ARS Scientists Help Cultivate Future Scientists

An ARS-led outreach and education program in Washington State is helping shape the destiny of future scientists. As part of the Science, Technology, Engineering, and Mathematics (STEM) Education program, Research Leader David Weller of the ARS Root Disease and Biological Control Research Unit in Pullman, WA, established a program involving scientists, engineers, staff and students from ARS, Washington State University (WSU), Bellevue Community College, USDA's Natural Resources and Conservation Service and members of The Confederated Tribes of the Colville Reservation. The program is designed to “pump up” math and science skills of students from Native American Reservations and rural communities from grade school to college. This “Pipeline Program” includes six components: teaching science and math modules in reservation and rural schools by ARS scientists and University faculty and students; organizing on-reservation summer science camps; supporting high school summer research interns in ARS labs; mentoring undergraduate minority students in STEM majors; connecting students to employment opportunities in STEM professions; and developing a biofuels program on the Colville Reservation. The Pipeline Program also partners with the WSU College Assistance Migrant Program (CAMP) to mentor and promote the success of CAMP undergraduate students in STEM majors. The program is underpinned by highly committed scientists and engineers that mentor and train young future scientists. As a national research organization, ARS is ideal to lead this program, which may serve as a model for other STEM programs across the agency.

Brown Speaks at the Western Culinary Institute About New Colorful Potatoes

On January 20, Research Geneticist Charles Brown with the ARS Vegetable and Forage Crops Research Unit in Prosser, WA, presented a talk to students at the Western Culinary Institute in Portland, OR, on new colorful specialty potatoes bred to have greater nutritional value. The new potatoes have higher antioxidant values and higher levels of vitamin C, phenolic compounds, flavonoids and potassium. These vibrantly colored potatoes come in red, purple and orange flesh colors, which can be incorporated into delicious and artfully composed meals with increased nutritional value. Brown’s talk was in conjunction with a special presentation by Chef Leif Benson, with the Western Culinary Institute, on novel methods of cooking and displaying potatoes, including a new flash pickling technique using released and near-release clones developed by Brown’s research team in collaboration with Oregon State University. Interaction with cooking schools helps inform restaurant food decisionmakers and institutional food preparers about the new potato varieties, which are pleasing to the eye and more nutritious. Chef Leif Benson is a big fan of specialty potatoes and has demonstrated creative ways of incorporating local spices and potatoes into traditional dishes.
Picklo Reappointed Associate Editor

Research Leader Matthew Picklo at the ARS Grand Forks Human Nutrition Research Center in Grand Forks, ND, was reappointed as an Associate Editor for Lipids. Lipids publishes high-quality, peer-reviewed papers and invited reviews in lipid research, including chemistry, biochemistry, clinical nutrition and metabolism. Lipids is an American Oil Chemists’ Society (AOCS) journal. AOCS is an international scientific society with more than 4,000 members in over 90 countries.

Miklas Becomes President of the Bean Improvement Cooperative

On January 20, Research Geneticist Phillip Miklas, ARS Vegetable and Forage Crops Research Unit in Prosser, WA, was honored with the role of President of the Bean Improvement Cooperative (BIC). BIC is a voluntary and informal organization designed to help information and material exchange on improving bean production worldwide. BIC has 285 members representing 40 countries, including scientists, students, private organizations and lay people interested in the mission. The organization is in its 53rd year, and Miklas is the sixth president elected since 1957.

ARS Scientists Led Visioning Session at Potato Expo

On January 6, Research Geneticist Chuck Brown, ARS Vegetable and Forage Crops Research Unit in Prosser, WA, joined forces with Plant Pathologist Stewart Gray, ARS Biological Integrated Pest Management Research Unit in Ithaca, NY, Gail Wisler, ARS National Program Leader, Beltsville, MD, and John Keeling, President of the National Potato Council, to organize a Potato Brainstorming Research Session immediately following the Potato Expo 2010 in Orlando, FL. Four different industry groups, representing different geographic areas of the United States, presented their research needs. Wisler described the new landscape of the granting programs in the National Institute of Food and Agriculture. Industry and public scientist participants expressed their priorities for various research areas proposed. University and ARS scientists presented major highlights of their research. The session was the culmination of many years of working to enhance stakeholder participation in coordination and prioritization of potato research topics. A single short document will emerge that can serve as guidelines for discussion for industry and government representatives.

NAL Hosted Annual Joint Class Day for Dietetic Interns

On January 11, the National Agricultural Library’s (NAL) Food and Nutrition Information Center (FNIC), in partnership with the University of Maryland, held its Annual Joint Class Day at NAL for more than 60 area dietetic interns on the theme, “Nutrition, Communication and Information Management.” Distinguished speakers from both the Federal Government and private sector led informative sessions, which included the importance of mobile technology for health, social media and nutrition informatics. FNIC publications and Web resources were highlighted throughout the day. This was a unique opportunity for dietetic interns to learn about cutting-edge technologies that enhance communication among nutrition and health professionals.
ARS’s Annual Recognition Program will take place June 8, 2010, at the Beltsville Agricultural Research Center in Maryland during the Administrator’s Council meeting scheduled for June 8-10, 2010.

Congratulations to all the winners for your wonderful achievements! To view a complete list of winners, see page 7.

**Erica Spackman**, Research Microbiologist with the Southeast Poultry Research Laboratory’s Exotic and Emerging Avian Viral Diseases Research Unit in Athens, GA, was one of 100 winners of the Presidential Early Career Award for Scientists and Engineers (PECASE) honored by President Obama at the White House on January 13. The PECASE is the highest award bestowed by the U.S. Government upon scientists and engineers in the early stages of their independent research careers. Spackman received the award for timely development of rapid diagnostic tests for the control of important poultry pathogens including avian influenza virus, Newcastle disease virus and enteric viruses of poultry. Honors such as this help further accentuate the importance of the President’s “Educate to Innovate” Campaign, which encourages and inspires young students to pursue studies in science, technology, engineering and math (STEM).

**Donald P. Knowles**, Research Leader, of the ARS Animal Disease Research Unit in Pullman, WA, was named a Fellow of the American Association for the Advancement of Science (AAAS). He will be honored at the AAAS Annual Meeting in San Diego, CA, this month. Knowles is being honored for distinguished contributions to the diagnosis and understanding of multiple important animal infectious diseases, and for leading an acclaimed animal disease research unit.

**Ronald F. Follett**, Research Leader of the ARS Soil Plant Nutrient Research Unit in Fort Collins, CO, won the Soil and Water Conservation Society’s most prestigious award, the Hugh Hammond Bennett Award. The award recognizes extraordinary national and international accomplishments in the conservation of soil, water and related natural resources. Follett is recognized nationally and internationally as a leading authority on soil erosion and crop productivity, water quality, soil carbon sequestration, nitrogen in the environment, global climate change, field experimental procedures and agricultural systems found inside and outside the United States.

**George Somkuti**, a Research Chemist with the ARS Dairy Processing and Products Research Unit in Wyndmoor, PA, was one of the 2009 recipients of the Outstanding Food Science Award from Purdue University’s Department of Food Science. Somkuti was recognized for his research on the molecular biology and enzyme technology of lactic fermentation bacteria that function as essential biocatalysts in dairy food production.

Somkuti was also selected for Honorary Membership by the Hungarian Society for Microbiology for his pioneering research on the biotechnology of dairy lactic cultures.

**Martin Glynn**, Food Technologist/Worksite Coordinator with the ARS Sugarbeet and Potato Research Unit’s Potato Research Worksite at East Grand Forks, MN, was awarded the National Potato Council’s Meritorious Service Award. Glynn has worked with the potato industry for over 38 years, and has helped solve numerous problems faced by our Nation’s potato growers.

**David Weller**, Research Leader of the ARS Root Disease and Biological Control Research Unit in Pullman, WA, received Washington State University’s Martin Luther King Jr. Distinguished Service Award. The award honors a select group of individuals and organizations for their work in promoting equity and diversity. Weller was honored for providing ongoing leadership in reaching out to Native Americans in Washington and encouraging
them to consider careers in mathematics, science and engineering.

Several ARS scientists will receive a Federal Laboratory Consortium National Award for Excellence in Technology Transfer at FLC’s annual meeting in April in Albuquerque, NM. The award recognizes top technology transfer activities across the Federal Government. The ARS winners include:

Research Leader Philip H. Klesius, Molecular Biologist Craig A. Shoemaker and Aquatic Pathologist Joyce J. Evans with the ARS Aquatic Animal Health Research Unit in Auburn, AL, and Chestertown, MD, will receive an award for developing novel fish vaccines to prevent severe economic losses in aquaculture. This team also won the FLC’s Southeast Region Technology Transfer Award, which was presented in January, for this research.

Research Entomologist Peter Follett and Food Technologist Marisa Wall, with the ARS Tropical Crop and Commodity Protection Research Unit, in Hilo, HI, were honored for implementing phytosanitary irradiation treatment protocols for tropical fruit.

Soil Scientists Matias B. Vanotti and Ariel A. Szogi and Research Leader Patrick G. Hunt with the ARS Coastal Plains Soil, Water and Plant Research Center in Florence, SC; Research Microbiologist Patricia D. Millner with the ARS Environmental Microbial and Food Safety Laboratory in Beltsville, MD; and Research Chemist John H. Loughrin with the ARS Animal Waste Management Research Unit in Bowling Green, KY, are being recognized for developing a second-generation treatment system for managing livestock manure. This team also won the FLC’s Southeast Region Technology Transfer Award, which was presented in January, for this research.

Plant Physiologist James Mahan, Laboratory Director and Research Leader John Burke, and

Donald Wanjura (retired) with the ARS Cropping Systems Laboratory in Lubbock, TX, and ARS Southern Plains Area Director Dan Upchurch, College Station, TX, are being recognized for developing and transferring the Biologically Identified Optimal Temperature Interactive Console (BIOTIC), an ARS-patented irrigation control technology. This team also won the FLC’s Southeast Region Technology Transfer Award, which was presented in January, for this research.

Center Director and Research Leader Anna McClung at the ARS Dale Bumpers National Rice Research Center in Stuttgart, AR, is being recognized for developing rice varieties for the processed, specialty and organic rice industry.

Research Microbiologist Mark A. Jackson with the ARS Crop Bioprotection Research Unit in Peoria, IL, and Plant Pathologist Judy Shearer from the U.S. Army Corps of Engineers’ Research and Development Center in Vicksburg, MS, are being honored for developing biological formations and techniques for managing aquatic plant pests.

Center Director Kenneth Linthicum of the ARS Center for Medical, Agricultural and Veterinary Entomology in Gainesville, FL, and Research Entomologist Seth C. Britch with the ARS Mosquito and Fly Research Unit in Gainesville, FL, along with researchers from the National Aeronautics and Space Administration (NASA), Department of Defense and the Centers for Disease Control, have been awarded the FLC’s Interagency Partnership Award. The team developed a highly innovative and effective method to forecast Rift Valley Fever (RVF) outbreaks based upon global climate conditions that determine the local and regional ecological conditions leading
to the emergence of the virus in Africa. RVF is a potentially fatal insect-borne disease of humans and animals, such as cattle, sheep, camels and goats. This award recognizes the efforts of laboratory employees from at least two different agencies who have collaboratively accomplished outstanding work in the process of transferring a technology. This team also won the FLC’s Southeast Region Honorable Mention Award, which was presented in January, for this research.

Linthicum also will receive one of two prestigious FLC Laboratory Director of the Year awards. This award is given annually to directors who have made outstanding contributions supporting technology transfer activities at their laboratory for the previous calendar year. The award also recognizes both the excellence of his efforts and his facility’s technology transfer program.

ARS Assistant Administrator Richard Brenner, Office of Technology Transfer in Beltsville, MD, has been awarded the FLC’s Outstanding Technology Transfer Professional Award. This award recognizes an individual who has demonstrated outstanding achievement in significant contributions to the transfer of federally-developed technology over and above what was called for in the normal course of work.
California Apricot Oatmeal Squares

2 sticks butter
3/4 cup brown sugar
3/4 cup sugar
2 eggs
2 teaspoons vanilla
1 1/2 cups flour
1 teaspoon salt
1 teaspoon baking soda
3 cups quick-cooking oats
1 (15 1/4 oz.) can California apricot halves, drained and diced into small pieces (approx. 1 cup)
1 12 oz. bag semi-sweet chocolate chips

Preheat oven to 375°F.

Servings: About 20

Grease a 13” x 9” pan and set aside. Melt butter, add sugars and blend well. Add eggs and vanilla and blend. In a separate bowl, combine flour, salt, baking soda and mix together. Add mixture to the butter and sugars. Add oats and blend until combined. Add apricot halves and chocolate chips. Spoon mixture evenly into pan and bake 20-25 minutes until toothpick pulls out clean; do not over bake.

Variations: Omit chocolate chips; add 2 teaspoons of cinnamon and an additional can of apricot halves (drained and diced). Other possibilities include adding 1/2 cup of walnuts, almonds or coconut.

Reprinted with permission from the Apricot Producers of California.

**Did You Know?**

California growers produce most of our Nation’s apricot supply—thanks in part to ARS’ apricot breeding program at the San Joaquin Valley Agricultural Sciences Center in Parlier, CA. Approximately 12-15 major producers grow approximately 13,000 acres of U.S. apricots. ARS researchers not only develop new apricot varieties, but also maintain the Nation’s official collection of apricot trees from around the world. ARS’ apricot varieties developed for the apricot industry account for 18% of all apricots sold in the United States.

Apricot breeding is a long, arduous process that takes many years from selection to commercial availability. Only today are consumers able to enjoy new apricot varieties whose development began more than 15 years ago. ARS’ extensive breeding program has resulted in new varieties that make it to market quicker and have higher sugar content, meeting consumer demands for sweeter tasting apricot varieties. Some of these sweeter apricots are processed into marmalades, jams and jellies for high-end gourmet markets.

ARS releases most of its varieties through the agency’s public release program. However, some varieties are patented and licensed to U.S. apricot growers to help them compete in a global marketplace.

Whether fresh, canned, juiced, frozen or dried, this delicious fruit—loaded with essential nutrients like vitamins A and C—is a tasty addition to American’s fruit offerings.

Written by Tara T. Weaver-Missick, ARS Information Staff.

Please submit story ideas and national award items to Tara T. Weaver-Missick, tara.weavermissick@ars.usda.gov or call 301-504-1663.
Annual Recognition Program Award Recipients

Distinguished Senior Research Scientist

Laboratory Director Donald L. Suarez, ARS U.S. Salinity Laboratory, Riverside, CA, for his scientific leadership and discoveries in effective water resource management.

Area Senior Research Scientists

William P. Kustas, ARS Hydrology and Remote Sensing Laboratory, Beltsville, MD, for pioneering research in the theory and application of remote sensing and soil-plant-atmosphere modeling related to hydrological and agricultural problems.

Anna Myers McClung, ARS Dale Bumpers National Rice Research Unit, Stuttgart, AR, for outstanding research and leadership accomplishments in genetic improvement and protection of rice through innovative development, adaptation, and implementation of molecular marker-assisted breeding technologies.

Jack A. Morgan, ARS Rangeland Resources Research Unit, Fort Collins, CO, for scientific contributions to global change research and dedication to the development of a unit research team where everyone can participate and succeed.

Agnes M. Rimando, ARS Natural Products Utilization Research Unit, University, MS, for research on stilbenes that positively impacted the blueberry industry and provided the basis for using these compounds to benefit human health.

Randy C. Shoemaker, ARS Corn Insects and Crop Genetics Research Unit, Ames, IA, for outstanding research on soybean genetics and genomics.

Michael Wisniewski, ARS Appalachian Fruit Research Station, Kearneysville, WV, for sustained research productivity, leadership and impact in the management of biotic and abiotic stress in fruit crops.

Bruce W. Wood, ARS Southeastern Fruit and Tree Nut Research Laboratory, Byron, GA, for excellence in pecan production and protection research and advancing mineral nutrition management of crops.

Herbert L. Rothbart Outstanding Early Career Research Scientist Award

Michael L. Looper, ARS Dale Bumpers Small Farms Research Center, Booneville, AR, for the development of pioneering research that improves production efficiency, product quality and food safety for the American cattle industry. This award winner automatically becomes the ARS nominee for the Office of Science and Technology Policy’s Presidential Early Career Awards for Scientists and Engineers Program.

Area Early Career Research Scientists

Elizabeth A. Ainsworth, ARS Global Change and Photosynthesis Research Unit, Urbana, IL, for significant contributions to understanding the impact of global change on crop physiology and production.

Dana M. Blumenthal, ARS Rangeland Resources Research Unit (RRRU), Fort Collins, CO, for outstanding scientific contributions to invasion ecology and for teamwork with the RRRU and collaborators.

David H. Gent, ARS Forage Seed and Cereal Research Unit, Corvallis, OR, for creativity and outstanding accomplishments in developing integrated pest management approaches to reduce the impact of diseases on crop productivity.

Mary J. Pantin-Jackwood, ARS Exotic and Emerging Avian Viral Diseases Research Unit, Athens, GA, for demonstrating the critical role of domestic ducks in the control of avian influenza viruses and for the characterization and improved diagnostics of novel enteric viruses of poultry.

Kerry F. Pedley, ARS Foreign Disease-Weed Research Unit, Fort Detrick, MD, for research contributions in molecular diagnostics and genetic characterization of foreign plant pathogens and for
demonstration of early career success in developing extramurally funded research programs.

Timothy A. Rinehart, ARS Southern Horticultural Laboratory, Poplarville, MS, for research and technology transfer related to the application of molecular markers and DNA fingerprinting biotechnology to breeding woody landscape plants.

Manan Sharma, ARS Environmental Microbial and Food Safety Laboratory, Beltsville, MD, for developing innovative methods for detecting internalization of pathogens into leafy greens.

Special Administrator’s Award

ARS H1N1 Influenza Virus Research Team, which includes Amy Vincent, Kelly Lager, Kay Faaberg and Marcus Kehrl, ARS Virus and Prion Research Unit, Ames, IA; Erica Spackman and David Suarez, ARS Exotic and Emerging Avian Viral Diseases Research Unit, Athens, GA; and Cyril Gay and Steven Kappes, ARS Office of National Programs, Beltsville, MD, for outstanding, rapid research support and technology development to assist USDA, cooperating agencies and the U.S. pork industry in responding to the 2009 H1N1 pandemic flu threat.

T.W. Edminster Research Associate Award

Brian Scheffler, ARS Genomics and Bioinformatics Research Unit, Stoneville, MS, for his outstanding research proposal “Development of a Genomic Breeders Toolkit for Sweet Potato.” The T.W. Edminster Award is given annually to the researcher who submits the highest-rated research proposal in the ARS Postdoctoral Research Associate Program.

Technology Transfer Awards

The Outstanding Efforts Award will be presented to a team of ARS scientists for developing an energy-efficient, environmentally friendly, and profitable livestock manure treatment system. This team includes Matias B. Vanotti, Ariel A. Szogi and Patrick G. Hunt, who work at the ARS Coastal Plains Soil, Water, and Plant Research Center in Florence, SC; Patricia D. Millner, who works at the ARS Environmental Microbial and Food Safety Laboratory in Beltsville, MD, and John H. Loughrin, who works at the ARS Animal Waste Management Research Unit in Bowling Green, KY.

The other Outstanding Efforts Award will be presented to two ARS scientists and their research partner for technology transfer activities to countless laboratories worldwide that use the QuEChERS—Quick, Easy, Cheap, Effective, Rugged and Safe—approach to monitor pesticides and other residues in foods. This team includes Steven Lehotay and Katerina Mastovska, ARS Eastern Regional Research Center, Wyndmoor, PA, and Michelangelo Anastasiades, Stuttgart, Germany.

This year, five Superior Efforts Awards will be presented to the following individuals and teams:

George E. Inglett, ARS Functional Foods Research Unit, Peoria, IL, for outstanding accomplishments in the invention and technology transfer of the multifunctional food ingredient Z-Trim, which contributes to healthier foods for people around the world.

Anna Myers McClung, ARS Dale Bumpers National Rice Research Center, Stuttgart, AR, for developing eight rice varieties resulting in new and improved processed foods, the capture of value-added markets, and expansion of the organic rice industry.

Chad Finn, ARS Horticultural Crops Research Unit, Corvallis, OR, for developing and transferring new berry varieties.

The Industrial Microwave System Technology Team, a partnership between ARS, North Carolina State University, and Industrial Microwave Systems, developed and transferred a novel continuous-flow microwave heating process for producing large containers of aseptic shelf-stable vegetable and fruit purées. The team includes Van-Den Truong, ARS Food Science Research Unit, Raleigh, NC; Josip Simunovic, Ken Swartzel, K.P. Sandeep, Pablo Coronel, Gary Cartwright, Prabhat Kumar and Laurie Steed, North Carolina State University, Raleigh, NC; and David Parrott, Industrial Microwave Systems, Morrisville, NC.
The Rift Valley Fever Outbreak Early-Warning Team is being recognized for outstanding effort and creativity in developing and transferring a Rift Valley fever outbreak early-warning system to protect global agriculture and public health. The team includes Kenneth J. Linthicum and Seth C. Britch, ARS Center for Medical, Agricultural and Veterinary Entomology, Gainesville, FL; Assaf Anyamba, Jenifer Small, Ed Pak and Compton J. Tucker, National Aeronautics and Space Administration, Greenbelt, MD; Jean-Paul Chretien, Department of Defense, Silver Spring, MD; Ralph L. Erickson, Department of Defense, Washington, DC; David C. Schnabel and Jason H. Richardson, Department of Defense, Nairobi, Kenya; Allan Hightower and Robert Breiman, Center for Disease Control, Nairobi, Kenya; Stephane de La Rocque, Food and Agriculture Organization, Rome, Italy; and Pierre B. Formenty, World Health Organization, Geneva, Switzerland.

Office Professional of the Year Award

Zarnaz Nina Ahmad, National Agricultural Library (NAL), Beltsville, MD, for outstanding performance and significant contributions to improve and streamline the operations at NAL’s Collection Services Branch.

Excellence in Information Award

The team of Joseph R. Makuch, NAL, Beltsville, MD; Stuart Gagnon, University of Maryland, College Park, MD; Cassandra Harper, formerly with Library Associates Companies, Inc., Rockville, MD; Diane Doyle, Library Associates Companies, Inc., Rockville, MD; and Charles Rewa, Natural Resources Conservation Service, Beltsville, MD, will receive this award for outstanding contributions in leading NAL’s efforts in meeting the scientific information needs of USDA’s Conservation Effects Assessment Project.

Administrator’s Outreach, Diversity, and Equal Opportunity Awards

Gwyn Watson, ARS Western Regional Research Center (WRRC), Albany, CA, will receive the Supervisory/Managerial Category award for consistent and exemplary contributions realizing the objectives of outreach, diversity, and equal opportunity for the Pacific West Area at WRRC.


Administrative and Financial Management (AFM) Support Awards for Excellence

The AFM Gold Award for Excellence will be presented to Myles H. Taniguchi, U.S. Pacific Basin Agricultural Research Center, Hilo, HI, for outstanding achievements as administrative officer at the Hilo location in coordinating the center’s construction, research unit consolidation and implementation of overall improvements to the location’s administrative office.

The AFM Silver Award for Excellence will be presented to Patrick G. Barry, AFM, Beltsville, MD, for outstanding leadership and vision throughout implementation of the design and construction program supporting the ARS portion of the American Recovery and Revitalization Act.

The AFM Bronze Award for Excellence will be presented to the ARS Information Technology Wiki Development Team for outstanding support to ARS in the conception and development of a Web-based
information repository (Wiki) to be used by the ARS
information technology community. Team members
include Paula Snell, Peoria, IL; Daniel Stieneke,
Kimberly, ID; Joy McDaniel, Beltsville, MD; Scott
Finke, Beltsville, MD; Andrea Miller, Peoria, IL;
Stephanie Jobes, Riverside, CA; and C. Gwen
Pentecost, Pullman, WA.

Michelyn Boyd, AFM, Beltsville, MD, will also
receive an AFM Bronze Award for Excellence
for outstanding contributions to the successful
implementation of WebTA and for commitment to
provide excellent customer service.