

August 2014



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Gatlin first-ever Pew Scholar from UW

By Ann Tanaka | August 2014

Jay Gatlin has been named a 2014 Pew Scholar, marking the first time a University of Wyoming faculty member has received this prestigious award.

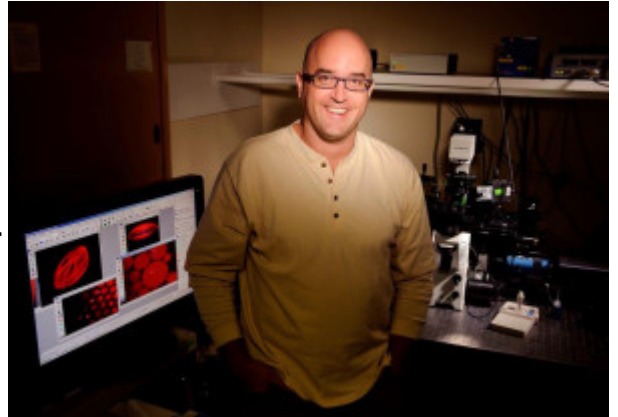
Gatlin, an assistant professor in the Department of Molecular Biology, is among 22 newly selected Pew Scholars nationally. The grant award for each is \$240,000, or \$60,000 per year for a four-year period.

Gatlin says the funding will be used to conduct further research on mitotic spindle assembly. Last November, [Gatlin and John Oakey](#), a UW assistant professor of chemical and petroleum engineering, published a paper in *Science*, recognized as one of the world's top scientific journals.

The research focused specifically on how the mitotic spindle scales with changes in cell size. Mitotic spindles are protein-based machines assembled in cells to accurately segregate their chromosomes during division. If the process of building a spindle goes awry, it can result in daughter cells with an incorrect number of chromosomes (called aneuploidy), a condition that has been linked to birth defects and cancer.

"Our research showed that, as the size of the cell in which a spindle is gets smaller, so does the spindle, suggesting that some building block required to make a spindle becomes limiting. If you don't have enough of what that building block might be, you can't build a spindle of the correct size," Gatlin says. "Now, we're trying to identify the limiting component or components."

"We found some biomolecule or protein to regulate spindle size. If you don't have enough (of these proteins), you can't grow the spindle size," he adds. "Now, we're trying to figure out what that component might be. We're conducting biochemical experiments to identify that limiting component."



Jay Gatlin, an assistant professor in the Department of Molecular Biology, has been named a Pew Scholar. The four-year research grant award – given for science relevant to the advancement of human health – is worth \$240,000.



Gatlin lab symbol

The Pew funding will cover salaries for a post-doctoral fellow or several graduate students, as well as the chemicals and supplies for the research, Gatlin says.

"You are only eligible for a Pew within your first three years of being an assistant professor," Gatlin says. "I just got in under the deadline."

The Pew Scholar award is the latest for Gatlin, who recently received the [Early Career Achievement Award](#) from the Wyoming Agricultural Experiment Station (AES) at UW.

Gatlin received his doctorate in cell and molecular biology from the University of Colorado Anschutz Medical Campus in 2005 and was a

post-doctoral fellow at the University of North Carolina-Chapel Hill until 2010.

He joined UW in 2010. In 2012, he received two National Institutes of Health grants totaling more than \$1.6 million and, in 2013, he was awarded a Whitman Research Fellowship. The award paid for Gatlin and doctoral student James Hazel to conduct summer research at the Whitman Center at the Marine Biological Laboratories in Woods Hole, Mass.

For the scholars' full abstracts and more information about the program, visit <http://bit.ly/pewscholars>.

UW's Gamma Sigma Delta receives double honors

By Ann Tanaka | August 2014



Kelly Wiseman

The Wyoming Chapter of Gamma Sigma Delta has received the 2014 New Chapter Activities Award and Bronze Award Chapter from International Gamma Sigma Delta.

Gamma Sigma Delta (GSD) is the honor society of agriculture.

"The officers have made a strong effort over the last few years to increase exposure of Gamma Sigma Delta, and these two awards reinforce those efforts," said Kelly Wiseman, GSD president for 2014-15.

"There are so many amazing people involved in agriculture, and Gamma Sigma Delta is an important avenue to recognize their worthy achievements."



Dannele Peck



Anowar Islam

Agricultural and applied economics Associate Professor Dannele Peck is president-elect, and plant sciences Associate Professor Anowar Islam is secretary-treasurer. Cole Ehmke, an academic professional in the Department of Agricultural and Applied Economics, was president in 2013, and plant sciences Assistant Professor Bill Stump was president in 2012.

The chapter presents outstanding student awards, an outstanding agriculturalist honor, and departmental awards to students.

GSD paid for a tour of Cozy Cow Dairy in Windsor, Colorado, in April.

For more information about Gamma Sigma Delta, see <http://bit.ly/gsdwyo>.

Powell Field Day Pictures

By Ann Tanaka | August 2014

No slides are available in this gallery

Heitholt begins plant sciences department head duties August 18

By Ann Tanaka | August 2014

A plant scientist with years of experience teaching students and conducting studies at research and extension centers is the new head of the [Department of Plant Sciences](#).

Jim Heitholt will leave his crop physiology position with Texas A&M University - Commerce and join the College of Agriculture and Natural Resources August 18.

"The appointment is a very exciting time for me personally," says Heitholt, a professor in the Department of Agricultural Sciences with Texas A&M University - Commerce, who also has a joint appointment in the Department of Soil and Crop Sciences at College Station.

"I am extremely grateful for this opportunity and intend to serve the students, faculty, staff, and college leadership and stakeholders as wisely and enthusiastically as I possibly can," he says.

Bret Hess, associate dean of research in the college, served as one of two interim department heads during the search to fill the position.

"I am excited to have an opportunity to work with professor Heitholt," notes Hess, who is also director of the



Soon-to-be plant sciences department head Jim Heitholt, left, visits with extension plant pathologist Bill Stump at the Powell Research and Extension Center field day July 17.

[Wyoming
Agricultural
Experiment
Station](#)

(AES) in the college.

The AES, in addition to other responsibilities, directs four research and extension (R&E) centers in Wyoming.

“He brings a wealth of experience and a comprehensive understanding of the land-grant mission to the Department of Plant Sciences,” says Hess. “I believe he is poised to continue the department’s and college’s commitment to research, teaching, extension, and community outreach.”

Heitholt coordinated teaching, service, and research activities while head of the Department of Agricultural Sciences at Commerce prior to returning to the faculty this year. He received his undergraduate and graduate degrees in agronomy from Western Illinois University and the University of Missouri, respectively, and his doctorate in crop science from the University of Kentucky.

Heitholt’s research specialty in recent years is screening genotypes for drought and insect tolerance and studying the yield potential of vegetable crops.

He has also taught for many years, and said he is passionate about teaching the next generation of plant scientists, contributing to the need of an abundant and secure food supply and encouraging sustainable practices.

He said his previous experience leading a department with a primary focus on teaching courses provides excellent perspective on what is successful in the academic environment.

“This position will allow me to make a positive impact on the training of students,” Heitholt notes. “Fostering student learning and success is a tremendous motivator.”

Heitholt spent many years at R&E centers across the southern U.S. and said he appreciates the challenges and opportunities distance brings.

Faculty members and other scientists in the plant sciences department have research at UW R&E centers at Powell, Sheridan, near Lingle and at Laramie. Department specialties include agroecology, agronomy of irrigated crops, forage agronomy, plant biotechnology, plant breeding, specialty crops, viticulture and weed management.

“It’s evident the department faculty are passionate about their extension and research projects and that they are poised to continue solving many of the region’s crop production issues,” he says.

Watching and mentoring faculty members develop creative ways to teach plant science and agroecology is enjoyable, Heitholt notes.

“It is also clear the college administration is very well-informed of the exciting projects and potential opportunities within the college’s departments and is committed to helping agriculture across the state and beyond.”

He and his wife, Debby, have one son, one daughter, one daughter-in-law and identical-twin granddaughters.

“After I spend a few days of enjoying the moment, my focus will be on the position’s responsibilities that impact the students, faculty members and college leadership,” says Heitholt. “I intend to keep my door open for students and everyone else as together, we tackle the opportunities and challenges of the academic programs in the plant sciences and related disciplines.”

Presentations

By Ann Tanaka | August 2014

Morgan, K. Invitation to attend “Emerging and New Leaders Workshop,” sponsored by the Council of Administrators of Family & Consumer Sciences, Tulsa, Okla., July 2014.

Morgan, K., and T. Bice-Wigington. “Skills & Strategies for FCS Professionals Working with Rural Individuals and Families Experiencing Persistent Health Challenges,” roundtable presentation at the Annual Conference of the American Association of Family & Consumer Sciences, St. Louis, 2014.

Presented at the Western Agricultural Economics Association Meetings, June 22-24, Colorado Springs, Colo.: **B. Rashford**, A. Mellinger-Scott, and **S. Lieske**, “Estimating the Residential Development Value of Agricultural Land: A Propensity Score Approach for Limited Data,” presented by **B. Rashford; B. Mock, K. Hansen, and R. Coupal**, “Economics of the Native Seed Industry: A Laboratory Experiment,” presented by **K. Hansen**; E. Duke, **K. Hansen**, and C. Bond, “Market Supply Analysis: Landowner Preferences for Ecosystem Service Provision,” presented by **K. Hansen**; S. Ruff, **D. Peck, C.T. Bastian**, and **W. Cook**, “Transition to Stockers as a Management Strategy to Reduce the Consequences of Contracting Brucellosis,” presented by **D. Peck; T. Hamilton, J.P. Ritten, C.T. Bastian, J. Tanaka**, and J. Derner, “Management Implications of a Changing and Variable Climate for Production in Southeast Wyoming,” presented by **C.T. Bastian; A. Baffoe-Bonnie, C.T. Bastian, D.J. Menkhaus**, and O.R. Phillips, “Stacking Subsidies in Factor Markets: An Experimental Approach,” presented by **C.T. Bastian; C. Kim, C.T. Bastian, D.J. Menkhaus**, and O.R. Phillips, “Understanding Subsidy Incidence in Imperfect Energy Markets Using Experimental Economics,” presented by **Choong Kim**.

Monies Awarded

By Ann Tanaka | August 2014

Adamovicz, Jeffrey: \$54,615 from U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service for “Brucellosis Diagnostic Testing 2014.”

Adamovicz, Jeffrey, and Brant Schumaker: \$19,000 from Wyoming Department of Agriculture (WDA) for “Evaluation of the Role of Cell-Mediated Immunity in Efficacy of Experimental Alternative Schedule of Live Attenuated RB51 Vaccine against Brucellosis in Cattle.”

Andersen, Matthew: \$20,000 from University of California, Davis for “A Bibliometric Analysis of the California Division of Agriculture and Natural Resources.”

Beck, Jeffrey: \$11,323 from Wyoming Wildlife Consultants LLC for “Population and Habitat Response of Greater Sage-Grouse to Wind Energy Development.”

Brown, Donna: \$400 from various sponsors for “Family and Consumer Science Support.”

Chichester, Kellie, Sandra Frost, and Caleb Carter: \$1,000 from Farm Credit Services of America for “Grain Bin Extrication Training for Farmers and Fire Fighters in Wyoming.”

Fox, Jonathan: \$70,750 from National Institutes of Health (NIH) for “Neuroscience Pilot Project FY15.”

Galey, Frank: \$3,300 from WDA for “Pay Potato Certification of Nebraska.”

Garcia y Garcia, Axel: \$6,000 from Astec Inc. for “Sugar Beet Variety Trial,” and \$6,000 from Germaines Seed Technology for “Germaines Seed Technology Trial.”

Geiger, Milton: \$12,458 from Colorado State University for “Sustainable Biofuel Feedstocks from Beetle-killed Wood.”

Groose, Robin, Anowar Islam, Axel Garcia y Garcia, Jerry Nachtman, Tim Anderson, Dave Bowman, and Gregor Goertz: \$20,000 from WDA for “Wyoming Production of Locally-Bred Winter Pea to Integrate Crop and Livestock Production in Wyoming.”

Hess, Bret: \$878,929 from WDA for “Seed Lab Operating 2014-2016.”

Hilgert, Christopher, and Sadanand Dhekney: \$12,500 from WDA for “Strawberry Production Using Vertical Growing Systems.”

Kniss, Andrew, David Claypool, Tim Anderson, and Ty Anderson: \$15,400 from WDA for “Reducing Direct Harvest Losses in Conservation Tillage Dry Bean Production.”

Murphy, Melanie, and Charlotte Gabrielsen: \$999 from Nature Conservancy for “Fragmentation and Climate Change: Implications for Prairie Wetland Conservation in the Northern Great Plains.”

Pasley, Christine: \$10,000 from WDA for “Preserving Wyoming’s Specialty Crops Safely.”

Raisbeck, Merl: \$490 from various sponsors for “Miscellaneous Analysis.”

Schumaker, Brant, Gerard Andrews, William Laegreid, and Sam May: \$20,000 from WDA for “Development and Validation of a Polymerase Chain Reaction (PCR) Test for Diagnosis of *Brucella abortus* Infections in Livestock in Wyoming.”

Stahl, Peter, and Dylan Bergman: \$9,360 from Pinedale Anticline Project Office for “Seasonal Technician/Research Internship in the Pinedale Anticline Project Office.”

Tanaka, John, and Kristie Maczko: \$15,000 from USDA Natural Resources Conservation Service for “Sustainable Rangelands Roundtable: Future Directions of Usable Science for Rangeland Sustainability Workshop,” and \$5,000 from USDA Agricultural Research Service for “Workshop on Future Directions of Usable Science for Rangeland Sustainability,” and \$10,000 from U.S. Geological Survey for “Sustainable Rangelands Roundtable 2014: Usable Science for Sustainable Rangelands,” and \$76,000 from USDA Forest Service for “Sustainable Rangelands Roundtable 2014.”

Ward, Naomi: \$370,645 from NIH for “Functional Significance of the Microbiome in Hirschsprung’s Enterocolitis.”

Proposals Submitted

By Ann Tanaka | August 2014

Adamovicz, Jeffrey: \$218,000 to Wyoming Livestock Board (WLSB) for “Brucellosis Testing, Regulatory Serology and Other Brucellosis Related Services for the WLSB.”

Beck, Jeffrey: \$14,861 to Wyoming Wildlife Foundation for “Red Desert Pronghorn Survival and Reproduction,” \$165,146 to Wyoming Wildlife and Natural Resource Trust for “Effectiveness of Existing Greater Sage-Grouse Conservation Measures in Wyoming,” and \$20,000 to Anadarko Petroleum Corporation for “Factors Influencing Pronghorn Survival and Reproduction in South-Central Wyoming.”

Dhekney, Sadanand: \$23,000 to U.S. Department of Agriculture (USDA) Agricultural Marketing Service for “Studying Grapevine Water Requirement and Irrigation Management Strategies in Wyoming Vineyards.”

Edwards, Jeffrey: \$25,000 to CropLife Foundation for “Creating a Sustainable Pesticide Safety Education Program for Wyoming,” and \$53,000 to Wyoming Department of Agriculture (WDA) for “Pesticide Safety Education Program.”

Edwards, Jeffrey, Justina Russell, and Catherine Wissner: \$22,946 to WDA for “Wyoming Pollinator Education Program.”

Ehmke, Cole, Denise Smith, Justina Russell, Kentz Willis, Ashley Garrelts, Caleb Carter, Windy Kelley, Scott Cotton, Sonya Moore, Angela Grant, Sue Blakey, and Maggie Palmer-McAlister: \$37,310 to USDA Risk Management Agency (RMA) for “Risk Management Trainings for Agriculturalists in the Billings Area 2014-2015.”

Freeburn, Jim: \$579,087 to USDA National Institute of Food and Agriculture (NIFA) for “2014 Western Sustainable Agriculture Research and Education (SARE) Professional Development Program Plan of Work.”

Garcia y Garcia, Axel: \$10,000 to Western Sugar Cooperative for “Phosphorus Fertility in Sugarbeets.”

Geiger, Milton: \$10,000 to Montana State University for “Exploring Small Hydroelectric in Montana: A Joint Project of the University of Wyoming Extension and Montana State University Extension.”

Hansen, Kristiana, Ginger Paige, Roger Coupal, Sara Brodnax, Esther Duke, Graham McGaffin, Jen Lamb, Anne MacKinnon, Eric Peterson, and Melanie Purcell: \$250,000 to USDA NIFA for “Development of a Conservation Exchange in the Wyoming Upper Green River Basin.”

Hansen, Kristiana, Ginger Paige, Roger Coupal, Melanie Purcell, Eric Peterson, Jen Lamb, Graham McGaffin, Anne MacKinnon, and Sara Brodnax: \$75,000 to USDA Natural Resources Conservation Service for “Implementing a Market-based Conservation Exchange in Wyoming.”

Hansen, Kristiana, Ginger Paige, Nicole Korfanta, **Roger Coupal,** Matt Holloran, Jen Lamb, Anne MacKinnon, Amy Pocewicz, Melanie Purcell, and Ted Toombs: \$499,890 to USDA NIFA for “Improving Ecosystem Service Provision Through Development of a Conservation Exchange in the Green River Basin of Southwestern Wyoming.”

Herbert, Stephen, John Stiller, Jinling Huang, and Qin Ding: \$50,450 to National Aeronautics and Space Administration for “The Evolution and Diversification of Photosynthesis.”

Hewlett, John: \$293,000 to USDA RMA for “Risk Management Education in Wyoming 2014-15.”

Islam, Anowar: \$24,500 to WDA for “Regional Assessment of Fenugreeks for Producer’s Propagation,” and \$24,998 to Western SARE for “Economic and Environmental Sustainability of Irrigated Grass-legume Mixtures.”

Islam, Anowar, Robin Groose, Steve Fransen, Glen Shewmaker, Mylen Bohle, Earl Creech, Steve Norberg, and William Woodward: \$164,999 to USDA NIFA for “Improving Alfalfa Production and Pest Control through Fertility Management in the West.”

Jabbour, Randa: \$444,961 to USDA NIFA for “A Holistic Approach to Halt Expansion of Damaging Wheat Stem Sawfly Populations.”

Jeliazkov, Valtcho, Peter Stahl, and Kristina Hufford: \$250,000 to Bureau of Land Management for “Improving Reclamation Success by Using Best Plant Genotypes for Sage-Grouse Habitat Restoration.”

Lake, Scott, Kristi Cammack, Steven Paisley, and John Ritten: \$45,447 to USDA NIFA for “Expansion of the GrowSafe Feed Intake and Behavior Monitoring System for Beef Cattle Systems Research at the University of Wyoming.”

Latchininsky, Alexandre, and Larry Debrey: \$3,357 to USDA Animal and Plant Health Inspection Service for “Wyoming Potato Cyst Nematode Survey.”

Levy, Daniel, and Krisztina Varga: \$550,000 to National Science Foundation for “Structural-functional Characterization of a Hyperactive Antifreeze Protein.”

Miller, Myrna: \$20,000 to Wyoming Animal Damage Management Board (WYADMB) for “WYADMB Rabies Surveillance FY15-16.”

Peck, Dannelle, and Rebecca Garabed: \$219,347 to USDA NIFA for “Preventing Disease at the Wildlife-livestock Interface: Neosporosis in Beef Cattle, Deer and Coyotes.”

Schell, Scott, Alexandre Latchininsky, Brian Mealor, John Connett, and Scott Cotton: \$501,492 to USDA NIFA for “Crop Protection and Pest Management Competitive Grants Program Extension Implementation Program.”

Schumaker, Brant, Gerard Andrews, Jason Gigley, William Laegreid, Myrna Miller, and William Edwards: \$69,878 to WDA for “Development and Validation of a Polymerase Chain Reaction Assay for Diagnosis of Bovine Brucellosis.”

Tanaka, John, and Kristie Maczko: \$10,000 to Wyoming Stock Growers Association for “Supplemental State-level Proposals for Public Land Ranchers Social and Economic Survey.”

Tanaka, John, David Keto, Rachel Mealor, George Ruyle, and Matt Rahr: \$99,989 to USDA NIFA for “Discovering Our Nation’s Rangelands.”

Vincenti, Virginia, Mona Schatz, Axton Betz-Hamilton, and Karen Goebel: \$4,000 to Kappa Omicron Nu for “Understanding Elder Financial Exploitation in the Family: Identifying Relational Complexities.”

Wardlaw, Mary Kay: \$2,020,899 to Wyoming Department of Family Services for “Wyoming Supplemental Nutrition Assistance Program Education 2015.”

Whipple, Glen, and Justin Derner: \$125,000 to USDA Agricultural Research Service for “Enhancing Decision-making by Agricultural Producers in Wyoming to Reduce Enterprise Risk and Increase Resilience on Working Lands with Weather Variability.”

Researchers study how complexity developed from simple cell

By Ann Tanaka | August 2014

Consider this a matter of scrambling down the family tree to its roots.

Really old roots.

Or perhaps it's more like blowing the dust off the family album - the human album - and opening to the first pages billions of years ago.

[Naomi Ward](#), an associate professor in the Department of Molecular Biology, is the senior author on a paper recently published in [Proceedings of the National Academy of Sciences USA](#) (PNAS).

The research examines how simple bacterial cells could have made the transition to more complex cells, leading to plants, animals, and humans.

The paper, "Spatially segregated transcription and translation in cells of the endomembrane-containing bacterium *Gemmata obscuriglobus*," was published online in July, and describes research supported by a grant from the National Science Foundation (NSF).

Ekaterina Gottshall, a graduate student in the Molecular and Cellular Life Sciences Ph.D. program, is first author on the paper and main contributor to the experimental work. Other authors are Assistant Professor [Jay Gatlin](#), also in molecular biology, and Corrine Seebart, an assistant research scientist in Ward's group.



Ward's version of genealogy looks at how simple bacterial cells, which do not have the nuclear membrane that separates transcription and translation (the reading of DNA instructions to make protein), could have evolved into eukaryotic cells (plants, animals, humans), which have transcription and translation occurring in separate locations.

This evolutionary step was an important part of developing greater cell complexity in ancient eukaryotic cells.

The membrane-no membrane distinction, and separation of the two processes, serves as a definition.

"This is usually considered to be a very fundamental way in which bacterial cells differ from our cells," says Ward. "However, cells of *Gemmata obscuriglobus* (the bacterium they studied) have complex internal membranes, making them look superficially like eukaryotic cells."



Ekaterina Gottshall

Gottshall wanted to know if transcription and translation could occur in different places in the cell just like in a eukaryote cell.

“We asked this question because the way in which complex eukaryotic cells evolved from a simpler ancestor is not completely understood, and we thought that studying this question in *Gemmata* might shed some light on that problem,” says Gottshall.

It is generally thought that two of the major membrane-bound compartments in animal and plant cells - mitochondria, the power plants of the cell, and chloroplasts, where photosynthesis occurs - were formed when ancient bacteria took up residence in an ancient proto-eukaryotic cell.

Some estimates place the move-in date around 1.8 billion years ago. Bacterial microfossils first appear about 3.5 billion years ago.

Ward and her research group found a substantial amount of *G. obscuriglobus* translation does occur in a different place from transcription, as is found in eukaryotic cells.

“Although this is not the first time this has been reported for bacteria, it is the first time it has been reported for such a complex bacterial cell,” says Ward. “Although we don’t know whether this uncoupled gene expression in *Gemmata* arose in the same way it did in the ancient eukaryotic cell, it shows us one possible way in which it might have been organized.”

The research has yielded another product unusual in molecular biology or other kinds of experimental science.

Ward recently participated in an art-science collaborative experiment ([The Ucross-Pollination Experiment](#)), organized by UW philosophy Professor Jeff Lockwood. She collaborated with philosophy professor H.L. Hix to explore form in poetry and science, and one of the products was a poem based on the *PNAS* paper. See a [video](#) of the experiment.

Ward believes the poem helps achieve one of the goals of the NSF as well as the Ucross Experiment (supported by the Ucross Foundation and the Wyoming Humanities Council, and a diversity of UW departments and programs), to make science more approachable to non-scientists.

UW Extension's 100th anniversary traveling exhibit at Wyoming State Fair and Rodeo

By Ann Tanaka | August 2014



Marion Neff of Hiland raised 27 bum lambs for his 4-H project. Natrona County, 1942

One hundred years of Wyoming residents striving to improve their lives is reflected in a traveling exhibit on display during the [Wyoming State Fair and Rodeo](#) in Douglas.

The [University of Wyoming Extension's](#) interactive exhibit celebrating its 100th anniversary includes touchscreen technology and standing presentation boards showing its engagement with citizens since 1913.

The exhibit will be in the [Peabody Energy Ag and Natural Resources Center](#) from Sunday, August 10, through Saturday, August 16. The center also houses an exhibit from the College of Agriculture and Natural Resources.

"UW Extension has helped Wyoming citizens survive and thrive for 100 years," says Tana Stith, manager of UW Extension's Office of Communications and Technology, which created the displays. "This exhibit looks back at the many lives that have been improved through extension educational programs."

The effects of world wars, the Depression and drought are shown but also those issues with a Wyoming touch - one woman rode a horse 10 miles in a blizzard to get to a hat-making workshop in Cokeville in 1922. One workshop attendee said she had not had a hat in seven years.

"As an organization, UW Extension continually develops educational programs that meet the needs of the times," notes Stith. "This traveling exhibit is our way of celebrating a rich history as well as a promising future of helping improve the lives of Wyoming's citizens."

A reception to celebrate the 100th anniversary is 1:30-3 p.m. Wednesday, August 13, in the center.

Changing Faces, Changing Places

By Ann Tanaka | August 2014

Welcome:

Fulton, Samantha: Powell Research and Extension Center, office associate (4/14)

Hans, Michelle: Natrona County UW Extension, Cent\$ible Nutrition program assistant (3/17)

Heitholt, Jim: Plant sciences, department head (8/15)

Lyuksyutova, Anna: Molecular biology, research professor (4/1)

McKinley, Marilyn: Platte County UW Extension, administrative assistant (5/22)

McTigue, Kristin: Family and consumer sciences, assistant lecturer (3/1)

Sbatella, Gustavo: Plant sciences, irrigated crop and weed management specialist, assistant professor (7/31)

Shaffer, Elizabeth: Sheridan County UW Extension, 4-H educator (6/30)

Stump, Bill: Plant sciences, UW Extension plant pathologist, assistant professor (7/1)

Wolfe, Dori: Ecosystem science and management, laboratory assistant (2/13)

Farewell:

Frost, Sandra: Park County UW Extension, extension educator (6/11)

Hanson, Marie: UW Extension, administrative associate (8/1)

LaBreck, Patrick: Veterinary sciences, research scientist, assistant (6/26)

Mills, Kenneth: Veterinary sciences, professor (5/10)

Montgomery, Donald: Veterinary sciences, professor (5/10)

Latest videos from University of Wyoming Extension

By Ann Tanaka | August 2014

Growing Leafy Vegetables

What to look for when selecting your 4-H market beef

Growing cucumbers

Weed barrier for weed control

Estimating forage production

Deadheading lilacs

White Mountain petroglyphs

Big Horn County

Washakie County

Wyoming Seed Analysis Lab