



# POULTRY GENOME NEWSLETTER 2008

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## GOODBYE NC-1008; HELLO NC-1170

The renewal application for the NC-1008 Regional Research Project “Advanced Technologies for the Genetic Improvement of Poultry” has been approved and will be **renumbered as NC-1170**. Thanks to Chris Ashwell for spearheading the renewal effort. (You’re really showing your age if you still think of this as NC-168.)

## PAG XVII & NAGRP/NC-1170 Meeting, January 2009

**NOTE:** Planning is already well underway for PAG-XVII and the NRSP-8/NC-1008 meetings to be held next year **January 10-14, 2009**, again at the **Town & Country Hotel, San Diego, CA**. **Lee Hood, George Church, Andy Clark** and **Ewan Birney** have agreed to speak. The Poultry Workshop will begin at 8:00 a.m. on January 10, ending by lunch on Sunday, Jan. 11, with Sunday afternoon devoted to a **Combined NRSP-8 Scientific Symposium** with invited speakers on a central topic of wide interest, followed by a brief NRSP-8 business meeting.



### GO to Starkville

Adjoining meetings will be held at the **Hunter Henry Center at Mississippi State University (Starkville, MS)** entitled: **Delivering Value from Avian Genomics** (May 19-20, 2008) and **Avian Gene Ontology (GO) and Microarray Data Modeling Workshop** (May 21-22, 2008).

The focus of the first meeting will be on ways to capitalize on the recent genomics advances for the chicken and other birds. The GO workshop will provide education about GO and hands-on advice for interpreting and using microarray data. Further information is at

<http://www.idb.msstate.edu/events.html>



### **PSA CENTENNIAL; COME CELEBRATE AT THE FALLS!**

The **Centennial Poultry Science Association Meeting** will be held **July 20-23, 2008** at the **Sheraton on the Falls Hotel and Convention Center, Niagara Falls, Ontario, Canada**. Be sure to sign up for the scenic trip **over** the Falls. You'll have a **barrel** of fun! The conference website is at <http://www.poultryscience.org/psa08> .

### **WASHINGTON UPDATE**

**Poultry Science Association Press Release:** President Bush's proposed FY09 budget would eliminate two U.S.D.A. laboratories that play a vital role in poultry and biomedical research and provide invaluable services to poultry and related industries, the **Avian Disease and Oncology Laboratory (ADOL)** in East Lansing, Michigan, and the **Animal Biosciences and Biotechnology Laboratory (ABBL)** in Beltsville, MD. The budget proposal for FY 09, which begins October 1, 2008, calls for a \$146 million cut in USDA's funding, \$84 million of which targets USDA's Agricultural Research Service. ADOL's annual \$3.4 million and ABBL's \$8.4 million budgets would be eliminated and the laboratories closed; the research programs would not be relocated. See <http://www.poultryscience.org/pr032008.asp> for the full press release. Thanks to **Nathan May** (Nathan May Communications) and **James Kessler** (Executive Director, PSA) and **Janet Fulton** (Hy-Line) for their efforts in putting together this release. Several of us have contacted our representatives in Congress in hopes that at least this part of the budget will not be adopted. The fact that proposed ARS cuts to poultry research were drastic in comparison to those for some other animal agricultural species is disturbing.

The National Research Initiative FY 2008 RFA is now available at <http://www.csrees.usda.gov/> or [www.grants.gov](http://www.grants.gov) . **Program 43.0, Animal Genome, contains five elements: Translational Animal Genomics, Tools and Resources, Bioinformatics, Functional Genomics and Whole Genome Enabled Animal Selection.** The deadline for the first four elements is **June 5, 2008**. The Whole Genome Enabled Animal Selection panel has already met and made two awards (one focused on chicken). Please see the RFA for deadlines for other animal-related programs. **The Consolidated Appropriations Act, 2008, left NRI funding virtually the same as last year at \$190.883M.** Note that up to 26% of these funds may now go to "integrated activities" (see the RFA for a description). Last year, Animal Genome funded 12 standard research awards (32%), Animal Reproduction funded 11 (23%), Animal Growth and Nutrition funded 13 (18%), and Animal Protection funded 28 (25%). As expected, changes to the RFA over the last two years have significantly reduced the number of applications, thereby increasing the success rate. Unfortunately, for CSREES as a whole, the total number of awards is down from about 600 in FY01 to 400 in FY06 and probably even less in FY07.

**EUKARYOTIC GENOME ANNOTATION AND ANALYSIS COURSE:  
J. CRAIG VENTER INSTITUTE**

The **J. Craig Venter Institute in Rockville, MD**, offers three-day courses in **Eukaryotic Genome Annotation and Analysis**. Dates offered for the rest of this year are June 18-20 and October 1-3. For more information, see [www.jcvi.org/cms/education/prodev/euk/](http://www.jcvi.org/cms/education/prodev/euk/).



**ZEBRA FINCH GENOME NOW BEING ASSEMBLED**

A second avian genome sequence will soon be joining that of the chicken, that of the model songbird, the zebra finch. The zebra finch sequence reads are complete and a version of the sequence has been assembled. The sequence contigs are a bit smaller than expected, perhaps as a result of the need to use a less inbred (more heterozygous) bird's DNA. Still, the vast majority of the contigs are expected to align with the chicken genome. As reported by **Art Arnold** at the PAG meeting, the assembly is expected to hit the browsers some time in mid-year.

**ON THE ROAD AGAIN. UPCOMING MEETINGS:**

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).

Delivering Value from Avian Genomics, May 19-20, 2008 and Avian Gene Ontology (GO) and Microarray Data Modeling Workshop, May 21-22, 2008, Mississippi State University, Starkville, MS. See <http://www.idb.msstate.edu/events.html>

XXIII World's Poultry Congress 2008, June 29-July 4, 2008, Brisbane Convention and Exhibition Centre, Brisbane, QUEENSLAND, AUSTRALIA. See [www.wpc2008.com](http://www.wpc2008.com)

8<sup>th</sup> International Marek's Disease Symposium, July 6-10, 2008, Townsville, Queensland, Australia. See <http://www.jcu.edu.au/vbms/news/mareks/index.htm>.

9<sup>th</sup> International Symposium on Avian Endocrinology, July 11-15, 2008, Universiteitshallen of the University of Leuven, Leuven, Belgium. See <http://www.isae2008.be>.

Pig Genome Annotation Jubilee, July 16-18, 2008, Wellcome Trust Sanger Institute, Hinxton, U.K. See [www.sanger.ac.uk/Projects/S\\_scrofa/workshop\\_Hinxton08/index.shtml](http://www.sanger.ac.uk/Projects/S_scrofa/workshop_Hinxton08/index.shtml)

Poultry Science Assoc. Centennial Meeting, July 20-23, 2008, Sheraton on the Falls Hotel and Convention Center, Niagara Falls, Ontario, Canada. See <http://www.poultryscience.org/psa08>

XXXI Conference of the International Society for Animal Genetics, July 20-24, 2008, RAI Conference Center, Amsterdam, The Netherlands. See [www.isag2008.nl](http://www.isag2008.nl).

Human Genome Organisation (HUGO) 13<sup>th</sup> Human Genome Meeting, Sept. 27-30, 2008. Visit <http://hgm2008.hugo-international.org/> for more information.

Plant & Animal Genome Conference, PAG XVII, Jan. 10-14, 2009, Town & Country Hotel, San Diego, CA. More info. will be available at <http://www.intl-pag.org/>.

### **CHICKEN CHIPS! 13K array usurped by larger commercial chips**

The 13K chicken spotted cDNA glass slide array (Burnside *et al.*, *BMC Genomics* 6:13, 2005) will no longer be available from the Array Facility at the Fred Hutchinson Cancer Research Center ([genomics@fhcrc.org](mailto:genomics@fhcrc.org)). However, they will offer hybridization services to the **44K Agilent Technologies** ([www.agilent.com](http://www.agilent.com)) **long oligonucleotide microarray** at a comparable price. It's also reported that Agilent has a 244K whole genome long oligo array in preparation that can be used to assess copy number variation and whole genome transcriptional profiles, among other things. A chicken whole genome long oligo array is also available 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). **Affymetrix, Inc.** markets the GeneChip® Chicken Genome Array that measures levels of 32,773 chicken and 684 viral transcripts, <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>.

### **THE BAC PAGE! TURKEY BAC INFO NOW AVAILABLE**

**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 CHORI 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).

Please note. As described previously, an extensive table is available of **Turkey BACs (from CHORI-260, see above) assigned to turkey markers and genes** at our **Resources** page at <http://poultry.mph.msu.edu/resources/Resources.htm>. This table is regularly updated and presently contains nearly 18,000 BACs assigned to 1429 markers/genes. Also available is a separate table describing the "overgo" hybridization probes used in making most of these assignments. Also at the <http://poultry.mph.msu.edu/resources/Resources.htm> site is another Table listing the **Genbank assignment numbers for over 20,000 Turkey BAC (CHORI-260) end sequences** and the corresponding BACs that were sequenced (this info can also be obtained by searching Genbank, of course). In addition, a multi-spreadsheet table is provided that lists the **orthologous location in the chicken genome (Build 2) for these turkey BACs**. Where an orthologous assignment is not obvious or is inconsistent, manual annotation has been done to resolve the most probable orthologous location.

## 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. PICTURES and GRAPHICS are especially welcome for our new .pdf versions of the newsletter.

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