Bioinformatics/Database Update

No. 1   March 1, 2005

Development of Pig QTL database. The pig quantitative trait loci (QTL) database (PigQTLdb) has been well used since its release last December (http://www.animalgenome.org/QTLdb/). On average about 6,000 web hits per month were made to PigQTLdb. The database contains all pig QTL data published during the past 10+ years. The database and its peripheral tools were made to compare, confirm, and locate on pig chromosomes the most feasible location for a candidate gene responsible for quantitative trait(s) important to pig production. To date, 791 QTL from 73 publications have been curated into the database. Please contact Zhiliang Hu (zhu@iastate.edu) with any suggested improvements or additional data to add to the database.

Development of a PCR primer development tool. The Expeditor tool has received some good comments and been used by some 200+ users since its release last October (http://www.genome.iastate.edu/~hu/expeditor). Expeditor is a web-based tool which combines human intron/exon structural information and EST sequence information of the target species to design primers for amplification of genomic segments of a given gene.

Development of a livestock sequence Blast server. A NAGRP Blast Server is now in service (http://www.animalgenome.org/blast/). This blast server uses a local copy of NCBI blast suite, which includes bl2seq, blastall, megablast, blastpgp, blastclust, netblast, etc. The local sequence data sets include all non-human, non-mouse EST sequences from the Genbank, Whole Genome Shotgun (WGS) sequence assemblies for different organisms from Genbank. These data sets are updated from Genbank every night. The local sequence data sets also include TIGR Gene Indices for Cattle, Chicken, Pig, Salmon, Catfish, and Rainbow Trout. The TIGR Indices are updated weekly (done every Saturday night). Currently users can use the web server for their blast. Links to the blast server are included on each of the species pages under resources. We can develop a service portal for batch blast if there are such needs in the community. Please email Jreecy@iastate.edu to discuss.

The Aquaculture genomics web site has a new home and look. The URL to the current web site is http://www.genome.iastate.edu/aquaculture/ . Please send information that you would like added to Rexroad, Caird (crexroad@ncccwa.ars.usda.gov) or Zhiliang Hu (zhu@iastate.edu).

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

UPCOMING BIOINFORMATICS MEETINGS

March 19-23, 2005 - 3rd Symposium on Computational Cell Biology
Web: http://www.ccbsymposium.org/index.html
Place: Cranwell Resort & Golf Club, Lenox, MA

April 8-13, 2005 - Keystone Symposia: Proteomics and Bioinformatics
Web: http://www.keystonesymposia.org/Meetings/ViewMeetings.cfm?MeetingID=734

Place: Keystone, Colorado, USA

April 24-25, 2005 - Computational Challenges in Systems Biology
Web: http://www.systemsbiology.org/symposium2005/
Organized by Institute for Systems Biology
Place: Seattle

May 17-19, 2005 - Bio-IT World Conference & Expo
Web: http://www.bioitworldexpo.com/
Organized by IDG World Expo
Place: Hynes Convention Center, Boston

June 9-12, 2005 - 7th International Conference on Bioinformatics 2005 (BIOINFORMATICS 2005)
Web: http://bioinfo.ebc.ee/bio2005/indexen.php
Place: Tartu, Estonia

June 17, 2005 - Bioinformatics: Knowledge Discovery in Biology 2005 (BKDB2005)
Web: http://xldb.fc.ul.pt/bkdb2005/
Place: Lisboa, Portugal

June 25- 29, 2005 - Intelligent Systems for Molecular Biology (ISMB 2005)
Web: http://www.iscb.org/ismb2005/
Location: Detroit, Michigan
Satellite event (June 24, 2005):
Eighth Annual Bio-Ontologies Meeting
Web: http://bio-ontologies.man.ac.uk/
Submission Deadline: 29th April 2005

June 31-5, 2005 - 14th International Conference on Cytochromes P450: Biochemistry, Biophysics, and
Bioinformatics
Web: http://www.p450dallas2005.us/
Organized by ASBMB
Place: UT Southwestern Medical Center, Dallas

July 10-13, 2005 - 9th World Multi-Conference on Systemics, Cybernetics and Informatics
Web: (http://www.iiisci.org/sci2005), which will
Place: Orlando, Florida

July 21-26, 2005 - 6th International Symposium on Computational Biology and Genome Informatics
Web: http://www.jcis.org/pages/subconference/cbgi/cbgi.aspx
Place: Marriott City Center, Salt Lake City, CO

August 8-11, 2005 - IEEE Computational Systems Bioinformatics Conference (CSB 2005)
Web: http://conferences.computer.org/bioinformatics/
Place: Stanford, CA

August 22-25, 2005 - 5th International Workshop on Bioinformatics and Systems Biology (IBSS 2005)
Web: http://www.biologie.hu-berlin.de/~gk/events/ibsb2005/index.htm
Place: Berlin, Germany

September 22-25, 2005 – Integration of Structural and Functional Genomics
Web: http://www.bb.iastate.edu/%7Egfst/homepg.html
Place: Ames, Iowa

September 28 - October 1, 2005 - 4th European Conference on Computational Biology (ECCB/05)
Web: http://www.eccb05.org/
Place: Madrid

October 26-30, 2005 - Genome Informatics
Web: http://meetings.cshl.edu/meetings/info05.shtml
Organized by CSHL
Place: Cold Spring Harbor

November 14-15, 2005 - Computational Intelligence in Bioinformatics and Computational Biology
Web: http://www.cibcb.org/
Organized by IEEE Computational Intelligence Society
San Diego, California

UPCOMING SHORT COURSES

Fortran programming and Bayesian implementation via Markov Chain Monte Carlo (MCMC) techniques
Time: May 16-27, 2005
Location: Department of Animal and Dairy Science, University of Georgia
Lecturer: Romdhane Rekaya and Ignacy Misztal

ASREML Workshop
Time: June 13-14, 2005
Location: Iowa State University, Ames, IA
Lecturer: Steve Kachman, University of Nebraska

C++ Programming for Animal Breeding
Time: June 15-24
Location: Iowa State University, Ames, IA
Lecturer: Steve Kachman (Nebraska) and Rohan Fernando (Iowa State)

Design and Analysis of Microarray Experiments
Time: July 11-12
Location: Iowa State University, Ames, IA
Lecturer: Dan Nettleton (Dept. Statistics, Iowa State)

NCBI PowerScripting
Time: April 20-22, 2005
Location: Lister Hill Center (Bldg 38A), NLM, NIH, Bethesda, MD
Lecturer: Andrei Gabrielian, Eric Sayers, and David Wheeler
Scopes: A 3-day course including both lectures and computer workshops on effectively using the NCBI E-utilities within scripts to automate search and retrieval operations across the entire suite of Entrez databases.

Items for the next update can be sent to me by no later than **May 15** please.

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