## Critical Components for a National Culture Collection System the Focus of Recent Workshop

Scott Gold, University of Georgia, sgold@uga.edu; Jeff Jones, University of Florida, jbjones@ufl.edu; and Kellye Eversole, Eversole Associates, eversole@eversoleassociates.com

Under the auspices of the APS Public Policy Board and the APS Ad Hoc Committee on Culture Collections and with support and participation from USDA-APHIS and USDA-ARS, a Workshop to Facilitate the Establishment of a National Culture Collection System (NCCS) was held November 13–14, 2007, at the USDA George Washington Carver Center in Beltsville, MD.

Nineteen participants, representing APS, universities, industry, the Fungal Genetics Stock Center, USDA-APHIS, USDA-ARS, and the National Science Foundation, met to outline a draft of the critical components of a NCCS and to determine directions toward its establishment. The

establishment of the NCCS 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.

The meeting began with presentations on efforts to catalog USDA-ARS collections and with overviews from industry,



Attendees with broad representation and expertise from academia, industry, and government participated in the workshop.

stock center, and university representatives on the current status of and future concerns for existing collections. It was evident from presentations and discussions that there are a number of efforts by U.S. and international groups that parallel our goals. For example, the U.S. Office of Science and Technology Policy (OSTP) has ongoing efforts toward culture collection preservation; collaboration with OSTP and/or other groups could allow for significant leverage with any efforts to protect and preserve useful culture collections of plant-associated microbes.

A primary focus for this first workshop was to outline the critical components of a NCCS. Although the specific nature of the NCCS was not determined, two basic models were discussed: a centralized and a decentralized system. It was the consensus that a hybrid, decentralized "hub-and-spokes" system could best utilize existing resources while providing long-term stability. A driving force for this model was that the expertise associated with current taxon-specific culture collections is critical for their continued use and value. The Germplasm Resources Information Network (GRIN)



Participants of the workshop discussed potential critical components of a national system.

established by the U.S. Congress could serve as an effective model. The National Plant Germplasm System, a section of GRIN, relies on a central Database Management Unit and a Plant Exchange Office that interact with "spoke" organizations.

Critical components envisioned for a hub-andspoke-type NCCS include 1) a permanently funded and appropriately staffed centralized database and repository, 2) a catalogue of both historical and genetic information on each isolate, 3) backup

cultures from key collections at the various spoke organizations, and 4) a mechanism for capture of collections at risk due to attrition of spoke curators. The role of public strain distribution by spokes and/or the hub would likely be determined on a case-by-case agreement between a spoke and the hub.

The meeting participants agreed to continue as a working group and communication has continued via e-mail. Deeper analyses of several issues, including a better understanding of the current status of plant-associated culture collections, will be necessary to aid in designing an effective NCCS. The USDA-ARS and the APS Ad Hoc Committee on Culture Collections both recently carried out extensive surveys to identify and characterize existing culture collections and the working group is providing feedback regarding the potential need for additional, more focused survey efforts to fill gaps in this information. Additionally, a thorough cost-benefit analysis was recommended before moving toward requests for funding to initiate the system. Outsourcing of such an analysis was considered and a decision on the approach and funding for that effort remains to be determined. Members of this working group plan to publicize these efforts, and seek input from the scientific community, at planned national and international meetings, and a follow-up conference with broader participation is under consideration for 2008.

There was a strong recognition by workshop participants that the time is ripe for establishment of an NCCS that includes plant-associated microbes and that the current convergence of interest with other groups provides an impetus not previously witnessed. However, much work remains to flesh out the details of the system and its essential perpetual support.

Persons with an interest in this issue or who have thoughts about the gaps in the current system or needed components of an NCCS are encouraged to contact the chair of the PPB or the Ad Hoc Committee, Jacque Fletcher (jacqueline.fletcher@okstate.edu) or Jeff Jones (JBJones@ufl.edu), respectively.