

ANIMAL SCIENCES

THE NEWSLETTER FROM THE DEPARTMENT OF ANIMAL SCIENCES
AT WASHINGTON STATE UNIVERSITY

[SPRING, 2009]

Gifts at Work Ruth Schneider Henderson Endows Scholarship

Washington State University and the Department of Animal Sciences are honored to benefit from the generosity of

Ruth Schneider Henderson. Through her generous gift to WSU, Mrs. Henderson is building on the success of programs that shape future leaders of the state's dairy industry and influence those who dedicate themselves to public service.

A portion of Mrs. Henderson's gift directly supports the Department of Animal Sciences with the establishment of the Robert and Margaret Schneider Endowed Scholarship in Dairy Science. Additional components of her gift include the Ruth Schneider Henderson 4-H Dairy Endowment, the Margaret L. "Marci" Henderson 4-H National Congress Endowment, and the Robert K. Henderson Endowed Scholarship in Political Science, Pre-law. Ruth has chosen to honor her life, the hard work of her parents, and the dreams of her children in the establishment of these endowments.

"There is no question the Robert and Margaret Schneider Endowed Scholarship in Dairy Science will contribute to the training of the leaders of tomorrow's dairy industry," said Margaret Benson, professor and chair of the Department of Animal Sciences. "Participating in experiential learning programs such as CUDS (Cooperative University Dairy Students), events like the National Dairy

Challenge, and dairy industry activities are critical to the students' professional development. Ruth's gift will enable us to continue to enhance the academic experiences of

our students in preparing them for successful careers."

Mrs. Henderson grew up in Longview, Wash., the only child of Robert and Margaret Schneider, dairy farmers of Swiss heritage who knew the value of hard work. Ruth attended R.A. Long High School and Lower Columbia College. She worked briefly in real estate before marrying and starting a family.

Her greatest satisfaction comes from serving organizations in which her children participated. Twins Marci (Home Ec. '80) and Robert were active in 4-H, an organization that significantly impacted their lives. Today, Ruth makes her home in Lewistown, Montana, where "agriculture is the essence of life." She continues to travel abroad and remains active in her local community, always seeking new opportunities for service.

This fall, students, staff and faculty had the opportunity to meet and host Ruth and Marci in a visit to the Knott Dairy Center. Students gave an overview of some of the activities in which they were involved. The Department of Animal Sciences and WSU would like to thank Mrs. Henderson for her generous gift and her support of programs designed to train tomorrow's leaders in agriculture.



Ruth and Marci Henderson with the CUDS students during their visit to the Knott Dairy Center in October.

Note from the Chair

Greetings from the Department of Animal Sciences! It is hard to believe that we are close to wrapping up another academic year and sending another talented group of graduates off to exciting careers. The opportunity to positively impact the lives of our students, the reward of seeing our research add new knowledge to the world, and the practical results of our Extension efforts continually remind us of why we do what we do.

2008 was a big year for the Department. We hired two excellent new faculty members, Drs. Jim Pru and Judith Capper. We also completed a comprehensive external USDA review of our teaching, research, and extension programs, including facilities and staffing. The review included an opportunity for stakeholders to provide input and we thank you for that. This spring, we are working on an action plan to implement some of the review's recommendations and strategize how to best use our resources and talent.

Even before the most severe economic downturn, the high fuel and feed prices were impacting our livestock units. As many of you know, high prices combined with

lower commodity prices made it a challenging year. We strive to accomplish our missions of teaching, research and outreach while addressing these challenges as strategically as possible.

This academic year, our department has 230 undergraduate majors and we boast the largest production agricultural undergraduate program at WSU. One of the parts of my job I enjoy the most is the opportunity to visit with graduating seniors in exit interviews.

One of the things I learned from these interviews is that 83 percent of our students participated in experiential learning activities (e.g., student cooperatives, work on farms and in labs) and valued those experiences highly. I am also pleased that more than 90 percent of our students actively seeking employment in 2007 and 2008 were successful and many had job offers in hand prior to graduation. I believe there has never been a time with more opportunity for exciting careers in the field of animal sciences than today.

I also want to acknowledge the efforts of Ashley Conway, a senior, from Camas, Wash. I had the opportunity to get to know Ashley while working with her on a



CAHNRS Undergraduate Research Project where we both share a common interest in sheep. I was impressed with her writing abilities, her enthusiasm for new challenges and her overall "can do" attitude. I asked if she would be interested in helping put this newsletter together, write some of the articles, and coordinate some of the activities and she agreed. Working with students like Ashley who have talent, drive, intelligence is what being a professor in the Department of Animal Sciences at WSU is all about.

Go Cougs! --Margaret Benson

Animal Sciences 24th Annual Awards and Recognition Program

Our annual Department of Animal Sciences Awards and Recognition Program is scheduled for Friday, April 3, 2009, 4:30 p.m., at the Ensminger Pavilion. The event gives alumni the opportunity to visit with students, faculty, and friends while recognizing the outstanding achievements of students, faculty, friends, and alumni. **Dr. C.V. Rao** will be honored with the Outstanding Alumnus Award, **Dr. Mark Kinsel** will receive the Distinguished Service Award, and **Dr. Janine Brown** will be presented with the Distinguished Graduate in Science, Education, and Technology Award. Please plan now to join us in celebrating the achievements of our alumni and students as we reflect on the past and take note of activities involving our current students and faculty.

Schedule of Events

4:30–5 p.m. Gathering and social time at the Ensminger Pavilion

5–7:30 p.m. Complimentary informal Cougar Smokies BBQ and Awards Program

Please let us know if you are coming so we can get an attendance estimate for the BBQ. Contact 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 _____

GIFTS

MAKE A DIFFERENCE

The students and faculty of the Animal Sciences department wish to recognize the many generous donors who have supported a variety of department efforts including scholarships, student and department activities and projects, research funding, and department programs. We recognize that with the help from all of these individuals our teaching, research and extension programs are enhanced. We are committed to being good stewards of the resources you provide. Thank you for your support.

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Amplicon Vaccine LLC
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Steven and Karen Aust
Merle and Janice Baldwin
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Paul and Amy McDonald
Lee and Lorraine McDowell
Douglas and Sandy McFarland
Derek and Ronda McLean
Rebecca Meats

Richard and Rosie Meyer
Frederick and Tanya Muller
John Nelson
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Torrance and Terry Nett
Ruth Newberry
Northwest Farm Credit Services
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Jennie and Conley Walker
Duane Walter
Washington Cattle Feeders
Todd and Susan Winters
Raymond and Patricia Wright
Van and Judy Youngquist

Alumni Happenings

Here's a look at what some of our past graduates have been up to lately.

Dorothy Kerlin (formerly Pietras), class of '86, is currently employed by Weyerhaeuser as an Environmental Chemist. She is married to **Mike Kerlin** (Agriculture '87) and their daughter, Danielle Kerlin, is currently enjoying her freshman year at WSU.

Reagan Trudelle-Schwarz (Ph.D. 2007)

and her husband, Adam, will be relocating from Sweden to St. Joseph, Missouri this year in March. Having completed her post-doc work in Sweden, Reagan has accepted a job as a research scientist in dog behavior with Nestle Purina.

Laura Odens, class of '04, has finished her Master's degree in Animal Science at the University of Arizona and is currently working for Hi-Pro Feeds in Roswell, New Mexico as a Dairy Feeds Sales Representative.

Edward Avila, class of '05, will be marrying Nicole Hunt on August 2, 2009. They will live in Quincy, Wash. upon the completion of their new dairy, and are planning on milking 3,000 cows.

Dr. W.R. Reg Gomes, the 2006 recipient of the Department of Animal Sciences Award for Distinguished Graduate: Science, Education and Technology, was recently recognized with an award of appreciation for his service on the board of the California State University Agriculture Research Initiative.

Research: The Next Generation

Animal Sciences Undergraduate Research Projects Lead the Pack

Each year, the College of Agriculture, Human, and Natural Resource Sciences sponsors the Undergraduate Research and Creative Projects program.

This year, Animal Sciences led the College with 16 undergrad researchers awarded grants of up to \$1,200. The program gives undergrads the opportunity to take a self-directed hand in their education. They have the opportunity to tailor the project to their specific interests and, working directly with distinguished faculty members, gain hands-on experience in Animal Science.

Nine undergraduate research projects have been funded this year in the Department of Animal Sciences and mentored by six faculty members.

Dr. Zhihua Jiang, an Associate Professor who studies comparative genome biology, is assisting Kari Von Krosigk, Dor Dor Vuong, and

Amy Youngren in their project as they explore the molecular characterization of the seroyl-CoA desaturase (SCD1) gene in efforts to improve the quality of pork.

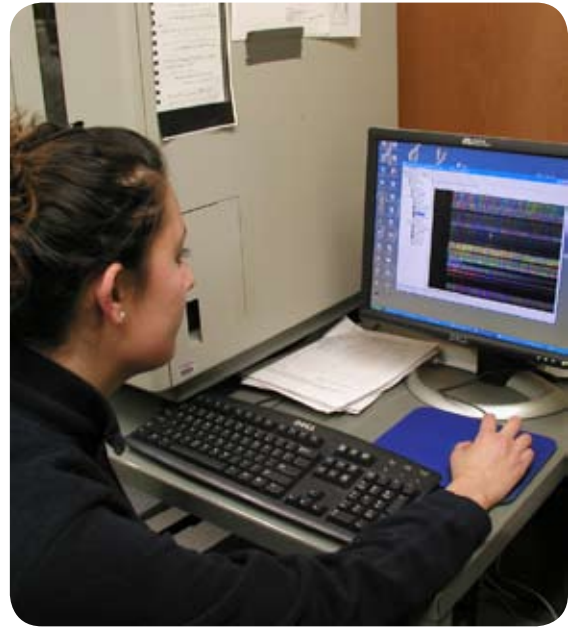
Dr. Jiang is also working with K.C. Fagan, Ashley Lewman, and Brianna Oas as they explore the whole genome SNP information transfer from cattle to buffalo.

The third project Dr. Jiang is mentoring involves Dana M. DeRego as she researches manual annotation of nucleus-encoded mitochondrial genomes in bovine.

Dr. John P. McNamara, a Professor conducting research in dairy metabolism, is mentoring six students' projects, including Gale Duncan, Amanda Lowe, and Jessica Miller, who are examining the regulation of energy use in dairy cattle through nutrigenomic and gene array methods.

Chris Schachtschneider, also under the direction of Dr. McNamara, is using a dynamic metabolic model to investigate and better understand the genetics of feed conversion efficiency in dairy cattle.

Dr. McNamara is working with Dr. Jiang and Dr. Jan Busboom, Professor in the meat science research arena, in assisting Alycia Youngquist and Alexandra Whalen with their project in



Dana DeRego

which they examine the nutrigenomic regulation of pig growth and pork quality among animals fed a Pacific Northwest diet of garbanzo beans and canola seed meal.

Dr. Busboom is also advising Riley Mengarelli as he examines the different levels of Omega-3 fatty acids in beef and determines the palatability of these different levels as they occur in grass-fed beef.

Dr. Holly Neibergs studies animal breeding and genomics and is an Assistant Professor in the Department. Dr. Neibergs is working with Elizabeth Domby as she investigates the genetic correlation between cows infected with Bovine Viral Diarrhea Virus during their pregnancy and persistently infected calves.

Drs. Margaret Benson and Kris Johnson, Professors and ruminant nutritionists, are guiding Ashley Conway in her project of calculating residual feed intake (RFI) for



K.C. Fagan, Ashley Lewman and Brianna Oas.



Dr. John McNamara and Amanda Lowe

ram lambs and examining correlations between RFI, behavior and heritable growth traits.

Throughout the academic year, these dedicated students and their faculty mentors work hard to bring knowledge, innovation and science to raising healthy animals more efficiently.



Ashley Conway

WSU prides itself in emphasizing experiential learning as an effective tool for education that compliments and reinforces traditional classroom learning. The Undergraduate Research and Creative Projects Program provides students with valuable opportunities to assist with and contribute to developments and discoveries in the field of Animal Science. Students have the option of earning credit and income while gaining superior research experience that paves the way for their continued success.

Students will present their research findings at the CAHNRS Awards and Recognition Program on April 4. Their work will be reviewed by faculty, staff and students from across the university. The public is invited to this annual event.

For more information, please contact Linda Bailey in the CAHNRS Office of Academic Programs at 509-335-4562.

Graduate Students

The Department of Animal Sciences is currently home to eighteen gifted graduate students who have chosen WSU as the institution where they will continue their higher education. These graduate students work in various areas of Animal

Science research including reproductive physiology, animal behavior, health and wellbeing, genomics, molecular regulation of muscle development, ruminant nutrition, and livestock and the environment.

Our recent graduates (with faculty mentor) include: **Dr. Kristen Brennan** (Dr. Johnson), **Ms. Angie Broadbent** (Dr. Reeves), **Dr. Liang-Yu Chen** (Dr. McLean), **Ms. Stacey Cobb** (Dr. Johnson), **Ms. Ting Jiang** (Dr. Nelson), **Ms. Katherine McKinnin** (Dr. Newberry), **Ms. Emily Terry** (Dr. Kincaid), **Dr. Tito Wibowo** (Dr. Jiang), and **Mr. Ricardo Zanella** (Dr. Neibergs).

This year, students pursuing an M.S. in Animal Science are **Molly Bellefeuille** (Dr. McLean), **Tyler Daniels** (Dr. Jiang), **Nicole Dossey** (Dr. Newberry), **Andrina Huisman** (Dr. Kincaid), **Jillian Interlichia** (Dr. Rodgers), **Vanessa Michelizzi** (Dr. Jiang), **Tracy Quirk** (Dr. Fox), **Shawnese Rocco** (Dr. McNamara) and **Sarah Spogen** (Dr. Johnson).

Students currently working toward a Ph.D. in Animal Science are **Johnathan Broady** (Dr. McLean), **Birpal Buttar** (Dr. Nelson and Dr. Busboom), **Kyle Caires** (Dr. McLean), **Winnie Chan** (Dr. Newberry), **Tammy Donaldson** (Dr. Newberry), **Ting Jiang** (Dr. Nelson), **Angela Oki** (Dr. McLean), **Rebecca White** (Dr. Harrison) and **Ricardo Zanella** (Dr. Neibergs).

We also have two Ph.D. students from the School of Molecular Biosciences who are partnering with Dr. Rodgers to earn a multi-disciplinary degree, **Nolan Williams** and **Melissa Jackson**.

Continuing to model Washington State University's excellence in higher education, these students will complete their studies and use their knowledge to further advance the field of Animal Science.

New Faculty

The Department of Animal Sciences is pleased to introduce two new faculty members that are joining our ranks this year. As the newsletter is going to press, neither have yet arrived at WSU but we want to introduce them to you anyway. Brief bios are presented, and please stay tuned as we will follow up in the next newsletter with highlights of their programs.

Jim Pru

The Department of Animal Sciences is pleased to welcome Dr. Jim Pru. The position Dr. Pru will fill is part of the Unified Agriculture Initiative which was established to add to WSU's efforts in the food and agricultural industries. His position includes a research appointment in WSU's Agricultural Research Center as well as a teaching component. Dr. Pru's expertise in reproductive biology will contribute to a longstanding strength in the Department. Dr. Pru's research focuses on female reproduction and investigates the fundamental mechanisms involved in pregnancy and parturition with application to dairy and other species. Dr. Pru begins at WSU on March 1, 2009.

Raised in north-central Wyoming, Dr. Pru obtained his B.S., M.S. and Ph.D. from the University of Wyoming in Laramie with his Ph.D. in Reproductive Biology/Animal Science. He brings with him a wealth of experience, having conducted postdoctoral research in Molecular Reproductive Biology at Massachusetts General Hospital Vincent Center for Reproductive Biology through Harvard Medical School in Boston, Mass. Most recently, he has served as an Assistant Biologist at the VCR and an Assistant Professor in Obstetrics, Gynecology and Reproductive Biology at Harvard Medical School. Dr. Pru's experience and areas of research interest add new expertise and research focus to the department.

In his new position, Dr. Pru is looking forward to continuing his work examining the basic mechanisms of how uterine stem cells function. This ultimate goal is to help establish practical remedies to enhance uterine repair following parturition and thus pregnancy success rates in the nutritionally stressed dairy cow. Dr. Pru is also looking forward to working with students in his teaching of both undergraduate and graduate student education.

Judith Capper

Beginning May 1, 2009, WSU and the Animal Sciences Department will become home to Dr. Judith Capper, our new Assistant Professor. Dr. Capper's position is part of the Unified Agriculture Initiative and her time will be split between Extension and teaching responsibilities in dairy systems and management. Dr. Capper's current research focus is modeling the environmental impact of the dairy industry and providing strategies to reduce the impact, as well as studying the impact of technology adoption and management practices that improve production efficiency. These interests will serve her well as she establishes her extension and teaching programs at WSU.

Born and raised in Oxford, UK, and growing up around horses, Dr. Capper developed an early interest in agriculture. Her undergraduate and graduate work was completed at Harper Adams University College in Shropshire. Her undergraduate degree was in Animal Science and, through her Ph.D. research in Ruminant Nutrition and Behavior, she became especially interested in milk fatty acid composition. Upon completing her Ph.D., Dr. Capper taught for two years at the University of Worcester, and was then offered a position at Cornell University to do postdoctoral work in ruminant lipid metabolism in Dr. Dale Bauman's laboratory. While at Cornell, Dr. Capper's work focused on the relationship between nutrition and milk fat depression. She also became extensively involved in evaluating the impact of biotechnology in improving production efficiency in the dairy industry and modeling the environmental impact.

Dr. Capper is excited to have the opportunity to combine her research interests with extension and teaching responsibilities. She values the opportunity to interact with the agricultural community and provide knowledge

and research results that can be directly applied on farm to address issues of immediate relevance to dairy and livestock industries. We are also pleased to add Dr. Capper's teaching experience and expertise to our ranks and believe that her industry and environmental perspectives will help prepare our students to address tomorrow's issues. We are pleased to welcome Dr. Capper to our academic community.

Students Get Connected

Animal Science Graduate Student Association

The Animal Science Graduate Student Association represents and connects graduate students from the various Animal Sciences disciplines. ASGSA actively participates in community service and holds several fundraising events each year. Past events include participating in the American Cancer Society Relay for Life and a Thanksgiving food drive.



Grad students Tito and Tyler serving ice cream at the Department's Awards Program.

ASGSA also hosts the annual Awards and Recognition Program, with proceeds going toward grants for travel. ASGSA travel grants are awarded to one M.S. and one Ph.D. student in the department each year. ASGSA markets Department apparel and gear to faculty, students and staff as a fundraiser for the group. If you would be interested in purchasing some animal sciences apparel and supporting graduate student travel, contact the club president, Winnie Chan, winnie_chan@wsu.edu, for more information.

Clubs and Organizations: Students Building Community

Organization of Future Veterinarians

The Organization of Future Veterinarians is the undergraduate pre-veterinary club at WSU. The club offers a support network for pre-veterinary students of all majors, allowing them to meet people who share the same interests (animals) and goals (veterinary school). OFV members not only have fun but gain valuable experience through volunteer activities and other club-organized events. Club meetings often focus on topics such as the many and varied disciplines of veterinary medicine, preparing for and applying to vet schools, succeeding in the interview process, and what the life of a vet student is like. The OFV is an excellent opportunity for all vet school hopefuls, and creates a lasting network of support for members whether they decide to become veterinarians or not.

Cooperative University Dairy Students

CUDS is still going strong at WSU! CUDS members maintain production of high-quality milk for Ferdinand's Creamery and are constantly working to improve the genetics of their 35-head milking-cow herd. CUDS is recruiting new members eager to learn and care for the student-managed herd. Several students had excellent internships in the last year and many more will have opportunities in the coming year. A number of graduates in recent years are now in the College of Veterinary Medicine preparing for careers in the dairy-vet industry. Several members will compete on the WSU Dairy Challenge team this winter and spring. Please visit our Web site (<http://tinyurl.com/cuds-club>) for member bios and more details on our recent events and activities.



2008 CUDS members

Collegiate Horsemen's Association

CHA is dedicated to teaching and learning horsemanship. Members accomplish this is by volunteering at the Viola, Idaho horse sanctuary and

Orphan Acres where members have the opportunity for hands-on husbandry experience. We are planning multiple fundraising activities such as a Mom's Weekend raffle and a movie night at the CUB. The proceeds are donated to Orphan Acres as well as sponsoring guest lecturers to give educational clinics at meetings. In conjunction with Orphan Acres, CHA is promoting Zootoo, an online competition between shelters nationwide for a \$1 million renovation. We also participated in Starbucks Day at Orphan Acres, where donations were made on a per hour-per volunteer basis by Starbucks. Most of all, CHA continues to provide enthusiastic students with the opportunity to share a love for horses as they work together to better their communities. Please visit our Web site for more information: <http://tinyurl.com/cha-club>.

Block and Bridle Club

WSU's Block and Bridle Club is a professional and social organization for those interested in the livestock industry. Club members work with the WSU Beef Center to train, fit, and sell heifers and steers.



Block and Bridle Club members in San Antonio.

This allows members to work with animals, earn money for club activities, learn to fit and train large animals, and interact with producers on sale day. This year, Block and Bridle put on its First Annual Club Calf Sale to help raise money to attend the National Block and Bridle Convention in San Antonio. Selling Cougar Smokies at home football games was another fundraiser. This spring, Block and Bridle is selling Easter hams to raise money for future club activities and trips. Block and Bridle is a club where the rewards include helping our community, getting "hands-on" experience, and creating friendships that last a lifetime.

Student Swine Cooperative

The Student Swine Cooperative (SSC) is a group of undergraduate students interested in learning about swine management and receiving hands-on



Student Swine Cooperative members

experience. The students work closely with advisors and members of the pork industry. They are responsible for managing a small herd farrow to finish in a modern swine facility. The students are responsible for all aspects of running a profitable business. Students also have the opportunity to get involved in the industry and help educate the general public about the pork industry through community service. Since this is a cooperative, students also learn how to work as a team.

Cougar Cattle Feeders

From its beginning in 1998, the CCF herd has grown from ten to 115 cattle. For the '08-'09 school year, 12 students are involved with CCF. Washington producers make CCF possible by donating and custom feeding cattle with us. We feed 17 donated and 54 custom-fed animals for 11 producers. Each of these custom feeders donates one animal to the Cougar Pride program. Proceeds go to the scholarship fund. CCF entered an agreement with the Washington Cattle Feeders Association to custom feed 45 head this year. Washington Cattle Feeders Association retains ownership and pays for feed and yardage. CCF members get the opportunity to feed a fairly sizeable number of uniform cattle and learn more from the members of the association about commercial cattle feeding. The annual CCF's Field



Members of Cougar Cattle Feeders

Day is Saturday, April 4 at 10 a.m. This is an opportunity for donors and interested people to view the cattle and meet with our members. Mr. Ed Field, Executive Secretary for the Washington Cattle Feeders Association, will talk about the future of the cattle feeding industry. Lunch will be served and all are invited. Please RSVP to gaskins@wsu.edu if you plan to attend.

Congratulations to Our Graduating Seniors

August 2008

Cassandra Abbot (Silverdale, WA), Mizuho Enomoto (Aichi, Japan), Kelly Kauber (Colorado Springs, CO), Marissa Lenting (Gig Harbor, WA), Kathleen Walter (Kent, WA), Kelsey Williams (Stanwood, WA).

December 2008

Meghan Carnegie (Otis Orchards, WA), Rebekah Featherkile (Wenatchee, WA), Jamie Simpson (Edgewood, WA), Daniel Greene (Arlington, WA).

May 2009

Lacey Atkinson (Eltopia, WA), Christine Blaschko (Ravensdale, WA), Anna Brooks (Haines, AK), Cydni Carender (Bremerton, WA), Emily Carner (La Center, WA), Ashley Conway (Camas, WA), Stephanie Cross (Tacoma, WA), Dana DeRego (Port Orchard, WA), Elizabeth Domby (Kent, WA), Deirdra Dong (Mount Vernon, WA), Gale Duncan (Eagle River, AK), Jasmin Feist (Belfair, WA), Laura Grinnell (Spokane, WA), Daniel Griswold (Cle Elum, WA), Satomi Keneko (Yokohama, Japan), Ashtan Lucenti (Issaquah, WA), Stefanie Lusko (Tacoma, WA), Jillian Marcy (Orting, WA), Riley Mengarelli (Toppenish, WA), Jessica Miller (Spokane, WA), Keena Mullen (Sedro Woolly, WA), Tiffany Patterson (Auburn, WA), Cheryl Preston (Graham, WA), Christopher Schachtschneider (Moses Lake, WA), Jacqueline Seyer (Black Diamond, WA), Christina Shima (Forks, WA), Keenan Tanoue (Honokaa, HI), Angela Thresher (Cashmere, WA), Tawnya Tifft (Orting, WA), Guy Tipton (Winnemucca, NV), Kaori Tokuhisa (Isehara, Japan), Heidi Van Buren (Kennebec, WA), Tess Wilson (Puyallup, WA).

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 EXTENSION

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