Curriculum Vitae

Name: Anti Vasemägi

EDUCATIONAL BACKGROUND:

28/10/2005 *PhD* in Aquaculture & Fish Biology. Title of the thesis: *Evolutionary Genetics of Atlantic Salmon (Salmo salar L.) - Molecular Markers and Applications*. Swedish University of Agricultural Sciences, Umeå, Sweden.

2000 -2004 *Ph.D.* student as a co-operation of University of Tartu (Estonia), Estonian Agricultural University and Swedish University of Agricultural Sciences.

1996-1998 *M.Sc*. (Fisheries and Ichthyology), University of Tartu (Estonia), Master thesis: *Genetic analysis of Estonian populations of Atlantic salmon by means of DNA markers*, Estonia.

1992-1996 *B.Sc*. (Hydrobiology), University of Tartu (Estonia), Diploma work: *Genetic variation of noble crayfish*, Estonia.

PPRESENT EMPLOYMENT:

1/2010-12/2013 Researcher, Department of Aquaculture, Institute of Veterinary Medicine and Animal Science, Estonian University of Life Sciences.

8/2011-12/2015 Researcher, Division of Genetics and Physiology, University of Turku, Finland.

DUTIES AND POSITIONS AS A SCIENTIFIC EXPERT:

EDITORIAL BOARD:

2011- Review Editor of Frontiers in Evolutionary and Population Genetics.

2007-2011 Associate Editor of Canadian Journal of Fisheries and Aquatic Sciences.

REFEREE DUTIES: Reviewer in Molecular Ecology, Genetics, Conservation Biology, Conservation Genetics, Journal of Fish Biology, Annales of Zoology Fennici, Journal of Heredity, Evolutionary Ecology, Evolutionary Applications, Genetica, Heredity, Fish and Fisheries, Fish Physiology and Biochemistry, Behavioral Ecology and Sociobiology, Aquatic Toxicology, Genetics Selection Evolution, Philosophical Transactions of the Royal Society of London, Ecology of Freshwater Fish, Current Zoology, African Journal of Agricultural Research (20 journals in total).

RESEARCH COUNCILS: Estonian Science Foundation, The Icelandic Centre for Research (Rannis), National Oceanic and Atmospheric Administration (NOAA) Northwest Fisheries Science Center (NWFSC) Internal Grants Program (US), Iranian Science foundation.

BOOK REVIEWS: Encyclopedia of Life Sciences, John Wiley & Sons, Ltd.

PUBLICATIONS

21 articles in peer reviewed international scientific journals (H-index: 10; Average citations per item: 26.58; Total number of citations: 505; Resource: ISI Web of Science®; Date of inspection:16.04.2012).

Bruneaux M, Johnston SE, Herczeg G, Merilä J, Primmer CR, Vasemägi A. Genomics without the genome: molecular evolutionary and population genetic analysis of the nine-spined stickleback using a modified RAD tag approach. *Submitted to Molecular Ecology*.

Bourret et al. High throughput SNP-array reveals genome wide neutral and adaptive divergence

patterns across natural range of Atlantic salmon (*Salmo salar*). *Submitted to Molecular Ecology*.

Pukk L, Kuparinen A, Järv L, Gross R, Vasemägi A. Life-history shifts in an exploited fish stock reflect increased immigration rather than harvesting-induced evolution. *Submitted to Proceedings B.*

Swatdipong A et al. Genetic mixed-stock analysis of lake-run brown trout fisheries catch in the Inari basin, northern Finland: implications for conservation and management. *Resubmitted to Journal of Fish Biology*.

21) Dash M, Vasemägi A (2012) Development of highly polymorphic major histocompatibility-associated microsatellite markers in Atlantic salmon (*Salmo salar*) and brown trout (*Salmo trutta*). *Accepted, Molecular Ecology Resources.*

20) Vuorisalo T, Arjamaa O, Vasemägi A, Taavitsainen J-P, Tourunen A, Saloniemi I (2012) High lactose tolerance in North Europeans: a result of migration, not in situ milk consumption. *Accepted, Perspectives in Biology and Medicine*.

19) Papakostas S, Vasemägi A, Vähä J-P, Peil L, Himberg M, Primmer C (2012) A proteomics approach reveals divergent molecular responses to salinity in populations of European whitefish (*Coregonus lavaretus*). *Accepted in Molecular Ecology*.

18) Swatdipong A, Vasemägi A, Niva T, Koljonen M-L, Primmer CR (2010) High level of population genetic structuring in lake-run brown trout, *Salmo trutta*, of the Inari basin, northern Finland. *Journal of Fish Biology*, Early online DOI: 10.1111/j.1095-8649.2010.02784.x

17) Ozerov MY, Lumme J, Päkk P, Rintamäki P, Ziętara M, Barskaya J, Lebedeva D, Saadre E, Gross R, Primmer CR, Vasemägi A (2010) High *Gyrodactylus salaris* infection rate in triploid Atlantic salmon *Salmo salar*. *Diseases of Aquatic Organisms*, 91, 129-136.

16) Vasemägi A, Gross R, Palm D, Paaver T and Primmer CR (2010) Discovery and application of insertion-deletion (INDEL) polymorphisms for QTL mapping of early life-history traits in Atlantic salmon. *BMC Genomics*, 11:156.

15) Tonteri A, Vasemägi A, Lumme J & Primmer CR (2010) Beyond MHC: signals of elevated selection pressure in Atlantic salmon (*Salmo salar*) immune relevant loci. *Molecular Ecology*, 19, 1273-1282.

14) Swatdipong A, Primmer CR, Vasemägi A (2010) Historical and contemporary bottlenecks in European grayling (*Thymallus thymallus*). *Conservation Genetics*, 11, 279-292.

13) Vasemägi A (2009) Eel mystery: time makes a difference. *Heredity*, 103, 3–4.

12) Swatdipong A, Vasemägi A, Koskinen MT, Piironen P and Primmer CR (2009) Unanticipated population structure of European grayling in its northern distribution: implications for conservation prioritization. *Frontiers in Zoology*, 6:6.

11) Tonteri A, Vasemägi A, Lumme J and Primmer CR (2008) Use of differential expression data for identification of novel immune relevant EST-linked microsatellite markers in Atlantic salmon (*Salmo salar* L.). *Molecular Ecology Resources*, 6, 1486-1490.

10) Ryynänen H, Tonteri A, Vasemägi A, Primmer CR (2007) A comparison of the efficiency of single nucleotide polymorphisms (SNPs) and microsatellites for the estimation of population and conservation genetic parameters in north European Atlantic salmon (*Salmo salar*) populations. *Journal of Heredity*, 98, 692-704.

9) Vasemägi A (2006) The adaptive hypothesis of clinal variation revisited: single-locus

clines as a result of spatially restricted geneflow. *Genetics* 173, 2411-2414.

8) Vasemägi A and CR Primmer (2005) Challenges for identifying functionally important genetic variation: the promise of combining complementary research strategies. Invited Review in *Molecular Ecology* 14, 3623-3642. (*Cited 99 times, resource: Web of Science*).

7) Vasemägi A, Nilsson J, Primmer CR (2005) Expressed sequence tag (EST) linked microsatellites as a source of gene associated polymorphisms for detecting signatures of divergent selection in Atlantic salmon (*Salmo salar* L.). *Molecular Biology and Evolution* 22, 1067-1076. (*Cited 97 times, resource: Web of Science*).

6) Vasemägi A, Gross R, Paaver T, Säisä M, Koljonen M-L, Nilsson J (2005) Analysis of gene associated tandem repeat markers in Atlantic salmon (*Salmo salar* L.) populations: implications for restoration and conservation in the Baltic Sea. *Conservation Genetics* 6, 385-397.

5) Säisä M, Koljonen M-L, Gross R, Nilsson J, Tähtinen J, Koskiniemi J, Vasemägi A (2005) The genetic structure and postglacial colonization of Atlantic salmon into the Northern Europe on basis of DNA microsatellite data. *Canadian Journal of Fisheries and Aquatic Sciences* 62, 1887–1904.

4) Vasemägi A, Gross R, Paaver T, Koljonen M-L, Nilsson J (2005) Extensive immigration from compensatory hatchery releases into wild Atlantic salmon population in the Baltic Sea: spatio-temporal analysis over 18 years. *Heredity* 95, 76-83.

3) Vasemägi A, Nilsson J, Primmer CR (2005) Seventy five EST-linked Atlantic salmon (*Salmo salar* L.) microsatellite markers and their cross-amplification in five salmonid species. *Molecular Ecology Notes* 5, 282–288.

2) Nilsson J, Gross R, Asplund T, Dove O, Jansson H, Kelloniemi J, Kohlmann K, Löytynoja A, Nielsen EE, Paaver T, Primmer CR, Titov S, Vasemägi A, Veselov A, Öst T, Lumme J (2001) Matrilinear phylogeography of Atlantic salmon (*Salmo salar* L.) in Europe and postglacial colonisation of the Baltic Sea area. *Molecular Ecology* 1, 89-102.

1) Vasemägi A, Gross R, Paaver T, Kangur M, Nilsson J, Eriksson L-O (2001) Identification of the origin of Atlantic salmon (*Salmo salar* L.) population in a recently recolonized river in the Baltic Sea. *Molecular Ecology* 10, 2877-2882.

Chapters in books

2) T. F. Cross, P. McGinnity, J. Coughlan, E. Dillane, A. Ferguson, M.-L. Koljonen, N. Milner, P. O'Reilly and A. Vasemägi (2007) Stocking and Ranching. In: Genetics and the Management of Atlantic salmon Stocks (Verspoor, Nielsen & Stradmeyer, eds.) Blackwell publishing.

1) Paaver T, Gross R, Vasemägi A (2001) Genetic characterization of Estonian salmon populations. In Present and potential production of salmon in Estonian rivers (eds. M. Kangur, B. Wahlberg) pp.77-84. Estonian Academy publishers, Tallinn.

Other scientific publications

7) Vuorisalo T, Arjamaa O, Vasemägi A, Taavitsainen J-P, Tourunen A, Saloniemi I (2012) Laktoosinsiedon alkuperä. *Accepted, Duodecim.*

6) Vasemägi A (2010) Fishing for genes that matter in wild. (Kummipükstes geene püüdmas – lõhe molekulaar-ökoloogilistest uuringutest Eestis). ETF aastaraamat. ETF, 2011, XX – XX.

5) ICES WGAGFM Report (2008) Report of the Working Group on the Application of Genetics in Fisheries and Mariculture (WGAGFM). Dahle G, Johansen T, Vasemägi A, Carvalho G, Florin A-B, Was A, Prödohl P, Khrustaleva AM. Review the potential for

application of SNP´s (single nucleotide polymorphisms) in fisheries genetics and aquaculture. Pitlochry, UK.

4) ICES WGAGFM Report (2008) Report of the Working Group on the Application of Genetics in Fisheries and Mariculture (WGAGFM). Boudry P, Gilbey J, Vasemägi A, Lallias D & Gosling E. Review current and future prospects of QTL based studies in fisheries and aquaculture. Pitlochry, UK.

3) Aho T, *et al.* incl. Vasemägi A (2005) Genetic Diversity in Commercially Exploited Fish Species. Nordic Council of Ministers Report, Iceland. 17 pp.)

2) Vasemägi A (2004) Evolutionary Genetics of Atlantic Salmon (*Salmo salar* L.) - Molecular Markers and Applications. PhD thesis, Swedish University of Agricultural Sciences, Sweden.

1) Paaver T, Tohvert T, Gross R, Vasemägi A (1998) Changes of quality indices of common carp during overwintering in a storage basin. Estonian Agricultural University Proceedings, Tartu, 69, 65-71.