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The Herbal Dispatch

The Medicinal Botanical Program
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Feature Articles:

Individual Highlights:

Researcher-Producer Forum at MSU

The Medicinal Botanical Program at Mountain State University will offer a researcher- producer forum as part of the 3rd Symposium in September.

The need for this sort of program was identified at a recent meeting of medicinal plant researchers and herb producers in Rutland, OH.

The forum will be moderated by renowned Appalachian herb researcher, Dr. Jeanine Davis, of North Carolina State University in Fletcher. The forum will take place on Thursday morning, September 23rd.

This unique opportunity is offered for herb growers to obtain specific information about their crops. Researchers conducting studies on production of medicinal plants will meet with interested growers in the format of small round table discussions.

The symposium will be held Thursday, Friday and Saturday, September 23-25, 2004. Registration is only $75 before July 31 and includes meals.

For more information about the 3rd Symposium on Medicinal and Aromatic Plants (including the schedule of events and speakers), visit our website or contact Shannon Howard at 304-929-1630 or showard@mountainstate.edu

APPALACHIAN NEWS

American Chestnut Cooperator's Foundation Teams up with MSU's Medicinal Botanical Program

Submitted by:
Dean Myles
Student Intern
Medicinal Botanical Project, MSU

The Medicinal Botanical Program's Herb Garden and Walking Trail has been selected as a site to study and monitor American chestnut seedlings.

The American Chestnut Cooperator's Foundation (ACCF) has selected the woodland portion of MSU's Walking Trail for plantings. The ACCF, sponsored by Virginia Tech's Department of Plant Pathology, Physiology and Weed Science, is a nonprofit scientific and educational foundation dedicated to restoring the American chestnut tree to eastern forests. The ACCF's priorities are to develop blight-resistant all-

(cont'd p.2)

ACCF Teams Up with MSU's Medicinal Botanical Program

American chestnut, and biological control measures against blight in the forest environment.

"It is not beyond the grasp of science to restore the American chestnut to economic importance within the next fifty years", Gary Griffin, Virginia Tech

According to the ACCF, 3.5 billion American chestnuts were destroyed by blight in the early 20th century. Professor Gary Griffin of Virginia Tech states "It is not beyond the grasp of science to restore the American chestnut to economic importance within the next fifty years".

Two blight-resist seedlings have been planted in the woodland portion of the trail. The seedlings will be monitored for the first stages of blight by Dr. John Elkins of the ACCF.

The Herb Garden and Walking Trail is located on the MSU campus, along S. Kanawha Street. It is divided into two portions: an upper garden containing medicinal plants grouped by their use in medicine, and a walking trail that slopes down the back of the lot, consisting of native Appalachian plants.

The Medicinal Botanical Program is excited to be a part of this research effort. As part of our commitment to conserve the Appalachian forest, the reestablishment of the American chestnut forest is a worthy goal.

To learn more on how you can help, please contact the ACCF at http://www.ppws.vt.edu/griffin/accf.html.

Appalachian Plant Profile: Goldenseal

Submitted by:
Dean Myles
Student Intern
Medicinal Botanical Project, MSU

Goldenseal, *Hydrastis canadensis,* is a highly prized medicinal plant native to the Appalachian Mountains. The perennial root, also known as yellow root, produces a single stem 6-12 inches tall. Late April through early May, each stem will bear two leaves; one large and one small. The plant can be aged from the formation of the second leaf which appears during the third year of growth. The leaves have 5-7 pointed lobes. The single greenish-white flower appears only for a few days, followed by the red berry in late summer.

Goldenseal can be found growing in rich open woodlands. This plant prefers a northern to eastern aspect and may be found in the coves above the intermittent stream bed that drains the cove. Goldenseal can be found growing with ginseng, bloodroot, and spice bush. Given the right conditions, goldenseal can form large patches throughout its range. Although the stem and leaves have the alkaloid, berberine, present, the rhizome is usually collected.

Goldenseal can be cultivated, if woodland conditions are matched. The plant should be propagated from rhizomes for best results. After the formation of the second leaf, the crop will be ready to harvest, usually within 2 years. As with all native wild plants, sustainable harvest is critical to prevent extinction. Sustainable goldenseal harvest includes: (1) harvesting only mature plants, with two leaves; (2) leaving 20% of population for regeneration; and (3) rotating harvest from year to year.

SCIENCE TODAY

Mycotoxin Contamination in Ginseng may Explain Estrogenic Effects

Conflicting evidence has emerged regarding the estrogenic effects of both American and Asian ginseng (*Panax quinquefolius* L. and *Panax ginseng* C.A. Meyer, respectively).

A study by researchers at Clemson University in South Carolina showed that the estrogenic effects observed are likely due to a contaminant.

Experiments were conducted using an estrogen receptor binding assay, testing the ability of ginseng extracts to bind recombinant receptors of estrogen receptor alpha (ER alpha) and beta (ER beta).

Hot water and methanol based extracts of American and Asian ginseng roots were prepared. Phytoestrogenic activity was noted in both extracts, with the methanol extracts showing significantly higher binding affinity than the hot water extracts. Both ER alpha and ER beta were bound by the root extracts.

Further analysis revealed that binding was attributable to a mycotoxin produced by *Fusarium species,* called zearalenone. The major ginsenosides, RB1 and Rb2 did not bind the ERs, when isolated

The authors conclude that mycotoxin contaminants may help to explain the disparate literature reports. They also suggest that conflicting evidence may also be due to differences in extraction methods and the particular plant species that is actually being studied.

Gray SL, Lackey BR, Tate PL, Riley MB, Camper ND. Mycotoxins in Root Extracts of American and Asian Ginseng Bind Estrogen Receptors alpha and beta*. Exp Biol Med (Maywood)* 2004 Jun;229(6):560-8.

Further analysis revealed that binding was attributable to a mycotoxin produced by Fusarium species, called zearalenone.

Gingko Extract does not Appear to Effect Blood Coagulation Parameters

The use of *Gingko biloba* has been implicated in numerous case reports of hemorrhagic events. German researchers set out to determine the effect of a specific gingko extract, EGb 761, on blood clotting in a clinical trial.

Fifty healthy male subjects were administered a crossover treatment with 2 x 120 mg/day EGb 761 or placebo in randomized sequence for seven days.

Twenty nine coagulation and bleeding parameters were assessed. Vital signs and adverse events were also monitored.

The results showed none of the parameters demonstrated any evidence of an inhibition of blood coagulation and platelet aggregation through EGb 761, as compared with placebo. The only difference was a slight increase in GI complaints in the group given gingko.

The authors conclude that the results did not reveal any evidence to substantiate a causal relationship between the administration of EGb 761 and hemorrhagic complications.

Kohler S, Funk P, Kieser M. Influence of a 7-day treatment with Ginkgo biloba special extract EGb 761 on bleeding time and coagulation: a randomized, placebo-controlled, double-blind study in healthy volunteers. *Blood Coagul Fibrinolysis* 2004 Jun;15(4):303-309.

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NATURAL MEDICINE NEWS

The results of the survey showed that 36 percent of U.S. adults aged 18 years and over use some form of complementary and alternative medicine (CAM).

NCCAM Releases Results of Study on CAM Use by Public

The National Center for Complementary and Alternative Medicine released the results of a large scale study of the use of Complementary and Alternative Medicine (CAM) by Americans.

The survey was conducted as part of the Centers for Disease Control and Prevention's (CDC) 2002 National Health Interview Survey (NHIS). 31,000 individuals were represented in the study. The results from the CAM portion of the NHIS provide the most comprehensive and reliable data to date describing CAM use by the U.S. adult population.

Questions on the survey involved 27 types of CAM therapies commonly used in the United States, including 10 types of provider-based therapies, such as acupuncture and chiropractic, and 17 other therapies that do not require a provider, such as natural products (herbs or botanical products), special diets, and megavitamin therapy.

The results of the survey showed that 36 percent of U.S. adults aged 18 years and over use some form of complementary and alternative medicine (CAM). CAM is defined as a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine. If prayer for health improvement is included, the survey results rise to 62 percent of Americans using CAM. CAM use was greater among a variety of population groups, including women; people with higher education; those who had been hospitalized within the past year; and former smokers, compared to current smokers or those who had never smoked.

The fact that more than one-third of Americans use CAM therapies emphasizes the necessity to continue to fund research in this area, and to further examine inclusion and expanded coverage of these therapies in public and private health care plans.

10 Most Commonly Used CAM Therapies

1. Prayer for own health, 43%

2. Prayer by others for the respondent's health, 24%

3. Natural products (such as herbs, other botanicals, and enzymes), 19%

4. Deep breathing exercises, 12%

5. Participation in prayer group for own health, 10%

6. Meditation, 8%

7. Chiropractic care, 8%

8. Yoga, 5%

9. Massage, 5%

10. Diet-based therapies (such as Atkins, Pritikin, Ornish, and Zone diets), 4%

Other Findings

* 55% of adults said they were most likely to use CAM because they believed that it would help them when combined with conventional medical treatments;

* 50% thought CAM would be interesting to try;

* 26% used CAM because a conventional medical professional suggested they try it.

HERB CONFERENCES AND EVENTS

Herbal Alternatives Forum for Members of Congress, June 17. Washington, DC. Dr. James Duke, the nation's top herbal expert and 30 year USDA veteran, will present scientific evidence record of herbs and the 2000-year safety**.** Visit the Citizens for Health website to send a message to your congressperson today. Website: www.citizens.org/briefing

AHG Four Day Clinical Intensive, June 18-21. Laurel, MD. Nationally known herbal practitioners and instructors will guide participants in clinical practice, client intake, physical assessment, formulation strategies, and more. Contact: AHG. Ph: (770)751-6021. E-mail: ahgoffice@earthlink.net**.**

La Paix Herb Farm's 2004 Lavender Fair, June 19-20. Alum Bridge, WV. Website: www.lapaixherbfarmproducts.com/lavenderfair.htm

Invasives, Forest Health and Forest Productivity; Potential impacts and Opportunities for Control, June 29. Crummies Crek Farm, Arnoldsburg, WV. The intention of the program is to show foresters and natural resource managers how to recognize, evaluate and potentially treat populations of invasive plants that are beginning to impact natural regeneration and forest understory vegetation. The entire schedule is listed at www.mountainstate.edu/usda/events. Contact WV Division of Forestry, Ph: (304)558-2788.

The 2004 International Herb Association (IHA) Conference, July 8-11. Wichita, KS**.** This year's theme: Reuniting Herb Professionals, New Insights from the American Prairie. Website: www.iherb.org/conference.html

North Carolina Herb Association's Wild Herb Weekend Summer Educational Conference, July 23-25. Valle Crucis, NC. With keynote speaker Jim Long, this conference will offer three herbal class tracks for the hobbyist and professional alike. Contact: Guy Ross. Ph: (828)478-9221.

An International Training Program on Essential Oils, Medicinal, & Aromatic Plants, July 26-August 3. New Brunswick, NJ. Sponsored by Rutgers University, this week long intensive course will cover essential oils, medicinal and aromatic plants and science-driven marketing. Website: www.asnapp.org.

CAM CONFERENCES AND EVENTS

Food as Medicine Professional Training Program, June 20-26. Berkeley, CA. Sponsored by the Center for Mind-Body Medicine and The Office of Continuing Medical Education and the Center for Spirituality and healing at the University of Michigan, this training program will help physicians, medical school faculty and others who want to integrate nutrition into clinical practice and medical education. Contact: Vickie Green. Ph: (202)966-7338. E-mail: vgreen@cmbm.org. Website: www.cmbm.org.

Heavy Metal Detoxification, July 30 – August 1. Bellevue, WA. All the Strategies and Pitfalls with Dietrich Klinghardt, MD, PhD @ Hyatt Regency Bellevue. CONTACT: The Institute of Neurobiology, Ph: (425)822-2509; aant@neuraltherapy.com; http://www.neuraltherapy.com

American Association of Naturopathic Physicians (AANP) 19th Annual Convention and Exposition, September 7-11. Seattle, WA. CONTACT: http://www.naturopathic.org

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3rd Symposium: More Speakers Announced

The 3rd Symposium titled, "Appalachian Opportunities: Medicinal and Aromatic Plants – Technology Transfer for Growers, Health Care Providers and Entrepreneurs", will be held September 23rd-25th, 2004.

The keynote speaker will be Mark Blumenthal, founder of the American Botanical Council. Additional speakers that have been confirmed include: Hassan Amjad, MD, a Beckley physician who researches and uses herbal medicine; Maureen Rogers who runs the Herb Growing & Marketing Network; Joe-Ann McCoy, PhD of USDA, ARS in Ames, IA; James McGraw, PhD of WVU; and Ed Fletcher of Strategic Sourcing, Inc

To register for this symposium, visit our website or contact Shannon Howard at (304) 929-1630 or by email showard@mountainstate.edu The registration fee is $75 (before July 31) which includes meals.

About the Medicinal Botanical Program

Through the efforts of Senator Robert C. Byrd and a Congressional Appropriation, a specific cooperative agreement was established between Mountain State University and the United States Department of Agriculture, Agricultural Research Service-Appalachian Farming Systems Research Center in Beaver, WV. The mission of the program is to promote the medicinal, plant industry through education, marketing and outreach. Offerings include undergraduate classes, community education and a workshop series. The site also maintains a greenhouse, garden and trail, containing many native medicinal plants.

For Subscriptions or Submissions

This newsletter is edited by Jennifer J. Stagg, N.D. To submit material or announcements to *The Herbal Dispatch*: send an email message containing your edited text to Dr. Stagg at **jstagg@mountainstate.edu**

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