



Pig Genome Update

No. 69 November 1, 2004

The 2004 ISAG meeting held in Tokyo, Japan on September 10-16 was a great success. Approximately 700 people attended and the hosts provided an outstanding mix of science and good hospitality. Plenary sessions featured a number of speakers on genome sequencing, gene identification, functional genomics and a look into the future of our field. Items of interest to pig genomics research included the *Pig Gene Mapping Workshop* which was organized by Gary Rohrer (USDA). The workshop was devoted primarily to comparative mapping, SNP mapping and new tools. Speakers were Sean Humphray (BAC mapping tools), Hiroshi Yasue (comparative maps), Jon Beever (comparative maps), Gary Rohrer (SNP parentage testing), Frank Panits, Denmark (initial SNP scan in Denmark) and Karl Schellander (QTL scans from Germany.). Sean presented a great tool to use *in silico* to find your pig genome region of interest and get sequence from the BAC ends. It can be found at http://www.sanger.ac.uk/projects/S_scrofa/ and then go to FPC released. The workshop committee was reelected to serve another 2 years. Another session was the *Swine Sequencing Workshop*, which covered talks by Larry Schook, Jon Beever, Jane Rogers and others. Kelly Eversole presented the likely situation for where we stand with money for a 3X BAC skim and 3 X shotgun coverage. Other workshops with interesting information included the *Immune Response Workshop*, the *Marker Assisted Selection Workshop* and the *Comparative Mapping Workshop*. Finally there was an excellent set of posters, many of which dealt with QTL, gene identification and array analysis.

The Genomics Needs for the Next 25 Years Workshop was held September 22-23 in Washington, D.C.

An interesting and extremely important strategic planning workshop for agricultural animal genomics was conducted by USDA... Nearly 40 scientists and administrators representing both ARS and CSREES and a number of other agencies participated. The objective of this meeting was "To identify critical infrastructure needs in the post-genome sequencing era of domestic animal genomics, specifically for research communities working with cattle, sheep, swine, and poultry." Operationally the meeting was organized by Dr. Ronnie Green, ARS and Dr. Muquarrab A. Qureshi, CSREE and Dr. Joseph Jen, USDA Undersecretary for Research, Education and Extension, attended and was the official host. A number of members of the National Science and Technology Council Interagency Working Group on Domestic Animal Genomics (chaired by Dr. Jen) and representatives from NIH, NSF, DOE and other Federal agencies with genomics interests also attended. Immediately following the Workshop, a small group of participants (representing various species) met with the Interagency Working Group to summarize conclusions from the Workshop and respond to questions raised at the meeting. Considerable sequencing is still in progress and there is more to do. Strong support was expressed for swine genome sequencing and targeted sequencing and/or finishing of other genomes. It was again emphasized that tools and reagents are more important now than ever, including access to high throughput technology and instrumentation and continued non-hypothesis-driven research. A clear consensus was that there was considerable disappointment in cancellation of the USDA Tools and Reagents program. Animal genomics is crucial to all aspects of animal science and animal biology and should be considered a crucial part of this research. Domestic animal genomics research is potentially of great value to the missions of other agencies including NIH and NSF because through comparative genomics they can contribute to the basic understanding of other disciplines. Finally, it is critical that animal resources in terms of populations, lines, germplasm, and tissues be preserved and expanded via appropriate support mechanisms. It is hoped that USDA will begin to address some of these issues in the near future.

PAG-XIII will be January 15-19, 2005 in warm, beautiful San Diego at the Town and Country Hotel. See <http://www.intl-pag.org/> for a schedule and registration information. Registration is \$475 before Nov. 1 for those from non-profit organizations and \$650 for industry participants, with fees going up by \$100 after Nov. 1 and another \$100 on-site. Student registration is \$275/\$325/\$375, respectively. A weekend rate (Fri.-Sun. only) is available at \$250/\$300/\$350. Among others, Nobel Laureate Rich Roberts from New England Biolabs and Bill Haseltine from Human Genome Sciences are scheduled to give plenary lectures. The NRSP8 Swine genome committee will meet. Joan Lunney is chairing the meeting and plans for an excellent program are underway. The meeting is scheduled to start at 8 am on Saturday, January 15. In addition, the Swine Genome Sequencing Committee will meet on Sunday from 12 noon – 2 pm. Both meetings are open to all interested participants. Limited partial travel assistance will be available for NRSP-8 swine committee members or members of their labs. Please contact the Coordinator, Max Rothschild, as soon as possible if interested.

A total of 200 pig oligo arrays still remain to be printed and released. Despite a number of previous requests additional materials still exist to print additional arrays. Previous individuals who have ordered arrays can again order up to 30 arrays and new orders from non-NRSP8 labs and foreign labs will now be accepted until the materials run out. Cost is \$20/slide plus shipping. Slide orders will be on a first come first serve basis. **If you are interested, please immediately contact Max Rothschild at mfrothsc@iastate.edu.**

The 3rd International Symposium on Genetics of Animal Health (formerly, Candidate Genes for Animal Health) will convene on July 13-15, 2005, in Ames, Iowa, USA. The meeting will feature several invited speakers, contributed presentations and poster sessions and should be an exciting continuation of past meetings. Support for the meeting will be provided by a number of industry groups and the USDA-CSREES genome coordinators. Please note the dates on your calendar, and bookmark the GAH2005 web home page: <http://www.ans.iastate.edu/GAH2005.html>. More information will be available at this site soon!

Swine Genome Sequencing Consortium continues to try to reach its goal. Efforts are progressing to advance the sequencing of the pig genome. The ISAG meeting in Tokyo, Japan in September was successful and additional meetings are planned including one at PAG.. Interested parties are encouraged to participate in the future. **If you can help in raising these funds please contact Larry Schook at UIUC or Max Rothschild, at ISU.**

Your input can help save this program. It came as a shock but it appears the Animal Genome Reagent & Tool Development program that has been very successful to date is now scheduled to end after the 2005 year. Now is the time for scientists that are concerned about this decision to make their voices known. Please consider contacting Dr. Anna Palmisano, Deputy CSREES Administrator for Competitive Programs (apalmisano@csrees.usda.gov) and/or Dr. Brad Fenwick, Chief Science Advisor, CSREES-NRI (bfenwick@csrees.usda.gov) and let them know how valuable this program is to our research.

Upcoming meetings (see: <http://www.genome.iastate.edu/community/meetings.html>)

Ninth DISCOVER Conference on Food Animal Agriculture. "Protecting and Managing Animal Genetic Resources for Future Generations: The Next Steps", Nov. 2-5, 2004, Cheyenne, Wyoming. Please see <http://www.adsa.org/discover/> for further information.

Bioinformatics and its Applications in Fort Lauderdale, Florida on December 16-19, 2004. For details please contact hem@nsu.nova.edu

Plant, Animal and Microbial Genome XIII, joint with the NAGRP annual meetings, Jan. 15-19, 2005, Town & Country Convention Center, San Diego, CA. Please see www.intl-pag.org/ for information.

Swine in Biomedical Research Conference, January 27-29, 2005, Chicago Illinois, Please see <http://www.conferences.uiuc.edu/conferences/conference.asp?id=333> or contact Larry Schook for details.

3rd International Symposium on Genetics of Animal Health, July 13- 15, 2005, in Ames, Iowa, USA, Please see: <http://www.ans.iastate.edu/GAH2005.html>

Symposium on Integration of Structural and Functional Genomics (14th Annual Growth Factor and Signal Transduction Conference), September 22-25, 2005, Iowa State University, Ames, Iowa. See <http://www.bb.iastate.edu/~gfst/homepg.html>

Additional items can be found at: <http://www.agbiotechnet.com/calendar/index.asp>.

Items for *Pig Genome Update 70* can be sent to me by no later than December 15 please.

*Max F. Rothschild
U.S. Pig Genome Coordinator
2255 Kildee Hall
Department of Animal Science
Iowa State University
Ames, Iowa 50011
Phone: 515-294-6202
Fax: 515-294-2401
mfrothsc@iastate.edu
<http://www.genome.iastate.edu>*

cc: *Muquarrab A. Qureshi, CSREES and Caird Rexroad II, ARS*

Paid for by funds from the NRSP-8 USDA/CSREES sponsored Pig Genome Coordination Program.