



- ❖ **USDA and Iowa State University co-hosted two workshops:** In November of 2017 the USDA and Iowa State University co-hosted two workshops at the National Agricultural Library in Beltsville, Maryland. The first workshop entitled “Livestock High-throughput Phenotyping and Big Data Analytics” recognized that high-throughput collection of data is making its way into livestock production, therefore high-throughput phenotype collection could revolutionize livestock production by facilitating advances in nutrition, reproduction, genetic improvement, meat science, i.e. all aspects of livestock production.

The second workshop was entitled “Genome to Phenome: A USDA Blueprint for Animal Production.” This workshop is part on an ongoing effort to update the previous report developed by the animal genomics community under the leadership of Dr. Ronnie Green (USDA-ARS) and Dr. Muquarrab Qureshi (USDA NIFA) titled “Blueprint for USDA Efforts in Agricultural Animal Genomics 2008 – 2017.” Over the last decade the vision outlined in this document has served to guide intra- and extramural research programs at USDA and in the broader international community. USDA and the animal genomics community are revisiting the progress made and developing meaningful and tangible goals for the next decade in developing the second generation blueprint.

Drs. James Reecy and Caird Rexroad will present updates on the outcomes of these workshops during the NRSP8 Session at PAG, materials from the workshops including video recordings of sessions will be posted to [animalgenome.org](http://animalgenome.org) in January 2018.

- ❖ **The Aquaculture Genomics Workshop:** The Aquaculture Genomics Workshop will take place at PAG in San Diego on Saturday, January 13, 2018, Town & Country, CA. This year, Dr. Geoff Waldbieser of USDA-ARS is the conference organizer. Invited speakers will include Wes Warren, Washington University of St Louis, “Assembly and Computational Use of Aquatic Genome Models”; Nuala O’Leary, NIH/NCBI, “The National Center for Biotechnology (NCBI) Genome Annotation Resources for Aquaculture Species”; Shawn Narum, Columbia River Inter-Tribal Fish Commission, “Applied Genomics for Conservation of Distinct Stocks and Phenotypic Diversity in Chinook Salmon”; and Adam Phillippy, NIH/NHGRI, “A strategy to assemble high-quality reference genomes for all vertebrate orders”. In addition, 15 speakers for a full-day workshop have been chosen by a committee from the abstracts submitted to PAG. Additionally, posters will be presented during the aquaculture reception. If you have any question, contact the Aquaculture Workshop Organizer, Dr. Geoff Waldbieser at [Geoff.Waldbieser@ARS.USDA.GOV](mailto:Geoff.Waldbieser@ARS.USDA.GOV).

- ❖ **Aquaculture Genomics Travel Awardees Selected:** The Aquaculture Genomics Workshop will be held on January 13, 2018 as a part of the International Plant & Animal Genome XXVI meeting ([www.intlpag.org](http://www.intlpag.org)) in San Diego, CA, USA. In order to bring graduate students and postdoctoral fellows to the conference, the NRSP-8 Aquaculture Coordinators have continuously committed funds to support its travel awards. This year, six awardees were selected from the applications. The winners of this year's travel awards are:
- 1) André L. S. Garcia, University of Georgia, "Genomic Evaluation for Harvest Weight and Residual Carcass Weight in Channel Catfish Using Single-Step Genomic BLUP";
  - 2) Melissa K. Holborn, University of Guelph, "Genome Wide Association Analysis for Resistance to the Causal Agent of Bacterial Kidney Disease in a North American Commercial Atlantic Salmon";
  - 3) Erin M. Roberts, University of Rhode Island, "Differential Expression of Apoptosis Pathway Gene Families in Response to Immune Challenge in *Crassostrea gigas* and *Crassostrea virginica*";
  - 4) Huitong Shi, Auburn University, "Identification of Resistance QTL and Candidate Genes Against Enteric Septicemia of Catfish";
  - 5) Rafael M.O. Silva, University of Georgia, "GWAS for Detecting QTL Associated with Columnaris Disease in Two Rainbow Trout Breeding Populations";
  - 6) Yujia Yang, Auburn University, "Identification of Sexually Differentially Methylated Regions in Channel Catfish Provides Evidence of Epigenetic Control of Its Sex Determination".

Congratulations to all!

- ❖ **Annual Report due to Species Coordinators:** It is that time of year again, we need to submit our annual report in advance of the PAG meeting. There are two reports- one is the Workshop report assembled this coming year by Dr. Geoff Waldbieser; the other is the annual progress report. Once again for the annual progress report our strategy will be to assemble individual species reports that will combine into an aquaculture report, which is eventually combined into the NRSP-8 project report. Unfortunately space is limited, therefore we can really only fit a short paragraph (2-3) sentences for each group under each objective (below). Please send your report to your species coordinators: Catfish: Dr. Sylvie Quiniou ([Sylvie.Quiniou@ars.usda.gov](mailto:Sylvie.Quiniou@ars.usda.gov)); Salmonids: Dr. Palti, Yniv ([Yniv.Palti@ars.usda.gov](mailto:Yniv.Palti@ars.usda.gov)); Striped bass: Dr. Ben Reading ([bjreadin@ncsu.edu](mailto:bjreadin@ncsu.edu)); Oyster: Dr. Dina Proestou ([Dina.Proestou@ars.usda.gov](mailto:Dina.Proestou@ars.usda.gov)); For all other species, send your report to Dr. Steve Roberts ([sr320@u.washington.edu](mailto:sr320@u.washington.edu)). Please send in your report before January 5, 2018, to cover the following objectives:

Objective 1: Advance the status of reference genomes for all species, including basic annotation of worldwide genetic variation, by broad sequencing among different lines and breeds of animals.

Objective 2: Develop strategies to identify and exploit genes and allelic variation that contribute to economically relevant phenotypes and traits, in part through improving functional annotation of the genomes of our species.

Objective 3: Facilitate analysis, curation, storage, distribution and application of the enormous datasets now being generated by next-generation sequencing and related "omics" technologies with regard to animal species of agricultural interest.

A publication list is required from each species for those published in 2017. Species coordinators please send in your reports by January 10th to Dr. Steven Roberts so he can assemble the full Aquaculture report.

Species coordinators please send in your reports by January 5th to Dr. Steve Roberts ([sr320@u.washington.edu](mailto:sr320@u.washington.edu)) so he can assemble the full Aquaculture report.

- ❖ **Fellowship available for Ph.D. students**: Auburn University is seeking candidates for PhD fellowships in Aquaculture Genetics, Genomics and Biotechnology. This is an intensive program with course work and research in Fish Genetic Enhancement, Molecular Genetics, Biotechnology, Bioinformatics, Quantitative Genetics, Reproductive Biology and Cell Biology. Exposure to a wide breadth of research in these areas will be expected in both the field and the laboratory, including fish care, physically demanding field work as well as extensive laboratory research. The purpose of the program is to develop cross-trained scientists in a combination of aquatic quantitative genetics and genomics to address future needs of the United States aquaculture research community, and to best utilize developing technologies for aquaculture genetic enhancement with emerging genomic tools. Candidates with either a Bachelor of Science or Master of Science degree will be considered, but must be US citizens or permanent residents. The stipend will be approximately \$24,000/year for 3 years plus a tuition waiver. To apply, please send a CV, letter of interest, references, GRE scores and transcripts by email to: Dr. Rex Dunham ([dunhara@auburn.edu](mailto:dunhara@auburn.edu)), School of Fisheries, Aquaculture and Aquatic Sciences, Auburn University, Alabama.

Happy New Year to all the colleagues!

