



Bioinformatics/ Database Update

December, 2006

COMMUNITY UPDATES

- Improvement to the QTL database has continued. QTL data for cattle, swine and chickens are now available in the database. A new feature recently added to the cattle QTL display tools is that the underlining markers for a QTL can be linked to either NCBI MapViewer or Ensembl Bovine Map (pre) tools for map details, where the QTL location can be tracked to the newly available cattle genome sequences by location. (<http://www.animalgenome.org/QTLdb/>) This feature will be available for chicken and pigs as well when data becomes available.
- To facilitate comparison of QTL data, we are in the process of developing an Animal Trait Ontology <http://www.animalgenome.org/bioinfo/projects/ATO/>. The initial goal of the project is to develop this ontology so that all curated QTL are linked to at least one ontology term. Recently, we attended the PATO meeting hosted by the National Center for Biomedical Ontology at Stanford University http://www.bioontology.org/wiki/index.php?title=PATO:Main_Page&oldid=4285. This workshop had a number of presentations on current phenotype ontology development in different organisms (Fly, zebrafish, rat, mouse, worm, human). Extensive discussions ensued on what tools were available for ontology development, what is needed, what can be done to link organism ontologies together, pre- vs. post-composition of phenotypes, natural language processing.
- The NAGRP blast server (<http://www.animalgenome.org/blast/>) is continuously being updated. The most recent addition to the blast sequence database is the cattle and chicken genome sequences (annotated by chromosomes). Please let us know if you need some other datasets to be available for blast.
- **Congratulations** to Dr. Chris Elsik and her collaborators on obtaining funding from USDA-NRI for development of the bovine genome database <http://racex00.tamu.edu/cgi-bin/gbrowse/bovine2>. In addition, congratulations to Dr. Shane Burgess and his collaborators on receiving USDA-NRI funding for AgBase <http://www.agbase.msstate.edu/>. I would encourage labs to contact Drs. Elsik and Burgess for additional details to see how your ongoing efforts may interact with their projects.

New projects: As always if you have suggestions about what needs to be developed/improved or how we can help please do not hesitate to contact us. Jreecy@iastate.edu

BIOINFORMATICS RELATED WORKSHOPS PLANNED FOR UPCOMING PAG MEETING:

✓ **Bovine Genome Annotation Workshop planned at PAG in San Diego**

On Monday January 15 at 1PM, in conjunction with Dr. Chris Elsik, Texas A&M University, we will be hosting a bovine genome annotation workshop. Presentation will be given outlining the annotation phase of the bovine genome sequencing project, how to use available tools to annotate bovine genes, how to fix misassembled portion of the genome. Additional information will be sent as soon as the

meeting schedule is set. If you know anyone who wishes to participate in annotation of the bovine genome, please help spread the word.

✓ **QTL database Workshop planned at PAG in San Diego**

On Tuesday January 16th at 1PM, we will be hosting a workshop involving databases actively curating QTL data from rat, mouse, chicken, cattle, and swine. The goals of the workshop are 1) Define the minimal amount of information needed for QTL publication. Can we develop MIAME guidelines for QTL publication?; 2) Integration of phenotype ontologies; and 3) Exchange of curated QTL information. At 3PM, we would like to invite all users of QTL databases to come and discuss with us what they would like QTL databases to be able to do. This is your chance to help set priorities for future development of QTL databases.

UPCOMING BIOINFORMATICS MEETINGS / WORKSHOPS / SHORT COURSES

(See http://www.animalgenome.org/share/mtg_bioi.html)

January 7 – 12, 2007 - 7th International Long Oligonucleotide Microarray Workshop

Location: University of Arizona, Tucson, AZ

Lecturer D.A. Henderson, D.W. Galbraith

Contacts: *David Galbraith*, Email: galbraith@arizona.edu

January 13 – 17, 2007 - Plant and Animal Genome XV (PAG-XV)

Location: Town and Country Convention Center, San Diego, CA

Contacts: *Sherago, Sherago International*, Email: pag@scherago.com

February 18 – 23, 2007 Gordon Conference on Quantitative Genetics and Genomics

Location: Ventura Beach Marriott, Ventura, CA

Contacts: *Patrick C. Phillips*, Email: pphil@uoregon.edu

March 12 – 16, 2007 Survival Analysis applied to Animal Breeding and Epidemiology

Location: Christian-Albrechts-University in Kiel, Germany

Lecturer Vincent P. Ducrocq

Contacts: *Georg Thaller*, Email: gthaller@tierzucht.uni-kiel.de

March 21 – 23, 2007 - Storage and Annotation of Reaction Kinetics Data

Location: Heidelberg, Germany

Contacts: *Ulrike Wittig*, Email: Ulrike.Wittig@eml-r.villa-bosch.de

July 19 – 25, 2007 Intelligent Systems for Molecular Biology (ISMB)

Location: Austria Center, Vienna, Austria

Contacts: *Steven Leard*, Email: steven@iscb.org

August 18 – 24, 2007 - 3rd International Conference on Quantitative Genetics

Location: Zhejiang University, Hangzhou, China

Contacts: *Jun Zhu*, Email: jzhu@zju.edu.cn

September 10 – 12, 2007 - Convergence of Genomics and the Land Grant Mission: Emerging Trends in the Application of Genomics in Agricultural Research

Location: Purdue University, West Lafayette, Indiana

Contacts: *William M Muir*, Email: bmuir@purdue.edu

October 23 – 25, 2007 - International Symposium on Animal Genomics for Animal Health

Location: OIE Headquarters, Paris, France

Contacts: *Cyril Gay*, Email: cyril.gay@ars.usda.gov

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