ROGER L. VALLEJO
Computational Biologist & Geneticist
National Center for Cool & Cold Water Aquaculture
Agricultural Research Service, U.S. Department of Agriculture
11861 Leetown Road, Kearneysville, WV 25430
Email: roger.vallejo@usda.gov
http://www.ars.usda.gov/pandp/people/people.htm?personid=37662

EDUCATION
1993 Ph.D. Plant Breeding & Genetics   North Carolina State University, Raleigh, NC, USA
1983 M.S.   Plant Breeding & Statistics   Universidad Nacional Agraria La Molina, Lima, Peru
1981 B.S.   Agronomy   Universidad Nacional Agraria La Molina, Lima, Peru

ACADEMIC & PROFESSIONAL EXPERIENCE
2005-   Computational Biologist & Geneticist, NCCCWA, ARS-USDA, Kearneysville, WV
2009-2019 Adjunct Professor, Graduate School of Aquaculture, Department of Fisheries, Universidad Nacional Agraria La Molina, Lima, PERU
2000-2004 Assist. Professor of Genomics & Bioinformatics, Department of Animal Science, Pennsylvania State University, State College, PA
1997-2000 Senior Research Fellow in Statistical Genetics, Laboratory of Neurogenetics, National Institute on Alcohol Abuse and Alcoholism, NIH, Bethesda, MD
1995-1997 Research Geneticist, Avian Disease & Oncology Laboratory, ARS-USDA, East Lansing, MI
1993-1994 Postdoctoral Fellow, GCREC, IFAS, University of Florida, Bradenton, FL
1990-1993 Graduate Research Assistant, North Carolina State University, Raleigh, NC
1983-1990 Associate Geneticist, Breeding & Genetics Department, International Potato Center, Lima, PERU

ACCOMPLISHMENTS
- Designed, performed statistical data analysis and implemented genomic selection (GS) for BCWD resistance using single-step GBLUP and Bayesian multiple regression methods in NCCWA rainbow trout breeding program, ARS-USDA, Kearneysville, WV, 2016.
- Designed, performed statistical data analysis and implemented genomic selection (GS) for BCWD resistance using single-step GBLUP and Bayesian multiple regression methods in a commercial rainbow trout breeding program, Troutlodge, Inc., Sumner, WA, 2017.
- Designed and performed GWAS and quantitative trait loci (QTL) mapping for complex traits in rainbow trout including BCWD, CD, IHNV, IFG and fillet yield using single-step GBLUP and Bayesian multiple regression methods in NCCWA, ARS, USDA, Kearneysville, WV, 2010-present
- Performed population genetic analysis in rainbow trout populations including assessment of the extent and distribution of linkage disequilibrium (LD), genetic diversity, population structure, admixture, genome-wide scans for signatures of selection for BCWD resistance and phylogenomic analysis in NCCWA, ARS, USDA, Kearneysville, WV, 2009-present
- Determined the extent and distribution of linkage disequilibrium in North American Holstein dairy cattle populations and conducted research on the genetics of resistance to clinical mastitis in dairy cattle. Department of Animal Science, Pennsylvania State University, University Park, PA, 2000-2004
- Detected and mapped QTL affecting vulnerability to alcoholism and psychiatric disorders comorbid with alcoholism in human populations. Laboratory of Neurogenetics, National Institute on Alcohol Abuse and Alcoholism, NIH, Bethesda, MD, 1997-2000
- Detected and mapped QTL affecting susceptibility to Marek's disease in chicken populations. Avian Disease and Oncology Laboratory, ARS, USDA, East Lansing, MI, 1995-1997
- Developed potato populations adapted to tropical and temperate climates with resistance to fungal,

bacterial and viral diseases using quantitative genetics and traditional selective breeding methods. Department of Breeding and Genetics, International Potato Center, Lima, PERU, 1983-1990

SCIENTIFIC & ACADEMIC ACTIVITIES
- Associate Editor: *BMC Genetics; Genetics Selection Evolution*
- Review Editor: *Frontiers in Genetics*
- Ad Hoc Science Journal Reviewer: *Genetics; G3; PLOS One; Heredity; BMC Genomics; Genomics; Journal of Animal Breeding & Genetics; Animal Genetics; Journal of Animal Science; Marine Biotechnology; Aquaculture*
- Grant Panel Reviewer: USDA-NRICGP; USDA-NIFA-AFRI
- Ad Hoc Grant Reviewer: National Science Foundation; Israel Science Foundation; US-Israel Binational Agric. Res. & Develop.

HONORS & AWARDS
1996 Outstanding Research QTL mapping for Marek's disease, ADOL, ARS-USDA, East Lansing, MI
1993 Excellence in Doctoral Research, North Carolina State University, Raleigh, NC
1991 Honor Society *Pi Alpha XI, Iota* Chapter, North Carolina State University, Raleigh, NC
1980 First Class Honors, B.S. Agronomy, Universidad Nacional Agraria, Lima, Peru

PEER REVIEWED PUBLICATIONS
Vallejo, R.L., H. Cheng, B.O. Fragomeni, K. Shewbridge, G. Gao, J.R. MacMillan, R. Towner, Y. Palti. 2019. Genome-wide association analysis and accuracy of genome-enabled breeding value predictions for resistance to infectious hematopoietic necrosis virus in a commercial rainbow trout breeding population. *Genetic Selection Evolution* 51:47

Silva, R.M.O, J.P. Evenhuis, **R.L. Vallejo**, G. Gao, K.E. Martin, T.D. Leeds, Y. Palti, D.A.L. Lourenco. 2019. Whole-genome mapping of quantitative trait loci and accuracy of genomic predictions for resistance to columnaris disease in two rainbow trout breeding populations. *Genetics Selection Evolution (2019 51:42*

Silva, R.M.O., J.P. Evenhuis, **R.L. Vallejo**, S. Tsuruta, G.D. Wiens, K.E. Martin, J.E. Parsons, Y. Palti, D.A.L. Lourenco, T.D. Leeds. 2018. Variance and covariance estimates for resistance to bacterial cold water disease and columnaris disease in two rainbow trout breeding populations. *Journal of Animal Science* 97(3):1124-1132

Vallejo RL, RMO Silva, JP Evenhuis, G Gao, S Liu, JE Parsons, KE Martin, GD Wiens, DAL Lourenco, TD Leeds, Y Palti. 2018. Accurate genomic predictions for BCWD resistance in rainbow trout are achieved using low-density SNP panels: Evidence that long-range LD is a major contributing factor. *J. Animal Breeding & Genetics* 135:263-274

Vallejo RL, RM Silva, JP Evenhuis, G Gao, S Liu, JE Parsons, KE Martin, DAL Lourenco, TD Leeds, Y Palti. 2018. Accurate genomic predictions for bacterial cold water disease resistance using low-density SNP panels in rainbow trout. *Proceedings of the 11th World Congress on Genetics Applied to Livestock Production*, Auckland, New Zealand

Sixin L, **RL Vallejo**, PE Evenhuis, KE Martin, A Hamilton, G Gao, TD Leeds, GD Wiens, Y Palti. 2018. Retrospective Evaluation of Marker-Assisted Selection for Resistance to Bacterial Cold Water Disease in Three Generations of a Commercial Rainbow Trout Breeding Population. *Frontiers in Genetics* 9:286

Vallejo RL, TD Leeds, G Gao, JE Parsons, KE Martin, JP Evenhuis, BO Fragomeni, GD Wiens and Y Palti. 2017. Genomic selection models double the accuracy of predicted breeding values for bacterial cold water disease resistance compared to a traditional pedigree-based model in rainbow trout aquaculture. *Genetics Selection Evolution* 49:17

Vallejo RL, S Liu, G Gao, BO Fragomeni, AG Hernandez, TD Leeds, JE Parsons, KE Martin, JP Evenhuis, TJ Welch, GD Wiens, Y Palti. 2017. Similar Genetic Architecture with Shared and Unique

Quantitative Trait Loci for Bacterial Cold Water Disease Resistance in Two Rainbow Trout Breeding Populations. *Frontiers in Genetics* 8:156

Abdelrahman H, M ElHady, A Alcivar-Warren, T Leeds, Y Palti, C Rexroad, **R Vallejo**, et al. 2017. Aquaculture genomics, genetics and breeding in the United States: current status, challenges, and priorities for future research. *BMC Genomics* 18:191

Vallejo RL, TD Leeds, BO Fragomeni, G Gao, AG Hernandez, I Misztal, TJ Welch, GD Wiens, Y Palti. 2016. Evaluation of Genome-Enabled Selection for Bacterial Cold Water Disease Resistance Using Progeny Performance Data in Rainbow Trout: Insights on Genotyping Methods and Genomic Prediction Models. *Frontiers in Genetics* 7: 96

Leeds TD, **RL Vallejo**, GM Weber, D Gonzalez-Pena, JT Silverstein. 2016. Response to five generations of selection for growth performance traits in rainbow trout (Oncorhynchus mykiss). *Aquaculture* 465: 341-351

Gonzalez-Pena D, G Gao, M Baranski, T Moen, BM Cleveland, B Kenney, **RL Vallejo**, Y Palti, TD Leeds. 2016. Genome-wide association study for identifying loci that affect fillet yield, carcass,and body weight traits in rainbow trout (Oncorhynchus mykiss). *Frontiers in Genetics* 7:203

Liu S, **RL Vallejo**, G Gao, Y Palti, G Weber, A Hernandez, CE Rexroad III. 2015. Identification of Single-Nucleotide Polymorphism Markers Associated with Cortisol Response to Crowding in Rainbow Trout. *Marine Biotechnology* 17: 328-337

Palti Y, **RL Vallejo,** G Gao, S Liu, AG Hernandez, CE Rexroad III, GD Wiens. 2015. Detection and Validation of QTL Affecting Bacterial Cold Water Disease Resistance in Rainbow Trout Using Restriction-Site Associated DNA Sequencing. PLoS ONE 10(9): e0138435

Liu S, **RL Vallejo**, Y Palti, G Gao, DP Marancik, AG Hernandez, GD Wiens. 2015. Identification of single nucleotide polymorphism markers associated with bacterial cold water disease resistance and spleen size in rainbow trout. *Frontiers in Genetics*. 6:298

Vallejo RL, TD Leeds, S Liu, G Gao, TJ Welch, GD Wiens, Y Palti. 2014. Accuracy of Genomic Selection for BCWD Resistance in Rainbow Trout. *Proceedings of the World Congress on Genetics Applied to Livestock Production.* Vancouver, BC, Canada

Vallejo RL, Y Palti, S Liu, DP Marancik, GD Wiens. 2014. Validation of linked QTL for bacterial cold water disease resistance and spleen size on rainbow trout chromosome Omy19. *Aquaculture* 432: 139-143

Vallejo RL, Y Palti, S Liu, JP Evenhuis, G Gao, CE Rexroad III, GD Wiens. 2014. Detection of QTL in Rainbow Trout Affecting Survival When Challenged with *Flavobacterium psychrophilum*. *Marine Biotechnology* 16: 349-360

Palti Y, G Gao, MR Miller, **RL Vallejo**, PA Wheeler, E Quillet, J Yao, GH Thorgaard, M Salem, CE Rexroad III. 2014. A resource of single-nucleotide polymorphisms for rainbow trout generated by restriction-site associated DNA sequencing of doubled haploids. *Molec Ecology Resources* 14: 588-596

Rexroad III CE, **RL Vallejo**, S Liu, Y Palti, GM Weber. 2013. Quantitative Trait Loci Affecting Response to Crowding Stress in an F2 Generation of Rainbow Trout Produced Through Phenotypic Selection. *Marine Biotechnology* 15: 613-627

Wiens GD, **RL Vallejo**, TD Leeds, Y Palti, S Hadidi, S Liu, JP Evenhuis, TJ Welch, CE Rexroad III. 2013. Assessment of Genetic Correlation between Bacterial Cold Water Disease Resistance and Spleen Index in a Domesticated Population of Rainbow Trout: Identification of QTL on Chromosome Omy19. *PLoS ONE* 8(10): e75749

Wolters WR, GS Burr, Y Palti, **RL Vallejo**. 2013. Phenotypic and Genetic Variation in Two North American Arctic Charr, *Salvelinus alpinus*, Stocks Cultured in a Recirculating Aquaculture System. *J World Aquaculture Society* 44: 473-485

Rexroad III CE, **RL Vallejo**, S Liu, Y Palti, GM Weber. 2012. QTL affecting stress response to crowding in a rainbow trout broodstock population. *BMC Genetics* 13: 97

Salem M, **RL Vallejo**, TD Leeds, Y Palti, S Liu, A Sabbagh, CE Rexroad III, J Yao. 2012. RNA-Seq Identifies SNP Markers for Growth Traits in Rainbow Trout. *PLoS ONE* 7(5): e36264

Overturf K, **RL Vallejo**, Y Palti, FT Barrows, JE Parsons. 2012. Microarray analysis of differential utilization of plant-based diets by rainbow trout. *Aquacult. Int*. 20: 213–232

Palti Y, C Genet, MC Luo, A Charlet, G Gao, Y Hu, C Castaño-Sánchez, K Tabet-Canale, F Krieg, J Yao, **RL Vallejo**, CE Rexroad III. 2011. A first generation integrated map of the rainbow trout genome. *BMC Genomics* 12: 180

Vallejo RL, GD Wiens, CE Rexroad III, TJ Welch, JP Evenhuis, TD Leeds, LLG Janss, Y Palti. 2010. Evidence of major genes affecting resistance to bacterial cold water disease in rainbow trout using Bayesian methods of segregation analysis. *J. Animal Sci*. 88: 3814-3832

Wiens GD, **RL Vallejo**. 2010. Temporal and pathogen-load dependent changes in rainbow trout (*Oncorhynchus mykiss*) immune response traits following challenge with biotype 2 *Yersinia ruckeri*. *Fish & Shellfish Immunology* 29: 639-647

Leeds TD, JT Silverstein, GM Weber, **RL Vallejo**, Y Palti, CE Rexroad III, J Evenhuis, S Hadidi, TJ Welch, GD Wiens. 2010. Response to selection for bacterial cold water disease resistance in rainbow trout. *J. Animal Sci.* 88: 1936-1946

Vallejo RL, CE Rexroad III, JT Silverstein, LLG Janss, GM Weber. 2009. Evidence of major genes affecting stress response in rainbow trout using Bayesian methods of complex segregation analysis. *J. Animal Sci*. 87: 3490-3505

Rexroad III CE, **RL Vallejo**. 2009. Estimates of Linkage Disequilibrium and Effective Population Size in Rainbow Trout. *BMC Genetics* 10: 83

Sanchez CC, TPL Smith, RT Wiedmann, **RL Vallejo**, M Salem, J Yao, CE Rexroad III. 2009. Single Nucleotide Polymorphism discovery in Rainbow Trout by deep sequencing of a reduced representation library. *BMC Genomics* 10: 559

Palti Y, MC Luo, Y Hu, C Genet, FM You, **RL Vallejo**, GH Thorgaard, PA Wheeler, CE Rexroad III. 2009. A first generation BAC-based physical map of the rainbow trout genome. *BMC Genomics* 10: 462

Rexroad III CE, Y Palti, SA Gahr, **RL Vallejo**. 2008. A second generation genetic map for rainbow trout (Oncorhynchus mykiss). *BMC Genetics* 9: 74

Weber GM, **RL Vallejo**, SE Lankford, JT Silverstein, TJ Welch. 2008. Cortisol Response to a Crowding Stress: Heritability and Association with Disease Resistance to *Yersinia ruckeri* in Rainbow Trout. *North Amer. J. of Aquaculture* 70: 425-433

Silverstein JT, **RL Vallejo**, Y Palti, TD Leeds, CE Rexroad III, TJ Welch, GD Wiens, V Ducrocq. 2008. Rainbow trout resistance to bacterial cold-water disease is moderately heritable and is not adversely correlated with growth. *J. Animal Sci.* 87: 860-867

Gahr SA, **RL Vallejo**, GM Weber, BS Shepherd, JT Silverstein, CE Rexroad III. 2008. Effects of short-term growth hormone treatment on liver and muscle transcriptomes in rainbow trout (Oncorhynchus mykiss). *Physiol Genomics* **32**: 380-392

Johnson NA, **RL Vallejo**, JT Silverstein, TJ Welch, GD Wiens, EM Hallerman, Y Palti. 2008. Suggestive Association of Major Histocompatibility IB Genetic Markers with Resistance to Bacterial Cold Water Disease in Rainbow Trout (Oncorhynchus mykiss). *Marine Biotechnology* 10: 429-437

Johnson NA, CE Rexroad III, EM Hallerman, **RL Vallejo**, Y Palti. 2007. Development and evaluation of a new microsatellite multiplex system for parental allocation and management of rainbow trout (*Oncorhynchus mykiss*) broodstocks. *Aquaculture* 266: 53–62

Rexroad III CE, **RL Vallejo**, I Coulibaly, C Couch, A Garber, M Westerman, C Sullivan. 2006. Identification and characterization of microsatellites for striped bass from repeat-enriched libraries. *Conservation Genetics* 7: 971–982

Silverstein JT, GM Weber, CE Rexroad III, **RL Vallejo**. 2006. Genetics and Genomics-Integration of Molecular Genetics into a Breeding Program for Rainbow Trout. *Israeli J. of Aquaculture* 58: 231-237

Rexroad III CE, Y Palti, **RL Vallejo**, JT Silverstein. 2006. Integration of molecular genetic information into the NCCCWA selective breeding program for rainbow trout. *Israeli J. of Aquaculture* 58: 323-327

Palti Y, MF Rodriguez, **RL Vallejo**, CE Rexroad III. 2006. Mapping of Toll-like receptor genes in rainbow trout. *Animal Genetics* 37: 597–598

Coulibaly I, RG Danzmann, Y Palti, **RL Vallejo**, SA Gahr, J Yao, CE Rexroad III. 2006. Mapping of genes in a region associated with upper temperature tolerance in rainbow trout. *Animal Genetics* 37: 598-599

Radel M, **RL Vallejo**, N Iwata, JC Long, R Aragon, M Virkkunen, D Goldman. 2005. Haplotype-Based Localization of an Alcohol Dependence Gene to the 5q34 γ-Aminobutyric Acid Type A Gene Cluster**.** *Archives Gen. Psychiatry* 62: 47-55

Vallejo RL, YL Li, GW Rogers, MS Ashwell. 2003. Genetic diversity and background linkage disequilibrium in the North American Holstein cattle population. *J. Dairy Sci*. 86:4137-4147

Vallejo RL, LD Bacon, HC Liu, RL Witter, MAM Groenen, J Hillel, HH Cheng. 1998. Genetic mapping of quantitative trait loci affecting susceptibility to Marek's disease virus induced tumors in F_2 intercross chickens. *Genetics* 148: 349-360

Xu SZ, N Yonash, **RL Vallejo**, HH Cheng. 1998. Mapping quantitative trait loci for binary traits using a heterogeneous residual variance model: An application to Marek's disease susceptibility in chickens. *Genetica* 104: 171-178

Vallejo RL, GT Pharr, HC Liu, HH Cheng, RL Witter, LD Bacon. 1997. Non-association between *Rfp-Y* major histocompatibility complex-like genes and susceptibility to Marek's disease virus-induced tumors in 6_3 x 7_2 F_2 intercross chickens. *Animal Genetics* 28: 331-337

Pharr GT, **RL Vallejo**, LD Bacon. 1997. Identification of *Rfp-Y (Mhc*-like) haplotypes in chickens of Cornell lines N and P. *J. Heredity* 88: 504-512

Cheng HH, I Levin, **RL Vallejo**, H Khatib, JB Dodgson, LB Crittenden, J Hillel. 1995. Development of a genetic map of the chicken with markers of high utility. *Poultry Sci*. 74: 1855-1874

Smith, EJ, HH Cheng, **RL Vallejo.** 1995. Mapping functional chicken genes: an alternative approach. *Poultry Sci.* 75: 642-647

Vallejo RL, WW Collins, JB Young. 1995. Inheritance of Resistance to Potato Virus Y and Potato Virus X in Hybrid *Solanum phureja-S. stenotomum* Diploid Potatoes. *J. Heredity* 86: 89-93

Vallejo RL, WW Collins, RD Schiavone. 1994. Genetics and Incorporation of Glandular Trichomes and Polyphenol Oxidase Activity into an Advanced *Solanum phureja-S. stenotomum* Diploid Potato Population. *J. Amer. Soc. Hort. Sci.* 119: 824-828

Vallejo RL, WW Collins, RH Moll. 1994. Inheritance of A and B Glandular Trichome Density and Polyphenol Oxidase Activity in Diploid Potatoes. *J. Amer. Soc. Hort. Sci.* 119: 829-832

Vallejo RL, WW Collins, RD Schiavone, SA Lommel, JB Young. 1994. Extreme Resistance to Infection by Potato Virus Y and Potato Virus X in an Advanced Hybrid *Solanum phureja-S. stenotomum* Diploid Potato Population. *Amer. J. of Potato Research* 71: 617-628

Vallejo RL, HA Mendoza. 1992. Plot Technique Studies on Sweet Potato Yield Trials. *J. Amer. Soc. Hort. Sci.* 117: 508-511

Vallejo RL, and S Helfgott. 1985. Determination de periodo critico de competencia de malezas en el cultivo del frijol typo Caraota (*Phaseolus vulgaris L.*) C.V. Porrillo Sintetico. *Anales Cientificos UNALM* 24: 165-175

PROFESSIONAL PRESENTATIONS

Vallejo, R.L., H. Cheng, B.O. Fragomeni, K. Shewbridge, G. Gao, J.R. MacMillan, R. Towner, Y. Palti. Genome-wide mapping of quantitative trait loci and accuracy of genomic selection for resistance to infectious hematopoietic necrosis virus in rainbow trout using multiple regression single-step methods. *Quantitative Genetics and Genomics Gordon Research Conference*, February 10-15, 2019, Lucca, Italy

Palti, Y., **R.L. Vallejo**, B. Fragomeni, H. Cheng, G. Gao, R. Towner, R. MacMillan. Genome-Wide Association Analysis and Accuracy of Genome-Enabled Breeding Value Predictions for Resistance to Infectious Hematopoietic Necrosis Virus in a Commercial Rainbow Trout Breeding Population. *Plant & Animal Genome XXVII*, January 12-16, 2019, San Diego, CA

Vallejo RL, RM Silva, JP Evenhuis, G Gao, S Liu, JE Parsons, KE Martin, DAL Lourenco, TD Leeds, Y Palti. Accurate genomic predictions for bacterial cold water disease resistance using low-density SNP panels in rainbow trout. *World Congress on Genetics Applied to Livestock Production*, February 11-

16, 2018, Auckland, New Zealand, http://www.wcgalp.org/proceedings/2018/accurate-genomic-predictions-bacterial-cold-water-disease-resistance-using-low

Palti Y, S Liu, **RL Vallejo**, KE Martin, JP Evenhuis, G Gao, GD Wiens, TD Leeds. Similar effects of QTL haplotypes for bacterial cold water disease resistance across two generations in a commercial rainbow trout breeding population. *Plant & Animal Genome XXVI*, January 13-17, 2018, San Diego, CA

Silva R, JP Evenhuis, **RL Vallejo**, G Gao, KE Martin, I Misztal, TD Leeds, D Lourenco, Y Palti. GWAS for detecting QTL associated with columnaris disease in two rainbow trout breeding populations. *Plant & Animal Genome XXVI*, January 13-17, 2018, San Diego, CA

Silva R, J Evenhuis, **RL Vallejo**, G Gao, K Martin, TD Leeds, D Lourenco, Y Palti. Prospecting genomic regions associated with columnaris disease in two rainbow trout breeding populations. *World Congress on Genetics Applied to Livestock Production*, February 11-16, 2018, Auckland, New Zealand

Liu S, **RL Vallejo**, J Evenhuis, KE Martin, A Hamilton, G Gao, TD Leeds, GD Wiens, Y Palti. Marker-assisted selection for resistance to bacterial cold water disease in a commercial rainbow trout breeding population. *International Symposium on Genetics in Aquaculture XIII*, July 16-20, 2018, Cairns, Australia

Palti, Y, **RL Vallejo**, J Evenhuis, R Silva, S Liu, G Gao, K Martin, D Lourenco, GD Wiens, TD Leeds. Lessons from the application of genomic selection to rainbow trout aquaculture. *International Symposium on Genetics in Aquaculture XIII*, July 16-20, 2018, Cairns, Australia

Palti Y, **RL Vallejo**, JM Everson, G Gao, S Liu, GD Wiens, TD Leeds, K Martin, J Parsons. Genome-wide association analysis of bacterial cold water disease resistance in rainbow trout reveals the potential of a hybrid approach between genomic selection and marker assisted selection. *Plant & Animal Genome XXV*. January 14-18, 2017, San Diego, CA, USA

Evenhuis J, TD Leeds, Y Palti, **RL Vallejo**, G Gao, GD Wiens. Genomic selection exploits within-family genetic variation for disease resistance in rainbow trout. *Aquaculture America*. February 19-22, 2017, San Antonio, TX, USA

Vallejo RL. Genome-wide Association Studies Identify 25 Genetic Loci Associated with Resistance to Bacterial Cold Water Disease in Rainbow Trout. *Gordon Research Conferences: Quantitative Genetics & Genomics*. February 26-March 3, 2017, Galveston, TX, USA

Vallejo RL. Genome-enabled selection doubles the accuracy of predicted breeding values for bacterial cold water disease resistance compared to traditional family-based selection in rainbow trout aquaculture. *The 44th Scientific Symposium "United States-Japan Natural Resources Panel on Aquaculture-Genetics & Breeding in Aquaculture"*, November 1-2, 2016, Seattle, WA, USA, https://spo.nmfs.noaa.gov/sites/default/files/TMSPO175_0.pdf

Vallejo RL, TD Leeds, K Martin, Jason Evenhuis, G Gao, GD Wiens, J Parsons, Y Palti. Genomic selection for bacterial cold water disease resistance in rainbow trout reveals large within-family variation that cannot be exploited in "traditional" family-based selective breeding. *Plant & Animal Genome XXIV*, January 9-13, 2016, San Diego, CA, USA

Vallejo RL. Assessing accuracy of genomic predictions for bacterial cold water disease resistance in commercial rainbow trout using progeny testing data. *Workshop for Aquaculture Genomics, Genetics and Breeding*, March 24-25, 2016, Auburn, AL, USA

Vallejo RL. Genomic Selection for Bacterial Cold Water Disease Resistance in Commercial Rainbow Trout. *Fish Breeders' Round Table 2016*, June 14-15, 2016, Tromsø, NORWAY

Fragomeni BO, D Lourenco, **RL Vallejo**, Y Palti, I Misztal. Weighted ssGBLUP improves genomic selection accuracy for bacterial cold water disease resistance in a rainbow trout population. *Plant & Animal Genome XXIV*, January 9-13, 2016, San Diego, CA, USA

Gonzalez-Pena D, TD Leeds, G Gao, **RL Vallejo,** Y Palti. Genome-wide association study for identifying genome loci that affect fillet yield in rainbow trout (*Oncorhynchus mykiss*). *Plant & Animal Genome XXIV*, January 9-13, 2016, San Diego, CA, USA

Vallejo RL, TD Leeds, S Liu, G Gao, TJ Welch, GD Wiens, Y Palti. Accuracy of genomic prediction for BCWD resistance in rainbow trout using different genotyping platforms and genomic selection

models. *International Plant & Animal Genome XXIII Conference*. January 10-14, 2015; San Diego, CA, USA

Vallejo RL, TD Leeds, S Liu, G Gao, TJ Welch, GD Wiens, Y Palti. Genomic selection for BCWD resistance in Rainbow trout using RADSNP and SNP genotyping platforms, single-step GBLUP and Bayesian variable selection models. *International Symposium on Genetics in Aquaculture XII.* June 21-27, 2015; Santiago de Compostela, SPAIN

Liu S, **RL Vallejo**, Y Palti, G Gao, DP Marancik, GD Wiens. Identification of single nucleotide polymorphism markers associated with bacterial cold water disease resistance and spleen size in rainbow trout. *International Symposium on Genetics in Aquaculture XII.* June 21-27, 2015; Santiago de Compostela, SPAIN

Vallejo RL, TD Leeds, S Liu, G Gao, TJ Welch, GD Wiens, Y Palti. Accuracy of Genomic Selection for BCWD Resistance in Rainbow Trout. *World Congress on Genetics Applied to Livestock Production.* August 17-22, 2014, Vancouver, BC, CANADA

Vallejo RL, Y Palti, , S Liu, DP Marancik, TJ Welch, TD Leeds, JP Evenhuis, CE Rexroad III, GD Wiens. Validation of Linkage Between BCWD Resistance And Spleen Size QTL On Omy19 In Rainbow Trout: Pleiotropy Versus Linkage. *Plant & Animal Genome XXII*, January 11-15, 2014, San Diego, CA, USA

Liu S, CE Rexroad III, **RL Vallejo**, G Gao, Y Palti, GM Weber. Identification of Positional Candidate Genes for Response to Crowding Stress in Rainbow Trout. *Plant & Animal Genome XXII*, January 11-15, 2014, San Diego, CA, USA

Wiens GD, **RL Vallejo**, S Liu, DP Marancik, Y Palti. QTL for bacterial cold water disease resistance and spleen size are located on rainbow trout chromosome Omy19. *International Conference on Integrative Salmonid Biology*. June 10-12, 2014; Vancouver, BC, CANADA

Rexroad III CE, S Liu, **RL Vallejo**, G Gao, Y Palti, GM Weber. Use of RADs to identify candidate genes for response to crowding stress in rainbow trout. *Aquaculture America Conference*. February 9-12, 2014, Seattle, WA, USA

Vallejo RL, Y Palti, S Liu, TJ Welch, TD Leeds, JP Evenhuis, CE Rexroad III, GD Wiens. Mapping QTL for Spleen Size and BCWD Resistance in Rainbow Trout” by Plant & Animal Genome XXI, January 12-16, 2013, San Diego, CA, USA

Palti Y, **RL Vallejo**, TJ Welch, TD Leeds, JP Evenhuis, G Gao, S Liu, CE Rexroad III, GD Wiens. Mapping of QTL for bacterial cold water disease resistance in rainbow trout. *International Symposium on Genetics in Aquaculture*, June 24-29, 2012, Auburn, AL, USA

Rexroad III CE, S Liu, G Gao, Y Palti, GM Weber, **RL Vallejo**. Quantitative trait loci analyses and RNA-seq identify genes affecting stress response in rainbow trout. *1st International Conference on Integrative Salmonid Biology*, June 17-20, 2012, Oslo, NORWAY

Palti Y, **RL Vallejo**, TJ Welch, TD Leeds, JP Evenhuis, S Liu, CE Rexroad III, GD Wiens. Mapping of QTL for bacterial cold water disease resistance in rainbow trout. *Plant & Animal Genome XX*, January 14-18, 2012, San Diego, CA, USA

Vallejo RL. Invited Seminar “Segregation analysis and detection of QTL for stress response in rainbow trout”. Section on Statistical Genetics, Department of Biostatistics, School of Public Health, Univ. of Alabama, June 24, 2011, Birmingham, AL, USA, http://www.soph.uab.edu/ssg/ssgseminars/2011

Vallejo RL, CE Rexroad III, S Liu, Y Palti, GM Weber. Detection of quantitative trait loci affecting response to crowding stress in rainbow trout. *Gordon Research Conferences: Quantitative Genetics & Genomics*, February 20-25, 2011, Galveston, TX, USA

Palti Y, **RL Vallejo**, TJ Welch, TD Leeds, JP Evenhuis, S Liu, CE Rexroad III, GD Wiens. Detection of QTL for spleen size and disease resistance in rainbow trout. *Plant & Animal Genome XIX*, January 15-19, 2011, San Diego, CA, USA

Rexroad CE, **RL Vallejo**, S Liu, C Sanchez, J Yao, Y Palti, GM Weber. Genomic analysis of the rainbow trout response to crowding. *Plant & Animal Genome XIX*, January 15-19, 2011, San Diego, CA, USA

Vallejo RL, CE Rexroad III, S Liu, Y Palti. Genetic management of rainbow trout populations with DNA markers. *The 9th World Congress on Genetics Applied to Livestock Production*, August 1-6, 2010,

Leipzig, GERMANY

Vallejo RL, GD Wiens, TJ Welch, LLG Janss, CE Rexroad III, Y Palti. Invited Presentation "Evidence of major genes affecting bacterial cold water disease resistance in rainbow trout using Bayesian methods of complex segregation analysis". *Plant & Animal Genome XVIII*, January 9-13, 2010, San Diego, CA, USA

Palti Y, MC Luo, C Genet, Y Hu, FM Yuo, **RL Vallejo**, CE Rexroad III. A first generation integrated physical and genetic map of the rainbow trout genome. *Plant & Animal Genome XVIII*, January 9-13, 2010, San Diego, CA, USA

Vallejo RL. Invited seminar "Rainbow trout genetic improvement and genomic selection in aquaculture" at Graduate Program in Aquaculture, National Agricultural University La Molina, July 13, 2009, Lima, PERU

Vallejo RL, GD Wiens, TJ Welch, LLG Janss, CE Rexroad III, Y Palti. Evidence of major genes for resistance to bacterial cold-water disease in rainbow trout using mixed inheritance multiple-threshold model and Bayesian segregation analysis. *Gordon Research Conferences: Quantitative Genetics & Genomics*, February 22-27, 2009, Galveston, TX, USA

Rexroad III CE, Y Palti, **RL Vallejo**. Characterizing the genetic diversity of rainbow trout in support of broodstock development. *Plant & Animal Genome XVII*, January 10-14, 2009, San Diego, CA, USA

Palti Y, MC Luo, Y Hu, C Genet, **RL Vallejo**, CE Rexroad III. A first generation BAC physical map of the rainbow trout genome. *Plant & Animal Genome XVII*, January 10-14, 2009, San Diego, CA, USA

Rexroad III CE, **RL Vallejo**. Characterization of linkage disequilibrium in a rainbow trout broodstock population. *Plant & Animal Genome XVI*, January 12-16, 2008, San Diego, CA, USA

Palti Y, MR Fincham, GD Wiens, **RL Vallejo**, CE Rexroad III. Progress toward an immunogenetic map for rainbow trout. *Plant & Animal Genome XVI*, January 12-16, 2008, San Diego, CA, USA

Vallejo RL. Complex segregation analysis of plasma cortisol in NCCCWA rainbow trout. *Fish Breeder's Round Table 2007*, June 11-13, 2007, Aalesund, NORWAY

Palti Y, NA Johnson, MR Fincham, CE Rexroad III, KE Hovatter, TJ Welch, GD Wiens, JT Silverstein, **RL Vallejo**.. Associations of markers linked to major histocompatibility (mh) regions and to other immune response genes with disease resistance in rainbow trout. *Plant & Animal Genome XIV*, January 13-17, 2007, San Diego, CA, USA

Gahr SA, GM Weber, BS Shepherd, JT Silverstein, **RL Vallejo**, I Coulibaly, CE Rexroad III. Effects of recombinant bovine somatotropin (rbst) on the liver and muscle transcriptomes of high growth rate rainbow trout (*Oncorhynchus mykiss*). *Plant & Animal Genome XIV*, January 14-18, 2006, San Diego, CA, USA

Rexroad III CE, RG Danzmann, Y Palti, **RL Vallejo**. The NCCCWA genetic map for rainbow trout. *Plant & Animal Genome XIV*, January 14-18, 2006, San Diego, CA, USA

Vallejo RL. Multipoint linkage of antisocial alcoholism to 5HT1B receptor gene on chromosome 6 in two populations. *The 22nd Annual Scientific Meeting of the Research Society on Alcoholism*, June 26-July 1, 1999, Santa Barbara, CA, USA

Vallejo RL. Platform presentation "Genome-wide Search for Genes Affecting Vulnerability to Alcohol Dependence in Finnish Pedigrees. *The 48th Annual Meeting of The American Society of Human Genetics*, October 27-31, 1998, Denver, CO, USA

Vallejo RL. Autosomal Genome Scan for Loci Linked to Alcohol Abuse and Related Psychiatric Disorders in Finnish Pedigrees. *The Annual Meeting of The Research Society on Alcoholism*, June 20-25, 1998, Hilton Head, SC, USA

PUBLISHED ABSTRACTS

Vallejo RL, RM Silva, JP Evenhuis, G Gao, S Liu, JE Parsons, KE Martin, D Lourenco, TD Leeds and Y Palti. Accurate genomic predictions for bacterial cold water disease resistance using low-density SNP panels in rainbow trout. *Proceedings of the 11th World Congress on Genetics Applied to Livestock Production*, February 11-16, 2018, Auckland, New Zealand. Log# 346198.

http://www.wcgalp.org/system/files/proceedings/2018/accurate-genomic-predictions-bacterial-cold-water-disease-resistance-using-low-density-snp-panels.pdf

Vallejo RL, TD Leeds, G Gao, JE Parsons, KE Martin, JP Evenhuis, BO Fragomeni, GD Wiens and Y Palti. Genome-enabled selection doubles the accuracy of predicted breeding values for bacterial cold water disease resistance compared to traditional family-based selection in rainbow trout aquaculture. Genetics and Breeding in Aquaculture: *Proceedings of the 44th U.S.–Japan Aquaculture Panel Symposium*, November 1, 2017, Seattle, WA. U.S. Dept. Commerce, NOAA Tech. Memo. NMFS-F/SPO-175, 78 p. Log# 339097. https://spo.nmfs.noaa.gov/sites/default/files/TMSPO175_0.pdf

Vallejo RL, CE Rexroad III, S Liu, Y Palti. 2010. Genetic management of broodstock populations with DNA markers in rainbow trout. *The 9th World Congress on Genetics Applied to Livestock Production*, August 1-6, 2010, Leipzig, GERMANY. Proceedings: http://www.wcgalp.org/proceedings/2010/genetic-management-broodstock-populations-dna-markers-rainbow-trout

Vallejo RL. 2003. Power to detect loci linked to common diseases of dairy cattle using identical-by-descent based methods of half-sib pair linkage analysis. *J Anim Sci* 81:160 (Suppl 1)

Radel M, **RL Vallejo**, R Aragon, JC Long, M Virkkunen, D Goldman. 2001. Analysis of GABA$_A$ receptor subunit genes in alcohol dependence and obsessive-compulsive disorder. *Am J Hum Genet* 69(4): 576 (Suppl)

Iwata N, **RL Vallejo**, M Virkkunen, JC Long, T Suizuki, N Ozaki, D Goldman. 2001. Evidence for linkage of genetic variants at the serotonin 2B receptor gene (HTR2B) with Finnish alcoholics. *Biol Psychiatry* 49: 563 (Suppl S)

Radel M, **RL Vallejo**, N Iwata, R Aragon, H Naukkarinen, M Virkkunnen, JC Long, D Goldman. 2000. Linkage and association analyses of sequence variants of the GABRA6, GABRB2 and GABRG2 gene cluster and alcohol dependence in a Finnish sample. *Am J Hum Genet* 67(4): 223 (Suppl 2)

Vallejo RL, J Brooks, J Lappalainen, D Hoopes, TB High, LA Wilhelm, M Virkkunen, M Linnoila, D Goldman, JC Long. 1999. Multi-point linkage of antisocial alcoholism to 5-HT1B receptor gene on chromosome 6 in two populations. *Alcohol Clin Exp Res* 23: 58A (Suppl).

Bergen AW, LA Wilhelm, RL **Vallejo**, S Kim, D McKeane, R Robin, D Goldman, JC Long. 1999. Association between alcohol dependence and 5-locus haplotypes on chromosome 11p15.5 in an American Indian population. *Am J Hum Genet* 65(4): 69 (Suppl)

Vallejo RL, Wilhelm LA, Hoopes D, High TB, Virkkunen M, Linnoila M, Goldman D, Long JC, 1998. Genome-wide search for genes affecting vulnerability to alcohol dependence in Finnish pedigrees. *Am J Hum Genet* 63: 236 (Suppl).

Vallejo RL, Long JC, Hoopes D, Virkkunen M, Goldman D, Linnoila M, 1998. Autosomal genome scan for loci linked to alcohol dependence and related psychiatric disorders in Finnish pedigrees. *Alcohol Clin Exp Res* 22: 97A (Suppl).

Goldman D, J Lappalainen, **RL Vallejo**, RW Robin, M Virkkunen, M Linnoila, JC Long. 1998. Linkage of the 5HT1B serotonin receptor to antisocial alcoholism in Finns and Southwestern Indians. *Am J Med Genet* 81(6): 479

Bacon LD, HH Cheng, **RL Vallejo**, RL Witter. 1996. Use of Recombinant Congenic Chicken Strains to Define Non-*MHC* Genes Influencing Marek's Disease Susceptibility. *Current Research on Marek's Disease*, Proceedings of 5th Internat. Sympos. on Marek's Disease, pp 63-68, East Lansing, MI. Edited by Silva RF, Cheng HH, Coussens PM, Lee LF, Velicer LF. Americ. Assoc. Avian Pathologists, Inc.

Mendoza HA, AM Golmirzaie, **RL Vallejo**, JA Espinoza, F Serquen. 1991. Breeding Potatoes for Warm Tropics. Proceedings of the workshop on *Production, Post-Harvest Technology and Utilization of the Potato in the Warm Tropics*, pp. 12-21. Edited by Govinden N, Julien MHR, Hunt GLT, Autrey LJC

CONGRESS & WORKSHOPS

- Quantitative Genetics and Genomics Gordon Research Conference, February 10-15, 2019, Lucca, Italy
- Breeding Insight Platform Meeting, USDA-ARS, November 27, 2018, Beltsville, MD, USA
- The 11th World Congress on Genetics Applied to Livestock Production, Feb. 11-16, 2018, Auckland,

New Zealand

- Gordon Research Conferences: Quantitative Genetics & Genomics, Feb. 26-March 3, 2017, Galveston, TX, USA
- The 44th Scientific Symposium "United States-Japan Natural Resources Panel on Aquaculture-Genetics & Breeding in Aquaculture", November 1-2, 2016, Seattle, WA, USA
- Plant & Animal Genome XXIV, January 9-13, 2016, San Diego, CA, USA
- Workshop for Aquaculture Genomics, Genetics and Breeding, March 24-25, 2016, Auburn, AL, USA
- Fish Breeders' Round Table 2016, June 14-15, 2016, Tromsø, NORWAY
- Plant & Animal Genome XXIII Conference. January 10-14, 2015; San Diego, CA, USA
- International Symposium on Genetics in Aquaculture XII. June 21-27, 2015; Santiago de Compostela, SPAIN
- World Congress on Genetics Applied to Livestock Production. August 17-22, 2014, Vancouver, BC, CANADA
- Plant & Animal Genome XXII, January 11-15, 2014, San Diego, CA, USA
- Plant & Animal Genome XXI, January 12-16, 2013, San Diego, CA, USA
- *Statistical methods for Genome-Enabled Selection*, May 6-10, 2012, Iowa State University, Ames, IA, USA
- Gordon Research Conferences: Quantitative Genetics & Genomics, February 20-25, 2011, Galveston, TX, USA
- The 9th World Congress on Genetics Applied to Livestock Production, August 1-6, 2010, Leipzig, Germany
- Plant & Animal Genome XVIII, January 9-13, 2010, San Diego, CA, USA
- Gordon Research Conferences: Quantitative Genetics & Genomics, February 22-27, 2009, Galveston, TX, USA
- Plant & Animal Genome XVII, January 10-14, 2009, San Diego, CA, USA
- Plant & Animal Genome XVI, January 12-16, 2008, San Diego, CA, USA
- NRI Animal Genome Annual Investigator Meeting, January 11, 2008, San Diego, CA, USA
- Fish Breeder's Round Table, June 11-13, 2007, Aalesund, Norway
- Plant & Animal Genome XV, January 13-17, 2007, San Diego, CA, USA
- *C++ Programming I*, UC Berkeley Extension Online, Feb. 21-August 22, 2006, Berkeley, CA, USA
- 3rd Symposium Biostatistics: Statist. Genet. & Genomics, Nov. 21-22, 2005, Univ. Washington, Seattle, WA, USA
- *Analysis Population Genetic Data*, November 19-20, 2005, Dep. Biostatistics, Univ. Washington, Seattle, WA, USA
- *Design & Analysis of Microarrays*, November 19-20, 2005, Dep. Biostatistics, Univ. Washington, Seattle, WA, USA
- *PHP for Web Development: Hands-On*, Oct. 31-Nov. 1, 2005, Learning Tree International, Reston, VA, USA
- *JavaScript for Web Development: Hands-On*, Aug. 9-12, 2005, Learning Tree International, Rockville, MD, USA
- Rainbow Trout Res. Cooperators Meeting, May 10-12, 2005, NCCCWA, USDA-ARS, Morgantown, WV, USA
- BAC Fingerprinting Data Analysis, Dr. MC Luo Laboratory, April 6-8, 2005, Univ. California Davis, CA, USA
- *Systems Analysis & Design: An Overview*, January 10-April 15, 2005, UC Berkeley Extension Online, CA, USA
- The 53rd Annual Amer. Soc. Hum. Genet. Meeting, November 4-8, 2003, Los Angeles, CA, USA
- *From genome to disease: Symp. of high throughput biology*, July 23-24, 2003, NHLBI, NIH, Bethesda, MD, USA

- Meeting of Amer. Dairy Sci. Assoc. & Amer. Soc. of Animal Sci., June 22-26, 2003, Phoenix, AZ, USA
- Plant & Animal Genome XI, January 11-15, 2003, San Diego, CA, USA
- Meeting of Amer. Dairy Sci. Assoc. & Amer. Soc. of Animal Sci., July 24-28, 2001, Indianapolis, IN, USA
- *Genetics Computer Group Sequence Analysis*, January 7-9, 1999, CIT, NIH, Bethesda, MD, USA
- Scientific Meeting of Res. Soc. on Alcoholism, June 26-July 1, 1999, Santa Barbara, CA, USA
- The 48th Annual Amer. Soc. Hum. Genet. Meeting, October 27-31, 1998, Denver, CO, USA
- Scientific Meeting of Res. Soc. on Alcoholism, June 20-25, 1998, Hilton Head Island, SC, USA
- *C Language Fundamentals*, April 20-24, 1998, CIT, NIH, Bethesda, MD, USA
- *Getting Started with C Language*, March 30-April 2, 1998, CIT, NIH, Bethesda, MD, USA
- *Genetic architecture of complex traits*, December 10-11, 1997, NIGMS, NIH, Bethesda, MD, USA
- The 47th Annual Amer. Soc. Hum. Genet. Meeting, October 28-November 1, 1997, Baltimore, MD, USA
- The 6th Annual Meeting of Internat. Genet. Epidemiology Soc., October 27-28, 1997, Baltimore, MD, USA
- Gordon Res. Conference, *Quantitative Genetics and Biotechnology*, February 9-14, 1997, Ventura, CA, USA
- Plant & Animal Genome V, January 12-16, 1997, San Diego, CA, USA
- The 25th Internat. Congress on Animal Genetics, July 20-25, 1996, Tours, France
- *Computational Genomics*, November 1-6, 1995, Cold Spring Harbor, NY, USA
- *Biotechnology's role in genetic improvement of farm animals*, May 14-17, 1995, USDA-ARS, Beltsville, MD, USA

TEACHING ACTIVITIES (Pennsylvania State University)
GENET/STAT/ANSC 597F *Statistical Genomics: QTL Mapping in Natural Populations*, 2002-2003
ANSC 322 *Principles of Animal Breeding*, 2002
Honors ANSC 001 *Animal Science*, Guest Lecturer, 2001-2002
ANSC 297B *Introduction to Animal Biotechnology*, Guest Lecturer, 2001-2003

MEMBERSHIP IN PROFESSIONAL SOCIETIES
International Society of Animal Genetics, 2006 -
American Association for the Advancement of Science, 1997 -
Genetics Society of America, 1995 -

MENTORS
Graduate Advisor (MS): Humberto A. Mendoza, International Potato Center, La Molina, Lima, PERU
Graduate Advisor (PhD): Wanda W. Collins, North Carolina State University, Raleigh, NC, USA
Postdoctoral Advisor: Hans H. Cheng, ADOL, ARS-USDA, East Lansing, MI, USA
Postdoctoral Advisor: Jeffrey C. Long, NIAAA, National Institutes of Health, Bethesda, MD, USA

GRANT SUPPORT & FUNDED RESEARCH
2007-09 USDA-CSREES, Rainbow trout physical-genetic map, Palti Y, **RL Vallejo**, $696,416
2002-04 USDA-CSREES, Improved Dairy Management Practices, Etherton T, **RL Vallejo**, $363,856
2001-03 USDA-CSREES, Milk Safety Research Program, Backman P, **RL Vallejo**, $350,007

PROFESSIONAL REFERENCES
Cheng, Hans H., Ph.D., Res. Molecular Geneticist, Avian Disease & Oncology Lab., ARS, USDA, 3606 E. Mount Hope Rd., East Lansing, MI 48823. Phone: 517-337-6758, Email: hans.cheng@ars.usda.gov

Dodgson, Jerry B., Ph.D., Professor, Department of Microbiology & Molecular Genetics, Michigan State University, 2215C Biomed. Phys. Sci., East Lansing, MI 48824-4320. Phone: 517-884-5345, Email: dodgson@msu.edu

Fernando, Rohan L., Ph.D., Professor, Department of Animal Science, Iowa State University, 239 Kildee Hall, Ames, IA 50011-3150. Phone: 515-294-5348, Email: rohan@iastate.edu

Garrick, Dorian J., Ph.D., Professor, Department of Animal Science, Iowa State University, 225 Kildee Hall, Ames, IA IA 50011-3250. Phone: 515-294-2080, Email: dorian@iastate.edu

Long, Jeffrey C., Ph.D., Professor, Department of Anthropology, University of New Mexico, Albuquerque NM 87131. Phone: 505-277-2635, Email: Email: JLo@unm.edu

Misztal, Ignacy, Ph.D., Professor, Department of Animal and Dairy Science, University of Georgia, 354 Animal and Dairy Science Complex, Athens, GA 30602. Phone: 706-542-0951, E-mail: ignacy@uga.edu

Palti, Yniv, Ph.D., Research Geneticist, National Center for Cool & Cold Water Aquaculture, ARS, USDA, 11861 Leetown Road, Kearneysville, WV, 25430. Phone: 304-724-8340, Email: yniv.palti@ars.usda.gov

Rexroad III, Caird E., Ph.D., National Program Leader Aquaculture, ARS, USDA, Room 4-2106 5601 Sunnyside Avenue, Beltsville, MD 25430. Phone: 304-620-5234, Email: caird.rexroadiii@ars.usda.gov

Silverstein, Jeffrey T., Ph.D., Southeast Area Director, ARS, USDA, 141 Experiment Station Road, Stoneville , MS 38776. Phone: 662-686-5338, Email: jeff.silverstein@ars.usda.gov

Wiens, Gregory D., Ph.D., Molecular Biologist, National Center for Cool & Cold Water Aquaculture, ARS, USDA, 11861 Leetown Road, Kearneysville, WV, 25430. Phone: 304-724-8340, Email: greg.wiens@ars.usda.gov