Introduction to the National Institutes of Health Botanical Research Centers Program¹,²

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The National Institutes of Health (NIH) currently funds 6 Dietary Supplement Research Centers focused on botanicals, which are collectively referred to as the Botanical Research Centers Program (BRCP). The BRCP has its origins in legislation passed by the US Congress in 1994 (1). The Dietary Supplement Health and Education Act assured consumers ready access to thousands of dietary supplement products, including many containing botanical ingredients. However, despite widespread use of dietary supplements with botanical ingredients and promising science (2–4), biomedical research in this area was relatively limited. As a consequence, the efficacy and safety of many widely used botanical ingredients had not been adequately evaluated.

In 1999 the Office of Dietary Supplements at the NIH received funding to develop a botanical research initiative with major research institutions in the United States. The BRCP is the most visible activity of the initiative. It is intended to advance the spectrum of botanical research activities ranging from plant identification to early-phase clinical studies, with preclinical research encouraged as the primary focus of center activities. The chemical complexity of botanicals poses some unique research challenges. For example, in contrast with synthetic drugs, botanicals are complex mixtures of complex compounds with multiple bioactive constituents that sometimes have synergistic or antagonistic effects. The BRCP is currently funded jointly by the Office of Dietary Supplements and by the National Center for Complementary and Alternative Medicine with substantial previous support from the National Institute of Environmental Health Sciences, the National Institute of General Medical Sciences, and the Office of Research on Women’s Health at NIH.

Each center has a thematic focus with high potential for being translated into benefits for human health. All centers operate under a funding mechanism that supports a broad collaborative, interdisciplinary research program consisting of highly integrated activities and associated research infrastructure. Centers are expected to include at least 3 primary research projects and must also have at least one research core, such as a botany resource or a proteomics laboratory. Each center is expected to reach a level of achievement exceeding that expected from the sum of its individual parts. Building multidisciplinary research teams, using contemporary technologies, and conducting research that considers the complexity of human biology are very much in line with the philosophy of the NIH Roadmap (5).

At the annual meeting of the BRCP scientists in 2005, the center directors agreed to submit a workshop proposal for the 2007 Experimental Biology Annual Meeting to present research conducted within the BRCP. As learning objectives for the workshop, the center investigators proposed to share research strategies used by the BRCP scientists and describe approaches for testing the efficacy and safety of botanicals, particularly those used in dietary supplements. The articles in this supplement were prepared by center scientists who gave presentations at the workshop.

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REFERENCES


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