

Animal Sciences Faculty and Graduate Student win National Awards

Dr. Derek McLean, assistant professor in the Department of Animal Sciences, has been selected to receive the 2007 Society for the Study of Reproduction New Investigator Award. This award recognizes an active, regular society member for outstanding research completed and published within 10 years after receiving a doctorate or other equivalent professional degree. Derek's research is in reproductive genomics focusing on sperm production in mice, bulls, and pigs through analysis of spermatogenesis, spermatogonial stem cells, and *Sertoli* cells. Congratulations, Derek, on this outstanding achievement and for being an active member of the Center for Reproductive Biology at WSU.



Dr. Derek McLean

Ragen Trudelle-Schwarz McGowan, a doctoral candidate in the Department of Animal Sciences, received a prestigious Graduate Student Teaching Award from the North American Colleges and Teachers of Agriculture (NACTA). The award was presented to Ragen at the NACTA Annual Conference last summer. Ragen was recognized for her dedication to excellence as a teaching assistant in introduction to animal sciences, rights and welfare of animals, and animal genetics, as well as her leadership in the University community, serving as chair of the governing board for University Recreation, president of the Animal Science Graduate Student Association, and coordinator and instructor of University recreational dance programs. Ragen's research area is animal behavior and environmental enrichment.



Ragen Trudelle-Schwarz McGowan

A Note From the Chair

Dear Alumni and Friends:

After a month on the Palouse things are starting to feel a bit like home. The departmental faculty, staff, and students and the University and Pullman communities have warmly welcomed me. During this first month I have had several opportunities to interact with some of you at industry events and I look forward to much more time with you in the future. I am excited and honored to be the new chair of the Department of Animal Sciences. My goal is to rapidly become knowledgeable about animal agriculture in Washington and the Pacific Northwest and to work hard to help the department meet its goals and expectations.

Let me briefly introduce myself. I grew up on a diversified livestock and grain farm in southwestern Minnesota and continue to be a part of our family farm. I earned my bachelor's and master's degrees in animal sciences at North Dakota State University in Fargo and my doctorate in ruminant nutrition from the University of Kentucky, Lexington. After graduation I joined the animal science faculty at Michigan State University in a teaching/research/extension appointment. This experience allowed me to gain an appreciation for each of the missions of animal sciences. My research program was in applied ruminant nutrition of sheep and beef cattle with a focus on developing nutritional management strategies to enhance efficient production. I taught ruminant

nutrition, sheep production, introduction to animal science, ethics in animal agriculture, and entrepreneurship in animal science. As the state sheep extension specialist I served as the liaison between the industry and the university. I also served as interim department chair at MSU for two and a half years.

What interested me in WSU? As I looked at this department I saw a forward thinking group of faculty, staff, and students that were part of a progressive college and university that values the contributions of agriculture. My expectation for the future is that the Department of Animal Sciences will build on its accomplished past while positioning itself to address the new challenges and opportunities our students, stakeholders, and society will face today and tomorrow.

As you read through this newsletter, you will see a glimpse of some of the accomplishments of your alma mater. We are proud of our students as they leave WSU and become successful contributors in many diverse career paths. The recently established Friends of Animal Science Alumni Association is a tremendous statement of interest by our alums. You not only want to know and support what we are doing today, but also desire to help our programs to be great tomorrow and in the future.

Today, departments of animal sciences everywhere face difficult challenges to successfully deliver on all of our missions—teaching, research, and extension. There is no question that we must adapt



Dr. Margaret Benson, Chair

to the changing environment. Our student body demographics are changing, student career goals are different and more diverse than in the past, the expertise needed by our graduates is also changing, and therefore our curriculum must be responsive to these needs. Producers are facing increasingly complex problems that influence their ability to manage sustainable enterprises and they look to us for assistance in facing new challenges and opportunities. Conducting research that links fundamental scientific discoveries with strategies for applying these discoveries in our industries will require new resources, techniques, and expertise. This dynamic environment is challenging but it creates exciting opportunities for the department. Successfully navigating this path will require a dedicated team effort among all who are associated with the department, including our alums. I appreciate your continued interest in the Department of Animal Sciences and I promise to work hard to ensure we maintain and deserve your enthusiastic support.

2007 Meat Animal Evaluation Team

The 2007 Meat Animal Evaluation Team is scheduled to travel to Oklahoma City to compete in the national contest March 22–24. The team will evaluate fed cattle, sheep, and swine, breeding stock, and carcasses, and discuss an issue relevant to the meat animal industry. They will also have to grade, price, and place all three species. Five members will be competing; they are coached by **Samee Ledgerwood**. She is a 2006 WSU graduate with a degree in animal science industry and the lone member of the 2006 Livestock Evaluation Team. Ledgerwood is originally from Pomeroy. She currently owns Gelbvieh cattle and works on her family's cattle operation.

The juniors on the team are **Rachel Lewis**, from Moses Lake, and **Alex King**, from Odessa. Lewis is the daughter of **Floyd and RaeAnn Lewis**. She intends to graduate in December 2007 with a degree in agriculture economics with a minor in animal science and then possibly obtain a job with the allied industries. King is the son of **Wes and Faye King**. He would like to return to the family cattle

operation upon graduating with a degree in animal science production.

The remainder of the team is made up of sophomores. **Riley Mengarelli**, an animal science production major, hails from Toppenish where his family operates a diversified farming operation. He is the son of **Kyle and Lisa Shinn**. **Dan Griswold** is an animal science pre-vet major from Cle Elum who plans to attend vet school and then work in the animal feeding industry. Griswold is the son of **Steve and Trish Griswold**. **Kent Stokes** is an agriculture technology major from Twisp. His family, **Vic and Carrie Stokes**, operates a cattle ranch, which Stokes would someday like to return to and manage.

While in Oklahoma the team will have the opportunity to see livestock operations and packing plants in the Midwest. They will visit Oklahoma State University and compete with approximately 15 other collegiate teams. They plan to meet industry contacts, see operations in the Midwest, and experience a national collegiate contest.

WSU Dairy Students Don't Get Mad, They Go To SAD

Five dairy science students from Washington State University (**Wade McMahan, Alison Burrel, Molly Kirk, Betsy Adams, and Andrea Mouw**) recently attended the American Dairy Science Association–American Society of Animal Science Annual Meetings in Minneapolis, Minnesota. The students attended the meetings as members of the American Dairy Science Association Student Affiliate Division (ADSA-SAD). The ADSA-SAD is a division of the parent organization that works to develop leadership and promote scholarship among students interested in the dairy industry, and to encourage students toward careers in dairy science. There are more than 400 undergraduate student members in ADSA.

The student meetings were held July 8–11 and attracted nearly 120 students in addition to the nearly 3,000 professionals from the United States, Mexico, Canada, and elsewhere. The students joined

the parent organization in the celebration of ADSA's 100th anniversary.

During the meetings, the students participated in a dairy quiz bowl, business meetings, various competitions including the undergraduate paper competitions, a "Leaders in Training" career symposium where students participated in a job fair in the exhibit hall, and an awards luncheon that included ADSA "Pioneers" who visited with the students about important events in the history of the organization and the industry. Students also attended symposia, oral sessions, and poster sessions presented by professional members of the organizations.

ADSA was established in 1906 as a scientific and educational association to serve the dairy and dairy-related industries. It facilitates the discovery, application, and dissemination of dairy science knowledge and information

Departmental Happenings

Friends of Animal Science (FAS)

In 2006 a group of our energetic alumni banded together and formed the FAS alumni association. With much hard work, this group has become an officially recognized group at WSU. The purpose of the group is to support the Department of Ani-

mal Sciences in any way possible. Specific goals, the official by-laws, membership forms, and other information may be found at the newly established Web site of the FAS (www.friendsofansci.org). We welcome any alumni, associate, or friend of the department to become a member.

2007 FAS Board of Directors

Heidi Thomsen ('92 B.S.), President	Melinda Fernyhough ('00 B.S., '06 Ph.D.)	Joseph Niemann ('86 B.S.)
Marvin Hoekema ('96 B.S.), Vice President	Katrine (Parmley) Gates ('93 B.S., '93 M.S.)	Paul Patterson ('79 B.S., '82 M.S.)
Jennifer Homan ('01 B.S.), Treasurer	Mike Hackett ('76 M.S.)	Emily Purbaugh ('07 B.S.)
Barbara Zawlocki ('02 B.S.), Secretary	Rich Lewis ('86 B.S., '95 M.S.)	Brian Treasure ('73 B.S.)
Dianne Appel ('74 B.S.)	Darla Marks ('01 M.S.)	Jennifer Wilson ('00 B.S.)
Andrea Barten ('05 B.S.)	Rebecca Meats ('01 B.S.)	
Michael Clark ('05 B.S.)	Richard Meyer ('68 B.S.)	

Annual Awards / Recognition Program

On April 13 join alumni, students, parents, family, and friends of the Department for the annual recognition program (schedule of events below). The program will include awards presentations, student and club recognitions, E.L. Martin recognition, and

Dean Bernardo, CAHNRS will officially dedicate the Ensminger Pavilion. A complimentary barbecue will make for a fun event of celebrating and reminiscing. To help us prepare for this event, please RSVP as directed below by April 10. We hope you join us!

Animal Sciences 22nd Annual Recognition Program

Our annual Department of Animal Sciences Awards and Recognition Program is scheduled for **Friday, April 13, 2007, 4:00 p.m.**, at the **Ensminger Livestock Pavilion**. This year will be a bit different and promises to be a festive event giving alumni the opportunity to visit with students, faculty, and friends while recognizing the outstanding achievements of students, faculty, friends, and alumni. **Scott Hodgson** will be honored with the Outstanding Alumnus Award, **Dr. Steven D. Aust** will receive the Distinguished Alumnus in Science, Education, and Technology Award, and **Randolph E. Gross** will be presented with the Distinguished Service Award. Please plan now to join us for a time of enjoyment as we reflect on the past and take note of current activities of our students and faculty.

Schedule of Events:

4:00–4:30 p.m.	Social Time at the Ensminger Livestock Pavilion. Live music will be provided by the Tyler Vance Trio
4:30–5:30 p.m.	Department Awards, E.L. Martin Recognition, Ensminger Pavilion Dedication (CAHNRS)
5:30–6:00 p.m.	BBQ
6:00–7:30 p.m.	Student Awards Program

Please let us know that you are coming so that we can get a head count for the BBQ by contacting Jaimie Dahl at 509-335-5523 or jaimie@wsu.edu. You may also mail the information below to Jaimie Dahl, Department of Animal Sciences, PO Box 646310, Pullman, WA 99164-6310.

Name(s) _____

Total number attending _____

Animal Sciences: Alumni Happenings

Sheila Erickson ('00 B.S.) and **Harold Jurgens** ('99 B.S.), now living in Paterson, report a new addition to their family. **Reagan** is now one year old and has balanced out the male to female ratio in their family. Reagan's brother, **Carter**, is two and a half years old and together they keep mom busy as Sheila also works part-time as a veterinarian in a mixed animal practice. Meanwhile, the Jersey herd Harold manages is up to 900 cows on their organic dairy. Sheila indicates the dairy cow numbers are expanding.

Dr. Matt D. Garcia, a December 2005 graduate from **Dr. Jiang's** Animal Genomics Lab and currently a postdoctoral research associate in the School of Molecular Biosciences, has accepted a postdoctoral research geneticist position at USDA, ARS, U.S. Meat Animal Research Center, Clay Center, Nebraska. Congratulations Matt!

Jack Gorski, age 75, died on August 30, 2006. Jack was born in Green Bay, Wisconsin, on March 14, 1931. He received his undergraduate degree from the University of Wisconsin-Madison, and did his master's and doctoral studies at Washington State University prior to returning to Madison as an NIH postdoctoral fellow at the McArdle Laboratory of Cancer Research in 1959. While an undergraduate in Madison, he met fellow student Harriet Fischer through mutual lifelong interests in dancing, music, politics, and outdoor activities. They were married in 1955 and raised their son, Michael, and daughter, Jo Anne, in Wisconsin and Illinois. A professor emeritus in the departments of biochemistry and dairy and animal sciences at the University of Wisconsin-Madison, Jack was known in the scientific community for his pioneering research, spanning more than 50 years, on the mechanisms of estrogen action and the biochemistry and physiology of reproductive hormones. Jack's first faculty position was with the Department of Physiology and Biophysics at the University of Illinois at Urbana-Champaign, a position he undertook in 1961. Twelve years later he returned to the University of Wisconsin-Madison, where he stayed until his retirement in 1999. During the course of his career Jack trained and mentored more than 100

scientists. He took tremendous joy in the accomplishments of each of these individuals, many of whom are now in leadership positions in academia, industry, and government. His contributions to the biomedical sciences were recognized through a number of awards including the Ernst Oppenheimer Memorial Award, Gregory Pinkus Medal and Award, Robert H. Williams Distinguished Leadership Award, Women in Endocrinology Mentor Award, and Fred Conrad Koch Award. He was elected a fellow of the American Academy of Arts and Sciences, a member of the National Academy of Sciences, and president of the Endocrine Society. Jack was an avid dairyman, breeding first Holstein cattle and later Jerseys. He relished time spent with his Jersey herd and farming friends and colleagues.

He received the WSU Regent's Distinguished Alumnus award on March 22, 2001. Nearly a decade before that, he received the Department of Animal Sciences Outstanding Scientist Award.

Julie (Kirchner) Hayes ('85 B.S.) recently accepted a position with the Grizzly Bear Outreach Project for the Grizzly Bear Recovery Plan for the North Cascades Ecosystem Recovery Area. She is also currently working for Cetos Research Organization, a marine biology research group. Their current work is focused on humpback whale mothers and calves in Hawaii. Julie commented that it is amazing all the places a WSU animal biology degree can take you. She has been on research surveys for whales and dolphins in Hawaii and Alaska, and worked on research projects in all the world's oceans. Julie also had a productive career in wildlife biology working with cougars, wolves, bears, owls, hawks, falcons, bats, frogs, and many others.

Jon Oatley ('01 M.S., '04 Ph.D.) started as an assistant professor in the Department of Dairy and Animal Science at Penn State University in June 2007. He has been a postdoctoral research associate at the University of Pennsylvania since 2004.

Roxanne Vandermeer ('00 B.S.) will be receiving her DVM in April 2007 from the Western College of Veterinary Medicine at the University of Saskatchewan.

Research News:

A Breakthrough in Nutrigenomics in Dairy Cattle

For more than twenty years, **Dr. John McNamara** and his team have been working to identify nutritional and genetic factors related to efficient milk production in dairy cattle. One goal was to study metabolic patterns in adipose tissue to help identify cows that gained neither too much nor too little weight during pregnancy and lactation. When cows store too much body fat, energy is diverted away from milk production and instead goes toward storing more fat. Yet if a cow does not store enough fat—or loses it too quickly—immunity is impaired, resulting in decreased production and efficiency and more diseases like ketosis, milk fever, and mastitis. Adipose tissue, in addition to being a major energy storage organ, is also a source of several powerful hormones that control food intake, inflammation, and immunity.

Recent research showed that chromium supplementation increased feed intake and milk production in dairy cows. Dr. McNamara identified the most novel part of this work was showing that chromium changed the body fat metabolism.

Part of the work was conducted by recent graduate **Dr. Jennifer Sumner**. She extracted RNA for microchip array analyses to determine effects of chromium on gene expression. The study convincingly showed that chromium supplementation “upregulated” a number of genes—causing them to become more active—while others were “down-regulated.” This work is the first study to document nutrigenomics in body fat of dairy cattle nutrition. A provisional patent application for the discovery has been filed by McNamara and Kemin Industries.

At the same time, Sumner conducted a companion study to measure gene activity in the adipose “lipolysis pathway,” which follows the breakdown and mobilization of fat tissue. Following a long line of research started by now retired faculty **Joe Hillers** and McNamara, Sumner was able to demonstrate changes in the genes that control body fat use in cattle. Her work proved for the first time that five major genes were upregulated during lactation, allowing the cow to utilize stored body fat for milk production. This is a novel finding among mammalian species.

This work garnered them a grant from the U.S. Department of Agriculture and National Research Initiative to continue the work. “Now that we’ve confirmed one application of nutrigenomics in dairy cattle, we plan to study it in more depth,” McNamara said. “We can start to define exactly how genes in adipose tissue respond to different diets. It all comes back to the goal of breeding the most efficient animals for milk production.”

Jennifer Sumner, from the small town of Elkton, Oregon, is the first woman in her family to earn a college degree. But she didn’t stop with just one. After completing bachelor’s and master’s degrees in animal science from Oregon State University, she came to WSU in 2003 to complete her doctoral work. A single mother with two children, Sumner completed her doctorate doing the work described. She hopes to continue with a postdoctoral experience and then a career in dairy research and teaching.

Graduate Student Research Summary

Liz O’Rourke’s (’07 M.S., **Dr. Ron Kincaid**) work is directed toward minimizing phosphorus accumulation on dairy farms. To determine the efficacy of diet formulation changes on phosphorus excretion by cows, she found

that fecal samples for phosphorus analysis can be collected at any time during the day. Additionally, bluegrass straw can be included in the diet of late lactation cows to reduce phosphorus intakes without affecting milk yield.

In 2006, these friends and alumni made generous donations to the department through the development fund, assisting with recruiting, scholarships, memorials, dairy judging, and research funding, and through donating cattle to the teaching program.

Jack & Lorraine Albright	Elias & Raghida Doughly	Tom Jones	Cheryl Nomanson	Jean Smith
Bruce & Liz Anderson	Kailan & Sue Dunn	JR Ranch Shorthorns	H. V. Nootbaar	Troy & Becky Smith
Rod & Lisa Anderson	Charles & Louanna Eggert	Neil Kayser	Northwest Farm Credit Services	Kevin Snekvik & Kathleen McMenamin-Snekvik
David & Carol Ard	El Oro Cattle Feeders	Sam Kayser	Novus International, Incorporated	Daniel & Deborah Snyder
William Armstrong	Line & Ellene Estergreen	Kemin Americas	OppenheimerFunds Legacy Program	Southway Animal Clinic
Howard Asmusen	Farmworld International Foods, Incorporated	Kendall Cattle Sales	Jim Ostheller	David & Robin Starkenburg
Bar R Cattle Company	Dennis & Carey Fieiss	Ronald & Lynda Kincaid	Neil Ostheller	Fredrick & Alice Stormshak
Joe & Trish Barker	Clement & Karma Fitzgerald	Cal & Susan Kinney	+Richard Patton	Robert Stout
Alan & Harriet Barr	Four Cross Ranch	Gregory & Vicki Knutson	Matthew Perini	Ronald & Margie Sumner
B.B. Cattle Company	Franklin County Cattlemen	Igor Kosin & Roberta Smith-Kosin	Bruce & Patricia Petty	Paul & Christine Swinehart
Reed & Beverly Benedict	Cline & Gretchen Frasier	Krogh Ranch	Edwin & Joan Phillips	Syngenta
Bill Bennett	Pat & Cindy Freeman	John Krogh	Gerald & Jane Pittenger	Timm Brothers
Benton County Cattlemen	Galisteo Land & Livestock, Ltd.	Les Ryan and Ryan Brothers	Larry & Phyllis Powell	Todd Tippett
Alfred & Annalee Benton	Charles & Jan Gaskins	Christopher Logue & Bernadine Wiesen	Robert & Jacqueline Prescott	Toppenish Livestock Commission Co.
Buzz & Jean Berney	Nate Gillian	M & I Livestock	John & Mildred Price	Trinity Farms
Bio-Oregon, Incorporated	Golden West Cattle Company	Richard & Janet Maricle	Raap Ranches	V2 Cattle Company
Wayne & Mary Blair	Cornelia Goodwin	Kenny Marx	Ralph E. Petty Trust	Van Baren Ranch, LLC
Blue Rock Cattle Company	Harriet Gorski	Richard & Elizabeth Mathews	Jerry & Heidi Reeves	Van de Graaf Ranches, Incorporated
C. Duane & Jennifer Booker	+Jack Gorski	Lee & Lorraine McDowell	Bruce Richards	Rod Van de Graaf
Allan & Laurie Britten	Grange Supply Company, Incorporated	Derek & Ronda McLean	John & Kristine Richter	Vanguard Charitable Endowment Program
David & Suzanne Brown	Randy & Margaret Hair	Lee & Helen McNinch	Janet Roberts Mooers	Edward & Sally Veenhuizen
Marvin & Helen Burgess	James & Donna Hanson	Harvey Meier	Rockey Mountain Angus Ranch	Sidney & Margaret Viebrock
Herald & Dyan Catlin	Kelly & Aisha Hanson	Merial Limited	Bill & Ruth Ryan	Steve & Debbie Wallace
Cattlemen's Association of Washington	Rex & Ann Harder	MGS Ag, Inc.	Jack & Marlene Ryan	Duane Walter
Colin Chopic & Lydia Baldwin-Chopic	Edward Heinemann	Monson Ranches	S & J Schwartz, Incorporated	Richard & Deanna Weber
Clark Cowlitz Farm Bureau	Herres Livestock Partnership	William & Darci Monson	San Pasqual Land & Cattle Company	James & Sharon Wedam
Stephanie Coon	Chris Herres	Gary Moss & Brenda Alexander	Del & Julie Sandberg	Rodney Wesselman
Dan & Karen Coonrad	Merle Herrett	Virgil & Susan Myers	Michael & Sharon Schmidt	Nancy Weston
Crouthamel Cattle and Thompson Cattle	Wilma Holmes-Richards	Jaime & Joie Navarrete	John & Karen Schultz	Brenda Wright
Chad Dahmen	Scott & Kim Holt	Rick Nelson	Stanley & Jill Schwartz	Zinpro Corporation
DeRuwe L & F, Incorporated	Mark & Joanne Huyler	Ronald & Kay Nelson	Sonda Sibole	
Dick Ledgerwood & Sons	Joel Jaquez	Ruth Newberry	Sideb, Incorporated	+deceased
David Dickson	Steve Jensen	Bonnie Nofziger		
Double B Ranch	Kristen Johnson	Franklin Nofziger		

Spring 2007 Dates to Remember

April 13	Friends of Animal Sciences (FAS)		Alumni Center Regency Room
	- Board of Directors Meeting	2:00 p.m.	
	- General Membership Meeting	3:00 p.m.	
April 13	Animal Sciences Department Social	4:00 p.m.	Ensminger Livestock Pavilion
April 13	Animal Sciences 22nd Annual Recognition Program & BBQ	4:30 p.m.	Ensminger Livestock Pavilion
April 14	E.L. Martin Retirement Party	5:30 p.m.	Clarkston Golf and Country Club Clarkston, WA

A retirement reception will be held at the Clarkston Golf and Country Club on April 14 at 5:30 p.m. for **Dr. E.L. Martin**. Cost is \$20 per person (including children) and tickets may be obtained by sending checks c/o Alice Hopkins (RE: E.L.M. Ticket), Department of Animal Sciences, 117 Clark Hall, PO Box 646310, Pullman, WA 99164-6310. Please register in advance if you plan to attend. We hope to see you there!

Graduating Seniors

We salute the following seniors who graduated in August and December 2006 or who will graduate in May 2007. We recognize the part that parents and family members play in students getting their degrees.

August 2006: Alison Burrell, Rachel Jones, Shaye Larson, Shana Teets, Bruce Wilson, and Andrea Yarber.

December 2006: Erin Healy, Jessica Matejik, Adelmo Leon Mateus, Kasandra Parrish, Stacey Prickett, Michelle Putnam, Shenelle Simonson, and Hsin-Jou Yuan.

May 2007: Alexis Adams, Betsy Adams, Kyle Chamberlain, Kristina Fraser, Kimberly Fritz, Daniel Greene, Jackelyn Gregory, Christina Guppy, Janelle Hafert, Griffin Hanberg, Kathryn Harris, Kevin Jensen, Allison Lian, Ryan Mansfield, Corrine McKinley, Andrea Mouw, Bridget Overbey, Kelsey Owen, Joomi Park, Stephanie Presthus, Emily Purbaugh, Sean Rae, Megan Reber, Suzanne Reding, Colleen Roberts, Naomi Sakuma, David Soler, Virginia Stout, Tyler Vance, and Colin Wolfe.

LET US HEAR FROM YOU...

We and your fellow alumni want to know what is happening in your life. Please let us hear from you by completing and returning the form below to: Dr. Margaret Benson, Chair, Department of Animal Sciences, WSU, PO Box 646310, Pullman, WA 99164-6310. E-mail responses may be sent to jaimie@wsu.edu. If you know of someone deserving recognition at next year's awards program, please put his or her name on this form.

Name

Degree(s) and year(s)

Address and Phone

Information about you

3/07 117500



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