

Aquaculture Genome Coordination Report for 2006
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Coordination structure: Over two hundreds of species are significantly used in aquaculture in the world, a good fraction of which are cultured in the US. However, with limited resources, only six major “species groups” were officially involved in the NRSP-8 Aquaculture Genome efforts. They are: catfish (mainly channel catfish, blue catfish, and their hybrids), tilapia (four species are under study), salmonids (most importantly Atlantic salmon and rainbow trout), striped bass (mainly striped bass, white bass, and their hybrids), shrimp (at least four species heavily used in aquaculture), and oysters (the Pacific oyster and the eastern oyster). Coordination of such a broad range of research activities has proven not to be easy. In order to achieve a good level of coordination, an executive committee was established including the following: John Liu, NRSP-8 Aquaculture coordinator; Melanie Wilson, Catfish coordinator; Thomas Kocher, Tilapia coordinator; Caird Rexroad, Salmonids coordinator; Mark Westerman, Striped bass coordinator/industry rep; Paul Gross, Shrimp coordinator; Pat Gaffney, Oyster coordinator. Industry reps and administrative advisor are also members of the Executive Committee. Each year, we elect a Chair for the Executive Committee, who also serves as the organizer for the Aquaculture Genome Workshop held along with PAG.

Coordination activities: In the past year, coordination efforts were focused on enhancing collaborations through the formation of Genome Consortium for several major aquaculture species. Through organized effort, our goal was to increase the level of research efforts per species, particularly through exploration of other possibilities such as persuading JGI and NIH to produce some sequence-related genome resources. Our major coordination efforts included, but not limited to:

- ❖ Genome consortia of aquaculture species function at various levels. Some great achievements have been made including the following:
- ❖ Approval of the catfish EST project by JGI for sequencing 300,000 catfish EST clones including 200,000 from channel catfish and 100,000 from blue catfish;
- ❖ Approval of sequencing the oyster EST project by JGI for sequencing 150,000 oyster ESTs and also 133 complete BAC clones;
- ❖ Approval of the cichlid genome sampling sequencing project by JGI. With this initial success, the Tilapia Genome Consortium has made additional efforts leading to
- ❖ NIH-NHGRI has committed to producing a draft assembly of the tilapia genome, together with 2x sequencing from each of three closely related haplochromine cichlid fish.
- ❖ Four Newsletters were distributed to the research community of Aquaculture Genomics that focus on information sharing and resource sharing. Details of the Newsletter can be found at <http://www.animalgenome.org/aquaculture/updates/>
- ❖ In order to attract young scientists join Aquaculture Genomics research, a significant amount of NRSP-8 Aquaculture funding was directed by the Executive Committee to support student and postdoc travel awards. Through abstract evaluation, the Executive Committee decided to have 10 students/postdocs as the recipients of the award.
- ❖ The NRSP-8 Aquaculture Subcommittee also partially funded a number of coordinating activities of the six species including:
 - the participation in the US-EU Livestock Genome Workshop;
 - Funds for travel to PAG and other meetings: invited speakers, industry reps, organizers, speakers, receptions, etc.
 - Committed to partially support the annual meeting of the National Program for Selective Breeding and Genetic Improvement of Striped Bass in San Antonio, partially supporting its organizer’s cost, and cost for one invited speaker.