2007).
- MSc (Population genetics), Department of Genetics and Ecology, Aarhus University, Denmark (2003).

Positions

- Senior Researcher, DTU Aqua, Technical University of Denmark (2013-present).
- Researcher, Danish Institute for Fisheries Research (DIFRES)/DTU Aqua (2007-2013).

Research area

I am broadly interested in ecology and evolution, and I apply candidate gene and population genomic approaches to identify genomic signatures of adaptation to local environments in natural populations. I use combinations of historical and contemporary samples to study both contemporary evolution and population dynamics with a high spatio-temporal resolution. These data allow us to identify and predict responses climate changes and can be used for improving sustainable fisheries management through population identification and individual traceability.

Distinctions and awards

Scholarships for research visit at the University of British Columbia, 2005 (Elisabeth and Knud Petersen's Foundation, Oticon Foundation, Knud Højgaard's Foundation).

Memberships of scientific committees, 2011-present

- Chairman of Senior Researcher evaluation committee (2016) and PhD assessment committee (2014), DTU Aqua.
- ICES Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK) (2014-present); ICES Working Group on Application of Genetics in Fisheries and Mariculture (WGAGFM) (2011-present).

Review, 2011-present

- Regular reviewer for a large number of scientific journals, including Molecular Ecology, Evolutionary Applications, Fish and Fisheries, ICES Journal of Marine Science, Marine Biology, Marine Genomics, Marine Biology.
- Reviewer of grant applications for research councils and programmes in South Africa, USA, Iceland and France.

Peer reviewed publications: 30. **Books and book chapters:** 1. **Reports:** 10. **International conferences:** 8.

Advisory tasks, 2011-present

Advise to the Ministry of Environment and Food of Denmark, the marine fishcare management, NGOs and ICES, including contributions to working groups and benchmark processes (e.g. WKBALTCOD 2015, DCWKPLE 2014/2015, WKBALFLAT 2014, WKPESTO 2013).

Educational tasks, 2011-present

- DTU courses: 25315 Genetic Methods in Aquaculture (Contributor; Responsible in 2015); 25313 Genetic Methods in Fisheries and Aquatic Biodiversity Conservation (Contributor; Responsible in 2015).
- Marine Ecological and Evolutionary Genomics (EuroMarine/EMBRC-France, Roscoff, France, PhD/postdoc level) (2011-present).

Supervision, 2011-present

PhD students: 1 (Main Supervisor); 2 (Co-supervisor). **Master students:** 1 (Main Supervisor).

Grants, 2011-present

EU Interreg: "MarGen – Expertise in marine and aquatic ecology and genomics for sustainable management of fish and shellfish in Skagerrak-Kattegat-Øresund" (2015-2018; PI, Danish Coordinating Partner). The European Fisheries Fund and the Danish Ministry of Food, Agriculture and Fisheries: "MSC certification of plaice fisheries in area IIIa – basic investigations and development of a management plan" (2012-2014; Coordinator). EU Interreg: "CodS – Restoration and management of cod in the Skagerrak/Kattegat" (2012-2014; PI, SSC Member). The Commission for Scientific Research in Greenland: "Genetic analyses of contemporary and historical samples for improved management of Greenlandic salmon" (2011-2012; PI). The European Fisheries Fund and the Danish Ministry of Food, Agriculture and Fisheries: "Population genetics of flounder in Danish waters" (2011-2012; Coordinator).

Research collaboration with stakeholders, 2011-present

I collaborate with stakeholder organizations, e.g. the Danish Fishermen's Association and the Danish Amateur Fishermen's Association, as well as the fish product industry and other private companies.

Five selected publications

Hüssy K, Hinrichsen H-H, Eero M, Mosegaard H, Hemmer-Hansen J, Lehmann A, Lundgaard LS. (2016). Spatio-temporal trends in stock mixing of eastern and western Baltic cod in the Arkona Basin and the implications for recruitment. *ICES Journal of Marine Science*, 73, 293-303.

Metzger DCH, Hemmer-Hansen J, Schulte PM. (2016). Conserved structure and expression of hsp70 paralogs in teleost fishes. *Comparative Biochemistry and Physiology. Part D: Genomics and Proteomics*, 18, 10-20.

Hemmer-Hansen J, Therkildsen NO, Pujolar JM. (2014). Population genomics of marine fishes: next generation prospects and challenges. *Biological Bulletin*, 227, 117-132.

Hemmer-Hansen J, Therkildsen NO, Meldrup D, Nielsen EE. (2014). Conserving marine biodiversity: insights from life-history trait candidate genes in Atlantic cod (*Gadus morhua*). *Conservation Genetics*, 15, 213-228.

Hemmer-Hansen J, Nielsen EE, Therkildsen NO, Taylor MI, Ogden R, Geffen A, Bekkevold D, Helyar S, Pampoulie C, Johansen T, FishPopTrace Consortium, Carvalho GR. (2013). A genomic island linked to ecotype divergence in Atlantic cod. *Molecular Ecology*, 22, 2653-2667.