



# POULTRY GENOME NEWSLETTER 2006

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## POULTRY GENOME NEWSLETTER GOES SOLELY ELECTRONIC! THIS IS THE LAST HARD COPY ISSUE TO BE MAILED

To reduce waste, both human and paper, the Poultry Genome Newsletter is entering the 21<sup>st</sup> century and moving to solely electronic distribution. **If you now depend on the hard copy version and wish to keep receiving the Newsletter, please do any one of the following:**

1. To view the latest Newsletter (or any earlier one) at your leisure, visit our archive at <http://poultry.mph.msu.edu/newsletters/newsletters.htm>.
2. Poultry Genome Newsletters are distributed electronically through Angenmap, the Animal Genome Discussion Group (<http://www.animalgenome.org/community/discuss.html>). Go to this site and sign up and you will receive electronic copies of each Newsletter as it appears and/or a link to the .pdf copy at the URL listed above when a new issue comes out. (If you're reading this on Angenmap already, you have nothing more to do.)
3. If you wish to be notified as each Newsletter appears and prefer not to join Angenmap, email me at [dodgson@msu.edu](mailto:dodgson@msu.edu), and I will add you to a list of those to receive a .pdf copy by email as they appear (Adobe Acrobat Reader required).

Our apologies to anyone who might be inconvenienced by this change. On the bright side, it will allow us to more easily update our user list and to add more interesting graphics via .pdf files.

### WASHINGTON FUNDING UPDATE:

**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/>.****

U.S. Land Grant Institutions are promoting a new initiative, **CREATE-21**, for inclusion in the next Farm Bill. CREATE-21 calls for the creation of a NIH-style National Institute within USDA that would double the Federal investment in research, education and extension. Not only would CREATE-21 substantially enhance funding for agricultural research, it would also shift the balance of that support much more towards competitive vs. formula funding. For more information, see the article by **Daryl Lund**, Executive Director of the NCRA, in the NCRA Summer, 2006, Newsletter at <http://www.wisc.edu/ncra/summer06news.pdf> .



## PAG XV & NAGRP/NC- 1008 Meeting

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. In order to meet the demand for workshop

space, plenary lectures have been reduced to two each on Tues. and Wed., with an 8 a.m. start, and workshops added between 10 a.m. and lunchtime. A keynote/plenary speaker also has been added to the program prior to the opening reception and Poster session on Sunday night. The **NC-1008 Multistate Research** project committee and the **Poultry Subcommittee of the National Animal Genome Research Program, NRSP-8**, will meet concurrently (9:00 am Saturday morning, Jan. 13, to 3:25 pm Sunday). The full NRSP-8 meeting will be 3:35-5:45 pm, Sunday, Jan. 14. **Kent Reed**, chair for NRSP8-Poultry, and **Tom Porter**, chair of NC-1008, are co-organizers. Guest speakers at the Poultry Workshop this year include **Helen Sang, Fred Leung, Roger Coulombe, Elisabeth Le Bihan-Duval** and **Michael Romanov**. Coordinators again have some funds to help with travel support for NAGRP members or their lab members - contact us asap ([dodgson@msu.edu](mailto:dodgson@msu.edu) or [hcheng@msu.edu](mailto:hcheng@msu.edu)).



Congratulations go to **Ben Dorshorst** of North Carolina State U., this year's recipient of the **Neal Jorgensen Travel Award** for poultry, designed specifically to support grad student attendance. Ben's abstract (co-authored with mentor **Chris Ashwell**) is entitled "Expression Analysis of Candidate Genes for Hyperpigmentation in the Silkie Chicken".

(Photo of Silkie chicken provided by **Ning Yang** of the China Agricultural University, Beijing)

## ON THE ROAD AGAIN. UPCOMING MEETINGS:

IMPORTANT NOTE: Regularly updated poultry meeting information is now available at [http://www.animalgenome.org/share/mtg\\_chic.html](http://www.animalgenome.org/share/mtg_chic.html). Meeting organizers can enter their own meeting information on-line at [www.animalgenome.org/cgi-bin/angenmap/mtg\\_new](http://www.animalgenome.org/cgi-bin/angenmap/mtg_new).

Seventh International Long-oligonucleotide Microarray Workshop, January 7-12, 2007, U. 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 <https://www.lists.bbsrc.ac.uk/mailman/listinfo/chicken-genome> to join the chicken genome email list and get updates for this meeting.

Poultry Science Association Annual Meeting, July 8-12, 2007, San Antonio, Texas. Joint with ADSA and ASAS. See <http://www.poultryscience.org/futuremtg.asp>.

3<sup>rd</sup> International Conference on Quantitative Genetics, August 18-24, 2007, Zheijiang University, Hangzhou, China. Conference Organizers: Jun Zhu (jzhu@zju.edu.cn) and Zhao-Bang Zeng ([zeng@stat.ncsu.edu](mailto: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)

### A SNIPPET ON CHICKEN SNPs

For the second year in a row, the Poultry Coordinators were able to contribute to a group effort to contract with Illumina Corp. to obtain ~3000 SNP genotypes from panels of birds that are of interest in QTL and single gene mutation analyses. In the 2005 project, about 88% (2733) of the SNP assays worked, and almost all of the submitted DNAs (~5300) were successfully typed. Since members of the East Lansing and Wageningen reference linkage families were included among the panel, these data greatly enhanced the chicken linkage map, more than doubling the number of markers. The data were also used to enhance the second build of the draft genome sequence that came out earlier this year. This year's project was coordinated by **Chris Ashwell** of North Carolina State. Unlike 2005, when part of the project was supported by a CSREES NRI Tools & Reagents grant along with industry and EU funds, this year each participant paid a majority of the typing costs, but coordination funding was critical to bring the overall cost down to a manageable level and to generate a project large enough to attract Illumina's interest. Another key factor was being able to use the same SNP assay reagents as were used in 2005, and thanks go to last year's project coordinator, **Hans Cheng**, and ARS staff in obtaining permission to do so. The analysis of the 2005 SNP data is still on-going and publications describing the results should begin to appear shortly. The 2006 data are not yet in. Thanks go to Chris and to all the other participants for contributing to this project.

## CHICKEN CHIPS AHOY!

**Operon Biotechnologies Inc.** distributes the *Gallus gallus* (chicken) Roslin/ARK CoRe Array V1.0 ready-to-spot oligonucleotide set that contains 20,673 long oligo probes for creating microarrays. The oligo probes were designed by **ARK-Genomics** using Ensembl gene transcripts, the BBSRC fully sequenced cDNA set and the DT40 full length sequencing set. This CoRe set includes 18,363 oligos designed from the databases listed above, along with probes for developmental genes, those for precursor RNA's for micro RNA's and ~30 microRNA's and probes previously used on other arrays. See [http://www.operon.com/arrays/oligosets\\_chicken.php](http://www.operon.com/arrays/oligosets_chicken.php). A chicken whole genome long oligo array is also available (~\$150 each) at the **U. of Arizona**, [www.grl.steelecenter.arizona.edu](http://www.grl.steelecenter.arizona.edu) and can also be purchased on a custom basis from **Nimblegen**, [www.nimblegen.com](http://www.nimblegen.com). A 13K chicken spotted cDNA glass slide array remains available from the Array Facility at the **Fred Hutchinson Cancer Research Center**. See **Burnside et al.**, *BMC Genomics* 6:13 (2005) (<http://www.biomedcentral.com/bmcgenomics>) for more details. Email requests to [genomics@fhcrc.org](mailto:genomics@fhcrc.org). **Affymetrix, Inc.** is marketing the GeneChip® Chicken Genome Array that measures levels of 32,773 chicken transcripts and 684 chicken viral transcripts. See <http://www.affymetrix.com/products/arrays/specific/chicken.affx>. Microarrays, along with clones and vectors (including RNAi vectors), genotyping services and other resources can also be obtained from **ARK-Genomics** at <http://www.ark-genomics.org>.

## BAC AT YOU!

**Chicken BAC libraries** have been constructed at Texas A&M (~39,400 each in three sublibraries called TAM31, TAM32, and TAM33, respectively; Lee et al., *Animal Genetics* 34: 151) and by **Pieter de Jong** (CHORI-261: ~73,700 BACs with ~195 kb inserts). Pieter has also generated a **turkey BAC library (CHORI-260)**. If interested in either library, see <http://bacpac.chori.org>. Some free filter sets with spotted arrays of CHORI-260, CHORI-261, TAM31 and TAM33 BACs are still available, email [dodgson@msu.edu](mailto:dodgson@msu.edu).

## Poultry Genome Newsletter Archive

Poultry Genome Newsletters are distributed electronically through Angenmap, the Animal Genome Discussion Group (<http://www.animalgenome.org/community/discuss.html>). All previous newsletters are archived at <http://poultry.mph.msu.edu/newsletters/newsletters.htm>.

### PLEASE PROVIDE YOUR INPUT

The Poultry Coordinators are always glad to hear from NRSP-8 members and other readers about ways that we can improve the coordination effort or provide resources that are needed and with which we may be able to help. Also, let us know if you have items of general interest to the poultry genetics community that we can include in this Newsletter.

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