

Oral presentation

Utilizing the National Plant Germplasm System (NPGS) for medicinal plant research

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Introduction. The National Plant Germplasm System (NPGS) is a cooperative effort by public (State and Federal) and private organizations to preserve the genetic diversity of plants by long-term storage of germplasm, primarily in the form of seeds. The mission of the NPGS includes: 1.) the conservation of diverse crop germplasm through collection and acquisition; 2.) conducting a variety of germplasm-related research; and 3.) encouraging the use of the germplasm collections and associated information for research, crop improvement and product development. Accession data is maintained via the Germplasm Resources Information Network's database (GRIN <http://www.ars-grin.gov/npgs/>). 466,173 accessions are represented in the NPGS as of 1 April 2007. The presentation will summarize how medicinal plant researchers can utilize the NPGS both for acquisition and long-term preservation of research collections. The collections are suitable for a wide variety of research projects ranging from ornamental breeding studies to LC/GC analysis of metabolites of interest. Examples of current research projects will be discussed. The *Echinacea* collection will be used as a model example of a comprehensive collection which has been preserved via the NPGS and is currently available for research purposes. Illustrations of seed and control-pollinated cage propagation methods, and facilities utilized for seed cleaning, testing and storage will also be included. In addition, methods for utilization of the GRIN database to view evaluation data, locate passport information and acquire germplasm will be provided.

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