

Public Policy Update

Proposed Structure for a National Plant Microbial Germplasm System More Clearly Defined in Second Workshop

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Under the auspices of the APS Public Policy Board (PPB) and the APS Ad Hoc Committee on Culture Collections and with support and participation from USDA-ARS and USDA-APHIS, a second workshop to facilitate the establishment of a National Plant Microbial Germplasm System (NPMGS) was held January 27–28, 2009, in Arlington, VA.

Some 35 participants, representing APS PPB, universities, industry, the Fungal Genetics Stock Center, USDA-ARS, USDA-APHIS, National Science Foundation (NSF), the Smithsonian Institution, and several international culture collection systems met to define a plan for an NPMGS. Additionally, we were very pleased to have two congressional staff members from the House of Representatives Committee on Science's Subcommittee on Investigations & Oversight attend and present their perspectives at the meeting. Representative **Brad Miller**, the chair of the subcommittee, is very interested in BioBanking issues and will reintroduce legislation this year to protect endangered collection resources under federal stewardship and those supported by federal funds maintained by nonfederal institutes. The establishment of the NPMGS is intended to provide efficient preservation of, access to, and retrievable documentation for important plant-associated microbial resources. The current lack of such a system is widely recognized as limiting to research efforts and potentially dangerous for our capacity to quickly respond to new disease challenges.

A draft NPMGS plan document was generated from a preliminary planning workshop held in 2007. Prior to the second workshop, working subcommittees from among the participants addressed challenges in the draft plan related to strategies for the future NPMGS, including 1) management structure; 2) cultures and collections; 3) system structure and operations; and 4) budget needs. Each subcommittee produced brief documents addressing these continuing issues that were shared with all participants prior to the meeting and were presented by the subcommittee co-chairs to initiate the meeting.

The meeting included several presentations by international culture collection and database experts. These presentations, highlighting existing culture collections and related efforts in Europe and Canada, informed participants about the state-of-the-art database tools for



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culture collections, as well as strategies and funding issues related to the various systems. Importantly, the potential for interconnectivity of a future NPMGS and international collections was discussed at some length. Additionally, a presentation on the current status of the U.S. Interagency Working Group on Scientific Collections was delivered by a representative from the Smithsonian Institution and potential interactions with that group were discussed.

Several breakout and roundtable discussions allowed participants to hone ideas generated by the premeeting subcommittee reports and the various presentations. These were wide-ranging discussions and they clearly indicated that many detailed issues will need to be resolved by the management of the NPMGS. The idea of taking incremental steps toward building the NPMGS was discussed.

A proposed structure of the NPMGS was more clearly defined through the second workshop. The current envisioned system includes the following core elements.

- 1) A centralized hub with backup collections located at the USDA-ARS facility at Fort Collins, CO, building on the current structural and expertise resources available through the NPMGS and the Germplasm Resource Information Network (GRIN). Investments in additional equipment and personnel would be required to make this possible, but the existing framework of the NPMGS is viewed as a valuable way to leverage new investments in the NPMGS. The personnel at the Fort Collins facility are envisioned to be permanent USDA employees.
- 2) A system of "BioBanks," based primarily on existing collections (government and university, etc.), each with taxon-specific expertise.

- 3) A state-of-the-art, federated database system (likely associated with the GRIN system managed through the NPMGS) linking BioBank and hub information with connectivity to other domestic and international collection databases to dramatically enhance the usefulness of the collections. More than a catalog, this is envisioned as serving as an integration point for information on collection specifics, genomics, molecular genetics, taxonomy, population genetics, and ecology. Sophisticated user-friendly informatics tools will be incorporated to generate a knowledge-rich platform for idea generation.
- 4) A management structure involving a Steering Committee of federal employees and a Scientific Advisory Board made up of stakeholders, including APS representatives.

The meeting participants agreed to continue as a working group and communication has continued via e-mail. A draft executive summary has been generated and will be provided to the APS PPB for distribution to policymakers during their midyear meetings in Washington, DC. Finally, a white paper more fully describing the NPMGS plan, by incorporating ideas generated at the second workshop, is underway. The executive summary and the white paper will be posted under Public Policy Initiatives on APSnet at www.apsnet.org/members/ppb.

Persons with an interest in this issue or who have thoughts about the gaps in the current system or needed components of an NPMGS are encouraged to contact the organizational committee members listed above or PPB Chair **Jacque Fletcher** at jacqueline.fletcher@okstate.edu. ■

