

March 2014



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UW biomechanics research draws scientist early career award

By Ann Tanaka | March 2014

Work in the biomechanics of cell division and the cell biology of cancer has earned Assistant Professor Jay Gatlin in the Department of Molecular the Early Career Achievement Award from the Wyoming Agricultural Experiment Station (AES).

He received the honor February 12 during the AES honors banquet in Laramie.

“Jay Gatlin’s research accomplishments are absolutely amazing for a scientist at this stage of his career,” notes Bret Hess, associate dean of research in the college and AES director. “Having received a perfect score on a National Institutes of Health (NIH) grant and publishing results of his research from UW in *Science* are testaments to the quality of his work. The college is blessed to have a scientist of Jay’s caliber.”

University of Wyoming president Dick McGinity spoke to the audience and acknowledged the importance of the land-grant university’s mission of boosting the state’s economy and the general well-being of its citizens.

Gatlin joined UW in 2010. In 2012, Gatlin receive two NIH grants totaling more than \$1.6 million. In 2013, he received a research award from the Marine Biological Laboratory. The grant paid for Gatlin and doctoral student James Hazel to conduct research at the Woods Hole Oceanographic Institute laboratories in Massachusetts. Last November, Gatlin and his laboratory published a paper in *Science* - the most prestigious scientific journal in the United States.

“Although these remarkable accomplishments should command the utmost respect, Jay doesn’t let them influence his attitude and demeanor,” says Hess. “He is the same kind, likable person everyone has come to know.”

Other award nominees were Anowar Islam and Urszula Norton, who are assistant professors in the Department of Plant Sciences.

Islam began as an assistant professor in 2008. He is author on 27 peer-reviewed articles in scientific journals with eight additional research articles in various stages of preparation. In addition, he is an author on 73 extension publications from UW since 2009.

Islam has been principal investigator or co-PI for research funding of nearly \$2 million. He has achieved international recognition for his work, having received a BRIDGE Fellowship from the Japan Society for the Promotion of Science. He has also been recognized at home with an Early Career Service Award for Professional Excellence in Extension and Research



Jay Gatlin accepts the Early Career Research Award with, from left, dean Frank Galey, Dorothy Yates, associate vice president, and Bill Gern, vice president, of the UW Office of Research and Economic Development.

Norton joined UW in 2009 and has received more than \$7.5 million in grants. Projects range from local, applied research to increase the sustainability of Wyoming agricultural land to research to increase conservation program adoption in Africa. Norton's publication record includes 14 peer-reviewed publications with six more in the submission process. She has also produced 14 field-day bulletins in the last three years.

Her impact extends beyond grant dollars and manuscript placement: she engages students, community members, and fellow scholars through her research program, her nomination notes. Findings from her soil and trace gas monitoring in the Medicine Bow Forest helped area residents understand the short- and long-term effects of pine bark beetle on forest ecology, both above and below the surface. Globally, she and her collaborators have built important relationships with local scholars, community members, small-holder farmers and students to build agricultural productivity in low-resource areas.

Celebrating 20

By Ann Tanaka | March 2014

Past and current agroecology faculty members discussed the origins of the program and past and current students offered why they choose to pursue agroecology degrees at sessions recognizing the program's 20-year anniversary at UW. The panelists were featured at February 14 and February 21 Department of Plant Sciences seminars. UW was the first land-grant university to offer an agroecology degree.

No slides are available in this gallery

30th Time for Farm and Ranch Days

By Ann Tanaka | March 2014

Great weather boosted attendance the first day but conflicts with other meetings for producers trimmed the number the second of those attending the Fremont County Farm and Ranch Days in Riverton. About 150 attended lunch Wednesday and 135 Thursday. "it is still a very good show all the way around," says Alex Malcolm UW Extension educator in Fremont County. The annual two-day conference offered 36 sessions ranging from weather forecasting tools for farming and ranching to agricultural marketing and using raised garden beds. "It's an annual thing, and there are a lot of people who come down and enjoy the festivities that are going on," Malcolm says.

He said a planning committee seeks program ideas each year to keep the annual show fresh and then finds the speakers. Not all learning occurs in the 45-minute sessions - Malcolm said a lot occurs in side conversations outside the rooms.

"There's a lot of catching up, a lot of networking going on, a lot of knowledge transferred from person to person, and finding out what's going on in your neck of the woods," he notes.

No slides are available in this gallery

Agroecology at University of Wyoming 20 years and growing

By Ann Tanaka | March 2014

Twenty years ago the University of Wyoming's College of Agriculture rolled out a new interdisciplinary undergraduate major and put a new idea on the forefront - agroecology. The program combines agronomy and ecology and focuses on the dynamic picture of today's agriculture including plant and crop production, soil science and the link between agriculture and society. "We were the first land-grant university to institute an agroecology undergraduate major," notes Robin Groose, associate professor in the Department of Plant Sciences. "Idaho, Penn State and West Virginia have followed. Florida, LSU, Minnesota and Wisconsin have followed with graduate majors in agroecology."

Groose estimates 34 of the 50 land-grant universities now have agroecology as a major or minor or program. UW's goal was to graduate independent thinkers who could recognize and solve real problems facing agriculture and



successfully refute what Groose calls bogus challenges. The then-Department of Plant, Soil, and Insect

Steve Miller fields a question with Jim Wangberg, left, and Jeff Lockwood, right.

and Insect

Sciences
(PSIS) in
1993 had
eight
students
spread
across crop
science,
soil science
and
entomology
. "Almost
overnight,
in 1993,
enrollment
doubled as
we
created a
single,
integrated
major in
agroecolog
y," says
Groose. "I
remember,
in the early
1990s, one
of my
advisees
was the
only new
freshman in
PSIS the
year he
came to
Laramie
from
Lovell. He
joked,
'Gosh,
everybody
is so nice to
me.'"
Agroecolog
y
enrollment
is now 45.
He said
agroecolog
y has

continued
adaptation
to
agricultural
concerns
and issues
using the
combination
of the
plant
sciences
department
and
Department
of
Ecosystem
Science and
Management.

Groose gives much credit to the program's required experiential learning, which frequently lays the groundwork for employment after graduation, he said. Students complete internships during summer and follow up hands-on experiences with a written paper and departmental presentation the following semester. Department of Plant Sciences Assistant Professor Brian Meador has overseen student internships the past two and half years. "The internship program is an opportunity to gain experience in their chosen field," says Meador. "These experiences can be positive or negative, but the students acquire first-hand insight into the challenges and opportunities associated with agroecology." The Department of Plant Sciences commemorated the program's 20 years with presentations during its Friday seminars February 14 and February 21.

[Click here for more about Agroecology 20 and pictures.](#)

Seminars

By Ann Tanaka | March 2014

Agricultural and Applied Economics Seminars

Fridays, 3:10 p.m., Ag C building, room 223

March 7: TBA, Sasha Skiba, Department of Economics and Finance

March 28: TBA, Matt Andersen, Department of Agricultural and Applied Economics

Department of Molecular Biology Seminars

Fridays, 2:10-3 p.m., Animal Science/Molecular Biology building, room 103

March 7: "Optogenetic Probes to Elucidate Cellular Function," Chandra Tucker, University of Colorado School of Medicine

March 14: "The Structure and Function of a Chromatin Spring," Kerry Bloom, UNC Chapel Hill

March 28: "Molecular Level Characterization of Processive Glycoside Hydrolase Function," Christina Payne, University of Kentucky

Research across Disciplines and Ecosystem Restoration Seminars

Fridays, 2 p.m., Ag C building, room 1030

March 7: "Functional Diversity in Agriculture: Farmers, Scientists, and Food Webs as Crucial Players in Ecological Weed Management,"

Randa Jabbour, Department of Plant Sciences

March 14: "Soil Carbon and Nitrogen Dynamics in Mountain-pine-beetle-infested Forests," Urszula Norton, Department of Plant Sciences

March 28: "Phosphorus in Agricultural Ecosystems," Renée Gebault King, Department of Ecosystem Science and Management

Changing Faces, Changing Places

By Ann Tanaka | March 2014

Farewell:

Rajan Ghimire: Ecosystem science management, research scientist assistant (12/23)

Kristen Herman: Ecosystem science management, office assistant (2/14)

Louise Johnson: Animal science, accountant (2/13)

Jerrica Lind: Sheridan County UW Extension, extension educator assistant (1/3)

Joseph Molle: Animal science, research scientist assistant (1/6)

Kathy Parsons: Powell Research and Extension Center, office associate (2/7)

Kathryn Ridgley: Cent\$ible Nutrition program assistant (12/17)

Camden Robbins: Cent\$ible Nutrition program coordinator senior (1/9)

Annie Toth: Molecular biology, postdoctoral associate (1/31)

Winter blast chills WESTI Ag Days attendance

By Ann Tanaka | March 2014

Temperatures approaching minus 30 degrees clipped attendance at Wyoming Extension's Strategically and Technologically Informative Ag Days in Worland February 4-5. UW Extension educators and specialists and other resource experts presented more than 30 sessions.

No slides are available in this gallery

Proposals Submitted

By Ann Tanaka | March 2014

Jarvis, Donald, and Carol Blair: \$483,500 to National Institutes of Health (NIH) for “Arbovirus Cross-reactive Monoclonal Antibodies for Arbovirus Prophylaxis and Therapy.”

Levy, Daniel, Jesse Gatlin, and John Oakey: \$1,729,120 to NIH for “Integration of Xenopus Extract and Microfluidics to Study Organelle Size Scaling.”

Vincenti, Virginia, Mona Schatz, Axton Betz-Hamilton, and Karen Goebel: \$3,000 to Kappa Omicron Nu for “Understanding Elder Financial Exploitation in the Family: Identifying Relational Complexities.”

Range Club members earn honors at international range meeting competition

By Ann Tanaka | March 2014



Undergraduate Range Management Exam members are, back, from left, Jake Hogan, Patrick Snead, Wallace “Wally” Butler (Society for Range Management president), Stuart Thrash, Eric Ramerth. Middle, Jaramie McLean, Shay Horton, Kate Richardson, Cassidy Comer, Tyron Ascencio, Amanda Lee, Kelsey Welter. Front, Shelby Baumgartner, Amanda O’Donnell, Andrea Leiningner, Bailey Terry, Barbara Bender, Russ Merrill.

Members of the University of Wyoming’s Range Club earned a fourth-place team award in the Undergraduate Range Management Exam (URME) and also earned high placings in other competition.

Club members attended the Society for Range Management Annual International Meeting in Orlando, Florida, February 8-13, for professional development and the chance to prove their rangeland skills.

Out of 157 participants, 17 UW students competed in the URME to test their knowledge and understanding of range management and ecology. Kate Richardson earned the fifth top individual award; placing sixth and ninth were Eric Ramerth and Amanda O'Donnell, respectively. The combined scores of the three Ecosystem Science and Management students merited the UW Range Club the fourth-place team award.

Club advisor Rachel Mealor stated the club's success during the competition was due to months of preparation.

"The team worked hard throughout the fall and beginning of the spring semester to prepare for each competition with weekly meetings and practices," explained Mealor.

Two graduate students also received honors during the graduate research poster competition.

Plant sciences master's student Shayla Burnette and ecosystem science and management Ph.D. candidate Leticia Varelas both placed second in their respective categories. Their posters reflected this year's meeting theme "From Dusty Trails to Waning Wetlands."

"In preparation for the student chapter display, they worked hard to incorporate the theme of the meeting," says Mealor. "There were great ecosystem pictures and live plant specimens showing different ecosystems within Wyoming."

The Range Club is a student chapter of the Society for Range Management.



Kate Richardson

Monies Awarded

By Ann Tanaka | March 2014

Baumgartner, Robert: \$3,240 from various sponsors for “Crop Research.”

Beck, Jeffrey: \$23,295 from U.S. Fish and Wildlife Service for “Inventory of Vegetation Cover for Uplands of Bowdoin National Wildlife Refuge,” and \$17,061 from Wyoming Game and Fish for “Effects of Mowing and Herbicide Treatments on the Nutritional Quality of Sagebrush in South-central Wyoming.”

Brown, Donna: \$500 from various sponsors for “Family and Consumer Sciences Support.”

Despain, Johnathan, Dawn Sanchez, Gretchen Gasvoda, and Justina Russell: \$97,828 from National 4-H Council for “Mentoring Underserved and At-risk Youth through the 4-H Program.”

Despain, Johnathan, Brittany Johnson, and Eloise Riley: \$34,390 from Kansas State University for “2014 Department of Defense Deployment Support Camp Grant: Military Kids Camp.”

Horn, Blaine, Anowar Islam, Axel Garcia y Garcia, and Valtcho Jeliakov: \$19,997 from Wyoming Department of Agriculture (WDA) for “Perennial Cool-season Grasses for Hay Production and Fall Grazing Under Full and Limited Irrigation.”

Islam, Anowar: \$20,000 from WDA for “Effect of Planting Time and Fertilizer Management on Quinoa Production in Wyoming.”

Jarvis, Donald: \$82,134 from GlycoBac for “Glycoengineering Insect Cells,” and \$83,906 from University of Georgia for “Research Resource for Integrated Glycotechnology Year 4.”

Lake, Scott: \$735 from various sponsors for “Research Laboratory Expenses.”

Paige, Ginger: \$22,770 from Wyoming Association of Conservation Districts for “Water Quality Monitoring and Certification Program 2014.”

Raisbeck, Merl: \$2,220 from various sponsors for “Miscellaneous Analysis.”

Schumaker, Brant: \$104,121 from Texas A&M University for “Foreign Animal and Zoonotic Disease Center Career Development Fellowship.”

Stayton, Mark, Richard McCormick, Scott Lake, and Bill Gross: \$20,000 from WDA for “Genetics of Resistance to High Altitude Disease (Brisket Disease) in Yak/Cow Hybrids.”

Thompson, Jennifer: \$2,550 from various sponsors for “Wyoming Barnyards and Backyards: An Educational Newsletter for Wyoming’s Small Acre Enthusiast.”

Vincenti, Virginia, Cynthia Jasper, Karen Goebel, Axton Betz-Hamilton, Lorna Browne, and Donovan Rudisuhle: \$2,500 from Phi Upsilon Omicron Educational Foundation, Inc. for “Elder Financial Exploitation by Family Members with Powers of Attorney: What Family Members’ Experiences Reveal About this Problem, its Causes, and Consequences.”

Wall, Daniel: \$241,965 from NIH for “Year 3 Protein Exchange and Self Recognition in Myxobacteria Biofilms.”