

Micropropagation as a Tool in Domestication of Medicinal Crops. RITA M. MORAES¹, Ana M.S. Pereira², Bianca Bertoni², Antonio L. Cerdeira³, and Ikhlas Khan¹. ¹National Center for Natural Products Research, The University of Mississippi, University, MS, 38655; ²University of Ribeirao Preto, Av. Costabile Romano, 2201, Ribeirao Preto, SP, 14.096-380, BRAZIL; and ³Brazilian Department of Agriculture, Embrapa/Environment, C.P. 69, Jaguariuna, SP, 13820-000, BRAZIL. Email: rmoraes@olemiss.edu

Micropropagation of medicinal species with broad applications varying from metabolite production to breeding for high yielding (elite) plants has been described by many researchers. During the past decade, we at the National Center for Natural Products Research (NCNPR) have engaged in a program called Medicinal Crops for Small Farmers. Tissue culture has been used as tool to select and maintain elite plants with anticancer and immune stimulatory properties. *Podophyllum peltatum* and *Echinacea* are examples of American species that are being developed as crops for US farmers. In the pursuit of our goal, NCNPR has collaborated with other institutions broadening our experiences. Together with two Brazilian institutions, The University of Ribeirao Preto and EMBRAPA (Brazilian Department of Agriculture Research Service/Environment), micropropagation protocols were developed for producing elite plants. In addition, a germplasm bank of micropropagated medicinal plants native to the Brazilian savanna (Cerrado) was established. Cerrado is a highly depleted biome and has been considered a global hot spot of biodiversity. This discussion will focus on the importance of micropropagation as an important technique for aiding research programs on *ex situ* conservation, drug discovery and drug development.