

NETWORKING CULTURE COLLECTIONS IN THE USA

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There is much optimism and many opportunities for culture collections in the USA. Coordinated efforts enjoy widespread support and benefit from a growing sense of the significant value of stewardship. Collections have enjoyed high level attention with surveys being conducted by USDA ARS (1), the Office of Science and Technology Policy (2) and professional societies such as the American Phytopathological Society. While the ARS survey identified relatively few collections, 498 out of 596 respondents to the APS survey indicated that they had a collection of microbial germplasm in their laboratories. USDA supported collections include the NRRL laboratory in Peoria (also a International Depository Authority), the Systematic Mycology and Microbiology Laboratory (3), the ARS Collection of Entomopathogenic Fungal Cultures (4), the USDA-ARS National Rhizobium Germplasm Collection (5), and the US Forest Service Center For Forest Mycology Research (6). The smaller collections identified by the APS survey are typically housed at university, corporate or government laboratories, often tied to an ongoing research program at the location. Similarly, collections supported by the US National Science Foundation Living Stock Collection program are housed at universities and research institutions. The NSF program is largely for genetic research organisms such as *Neurospora*, *Drosophila*, *E. coli*, *Bacillus*, *Chlamydomonas*, *Arabidopsis*, as well as Algae, Mycorrhizal fungi, and deer mice. It does make grants for short term projects and it was the panel to which a US working group submitted a Research Coordination Network grant proposal in July 2010 (7). Among the goals of the RCN proposal are the development of long term support for plant associated microbial germplasm collections, similar to that provided for plant germplasm or microbial germplasm associated with human or animal disease or toxin production. This proposal specifically includes ties to the GBRCN and WFCC.

The US National Institutes of Health has recently announced support of up to \$140 million for consolidation of several Division of Microbiology and Infectious Diseases collections into a new entity called the Microbiology and Infectious Diseases Biological Resources Repository(8). The NIH supports additional collections of specimens and among the largest are the NIH AIDS Research and Reference Reagent Program as well as the The NIGMS Human Genetic Cell Repository, and the Residual Tissue Repository Program. In 2010, the National Cancer Institute announced the formation of a cancer Human Biobank (caHUB, 9). This grew out of the 2004 formation of a trans-NCI committee, called the NCI Biorepository Coordinating Committee and is for an initial award period of 1 year with renewal up to 5 years.

The current favorable climate regarding collection activities make this an ideal time to build connections with US collection efforts. The APS/USDA group currently working towards the development of a National Plant Microbial Germplasm System has proposed a network of collections distributed among the universities and national laboratories, leveraging the expertise in different regions. The network will have a central coordinating hub which also serves as an offsite backup for fully accessioned materials. Establishing a national network has the added advantages of promoting best practices, protecting collections during funding or personnel changes, and enforcing biosafety and security standards.

1) <http://www.ars.usda.gov/is/np/ARSCollections/ARSCollections.pdf>

2) <http://www.whitehouse.gov/sites/default/files/sci-collections-report-2009-rev2.pdf>

3) http://www.ars.usda.gov/Main/site_main.htm?modecode=12-75-39-00

4) <http://www.ars.usda.gov/is/np/systematics/fungibact.htm>

5) <http://www.ars.usda.gov/is/np/systematics/rhizobium.htm>

6) <http://www.fpl.fs.fed.us/research/centers/mycology/culture-collection.shtml>

7) <http://www.nsf.gov/pubs/2010/nsf10566/nsf10566.htm>

8) <https://www.fbo.gov/spg/HHS/NIH/NIAID/Awards/HHSN272201000027C.html>

9) <https://www.fbo.gov/spg/HHS/NIH/FCRF/ST10-1035/listing.html>