Dear colleagues, alums, students, and friends,

As we ring in the new year of 2016, I would like to personally thank all of you for your gracious welcome to UVM and the great state of Vermont! My family and I are settling in nicely here after having lived in nearby New Hampshire, the Granite State, for just about 19 years. This is officially my first semester as chair of the department, and I’m already enjoying the opportunity to teach some of the ASCI students (ASCI 215, Reproductive Physiology), to work with some outstanding faculty and staff, and to meet stakeholders throughout the state who are supportive of our department and programs. Collectively, a very friendly, diverse and energetic group.

In the following pages of this newsletter you will find highlights about some of the great achievements of our faculty and students over the past few months, as well as insight about the multitude of activities available to our students, you and the general public. Please consider joining us at some future date.

Among the achievements, Dr. Julie Smith received the prestigious John Finley Award for Outstanding Contribution to Agriculture. In the brief time I’ve known Julie, it is easy to see she is a “mover and shaker” in the Vermont Dairy Industry…so this recognition is well-deserved. Kudos also to Drs. McKay and Kraft for their recent successes in mentoring students toward completion of degrees, presenting at conferences, and completing research studies through publication. As you will see, the department is humming with activity as previous students complete their programs and new students come onboard. Among the activities to note: Dr. Pat Erickson’s ASCI 272 class hosted a fun and extremely popular display about animal conservation at the Echo Science Center; ASCI students travelled to Ecuador and learned about alpaca husbandry during the winter session; the CREAM 2015 students held their year-end dinner and welcomed the new CREAM 2016 group; and several students found ways to express their individuality and have fun through such things as selfies, videos and the UVM Horse Barn Coop. Activities on the horizon in which you are encouraged to join us include the annual UVM Horse Barn Easter Egg Hunt, Vermont Breakfast on the Farm, ASCI Honor’s Day, and the UVM Morgan Horse Farm foal raffle.

In the time ahead I hope you will accept my invitation to visit on occasion, tour the new barn facilities, and perhaps reacquaint yourself with the great faculty, staff and students within the department. I think you will find there are some wonderful things going on with our programs, research, and outreach activities. As always, we are very appreciative of your support, and we look forward to the opportunity to serve you and work with you in the coming year.

All the best, Dave
Dr. Julie Smith, Extension Associate Professor in the UVM College of Agriculture and Life Sciences, was named the 39th Annual John Finley Award recipient at the Vermont Farm Show. The prestigious award recognizes an individual that has made exceptional contributions to agriculture and the working landscape through education, research, policy, and community development.

Dr. Smith has earned a national reputation as a pioneer in biosecurity and livestock health. She is currently the Principle Investigator on a $7.4 million biosecurity grant, the largest grant in the history of the UVM College of Agriculture and Life Sciences.

In addition to her outstanding work in the CALS Department of Animal and Veterinary Sciences, she is also the founding member of the Extension Agrosecurity Committee. Dr. Smith has brought federally recognized trainings in the areas of food and agriculture security to Vermont. As an educator, she is loved and respected by her students, and provides them support and advice as they prepare for a career in agriculture.

Her deep commitment to the agricultural industry is evident far beyond the laboratory. She has worked with Agri-Mark Cooperative, the Vermont Farm Bureau, and the Vermont Agency of Agriculture, as well as serving on multiple committees. She also served as the President of the Vermont Dairy Industry Association for several years.

The award is given annually at the Vermont Farm Show in January. John Finley was a UVM graduate, an educator at Vermont Technical College and Vergennes High School, and served as Vermont Deputy Commissioner of Agriculture until his untimely death in 1975.
Smith leads USDA NIFA Coordinated Agricultural Project grant

Submitted by Julie M. Smith

In November 2015 Dr. Julie Smith and the project team convened in Chicago. This was the second time the whole team met face-to-face and the first time meeting with external advisers. These interactions fuel the interconnectedness of the project. As the final subawards are executed, the project is picking up speed. The first newsletter on the project has been published and can be found via a link on Dr. Julie Smith’s blog: http://blog.uvm.edu/jmsmith smith-leads-usda-nifa-cap-protecting-animal-health/

In October Dr. Smith gave an overview of her biosecurity work and introduced the goals of the current project in the USDA/ARS Research Summaries session at the US Animal Health Association annual meeting in Providence, Rhode Island. In April she heads to Kansas City for the National Institute for Animal Agriculture annual conference, which focuses on biosecurity this year.

The project welcomes Susan Moegenburg to the team at UVM. Her office is in Terrill Building, but she is working closely with team members in the Social-Ecological Gaming and Simulation Laboratory based in Jeffords Hall.

Smith speaks about animal welfare on and off campus

Dr. Julie Smith was an invited speaker in the Northern New York Extension series on Cow Comfort, Welfare and the Public in January 2016. She spoke on aspects of how animals learn and how that applies to how we handle cows on their way to, while in, and leaving the milking parlor. Dr. Katy Proudfoot from The Ohio State University College of Veterinary Medicine and Dr. Kimberley Morrill of Cornell Cooperative Extension were also on the program.

This semester Dr. Smith has about 40 students in her spring ASCI 122 Animal Welfare/Animal in Society class. She is engaging them in examining their own beliefs about animal use and learning how to assess welfare in a range of situations.
This year we have welcomed Stefano Frattini, a visiting Ph.D. student from the University of Milan. Stefano recently presented his work, entitled “The DNA methylation pattern of prepubertal and pubertal Alpine goats” at the Plant and Animal Genome Conference (PAG) in San Diego, California. Also in attendance at the conference were Bonnie Cantrell who presented work entitled “Global DNA Methylation in Vermont Bobcat (Lynx rufus) Liver” and Fernando Betancourt who presented a poster entitled “Exploring DNA Methylation in the Bovine 5’ AMPM Gene Family.”

We would also like to congratulate Bonnie, who was awarded a competitive USDA sponsored travel award to attend the Animal Epigenetics Workshop at PAG.

Congratulations are in order as well for Fernando. He completed his Bachelor of Science degree in Animal and Veterinary Sciences from the University of Vermont in December. Fernando is continuing to work in the McKay lab for the spring semester and will be finishing up his research and writing it up for publication.

Sydney Friedman is busy writing her undergraduate thesis for her project and is due to graduate this spring. She plans to present her work at the University of Vermont Student Research Conference this spring.

Darla Quijada, an undergraduate student doing research in the lab, is continuing to extract DNA from shed snake skins and her biography will be on the McKay Lab website in the near future.

Since our last newsletter, Dr. Stephanie McKay has been busy organizing the Cattle/Sheep/Goat workshop at the Plant and Animal Genome Conference. While there, she also presented a poster entitled “A viewable Whole Genome Resource with Fourth North American Moose Mapped to Cattle and Sheep.” Whole genome sequence reads for moose are publically available and can be found at: http://www.ars.usda.gov/Research/docs.htm?docid=25590.

Later in January, Dr. McKay was invited to give a presentation at the Centre for Genetic Improvement of Livestock (CGIL) at the University of Guelph in Ontario, Canada. She enjoyed the opportunity to visit the CGIL group and learn more about their work.

The McKay Lab would also like to congratulate Rex Yee on his acceptance into the NASA High School Aerospace Scholars program. Rex is a former lab member and is currently a Junior at Poteet High school.

Finally, HUGE congratulations are in order for both Sydney and Fernando who have both been accepted to vet school!
In December, **Hira Haq** (BIOC, Class of 2016) successfully defended her Honors College thesis entitled “Delineating the effects of a diet comprising of full-fat dairy on the human gut microbiota”. Hira has been an integral part of our clinical trial since its inception in August of 2013 and will be attending UVM’s Medical School in the fall. Congratulations and thank you for all your help, Hira!

**Allison Unger,** Ph.D. candidate, started her first trial in January in collaboration with **Dr. Tom Jetton** (Department of Medicine, Division of Endocrinology, Diabetes and Metabolism) at the Colchester Research Facility. She has taken 180 CD-1 mice under her wing, taking care of them (feeding, weighing, blood glucose tests, etc.) every Monday, Wednesday, and Friday for the next 14 months. Allison’s project seeks to determine the effectiveness of dietary dairy- and plant-based bioactive fatty acids in reducing glucose intolerance, diabetes, and associated metabolic derangements in aged mice. Moreover, Allison is enjoying Vermont and her new puppy, Hardy.

**Laura Cersosimo,** Ph.D. candidate, recently published her second research article entitled “Breed and lactation stage alter the rumen protozoal fatty acid profiles and community structures in primiparous dairy cattle” in the *Journal of Agriculture and Food Chemistry*. In January, her third manuscript “The rumen methanogen community shifts from a periparturient to a postpartum diet in three breeds of dairy cattle” was revised and is currently under review with the journal, *BMC Microbiology*. Laura is writing two additional manuscripts and analyzes microbial fatty acid and sequencing data from a study where alternative forage crops were fed to dairy cows during periods of low pasture mass.

Ph.D. candidate **Melissa Bainbridge**, has been hiding these past months writing and submitting two manuscripts as first author and two manuscripts as co-author before the end of last year! Melissa and her fellow lab mate, **Caleb Goosen** (Ph.D. candidate, Plant and Soil Science), were invited to present a webinar entitled “Bovine fatty acids: From forage to milk”, which can be viewed on the eOrganic website at: [http://articles.extension.org/pages/73358/bovine-fatty-acids:-from-forage-to-milk-webinar-by-eorganic](http://articles.extension.org/pages/73358/bovine-fatty-acids:-from-forage-to-milk-webinar-by-eorganic)

On February 11, Melissa and Laura participated in the 25th Annual Vermont Agricultural Experiment Station and Extension Legislative Reception at the State House in Montpelier representing the research conducted in the Kraft lab.

**Helen Walsh**, postdoctoral fellow, has been working primarily at UVM’s Clinical Research Center on our clinical trial which is due to complete recruiting by the end of the spring semester. Preliminary data from this study has been used to produce an abstract for the Experimental Biology conference in San Diego, California in April. Our data (presentation title: “Decreased abundance of firmicutes in the gut microbiota after consumption of a diet containing milk fats.”) will be presented in the session: Medical Nutrition/Nutrition and Gastrointestinal Function/The Microbiome and Beyond).

Lastly, in mid-January, the Kraft lab relocated scientific endeavors to the Stone Corral in Richmond, exploring the world of brewing including sensory evaluation.
Lecturer Position Available—Equine Science

The Department of Animal and Veterinary Sciences at UVM seeks candidates for the position of Lecturer. This two-year, benefits-eligible, renewable, non-tenure track position will begin in July of 2016 and is a 12-month (0.8 FTE) teaching position. The person hired will be primarily responsible for equine-related, undergraduate teaching in the Equine Science option of the Animal and Veterinary Sciences program. They will be expected to teach courses in equine training techniques, equine enterprise management, beginner and intermediate riding, and the equine industry. Other responsibilities will include supervising the experiential equine learning program (EQUUS) and student cooperative horse barn, and advising and mentoring undergraduate students.

Qualifications include:

- Masters or Ph.D. degree in Animal or Equine Science, or a terminal degree
- Minimum of two years equine experience
- Highly-motivated professional with demonstrated proficiency in equine training and balanced seat instruction
- Experience with equine management and industry
- Strong commitment to excellence in teaching

Learn more at: https://www.uvmjobs.com/postings/18866

Conserve Vermont, Conserve the World: Love Without Borders

Students in Dr. Pat Erickson’s Advanced Zoos, Exotics, and Endangered Species class (ASCI 272) designed and managed a one-day conservation exhibit at Burlington’s ECHO Lake Aquarium and Science Center. The educational “trip around the globe” exhibit, “Conserve Vermont, Conserve the World: Love Without Borders” was comprised of six different interactive stations where parents and children could learn about bats, bees, birds, elephants, large cats, and small mammals as students discussed conservation concerns for these various species both locally and worldwide.

(L to R): Professor Pat Erickson, Hailey Everett, Meixian Huang, Chad Faulkner-Filosa, Jackie Tauberman, and Julia Ballionis.

Photo courtesy of Jon Erickson
Benjamin Daggett, who graduated from UVM in 2015 as an Animal and Veterinary Sciences major, is a first-year student at Cornell University College of Veterinary Medicine and is a contributor to Merck Manuals Student Stories. He contributed the following story:

During my senior year of undergraduate school in Vermont, I was on the day technician shift at the large animal clinic where I worked. I had already been accepted to veterinary school. I was, in many ways, on “Cloud 9” as they say. However, on this given day, we had a very ill donkey in the clinic. She had been in critical care, but it seemed she was becoming weaker by the minute. With an equine veterinarian, I was waiting for her owners to arrive so that we could euthanize her with them next to her.

During the euthanasia, I remained quiet. After a long time of silence, spent with my hands together, so thankful that this wonderful creature could pass on in peace with her loving owners, one of her owners said something to us that remains one of the proudest moments of my career to date.

“Thank you both. It is so wonderful that a place like this exists where you can do the work that you two do.”

That statement hit home for me. That was what I needed to hear. That was the answer to so many of the difficult ethical questions I’ve been struggling with for weeks (years, in some cases). The questions that I had been struggling with are ethical questions that every pre-veterinary student should ask themselves as they progress with their education. That day reminded me that we are the ones who will stand by owners during the hardest moments of their pet’s life. It is not only our jobs, it is a privilege. Although our jobs can sometimes be emotionally challenging, it can be very revitalizing to hear how appreciative owners are for the care we provide for their beloved animals. We may not always receive praise in this way. Those are the times when we must find praise from within. But there are those special moments, like this one, that glitter brightly and provide us with reassurance that our work is helping other people as well as their animals.

Margaret Quaassdorff’s interest in agriculture developed into a passion after a class at UVM exposed her to all aspects of the dairy industry. She received her bachelor’s degree in Animal Science from UVM in 2012 after which she worked for more than a year with hands-on experience as the dairy management intern at W.H. Miner Agricultural Research Institute in Chazy, New York. Recently she earned her master’s degree in dairy science with a focus on ruminant nutrition at the University of Wisconsin—Madison.

Margaret has accepted the position of Dairy Specialist at Vita Plus a livestock feed manufacturer in Lake Mills, Wisconsin. Her responsibilities will include serving as a knowledgeable resource for implementable nutrition, management and herd health solutions for dairy producers. She will also represent the company at local and regional industry events. Her previous experience working on the UVM dairy farm and as a dairy biosecurity research intern will serve her well in this new position.

When recently asked who made the biggest impact on her career, she stated: “As the saying goes, ‘It takes a village.’ Steve Couture and Anna Pape of the farm staff at the Miner Institute as well as Dr. Rick Grant, Dr. Heather Dann and Kurt Cotanch of the research staff have been instrumental in helping lay my strong foundation of both practical and technical dairy skills. They coached me in everything from animal husbandry to labor management on a working dairy farm, while instilling in me the importance of proper nutrition and cow behavior. Practical, cutting-edge ideas and integrated knowledge is advantageous when teaming with customers to overcome dynamic challenges on their dairies.”

We wish Margaret much success in her new position.
New CREAM barn and milking parlor opens

On October 29, 2015 the new CREAM barn was opened. CREAM’s own Miriam Lipschutz and other UVM dignitaries were involved in a ribbon cutting ceremony at the Paul Miller Research and Educational Center.

A week later the intended residents moved in. Each cow was walked from the Brett Klein Memorial Barn to their new abode. Twenty plus students gently coaxed and coaxed the cows on their journey.

To the beat of their own drum, the cows strolled into their new digs. The resultant reply from all the cows... “I don’t like it.” Cows are creatures of habit, even if they are moving into a brand new facility.

The CREAM program, which puts students in charge of managing every aspect of a dairy operation, from caring for the cows to managing finances, is already a much-admired program, with a 95 percent plus acceptance rate of its graduates into veterinary school.

The teaching barn will also be used by the roughly 250 animal and veterinary sciences majors in UVM’s College of Agriculture and Life Sciences.
“Cows are creatures of habit.” said Norm Purdie, faculty adviser to CREAM and a faculty member in the Animal and Veterinary Sciences Department. “If you change their environment, they get upset. We’re changing their environment for the better, but it’s still a big change for them. They’ll be upset for the first couple days and even for the first week. Then they’ll settle in.”

“It is so exciting to see CREAM move forward with modern facilities and a bigger milking herd. Day-to-day chores, as well as the CREAM program as a whole, are going to change completely, and for the better. We can run with greater efficiency, and operate on a similar level to other dairies in the state, so that when each of us graduates and enter the industry, we will be much more prepared and knowledgeable than before.”

Miriam Lipschutz
Class of 2017

The CREAM cows become acclimated to their new surroundings. The spacious barn includes an intelligent heating and cooling system which automatically opens and closes windows and starts or stops fans to maintain ideal temperatures and ventilation for maximum cow comfort.
CREAM 2015 holds end-of-year dinner

CREAM 2015 marked the 27th anniversary of the program which has become one of the most developed experiential based learning classes at UVM.

The CREAM 2015 annual dinner was held on November 19, 2015. An audience of dairy industry representatives and staff and faculty from the CALS Dean’s Office and the Animal and Veterinary Sciences Department heard how the CREAM program has changed the lives of another 16 proud members.

CREAM provides more than just an education, it enhances peoples’ lives.

The audience heard of the win-wins for CREAM this year. About moving cows to a new barn. About the small research projects completed by the CREAMers, some of these include, the equation to work out the value of a cow, what music increases milk production, and genomic testing in the CREAM herd and its knock-on effects.

CREAM 2016 consists of a group of 15 students. This new group will face many challenges and tough decisions; one of which won’t be about the old facilities. But hopefully they are safe in the knowledge that they have joined a select group of young people that in the past have gone on to be leaders of the industry, and maybe, friends for life.

Register for

The summer CREAM (Cooperative for Real Education in Agricultural Management) is designed for undergraduate students or recent graduates who are exploring veterinary medicine as a career option and who plan to apply to a professional program within the next academic year. Students will receive large animal handling experience that will strengthen their qualifications for veterinary school, and be provided guidance and resources for preparation of the GRE and vet school admission.

Students will benefit from workshop-style sessions on application and interview preparation. The program’s on-farm experience also includes special projects and field trips, and offers students an uncommon experiential learning opportunity that will help distinguish them as future agriculture leaders.

Upon successful completion of this course, students receive four academic credits.

Students may register at: http://learn.uvm.edu/course/201606/60451/summer-2016/animal-science/cream/

CREAM website: http://asci.uvm.edu/cream/


Photo courtesy of Jane Kennedy O’Neil
Students travel to Ecuador

Twelve students had the opportunity to travel to Ecuador during the 2015-16 winter session to participate in ASCI 298, Boot Camp in Alpaca Husbandry. This course provides students with the opportunity to understand camelid culture history in the Andes, learning the principal camelid husbandry practices: Handling and restraint, the parenteral and oral administration of pharmaceuticals, blood drawing, castration, placement of uterine blouses, toenail clipping, incisor trimming, use of a feeding tube, shearing, and fiber classification. Students worked directly with large numbers of alpacas and performed all of these interventions. Students also gained a practiced eye in the evaluation of fiber quality and conformation in alpacas, and reviewed methods for genetic improvements. They learned how to judge alpacas and to make on-farm selection of promising sires. Students were introduced to the principal parasitic and infectious diseases affecting alpacas, means of control, and treatment. They were able to observe the non-lethal methods employed to reduce predation by mountain lions and foxes, and the cost of these interventions. Students also had the opportunity to work with birthing mothers and alpaca newborns. Lastly, they were able to evaluate the feasibility of alpaca husbandry as a tool for conservation and the protection of environmental services in the tropical Andes.

A participating student shares her thoughts on this course:

Brooke Pietrafesa: “I thought that this experience was very unique and very hands on. I was able to learn and perform different tasks such as performing castrations, giving shots, and drawing blood, which is something that many undergraduate pre-vet students aren’t able to do until vet school.”

Brooke Pietrafesa draws blood with the assistance of the course instructor, Dr. Stuart White.

Brooke Pietrafesa learns how to shear an alpaca.

Brooke Pietrafesa intubating and tube feeding a cria, a baby camelid.
News from the UVM Morgan Horse Farm

The mild winter of 2015-2016 has been a boon for working in the barn, and a bust for those hoping for picturesque sleigh rides. The UVM Morgan Horse Farm (MHF) staff and friends, such as recently retired Associate Dean of the College of Agriculture and Life Sciences (CALS) and Animal and Veterinary Sciences Lecturer, Dr. Josie Davis, (pictured riding Senior Stallion “Xeno”), have enjoyed outdoor hacks unusual for this time of year. The upcoming 28th Annual Equine Reproduction Workshop, which will be held the second weekend in April, has a full roster and preparations are well underway. The farm is gearing up for the upcoming foaling/breeding season, with the first foals due at the end of February/early March. The foals will be three or four months old when on display for the 2016 Foal Days which are held each Saturday in June. The mares and foals are exhibited in our outdoor arena while staff share information with guests about a Morgan’s first year.

Ellen Sandstrom and her daughter Kristen were the lucky winners of UVM X-Finity, the 2015 Raffle Foal. “Finn” is wintering at the UVM MHF and will go home with the Sandstroms to Sutton, Massachusetts later this spring. White the 2016 raffle foal won’t be born for a few weeks, you can still call the farm for our tickets! 802-388-2011.

Ellen and Kristen Sandstrom winners of Finn who is enjoying a crisp January turnout

Right: Filly UVM Xanthia, born 4/23/15, is coaxed outdoors for the first time by former Apprentice Intern Harley Downey-Teachout, who now enjoys an Assistant Position at NDY Stables in Belmont, New Hampshire.

Above: The Vermont Magazine featured an article about the UVM MHF in its Winter 2015 article. It was great positive publicity for the farm. Link to article: http://www.vermontmagazine.com/

Dr. Josie Davis enjoying her recent retirement.

A rare photo-op: UVM Serendipity post parturition with her first foal, UVM Xposé, born 4/23/15. Mares are notorious for being elusive when birthing.
ASCI Summer Courses

One Health: Zoonoses

ASCI 395: An 8-week on-line course (May 23 to July 15) - This course examines infections shared between humans and vertebrate animals (zoonoses) and vector-borne diseases, using a One Health (human-animal-environmental health) lens. Instructors: Dr. Lynn Blevins and Dr. John Barlow

http://www.uvm.edu/~summer/course/201606/61854/summer-2016/animal-science/one-health-zoonoses/#enginece_section_tabs

You to the Zoo

ASCI 297: Our days spent at the zoo will be a perfect mix of hands-on work and discussions with zoo employees, veterinarians, and para-professionals. We will be doing a fair bit of zookeeping, short coursework (designed to augment our time with the animals), and will participate in a service project to the zoo. We will also travel to the Cornell University Veterinary Medical College, and the Cornell Lab of Ornithology (both in Ithaca, NY) to better understand how complimentary organizations play vital roles the conservation and medical treatment of zoo residents. Come enjoy this superior educational experience in a fast paced, fun environment, close to amazing exotic animals, all while earning 3 credits!

Instructor: Dr. Pat Erickson

http://www.uvm.edu/~summer/course/201606/60267/summer-2016/animal-science/you-to-the-zoo/

23rd Annual Alumni & Friends Dinner

Saturday, May 14, 2016
5:00 - 8:00 pm
Grand Maple Ballroom
Dudley H. Davis Center
Burlington, VT
Vermont Breakfast on the Farm plans two events in 2016

Breakfast on the Farm is an opportunity to tour a farm, see animals, talk with farmers and enjoy a great breakfast filled with Vermont-grown and Vermont-made products. Activities are geared toward families with younger children; however, these are great events for anyone who is interested in learning about farming and where their food comes from.

This year’s Vermont Breakfast on the Farm events will be held June 25th at Nea-Tocht Farm in Ferrisburgh, hosted by the Vander Wey Family, and August 27th at Green Mountain Dairy in Sheldon, hosted by the Rowell family.

If you would like to volunteer, please sign up at http://goo.gl/forms/glFHn53x03

UVM Horse Barn Easter Egg Hunt March 20th

UVM Horse Barn’s Annual Easter Egg Hunt
Sunday, March 20th
10 am—1 pm
500 Spear St., So. Burlington
Children 10 and under look for candy and toy stuffed eggs in the horse barn and enjoy craft activities.
(suggested donation $3 per child)
Please park at Gutterson so a shuttle can bring you to the barn; however, handicap parking will be available at the farm.
Email questions to Jenny.Wilkinson@uvm.edu
Sponsored by UVM Horse Barn Coop
As a junior at UVM, I figured my extracurriculars were pretty much set in stone; I had none. Two years spent at the University I call home—and I never joined a club, sports team, or even an intramural event. As the crazy horse girl I am, I knew that UVM had riding teams. But as an eventer, I knew the Dressage Team would be the only one I would be remotely interested in. As each semester flew by, I told myself I would try out and get ponies back into my life, but as each semester passed, I kept telling myself that I wouldn’t make the team and didn’t have time for the responsibilities.

Finally, at the start of my junior year I decided to go for it—I had spent the past two years stressing myself out over school work, while lacking animals in my life, and I needed a change. After getting accepted into the Dressage Team, I was introduced to the co-op barn that I had been so skeptical of since joining the Animal and Veterinary Sciences program. A student-run horse barn? Throwing twenty-plus crazy horse girls together did not sound highly functional to me, but I was wrong. If you ask anyone who has horses in their lives, they will usually tell you that they can’t imagine their lives without the daily happenings of cleaning up poop, struggling with a water hose, and sacrificing sanity and countless days to the care and maintenance of our beloved ponies. This was true for me and every co-op member I have become friends with since I joined this past fall. The co-op requires every student to be responsible for not only the care of their own horse, but also barn chores that cover the needs of everyone else’s horses. I soon began to make friends with girls not only on the Dressage Team, but other co-op members that were friendly and helpful to us newcomers. We have each other’s backs in case schoolwork or life prevents us from getting to the barn on time.

I finally found the barn family that had been missing from my life since I started college and I could not be happier. The mental relief of being a part of a horse barn community again was astronomical. It may get hectic at times, but I’m so grateful that my team and I get to be a part of this incredibly unique program.
“but first let me take a selfie” #SCIFIE

Bonnie Cantrell, a Ph.D. candidate in the Animal and Veterinary Sciences Department and Dr. Stephanie McKay, a genetics and genomics professor in the department were included in a YouTube video. The four-minute parody written to the song “but first let me take a selfie” by the Chainsmokers shows “scifies” (science/selfies) of female plant and animal breeders from around the world. The video emphasizes the important role women play in this field—both historically and at the current time—and also emphasizes the passion these women have for science, their careers and their family lives. Bonnie appears at the 2:17 mark and Bonnie and Dr. McKay both appear at the 2:46 mark.

https://www.youtube.com/watch?v=X68Phc0pk_A&feature=youtu.be

Bonnie Cantrell and Dr. Stephanie McKay show their support for women in science by appearing in the YouTube video, #SCIFIE.

Wishing all the best for Dr. Betsy Greene

We said farewell to a wonderful colleague, teacher and friend this fall as Dr. Betsy Greene left the department to join the School of Animal and Comparative Biomedical Sciences at the University of Arizona. For over 15 years Betsy taught, advised, and inspired students and promoted the equine industry as Professor of Animal and Veterinary Sciences and Extension Equine Specialist.

Her statewide extension programs have focused on preventative care and maintenance for horse health, safety, equine business, and pasture management. For 12 years she organized the educational aspect of Everything Equine & Canine, a two-day equine and canine education event and consumer trade show held at the Champlain Valley Exposition.

The quality of Betsy’s work has been recognized by many organizations. She has received the American Society of Animal Science/Equine Science Society Equine Science Award, a National Institute of Food and Agriculture Northeast Extension Award, the JCEP Teamwork Award, three different national awards for providing education using digital methodology, and many others. She has served as President of the Vermont Association of Agricultural Agents, and also Northeast Region Director for National Association of County Agricultural Agents. Betsy represented the department in UVM’s Campus Senate, serving on the Executive Committee and other subcommittees. In addition, she has served on the American Farm Bureau Federation Equine Advisory Committee. Throughout her career, Betsy has successfully integrated teaching and extension programs by involving undergraduate students as researchers, co-authors, as well as engaging them with legislative issues involving the equine industry.

We wish Betsy all the best as Professor and Equine Extension Specialist at the University of Arizona School of Animal and Comparative Biomedical Sciences.
Mital Pandya passes her defense


Dr. Pandya is originally from Columbus, Ohio. She received her Bachelor’s Degree in Animal Sciences from The Ohio State University in 2006. She completed her Master’s Degree in Veterinary Public Health from the same university in 2007. Following graduation she worked as a research assistant at Plum Island Animal Disease Center in Orient Point, New York. Mital joined Dr. John Barlow’s lab in the fall of 2010 focusing on foot-and-mouth disease (FMD) and the immune system response in bovines following vaccination or infection.

After completing her doctoral degree, she joined her husband in Manhattan where they are raising their new puppy, Disco, and she is taking a well-deserved break before pursuing a job.

Honor’s Day

May 4, 2016

5:00—7:00 pm

Miller Research & Educational Center

500 Spear St., So. Burlington

One of the most significant events of the academic year for students, faculty, and staff. Honors Day is the chance to highlight some of our best and brightest students.

Please join us as our talented students receive their awards.
Welcome to Animal & Veterinary Sciences

Dr. David H. Townson is originally from southeast Michigan, graduating from Michigan State University with the BS degree in Animal Husbandry. His passion for dairy cows and horses started at early age, having spent time on the dairy farms of his uncles in Ontario, Canada, working as a wrangler at summer camps and a show groom on the national Arabian horse show circuit, and driving draft horses for a historical museum in Dearborn, Michigan. After MSU, Dave completed his MS degree in Veterinary Sciences at the University of Wisconsin-Madison, the PhD in Dairy Science at The Ohio State University, and a postdoctoral fellowship in Reproductive Sciences at the University of Michigan. For the last 19 years Dave has been on the faculty at the University of New Hampshire, rising through the ranks to Full Professor before accepting the chair position in our department. His research specialty is reproductive physiology, focusing on ovarian-immune interactions. Dave is married and has two sons and a daughter, all of whom are now pursuing their own careers in life. Outside the department, Dave and his wife enjoy spending time outdoors and traveling, working on their new home, and playing with their “new” daughter, Zoey, whom you see pictured.

Stefano Frattini is originally from Varese, Italy. He graduated from the University of Milan in 2013 as a Green Biotechnologist. During his time there, he worked for a year at the Department of Animal Science in an animal genetics laboratory, supervised by Professor Paola Crepaldi, dealing with goat casein genotypings. In 2014 he started his Ph.D. course work in Veterinary and Animal Sciences at the University of Milan working on a project entitled, “Epigenetic investigation on cyclic onset of reproduction activity in dairy goats.” Nowadays he is collaborating with Dr. Stephanie McKay for his Ph.D. project, which mainly focuses on DNA methylation in the hypothalamus of goat species associated with puberty and seasonality. Stefano also enjoys team sports, actually more to watch than to practice, considering his age. In this picture he is the one on the right side.

Nicole Jaskiewicz grew up in the Lakes Region of New Hampshire and graduated from Colby-Sawyer College in May of 2011 with a Bachelor of Arts Degree in Biology and a minor in Chemistry. She had always planned on attending veterinary school, but when her mother was diagnosed with an aggressive form of breast cancer, Nicole realized her passion for biomedical research. In August of 2012 she enrolled in the University of New Hampshire’s Biochemistry Ph.D. program under the mentorship of Dr. David H. Townson. When Dr. Townson became the UVM Animal and Veterinary Sciences Department Chair in January of 2016, Nicole and her family jumped at the opportunity to make a fresh start in Vermont. Nicole’s research focus is, the role of Glycobiology, specifically O-GlcNAcylation, in cancer disease progression. Her mother is now cancer free and is her greatest cheer leader! Outside of the lab Nicole enjoys spending time outdoors with her husband and their new daughter, Fiona. As a family they enjoy gardening, working on their new home, and hiking with their dog, Newton.
ASCI faculty and students appear on Across the Fence

**Across the Fence** is the longest running daily farm and home television program in the country, airing Monday-Friday, 12:10-12:30 p.m. on WCAX TV Channel 3. Department of Animal and Veterinary Sciences faculty and students appeared on the following episodes:

- November 9th: Celebrating the UVM Animal and Veterinary Sciences Halloween Barn — **Betsy Greene**, UVM Extension Specialist, and UVM Senior **Somer Brown**, Student Organizer
- December 7th: Sustainable Agriculture Research and Education (SARE) Projects — **Debra Heleba**, Vermont SAFE Coordinator and **Robert Mugabi**, UVM ASCI Graduate Student
- December 22nd: Former UVM Extension Equine Specialist **Betsy Greene** talks about her years as UVM's Extension Equine Specialist

ASCI graduate students present research

Ph.D. candidates **Laura Cersosimo** and **Melissa Bainbridge** were invited to the State House to present research from the Kraft Lab at the 2015 Annual Report of the Vermont Agricultural Experiment Station and University of Vermont Extension. The research presented focused on developing functional dairy products to maximize the contribution of milk fat to health promotion and disease prevention. Melissa is pictured on the right working with Echium oil which is added as a natural supplement to cow feed.

More information about this research can be found at [http://www.uvm.edu/vtaes/](http://www.uvm.edu/vtaes/).

Recent Peer-reviewed Publications


Support UVM Animal & Veterinary Sciences

The Department of Animal & Veterinary Sciences is home to some of the best and brightest students, faculty conducting high quality research, and outstanding outreach activities at the University of Vermont. Your donation will help the Department continue to deliver first-rate service in these areas. Annual gifts from alumni and friends at all levels do make a difference. Please consider supporting the Department with a donation of any size.

Gifts may be made online at the UVM Foundation’s secure website:

https://alum.uvm.edu/foundation/giving/cals/

Please specify Animal & Veterinary Sciences in the “Other” category.

Easter Egg Hunt

Sunday, March 20th
10:00 A.M. to 1:00 P.M.
UVM Farm
500 Spear Street; So. Burlington, VT
$3 suggested donation per child (10 and under)

Calendar of Events—2016

March
Mar. 20, 2016. Easter Egg Hunt, Ellen A. Hardacre Equine Center, 500 Spear Street; South Burlington, VT

April
Apr. 9-10, 2016. Equine Reproduction Workshop, Morgan Horse Farm; Weybridge, VT
Apr. 28, 2016. Student Research Conference, Grand Maple Ballroom, UVM Davis Center

May
May 4, 2016. Last Day of Classes
May 4, 2016. Honors Day
May 6, 9, 10, 12, 13, 2016. Exam Days
May 14, 2016. CALS Alumni & Friends Dinner; Grand Maple Ballroom, UVM Davis Center

May 22, 2016. Commencement
May 23, 2016. First Day of Summer Classes
May 30, 2016. Memorial Day

June
Jun. 4, 11, 18, 25, 2016. Foal Days, Morgan Horse Farm, Weybridge, VT
Jun. 12, 2016. Walk for the Animals and 5K Doggie Fun Run—Battery Park; Burlington, VT

July
Jul. 4, 2016. Fourth of July Holiday
Jul. 19-23, 2016. The 2016 Joint Annual Meeting (JAM) of the American Dairy Science Association (ADSA), American Society of Animal Science (ASAS), the Western Section of the American Society of Animal Science (WSASAS), and the Canadian Society of Animal Science (CSAS) will be held together in Salt Lake City, UT