

Report (revised 6/29/11)
Peanut Genome Project
Executive Committee Meetings, Brasilia, BRAZIL
6/12/11 Pre AAGB-2011 Meeting
6/15/11 EC Teleconference
6/15/11 Post AAGB-2011 Meeting

PARTICIPANTS

Corley Holbrook	Mark Burow	Howard Valentine
Baozhu Guo	Tom Stalker	Richard F. Wilson
Lutz Froenicke	Rajeev Varshney	David Bertioli
X. Wang	Patricia Guimaraes	Soraya Bertioli
Xinyou. Zhang	Victor Nwosu	Scott Jackson
Jose Valls	Peggy Ozias-Akins	Richard Michelmore

Valentine convened the 6/12 meeting. Minutes of the 6/07/11 EC teleconference were approved. Nwosu convened the 6/15 teleconference. Jackson convened the 6/15 meeting. Participants listed attended one or more of the subject meetings.

Discussion Items:

Meeting with BGI. A change in plan was necessary for logistical and strategic convenience. Howard Shapiro and Xu Xun met in Washington DC instead of Brasilia to negotiate agreements for work under Component 1 of the PGP. A teleconference was arranged at CENARGEN on 6/15 to brief the EC. A version of the 5/12/11 EC approved document (PGP Component 1 Briefing Paper May11b.doc) was used in the meeting with BGI. Michelmore reported (per phone) on details of the negotiations and plans to move forward. Nwosu will visit UC-Davis to help finalize the document. **Shapiro will brief the EC in another teleconference set up by Nwosu.**

Nomination of new EC members (6/12)

Mark Burow accepted a nomination and was inducted as a new member. A nomination for Andy Paterson was tabled for further consideration. In addition to David Hoisington (ICRISAT) and Roy Scott (USDA, ARS, ONP) who previously accepted invitations to serve as Ex Officio members of the EC, new candidates (to be contacted by members in parentheses) included: **Chairman Luo (Guo, Zhang); Pedro Arraes (Bertioli, Nwosu); Jean-Marcel Ribaut, Director of the Generation Challenge Program (Varshney); and a member of the Carter Foundation (Valentine).** Formal invitations should be sent to each. **Valentine agreed to design a logo, slogan and letterhead for the PGC as soon as possible.** It was agreed that a primary contact with all Chinese collaborators (excluding BGI) was needed. **Baozhu Guo and Xinyou Zhang will identify appropriate contacts.**

Election of EC Officers (6/12)

The slate of candidates included: Scott Jackson, chairperson; Richard Michelmore, co-chair; Peggy-Ozias Akins, co-chair. All agreed to serve, and were elected by acclamation. The position of Secretary will not be needed., and the P&P will be amended. A list of international liaisons was approved. The following accepted this invitation: China, Baozhu Guo; Brazil, David Bertioli; India, Rajeev Varshney. **Invitations will be sent to the following: West Africa, Farid Waliyar (Varshney); Australia, Graeme Wright (Holbrook); Japan, Sachiko Isobe (Varshney); Ran Hovav, Israel (Ozias-Akins)**

AAGB-2011 Program (6/12)

Soraya Bertioli outlined logistics and changes for the technical and social programs. Wilson reviewed guidance for EC and breakout session facilitators. EC members were encouraged to review the example for Goal 2 which outlines performance measures for each component of the Peanut Genome Project.

PGC Policies & Procedures (6/12)

Wilson distributed copies of various documents including the P&P and a list of FAQs regarding questions about Section 3.05 Terms & Conditions. All documents are posted on www.PeanutBioscience.com. Concern was expressed about placing restrictions on access to data submitted to the PGP. A counterpoint was raised that the PGC is a custodian of such data, and the IAA (information access agreement) is a responsible measure to protect NCGR and information entrusted to the PGP database until it is officially deposited in GenBank or other public resources. **Chairperson Jackson will select and lead an ad hoc committee to review all aspects and ramifications of the IAA policy statement.**

The EC agreed to draft policy on publication of information included or derived from the PGP database. The policy must also be acceptable to international members. **Peggy Ozias-Akins will lead an ad hoc committee including Richard Michelmore, Scott Jackson, David Bertoli, Greg May, Baozhu Guo to draft guidelines on the ethics of authorship.**

Agreements with International Collaborators (6/12)

Guo reconfirmed reports that Chairman Luo encouraged the Minister of Technology & Science to support the PGP. The Minister met with the Secretary of USDA during a diplomatic mission to the US in May 2011. The intent was to include collaborative research between Chinese and US members of the PGP as a part of the recently renewed US-China Science & Technology Cooperation on Agriculture & Forestry MOU. The joint US-China peanut whole genome sequencing project (PWGSP) will be funded by US and China government agencies and collaborators. The original total budgeted cost is \$5 million US dollars, equivalent to about 35 million Chinese dollars (YMB), and will be carried out by BGI-Shenzhen. The potential funding agency from China is the Ministry of Science and Technology with potential funding of 10 million YMB. The other Chinese collaborators with commitment of funding are Henan Academy of Agricultural Sciences with commitment of 1 million YMB, and Chinese Academy of Agricultural Sciences Oil Crop Research Institute, Shandong Academy of Agricultural Sciences and Guangdong Academy of Agricultural Sciences (each with commitment of half million YMB). In addition, Luhua Peanut Oil Company in Shandong has also committed 5 million YMB, and BGI-Shenzhen is also a collaborator. Therefore, the total potential funding from China Ministry of Science and Technology and other collaborators are 17.5 million YMB in pledge, equivalent to half of the total budget. Chairman Luo Fuhe, Vice Chairman of the 11th National Committee of the Chinese People's Political Consultative Conference (CPPCC) and Executive Vice-Chairman of the China Association for Promoting Democracy (CAPD) Central Committee, is a strong supporter of this joint US-China PWGSP, has been nominated as Ex Officio to the PGC. Delegates will be sent to China in September 2011 to sign this agreement. Wilson has contacted USDA to confirm these understandings, and seek assistance in drafting a briefing paper to increase awareness of the IPGI and the PGC. **Wilson, Guo and Nwosu will pursue action to develop a strategy for building USDA support for the proposed ancillary MOU between the US and Chinese governments.**

On 6/15 Wilson, Nwosu, Soraya Bertoli, and Jose' Valls were invited to a luncheon with Pedro Arraes (President), Mirian T.S. Eira (Head of R&D) and other ranking EMBRAPA officials. PGC & PGP organization/mission and the benefits Brazil should gain from this collaboration were discussed. President Arraes made a firm funding commitment for a peanut breeding network plus genomic support for the network in Brazil. President Arraes accepted an informal invitation to serve as an Ex Officio member of the PGC.

PGP Updates (6/12)

Component 2: Froenicke and Bertoli reported that about 0.4 Gbase of sequence information has been generated thus far on A genome (90 RIL), B genome (96 RIL) and AABB genome (synthetic x AC-Runner). Size of gene space is unknown, intend 20X coverage. The estimated age of evolutionary divergence of the A and B genomes was estimated to be between 3-4 million years ago which is much more recent than the divergence of the subgenomes of soya (13 million years). This raised concern for the technical feasibility of de-novo assembling the tetraploid genome. To further understanding of the potential problems, results of an in-silico experiment using homeologous A and B BAC sequences were presented. The A and B sequences assembled satisfactorily using simulated Hi-Seq paired-ends at 60x coverage, but when assembled together, numerous artifactual mixed origin sequences representing only 80% of true sequence length were generated. Bertoli suggested that sample sequencing of BACs from the A and B would provide useful information as to the properties of the tetraploid genome. Ten BACs from A and ten from B-genome would be a good start. The cost would be about \$20,000. Half of that cost may be available through an EMBRAPA project.

An MTA is needed between UC-Davis and (EMBRAPA, University of Brazil). MTA between UC-Davis and ICRISAT is signed. In addition, availability of DNA has delayed sequencing of US germplasm. The Peanut Foundation has provided \$40K in support of this work (Ozias-Akins, Scheffler). Although not

stated at the meeting, the Peanut Foundation also provided \$15K to M. Burow and T. Wilkins for transcriptome sequencing of peanut, with sequencing being performed by NCGR.

Component 3: Little work has been done previously on the transcription of B-genome material.

Component 5: Phenotyping is needed on populations developed in other countries. Chinese collaborators will send DNA and phenotypic data on their mini-core to UC-Davis. **Holbrook will lead an ad hoc committee including Guo, Varshney, and Bertioli to develop a uniform list of phenotypic trait descriptors.** Varshney proposed that a consensus genetic map be developed from all mapping population and QTL data in the PGP database.

Other: (6/12-15)

A plea was made for assistance in gaining access to information that may be held by Andy Paterson. Need was expressed for information developed under the Generation Challenge Grant program, which may include: a physical map of the A-genome, fingerprint files, and raw sequence data from wild and cultivated genomes. **Jackson will lead an ad hoc committee including David Bertioli and Rajeev Varshney to make appropriate contacts and request access to these resources by the end of July 2011.**

Wilson will coordinate the drafting of the next Strategic Plan with the writing team:

Allelic Diversity & Germplasm Resources (T. Stalker, J. Valls)

Genetic Mapping & Gene Discovery (P Ozias-Akins, R. Varshney)

Genome Sequence & Structure (S. Jackson, D. Bertioli)

Product Quality & Safety (V. Nwosu, B. Guo)

Crop Improvement (C. Holbrook, I. Godoy, Mark Burow)

A first draft is due by July 9, 2011. Highest priority objectives from the Strategic Plan will be used to develop an Action Plan for fund raising (Nwosu)

Valentine will work with the National Peanut Board to develop a public relations strategy for launching the PGP. A press release will be developed for release in PGC member countries. Valentine will coordinate development of a PGC logo and branding message (slogan).

Varshney agreed to include at least one technical presentation from the PGP in his session at the Plant & Animal Genome meeting in San Diego, CA. Howard Shapiro will be asked to arrange a PGC luncheon meeting during PAG.

Varshney extended invitations to the VI International Conference on Legume Genetics and Genomics (VI ICLGG) in Hyderabad, during October 3- 8, 2012. The event brings together scientists working on legume biology in model species using genetic and genomic tools, with those working on applied aspects and breeding of food legume crop and pasture species. The scientific program of this meeting will include plenary talks of general interest and focused special sessions featuring current research in legumes genetics and genomics from around the world. In addition, the program will have workshops on topical subjects, contributory presentations from the selected abstracts and dedicated poster sessions. For more details, please visit <http://www.icrisat.org/gt-bt/VI-ICLGG/homepage.htm>.

Next Meetings:

June 28, 2011 EC teleconference

July 11, 2011 PGI at APRES, San Antonio TX

January, 2012 Plant & Animal Genome Meeting, San Diego CA

October 3-8, 2012 VI International Conference on Legume Genetics & Genomics, Hyderabad India

Early April, 2013, 6th AAGB, Zhengzhou, China

Action Items for the June 28 EC Teleconference

Shapiro will brief the EC on negotiations with BGI in another teleconference set up by **Nwosu**

Invitations to Ex Officio candidates (to be contacted by members in parentheses): Chairman Luo (**Guo, Zhang**); Pedro Arraes (**Bertioli, Nwosu**); Jean-Marcel Ribaut, Director of the Generation Challenge Program (**Varshney**); and a member of the Carter Foundation (**Valentine**).

Identification of a primary contact for all Chinese collaborators (excluding BGI) **Baozhu Guo and Xinyou Zhang**

Invitations to the following candidates for international liaison: West Africa, Farid Waliyar (**Varshney**); Australia, Graham Wright (**Holbrook**); Japan, Sachiko Isobe (**Varshney**); Ran Hovav, Israel (**Ozias-Akins**)

Chairperson Jackson will select and lead an ad hoc committee to review all aspects and ramifications of the IAA policy statement.

Ozias-Akins will lead an ad hoc committee including Richard Michelmore, Scott Jackson, David Bertioli, Greg May, Baozhu Guo to draft guidelines on the ethics of authorship.

Wilson, Guo and Nwosu will pursue action to develop a strategy for building USDA support for the proposed ancillary MOU between the US and Chinese governments.

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