

**Report**  
**Peanut Genome Project**  
**Executive Committee Teleconference**  
**4/28/11 (revised)**

**PARTICIPANTS**

Corley Holbrook  
Baozhu Guo  
Scott Jackson  
Brian Scheffler

Lutz Froenicke  
Victor Nwosu  
Richard Michelmore  
Peggy Ozias-Akins  
Howard Valentine

Greg May  
Pat Donahue  
Darlene Cowart  
Richard F. Wilson

Valentine convened the teleconference. Minutes of the 4/28/11 EC teleconference were approved.

**Discussion Items:**

Draft IPGRI Strategic Plan Outline

The final technical program for AAGB-2011 is posted on <http://www.cenargen.embrapa.br/aagb2011/>. Plenary sessions will cover principal elements of the IPGRI Strategic Plan for 2012-2016, which will focus on characterization of the peanut genome. Input for drafting the IPGRI Strategic Plan will be gathered during facilitated breakout sessions.

Allelic Diversity & Germplasm Resources (Stalker, Valls)

Genome Sequence & Structure plus Genetic Mapping & Gene Discovery (Ozias-Akins, Varshney)

Product Quality & Safety (Nwosu, Waliyar)

Crop Improvement (Holbrook, Sharma)

A pdf that outlines the process and expectations of the breakout groups is posted on the Technical Program page and a pdf of the current Strategic Plan is posted on the Documents page of the URL above.

**Wilson will provide additional guidance for facilitators.**

A draft outline of the Plan was presented for discussion. It was agreed that the framework for Goal 2: Genome Sequencing & Structural Characterization would be drafted from the proposals for components of the Peanut Genome Project. **Wilson will initiate & distribute drafts to the EC, Bertioli & Varshney.**

An **executive pre-meeting** of the PGP will be held on **Sunday June 12 in Brasilia**. Tentative participants will be: Shapiro, Valentine, Nwosu, Wilson, Ozias-Akins, Holbrook, Guo, May, Stalker, Froenicke, Varshney, Xu, Zhang, Liang, Boshou, S & D. Bertioli. (Jackson is scheduled to arrive June 13). The Sonesta hotel wants about **\$600** for a meeting room for up to 22 people with coffee & water service. A **pre-reservation was made for 2 to 6 PM**. If funds are not available, the meeting could be held at Cenargen. Location **TBD**.

Germplasm Resources

USDA Mini-Core: 94 accessions in plant rows at Griffin GA. Ancestral lines (18 more) some are still not available. Charles Chen (ARS breeder at Dawson GA) was instrumental in helping the germplasm curator (Noele Barkley), but has been moved to a sugar cane project at Canal Point FL due to changes in FY11 ARS budget. ARS agreements with Golden Peanut are now in jeopardy.

ICRISAT Mini-Core Collection: Seed in the USDA collection at Griffin GA will be increased this summer. Holbrook will help Barkley if Chen redirection is permanent.

ICRISAT Diversity Panel: MTA at UC-Davis for germplasm plus phenotypic data in process. No MTA is needed for DNA exchanged between UC-Davis and Brazil.

Tifrunner x GT-C20 RIL: DNA marker screens indicate 85 of 92 RIL are useable. Difference seed sources are needed for parental lines. No alleles from parent in RIL also observed in rice project. 72 more RIL to screen. Some may be retested. It was agreed to move forward with this population. Up to 96 lines (final number) will be phenotyped by Holbrook et al this summer. **Substitute lines must be presented in next two weeks**. Dawson may not be a test location. Scheffler volunteered to help with HiSeq genotyping. **Holbrook will solicit assistance from Diane Rowland at UFL**. In addition, **Renee Arias (ARS Pathologist at Dawson GA) will be approached for help by Valentine** via Marshall Lamb (Research Leader).

### Plans, Needs, Responsibilities, Deliverables

Component 1: Tetraploid Reference Genome Sequence: Draft patterned after language in the Lettuce Project proposal was presented. Certain items are pending receipt of a BGI proposal. **Nwosu, Wilson, Michelmore will produce a finished draft for Shapiro negotiations with BGI.**

Component 2: Ultra Dense Map of Allelic Variation: Data sets with material from Brazil are in progress at UC-Davis. Parallel effort on allelic variation in Chinese germplasm is desired. **Nwosu, Holbrook, Guo will explore possibilities with Liang and Boshou.**

Component 3: RNAseq Analysis of Transcriptomes: Tifrunner will be the only genotype. Expressed genes will be analyzed in various organs at several stages of development. **Ozias-Akins, Jackson, May, Scheffler will develop a final list of treatments in two weeks.** Gaps will be filled by Sanger sequencing of large cDNA libraries. RNA-Seq data will facilitate annotation. About 10M paired-end reads will be needed per library (30M for de novo assembly if capture transcription factors). Medicago and soybean will be used for reference. It would be desirable to identify a biological question with sufficient reps for publication.

Component 4: Other Approaches: NCGR has U.S. service agreement with Key Gene.

Component 5: Phenotyping & Validation: **Written plan pending.** See discussion under Germplasm Resources.

Component 6: Bioinformatic Resources: NCGR will be the Gatekeeper for PGP data. Scope covers bioinfo needs for Components 2 & 3 & 5 (phenotyping). Needs include data curation, genotypic analysis, alignment of reads, mapping QTL (if needed). BGI will cover needs for Component 1. **Written plan pending**

### Governance for the Peanut Genome Consortium

Draft Policies & Procedures: Wilson & Valentine have submitted draft to the Peanut Foundation legal counsel for review. Document includes a compilation of NSF, NIH, USDA and NGO policies on data sharing & protection. **Revisions will be distributed to the EC for review in two weeks.**

### Status of Funding Strategies:

Valentine has scheduled visits to Kraft, Smuckers, Unilever, Hershey. Meetings pending with NPB, ConAgra, Rio Corp, Shellers group. Need to determine amount that will be available, & when.

Wilson reported the FY11 ARS budget was reduced by \$44M for earmarks (all Congressional earmarks totaled over \$200M). Includes: Dawson, GA (-\$1.2M); Scheffler (-\$0.67M); and NCGR (-\$1.02M). The FY12 budget forecasts a -\$100M cut (-\$44M in FY11, -\$38M in 10 location closures mostly in Tea Party districts; -\$20M in additional pass-thru funds). There is potential for loss of 320 scientific positions.

Other Business: Guo will travel to China 22 May; meeting with Chinese collaborators 29 May

Next Meeting: **Teleconference, 12 May @ 5 PM EDT**

### Action Items for Next Meeting:

**Guidance to AAGB-2011 Breakout Session facilitators (Wilson)**  
**Development & distribution of draft Strategic Plan outline to Bertoli & Varshney (Wilson).**  
**Executive pre-meeting at AAGB-2011 on Sunday June 12 (Wilson)**  
**Genotypic analysis of Tifrunner x GT-C20 RILs (Ozias-Akins)**  
**Collaboration with Diane Rowland at UFL (Holbrook)**  
**Collaboration with Renee Arias (ARS Pathologist at Dawson GA (Valentine).**  
**Final draft of plan for Shapiro negotiations with BGI (Nwosu, Michelmore, Wilson)**  
**Allelic variation in Chinese germplasm (Nwosu, Holbrook, Guo)**  
**Treatments for Component 3 (Ozias-Akins, Jackson, May, Scheffler)**  
**Component 5 Phenotyping plan (Holbrook etal)**  
**Component 6 Bioinformatics plan (May etal)**  
**Policies & Procedures manual (Valentine, Wilson)**