

**PAG XVI Aquaculture Workshop Report, January 10-11, 2009**  
**Prepared by Dr. Krista Nichols**

The 2009 NRSP8 Aquaculture Genome Workshop was held in conjunction with the International Plant and Animal Genome XVI Conference in San Diego, CA. Yniv Palti of the USDA/ARS National Center for Cool and Cold Water Aquaculture served as the Program Chair and Krista Nichols, Purdue University, served as the Aquaculture NRSP8 secretary and Program Chair-Elect. The attendance were well over 100 during the course of the workshop, with 76 participants signed in from 9 countries; USA, Belgium, Taiwan, Canada, Italy, France, Ireland, Netherlands, and Japan.

The NRSP8 Aquaculture Executive Committee received 15 applications for the \$1000 Travel Awards. Twelve of the applicants were students or postdocs from US institutions and three were international applicants. This year we were able to give travel awards to all applicants. The number of applications from students declined this year (n = 15) from the number received last year (n = 21). All of the student and post-doc presentations were of high quality research in genomics, and it was clear from these and all other presentations that Aquaculture genomics research is advancing at a rapid pace.

Two plenary speakers were invited to the 2009 Aquaculture Workshop – Dr. Curt VanTassell, BARC, ARS, USDA, and Dr. Carlos Bustamante, Cornell University. On Saturday morning, Dr. VanTassell spoke about the merits of genome-wide selection in cattle, and the advantage of this method over selection based on a few identified QTL. On Sunday morning, Dr. Carlos Bustamante spoke about genome-wide association (GWA) mapping in dogs and human populations, and stressed the importance of controlling for population substructure in GWA studies. The Saturday morning and early afternoon sessions of contributed speakers were focused on the development of tools for aquaculture genomics, and it was apparent that for many species great strides have been made in EST sequencing, physical map construction, and SNP assays. The Saturday late afternoon and Sunday morning sessions of contributed talks were focused on functional genomics in aquaculture species, including functional characterization of candidate genes, QTL, gene expression of important growth, developmental, survival, and disease resistance traits in aquaculture species, as well as the identification of microRNAs in rainbow trout. In total, 23 contributed presentations were given during the Saturday and Sunday morning sessions. In addition to functional genomics talks on Saturday afternoon, one talk was given about the marine genomics resources available through Clemson University's Genomic Institute. An additional presentation was given by Dr. Jeff Silverstein, USDA National Program Leader for Aquaculture, who introduced a short presentation given by Diane Bellis of AgSource. Both were promoting the need for genomics research in alternative food development for the aquaculture species.

On Sunday morning the species progress reports were presented, and are detailed in the annual report.

## 2009 Aquaculture Workshop Participants

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