

BARC e-Update



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BARC is part of the USDA's Agricultural Research Service and encompasses programs at the Beltsville Agricultural Research Center; the U.S. National Arboretum in Washington, D.C.; and worksites in Chatsworth, New Jersey; Presque Isle, Maine; and McMinnville, Tennessee. BARC is the largest and most diversified agricultural research complex in the world. BARC's record of accomplishments and its ongoing programs have made it a world leader in agricultural research.

Blowing Our Own Horn!

INTRODUCING BARC's NEW FACILITIES DIRECTOR

Mrs. Tracy Wilson, BARC's new Facilities Director came on board in late November. Mrs. Wilson has been a planning/design professional for more than 18 years. She is a native of Washington, D.C., and has a Bachelor of Architecture with a secondary concentration in Urban Planning. She is a 2002 graduate of the Army's Management Staff College Sustaining Base Leadership for Managers Program, and is currently working on her Masters of Public Administration in facilities management. Her most recent federal employment before arriving at BARC was with the Department of State's Overseas Building Operations Bureau as a Design Manager and Planning Integration Manager. She managed the integrated design review process for the Standard Embassy Design program as well as planning implementation for New Embassy Compounds in Jeddah, Saudi Arabia; Managua, Nicaragua; Bamako, Mali; Accra, Ghana; Tbilisi, Georgia; and Harare, Zimbabwe.



NEW FELLOWS

Dr. Wanda Collins, Director of BARC's Plant Sciences Institute was named a Fellow of the Crop Science Society of America. This is the highest recognition given by the Society and **Dr. Walter Rawls**, Research Leader of BARC's Hydrology and Remote Sensing Laboratory, was named Fellow of the Soil Science Society of America. The announcements were made at the joint society meeting in November.

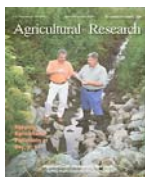
BARC SCIENTIST HONORED BY AAAS

Dr. Robert E. Davis of BARC's Molecular Plant Pathology Laboratory has been elected to the rank of Fellow in the American Association for the Advancement of Science (AAAS). Each Year the council elects members whose efforts on behalf of the advancement of science or its applications are scientifically or socially distinguished. Dr. Davis is being honored for the discovery of spiroplasmas and pioneering work on their cultivation, evolution, virulence, and host adaptation. Visit the AAAS at www.aaas.org.

Community Interest...

CHESAPEAKE BAY HIGHLIGHTED IN RECENT AGRICULTURAL RESEARCH MAGAZINE

Several Agricultural Research Service projects are highlighted in the November/December 2006 issue of Agricultural Research magazine. The article contains Research Projects in the Choptank watershed, riparian buffer zones, and nutrient management. The full story can be found by clicking on photo at left.



THE NATIONAL HERB GARDEN... NOW AVAILABLE FROM YOUR CELL PHONE!

Calling for information has a new ring at the National Arboretum. This past September, visitors to the National Herb Garden discovered that learning was just a phone call away. Signs in the garden provide a phone number and the specific stop's extension, which, when dialed, connects the listener to a recorded message about the garden's history, plants, and more. The voice on the recording might be the director, a curator, a garden volunteer, or even a well-known personality. The technology is one of the latest to hit museums and public gardens. Called cell phone tours, these new self guided educational offerings allow visitors to

individualize their experience – to listen to all of the messages, or focus on the ones that pique your interest. The number of stops is limitless, and with the phone call free, the only expense to the callers is the minutes used from their plans. The phone number can be dialed from anywhere, too. Redialing from the home or office phone allows for more convenient note taking. For more information, visit: <http://www.usna.usda.gov/Information/news/cellphonetours.html>

IT'S SCIENCE FAIR TIME

That post-holiday time of year is fast approaching – Science Projects!!! To assist in coming up with ideas for science projects as well as provide information on the components of a science fair project, check out <http://www.ars.usda.gov/is/kids>.



CURRENT RESEARCH IMPACTS

The 2006 version of BARC research impacts is now available on the web. It is a compendium of current impacts on private companies, agricultural commodities, the Chesapeake Bay and much more. The booklet can be found at: <http://www.ars.usda.gov/ba/currentimpacts>.



CONTROLLING MASTITIS INDUCED INFLAMMATION

Ms. Manuela Rinaldi, a visiting Ph.D. student from the University of Milan received a first place award for her poster presentation at the 2006 Conference of Research Workers in Animal Diseases "Cis-urocanic acid inhibits bovine neutrophil generation of extracellular superoxide." Ms. Rinaldi has been working in the laboratories of Drs. Doug Bannerman and Max Pappé of our Bovine Functional Genomics Laboratory since December 2004. Her research during her tenure at BARC has focused on the development of assays for measuring oxidative burst in bovine neutrophils. The assays that Ms. Rinaldi has developed and validated have been successfully used to screen potential anti-inflammatory compounds that downregulate neutrophil oxidative burst. The research highlighted on her poster, and performed in partnership with **Bio-Cis Pharma, Ltd.**, identified a compound, cis-urocanic acid, that preferentially downregulates extracellular, but not intracellular reactive oxygen species produced by neutrophils. Further, although this compound impairs oxidative burst activity that is potentially harmful to the mammary tissue, she has established that cis-urocanic acid does not impair the beneficial activity of neutrophils to kill bacteria. The results of this research have led to an expanded agreement with **Bio-Cis Pharma, Ltd.**, to investigate the role of this compound in diminishing inflammation during bovine



mastitis, one of the most costly diseases to animal agriculture. For more information contact Dr. Lou Gasbarre, lgasbarr@anri.barc.usda.gov.

STRAWBERRY FIELDS FOREVER LOCALLY GROWN FALL STRAWBERRIES?

Dr. Fumiomi Takeda at the ARS Appalachian Fruit Research Station, Kearneysville, West Virginia, has developed a propagation technique to produce strawberry transplants that normally flower only in the spring to flower in the fall and again in early spring (double cropping). "Camarosa", "Carmine", and "Sweet Charlie" strawberry plants that are propagated by Dr. Takeda's method and grown in high tunnels produce a half pound of large, attractive berries from October to December and nearly 2 pounds in early spring.



Dr. Kim Lewers of BARC's Fruit Laboratory is providing new strawberry breeding material to test for yield and fruit quality in this new production system. Strawberry growers on the Eastern Shore may soon be able to harvest strawberry fruit from October through December. For more information contact kimberly.lewers@usda.gov

Mark Your Calendar!

BELTSVILLE AREA DISTINGUISHED LECTURE SERIES

This seminar is open to the public



James E. Womack, PhD, Texas A&M University, College of Veterinary Medicine, Department of Veterinary Pathobiology

Date: Wednesday, February 21, 2007

Time: 10:30 a.m. - 11:30 a.m.

Place: Building 003 Auditorium, BARC-West

Title: "Evolution of Animal Genomes and Animal Genomics"

BIOLOGICAL SYSTEMS MODELING CONFERENCE

April 17 – 19, 2007 – The 37th Biological Systems Simulation Conference will be held at the Holiday Inn in College Park, Maryland. The Biological Systems Simulation Group (BSSG) brings together an international group of scientists interested in using integrated systems approaches to study agricultural and natural systems. The conference will be hosted by the BARC's Crop Systems and Global Change Laboratory. The primary focus of this year's conference will be addressing knowledge

gaps related to (1) modeling root growth and uptake of water and nutrients and (2) modeling plant responses to nutrient and water deficits. Presentations will be on a broad range of topics related to the simulation of biological systems. For further information about the meeting, please visit the web site at <http://www.ars.usda.gov/News//docs.htm?docid=14256>.

SEED EXCHANGE AT THE US NATIONAL ARBORETUM

January 27, 2007 – 12:30 pm – 4:30 pm – Growing your own plants from seed is a fun and thrifty way to while away the winter and expand the variety in your ornamental and edible gardens. Learn from the experts how to harvest, store and germinate seeds and tend to seedlings until they're ready for life in the great outdoors. Then comes the best part – share the seeds you've brought with the rest of the group! Fee \$25 (FONA Members are \$20) Registration required. Click here for more information or to register: www.usna.usda.gov/Education/events



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