



# Pig Genome Update

## No. 81 November 1, 2006

**The new pig oligo arrays are here.** Thanks to efforts of a number of groups and individuals we have developed a novel 70-mer oligonucleotide microarray for profiling expression of the pig (*Sus scrofa*) genome. This microarray will enable rapid and simultaneous comparison of mRNA levels for thousands of genes. Such global analysis of transcript abundance will provide valuable information about the genes/proteins important for specific functional activities, the coordination of gene expression and function, and the complex regulatory networks that control swine cellular physiology. This information will contribute to animal agriculture by advancing our understanding of pig growth, development, reproduction, nutrition and health. In addition, pigs provide important biomedical models and are the most likely source of donor tissues for the developing field of xenotransplantation. Therefore, the information developed using the swine oligonucleotide microarray will contribute both to the quality and safety of our food supply, and to the understanding and treatment of human disease. The Swine Protein-Annotated Oligonucleotide Microarray has been developed as an OPEN SOURCE collaboration between investigators and institutions with an interest in pig physiology. The sequences of the oligonucleotides, the consensus sequences they represent, and the annotation of the consensus sequences are provided at no cost to the entire research community. Finally a big thank you goes to Scott Fahrenkrug, Michael Murtaugh and Bhupinder S. Juneja, University of Minnesota, Christine Elsik, Michael Dickens and Anand Venkatraman, Texas A&M University, Joan Lunney, USDA ARS Beltsville Agricultural Research Center, Joe Cassady, North Carolina State University, Cathy Ernst, Michigan State University, Max Rothschild and James Reecy Iowa State University, David Galbraith and Leukena Cheam, University of Arizona.

**New swine oligo arrays ordering can begin November 10.** Microarrays spotted with already synthesized oligonucleotides can be purchased (see availability/ordering) at a reasonable price based on investment by the sponsors. See <http://www.pigoligoarray.org/> to order them. Please note ordering depends on the source of your funding. Labs associated with agriculture (at US Colleges or Universities, US government laboratories, or foreign Universities or governments) please order using the "Arrays for USDA NAGRP-8 supported activities" button. If you are a PRRS researcher please order using the "Arrays for PRRS CAP supported activities" button. Commercial concerns (domestic or foreign) or any biomedical researchers (domestic or foreign) please order using the "Array for Biomedical and Commercial Applications" resource button.

**Validation of arrays will take place.** Thanks to efforts of a number of the swine genome community a validation experiment, funded in part by the participants and the USDA Pig Genome Coordinator will take place over the next few months. The plan is to report the information to the community at the earliest possible date.

**Pig Genome Update goes electronic only beginning January 1.** For those who also get the hard copy version of this newsletter, this issue will be the last to be distributed in that format. It will be only available from Angenmap (<http://www.animalgenome.org/community/discuss.html>), you will continue to receive the electronic version in this way. Acrobat .pdf versions (with graphics) are also posted on our website at <http://www.animalgenome.org/pigs/newsletter/index.html>.

**Swine Sequencing Committee met recently in Toulouse France.** Progress on the sequencing continues at an excellent pace and was reported to those attending by the project directors. Minutes of the latest meeting will be posted at [www.piggenome.org](http://www.piggenome.org). The website also provides access to all of the newsletters and permits direct communication with the Project Directors. There is also an opportunity for users to participate more fully and to become a SGSC member.

**The CSREES FY 2006 National Research Initiative (competitive grant program) request for proposals can be found at [http://www.csrees.usda.gov/funding/rfas/nri\\_rfa.html](http://www.csrees.usda.gov/funding/rfas/nri_rfa.html).** Total FY 2006 NRI funding was \$181.7M. The House FY 2007 budget and the Senate Appropriations Committee allocate about \$190M for next year's NRI, but almost all appropriations bills failed to get through by the Oct. 1 deadline and it seems likely that another Omnibus Appropriations Act will be required, and one can never tell what that may contain. Note: next year's FY 2007 NRI applications will require electronic submission through <http://grants.gov/> (provided by Jerry Dodgson).

**PAG-XV will be held January 13-17, 2007 at the usual spot, the Town and Country Hotel, San Diego, CA.** The program is available at [www.intl-pag.org/](http://www.intl-pag.org/). See the PAG website for more information or to register on-line. The deadline for reduced fee registration is Nov. 1. The program for porcine genomics can be found at <http://www.intl-pag.org/15/15-swine.html> and looks quite good. Please register soon.

**Upcoming meetings (see: <http://www.animalgenome.org/pigs/community/meetings.html>)**

Seventh International Long-oligonucleotide Microarray Workshop, January 7- 12, 2007, Univ. of Arizona, Tucson, AZ. See <http://ag.arizona.edu/microarray/workshopJan2007.html>.

Plant and Animal Genome XV, joint with NC-1008 and NAGRP annual meetings, Jan. 13-17, 2007, Town & Country Convention Center, San Diego, CA. See [www.intl-pag.org/](http://www.intl-pag.org/).

Chicken Development and Genomics, April 12-15, 2007, Barcelona, Spain. See [www.lists.bbsrc.ac.uk/mailman/listinfo/chicken-genome](http://www.lists.bbsrc.ac.uk/mailman/listinfo/chicken-genome)

3rd International Conference on Quantitative Genetics, August 18-24, 2007, Zhejiang University, Hangzhou, China. Conference Organizers: Jun Zhu (jzhu@zju.edu.cn) and Zhao-Bang Zeng (zeng@stat.ncsu.edu)

Convergence of Genomics and the Land Grant Mission: Emerging Trends in the Application of Genomics in Agricultural Research, September 10-12, 2007, Purdue U., West Lafayette, Indiana. See [www.entm.purdue.edu/conference](http://www.entm.purdue.edu/conference).

International Symposium on Animal Genomics for Animal Health, October 23-25, 2007, OIE Headquarters, World Organization for Animal Health, Paris, France. For information contact Cyril Gay, [cyril.gay@ars.usda.gov](mailto:cyril.gay@ars.usda.gov), or Marie-Hélène Pinard, [pinard@dga2.jouy.inra.fr](mailto:pinard@dga2.jouy.inra.fr)

Items for *Pig Genome Update 82* 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.animalgenome.org/pigs/>*

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

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