Dear friends,

It is hard to believe we are already well into March, and we are halfway through the Spring 14 semester. Back in January I had planned to attend the National Animal Sciences Chair’s meeting in Atlanta, but my flight was cancelled as Atlanta and the rest of the south got hit with snow and ice (something we are very familiar with here in Vermont).

Congratulations to the following folks: Dr. Jana Kraft for receiving $150,000 from the USDA-Agriculture and Food Research Initiative (see page 2); Drs. Sabrina Greenwood and Jana Kraft for receiving a grant from the George H. Walker Milk Research Fund; and again to Dr. Jana Kraft and her co-investigators Drs. Thomas Jetton (Medicine/Endocrinology, Diabetes and Metabolism, Dhananjay Gupta (Medicine/Endocrinology, Diabetes and Metabolism), and Alexander Wurthmann (Chemistry) for receiving a competitive UVM REACH Award. Congratulations also to ASCI alum Dr. Isis Kanevsky-Mullarky (Virginia Tech) for receiving the Presidential Early career award (see page 5). Welcome back to Hannah Lachance (Class 2012) who is working with Dr. Stephanie McKay (see page 5), and sad good byes to Ms. Rachel Smith (Wright and Kraft Labs) and more recently Ms. Amanda Ochoa (Barlow Lab). Thank you both for your significant contributions over the years, I wish you both well in your future endeavors.

We had our first study abroad course on alpaca husbandry in Ecuador. The 12 students spent nearly two weeks high up in the Andes working with these beautiful animals (see page 8). In addition to our regular summer courses “You to the Zoo” and “CREAM”, this summer we will be offering two new courses, “The Horse” and “Elephant Care, Handling, and Management”, as well as ASCI 001 Introductory Animal Science (for more information, see page 9).

Last week, the first of our four shortlisted candidates came to campus to interview for our tenure-track position in Animal Health. This is an exciting time as we continue to invest into our department. As you will see from our newsletter, the contributions and activities of our faculty, staff, and students make this department one of the best academic units on campus. Also, we now have over 300 undergraduate students majoring in Animal Science. Like the College, our numbers keep going up. We also received the external reviewer’s draft report from our Academic Program Review and everything looks very positive for the Department.

I hope you enjoy this issue of our newsletter. It’s packed with exciting information, including updates from the Horse barn, the Morgan Horse farm, Everything Equine & Canine (April 26-27), faculty lab news, an introduction to our new CREAM students, and plans for the new Miller Farm facilities.

I wish everyone all the very best. As always, thank you for your support and please follow us on Facebook (UVM Animal Science) and Twitter (uvmasci).

Kind regards,

André Wright, Ph.D.
Department Chair
News from Dr. Jana Kraft’s Lab

In the fall, the Kraft lab was back in full swing. In November, we welcomed Andrew Gordon who is working as a research assistant in collaboration with Drs. Tom Jetton and Dhananjay Gupta at the UVM Colchester Research Facility (Division of Endocrinology, Diabetes and Metabolism). Andrew’s work focuses on dairy-derived bioactive lipids impacting glucose homeostasis and pancreatic β-cell function. In December, we said good-bye to Rachel Smith. We would like to thank Rachel for working in the lab over the past seven months and wish her all the best for her future endeavors!

Congratulations to Tess Rooney (ASCI Class 2014) and Hira Haq (BIOCHEM Class 2016) on securing a Mini-grant from the Office of Undergraduate Research. In September, Jack O’Day (ASCI Class 2014), Katie Ritchie (ASCI Class 2014), and Pamela Bay (ASCI Class 2014) applied for the Distinguished Undergraduate Research (DUR). They are currently busy working on their projects processing their milk samples (408 samples from our CREAM cows sampled over a year – Jack), mouse tissue (muscle, liver, adipose tissue, and erythrocytes – Pamela), and fish samples (white and yellow perch from Lake Champlain – Katie). Both gas chromatographs “Hans” and “Liebchen” have been happily pegging away on all those samples.

Melissa Bainbridge successfully finished up her first year as a PhD student and is currently completing laboratory analyses from her previous trial. She prepared an abstract submitted for the ADSA/ASA joint annual meeting to be held in Kansas City in July 2014. Melissa is working on her second trial in collaboration with Dr. Wright’s PhD student Laura Cerosimo.

In November, Dr. Kraft gave a presentation to the New England Dairy Promotion Board at the 2013 Annual Meeting in Jay Peak about her current research trial (Examining the effects of consuming a diet comprising of milk fat on metabolic health markers) funded by the New England Dairy Promotion Board and Dairy Research Institute. Dr. Kraft and her study manager, Helen Walsh, are busy recruiting and enrolling volunteers into the trial.

Dr. Kraft was awarded an Agriculture and Food Research Initiative (AFRI) grant over two years from the United States Department of Agriculture - National Institute of Food and Agriculture (USDA—NIFA). Co-Principal Investigator on the research project is Dr. André-Denis Wright. The goal of this project is to investigate host-rumen microbiota interactions and their contribution to the content of branched-chain fatty acids (BCFA) in milk fat.

On a sportive note, in December, the Kraft lab challenged the Barlow lab members to a bowling duel. Despite outstanding fighting spirit, the Kraft lab was defeated by the Barlow lab (including Kerr lab members in disguise) by one point (Barlow lab: 90 points on average, Kraft lab: 89 points on average). Congrats to the Barlow lab! The next challenge is on!

Visit the Kraft lab online: http://asci.uvm.edu/labs/kraft/
News from Dr. Sabrina Greenwood’s Lab

PhD student Rink Tacoma has successfully completed her second animal experiment in December 2013 with the help of our undergraduate researchers Adriana Wilford, Beth Kennett, Dana Ortiz, Nicole Gruszczynski, Sarah Zeger and Taylor Hull. This semester we welcome Adriana and Sarah back to the lab, and also welcome sophomore Matthew Herber to the team. Students will be helping to process milk, plasma, urine and fecal samples collected during the experiment. Rink is currently working with the University of Vermont Proteomics Facility to complete method development for milk proteome analysis on the Mass Spectrometer.

News from Dr. André Wright’s Lab

The Wright lab is busy as always. Doctoral candidate Sue Ishaq recently had her second manuscript accepted in the journal Microbial Ecology, has another paper submitted and undergoing peer-review, and is preparing for a probiotic experiment using lambs. Ph.D. student Laura Cersosimo is hard at work finishing out her first animal trial with 22 primiparous cows at the Miller farm. In February, she started a similar project at the Thompson Farm in Colchester with undergrads, Dylan Devino (ASCI, Class 2014), Mallory Sullivan (ASCI, Class 2014), and Sarah Zeger (ASCI, Class 2014) that explores the rumen microbiome of lactating Guernsey to Holstein dairy cattle in high and low milk production groups. Laura is comparing the rumen methanogen population between different breeds of dairy cattle. As a side project, Laura is also working on a manuscript that is looking at the methanogen and bacterial populations within the rumen of impala from South Africa and writing a Springer book chapter that is highlighting different enteric methane emission estimation methodologies.

Our undergraduate researchers, Sam Rosenbaum (ASCI, Class 2014), Emma Hurley (ASCI, Class 2016), Ken Wesley (ASCI, Class 2016), and Michael Chilton (Microbiology and Molecular Genetics, Class 2015) have made excellent progress. This spring we are happy to welcome several new undergraduate members to the lab: Jesse Bachmann (ASCI, Class of 2017), Anjana Mangalat (ASCI, Class of 2017), Audria Greenwald (ASCI, Class of 2017), and Katy Nelligan (ASCI, Class of 2016). Sam and Emma are learning how to analyze bacterial DNA sequence data using bioinformatics programs, and will soon be writing manuscripts on their data. Ken is assisting Dr. Benoit St-Pierre to measure the effect of different input materials on anaerobic digester production. Dr. St-Pierre’s work is going well and he is busy preparing a new manuscript to be submitted soon for publication. Michael and Katy are learning how to amplify the 16S rRNA gene for DNA sequencing. Jesse, Anajana, and Audria are assisting Sue with culturing and testing of different bacteria isolated from the rumen of moose. Doug and Sue are currently writing a manuscript on their data of lactic acid bacteria.

Visit the Wright lab online:
http://asci.uvm.edu/labs/wright/
News from Dr. Stephanie McKay’s Lab

The McKay lab is busy working on a variety of aspects of the bovine genome with respect to economically important traits with beef cattle. Our work predominantly focuses on determining the extent to which epigenetic modifications affect phenotypic variation. We were funded last year to evaluate the bovine brain epigenome in Red Angus x Simmental steers in relation to docility. In other studies, we are investigating feed efficiency from both a genome-wide aspect as well as a targeted gene family approach. Genome-wide methylation levels in three tissues from each of eight Angus cattle with extreme measure of feed efficiency are being characterized. Preliminary results indicate the presence of methylation within regions of the genome known to harbor genes associated with feed efficiency. Dr. McKay presented both an oral and a poster presentation about this work at the 22nd Plant and Animal Genome meeting in San Diego in January of 2014.

Additionally, we are investigating the AMP-activated protein kinase (AMPK) gene family from an epigenetic perspective in livers of Angus and Charolais animals. The AMPK gene family plays a role in metabolism and is an important regulator of cellular ATP.

Stay tuned to our website for project updates and additional images: http://asci.uvm.edu/labs/mckay/

Hannah Lachance grew up on various military bases in New York, Kansas, Massachusetts, and Germany. She graduated from the University of Vermont in December 2012 with a B.S. in Animal Science and a minor in Wildlife Biology. After graduating she worked various jobs including research assistant for Dr. André Wright, assistant lab coordinator to Fran Kinghorn, and temporary laboratory technician in Dr. Stephanie McKay’s lab. In September 2013 Hannah left UVM to take an animal care internship at White Oak Conservation. At the conclusion of the internship, Hannah returned to UVM to work full time as a Laboratory Technician in Dr. McKay’s lab. In her free time, Hannah enjoys photography, crafting, adventures, and spending time with friends.
**ASCI alum receives Presidential Award**

**Dr. Isis Kanevsky-Mullarky**, an associate professor of dairy science in the Virginia Tech College of Agriculture and Life Sciences, has been honored by the White House as one of the 2013 recipients of the Presidential Early Career Award for Scientists and Engineers. The award is the highest honor bestowed by the U.S. government upon outstanding scientists and engineers beginning their independent careers.

Kanevsky-Mullarky received her Ph.D. in pathobiology and immunology at Penn State in 2003, her master’s degree in biological and animal sciences at the University of Vermont in 1998, and her bachelor’s degree at the University of Vermont in 1996. For three years prior to accepting a faculty position at Virginia Tech she was a postdoctoral researcher at the Trudeau Institute, an independent, nonprofit, biomedical research organization.

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**2012 UVM Graduate Erica Campbell**

"Entering veterinary school was daunting, I worried if I was prepared enough, but I soon realized that my Animal Science degree prepared me more than I could have anticipated. The rigorous coursework and hands-on animal experiences at UVM have given me a huge leg up in my class. Participating in EQUUS and Summer CREAM provided me with a great working knowledge of animal handling and husbandry, which made some of our introductory classes in veterinary school a breeze (especially for someone like me who didn’t grow up in a rural environment!). Having prior exposure to courses like anatomy, parasitology, nutrition, etc. have made the transition that much smoother. And one of the most important things for me was having the support system through my advisor and others during the four years in preparation for applying to vet school. I’m so proud to have chosen UVM, it was the perfect choice!"

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**McGarry Regional Representative at Holstein Association USA**

Holstein Association USA recently announced the appointment of **Robert McGarry** as Regional Representative, covering the New England states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont.

A Vermont native and 2013 graduate of Animal Science at the University of Vermont, Robert has been with the Association for seven months, gaining experience working in the Customer Service department.
Quality milk producers and delicious cheeses draw crowd to VDIA Dairy Banquet

Over 250 people joined Governor Peter Shumlin and Secretary Chuck Ross in recognizing Vermont dairy farmers for producing high quality cow and goat milk at the Dairy Farmers’ Appreciation Banquet on January 30th. Congressman Peter Welch reported the passage of the Farm Bill by the House and commented on other issues of interest to the dairy industry. The 2013 overall highest-quality (cow) milk award was presented to the Meyer Family of North Hardwick, Vermont, for the 10th year in a row! The 2013 overall highest-quality goat milk award went to Huard Family Farm of Craftsbury, Vermont. The Finley Award was presented to Tom Gates, Cooperative Relations Manager with St. Albans Cooperative Creamery. Gervais Family Farms was presented a hand-painted sign to commemorate its selection as 2013 Vermont Dairy Farm of the Year. Dr. Julie Smith, President of the Vermont Dairy Industry Association (VDIA), served as emcee of the Dairy Farmers’ Appreciation Banquet, which has been hosted by the VDIA for many years in cooperation with the Vermont Farm Show and Vermont Agency of Agriculture.

Like us on Facebook! https://www.facebook.com/VermontDairyIndustryAssociation

Smith took to the road to talk about calf management, biosecurity and emergency management

Dr. Julie Smith gave talks across Vermont on “Dollars and sense of calf rearing: exploring the options” during the UVM Extension Agronomy Plus series of workshops. This month she’s heading to Green Mountain College in Poultney to talk to a class about biosecurity and herd health issues. But first she’ll visit with the PA317 Systems Analysis and Strategic Management class at UVM to share some perspectives on dairy production systems and disease emergencies.
Smith Spearheads Vermont Cattle Health Improvement Program

In fall 2013, Dr. Julie Smith took on the role of Designated Johne’s Coordinator (DJC) in the state’s Johne’s control program. The DJC manages documentation of herds in the classification level program and is available to assist veterinarians who are working with herds managing Johne’s disease. Cattle and small ruminants can be affected by Johne’s disease, which is a progressive, incurable, wasting disease caused by bacterial infection of the intestines and other tissues. Check out fact sheets developed by ASCI graduate Rebecca Calder and other resources on the UVM Extension site: http://go.uvm.edu/1xuw
(or Google “UVM Extension Johne’s”).

UVM Extension collaborations are finalists in Equestrian Digital Awards

The international 2014 Equestrian Social Media Awards created the Equestrian Digital Awards to showcase digital excellence beyond social media, and UVM Extension national and state collaborations were recognized as Top Ten finalists in two categories. eXtension-Horses: Keeping Equestrians Educated (http://www.extension.org/horses) is a Top Ten finalist for Websites over 20K visitors and uses a national team of experts encompassing state equine extension specialists, teaching and research faculty, and county extension educators to create a research-based learning network. With over 2,900 current participants in 18 online learning lessons, Certificate Courses (Equine Youth Safety and Equine Business Network), Online Webinars, and over 230 educational video clips on the eXHorses YouTube channel, there is something for equine participants of all ages and levels of experience.

The second Equestrian Digital Award was for the Public Service Announcement (PSA) “Mutual Respect May Save a Life.” This statewide collaboration between The Vermont Horse Council, Vermont Farm Bureau, and UVM Extension was filmed and edited by Across the Fence personnel and has been distributed to television stations in at least seven states to date (http://www.youtube.com/watch?v=WNii-UbA_Bg&feature=youtu.be). This PSA also won the national 2013 Video Communications Award by the National Association of County Agriculture Agents Association. Equestrian Digital Award entries were judged by an international panel of equine media professionals based on content, user experience, visual design and film quality, cross-platform integration, and overall experience. Finalists were required to submit short video speeches for online use. http://www.youtube.com/watch?v=dJgy7ihRDak&feature=youtu.be

For further information on eXtension Horses website or to get the PSA on your local stations, contact Betsy Greene at betsy.greene@uvm.edu.
Students study Alpaca husbandry in Ecuador

Primer in Alpaca Husbandry was an experience that none of us will forget. Between the alpacas, the hiking and the culture shock, the experience was well worth taking.

Alpaca husbandry is physically challenging, especially if you have not done anything like this before. Everyone had turns with the alpacas. Wrestling an alpaca so that we could work with it was probably one of the biggest challenges since they are strong and speedy creatures. Once they were restrained we were able to perform toe nail clipping, teeth filing, oral injections, subcutaneous injections, shearing, and castrations. The days were long when we worked the alpacas, but the skills that we learned were amazing. We gained a great deal of respect for the farm hands Jose and Roger who do all of this work by themselves, and love doing what they do.

The adults may have been a strength challenge, but their offspring were a whole other experience. To capture them required speed, but they were so adorable that we didn’t mind having to chase them, just as long as we got to hold them in the end.

You can never appreciate a country’s landscape until you literally hike through it. To get to certain pastures, we hiked along trails that looked more like we were walking through the tropical rain forest of the Amazon rather than the forests of the Andes. We camped out for one night and then continued to the pasture. Physically challenging? Yes! Worth it for the sake of bragging rights that we trekked through thick bush? Definitely yes!

Four of us trekked up the mountain on horseback while another four rode them back down. I became all the more appreciative of horses with their power to see them march up and down those muddy slopes.

Everyone experienced culture shock when entering Ecuador. We all got a taste of traditions and food throughout the trip. Celebrating New Year’s Eve with the locals and eating their food was a fantastic way to appreciate the people and their way of life. Not many people can say they have eaten alpaca, llama, and guinea pig. But all 12 of us can now.

I can write about this trip, but the only way to fully understand what we learned and experienced is to seize this opportunity and take the course next year. It will be something that you will want to tell everybody about.

Submitted by Natalie Tocco
Class of 2017
**Summer courses to be offered in Animal Science**

**ASCI 297 TR1—You to the Zoo (NY)**

The goal of this course is to provide you with knowledge that will foster a deep appreciation and respect for the diversity of life while giving you direct zoo keeping experience in a zoo setting. Students will travel to the Rosamond Gifford Zoo in Syracuse, NY to participate in a hands-on course involving the daily care of zoo animals. 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 in the conservation and medical treatment of zoo residents. This is a fast paced, work intensive, course. **Travel dates:** May 18-24, 2014.  [http://www.uvm.edu/~summer/course-detail/?crn=60388](http://www.uvm.edu/~summer/course-detail/?crn=60388)

**ASCI 297 TR3—Elephant Care, Handling, and Management (FL)**

This travel course introduces and expands students’ knowledge and experience in all facets of the care, handling, and management of the Asian elephant. Students will travel to the Ringling Circus Museum in Sarasota, Florida in the second half of the week to learn about the history of the circus and the elephants’ role through the years. Students are encouraged to be in good physical condition because the course involves some strenuous activity with the elephants. Course is limited to ten students. **Travel dates:** June 1-8, 2014.  [http://www.uvm.edu/~summer/course-detail/?crn=61022](http://www.uvm.edu/~summer/course-detail/?crn=61022)

**ASCI 134—CREAM**

CREAM is a student run dairy enterprise. Students get to perform all the tasks that would be performed on a normal dairy farm with the added benefit of a University grade education in areas such as nutrition and animal breeding. CREAM gives student hands on experience with large animals and encourages lifelong learning and team building skills. Objectives: 1. Introduce and discuss the current practices in dairy farm management and apply that knowledge to the management of the CREAM herd. 2. Familiarize students with how to manage and operate a business. 3. Provide students the opportunity to gain leadership, communication, problem solving and time management skills that will give them an advantage in their careers and make them more valuable to future employers.  [http://www.uvm.edu/~summer/course-detail/?crn=60925](http://www.uvm.edu/~summer/course-detail/?crn=60925)

**ASCI 001—Introductory Animal Science**

This 4-credit Jump Start course gives students an overview of the genetics, nutrition, reproduction, and management of livestock and recreation species; introduction to animal behavior, animal disease, and biotechnology. Students have to apply to the Jump Start program via application process here  [http://www.uvm.edu/~summer/precollege/uvm-jump-start/apply/](http://www.uvm.edu/~summer/precollege/uvm-jump-start/apply/). Open to UVM enrolled 1st year students and other students who have earned a high-school diploma. Others by faculty approval.  [http://www.uvm.edu/~summer/course-detail/?crn=60943](http://www.uvm.edu/~summer/course-detail/?crn=60943)

**ASCI 297 TR2—The Horse (NY)**

This course has three distinct components, an online portion followed by two short travel components. The online portion is designed to allow students to understand the principles of horse husbandry and management, emphasizing anatomy, nutrition, preventive medicine, first-aid and common diseases. We then travel to SUNY Morrisville to the Equine Rehabilitation Facility to participate in a short equine rehabilitation course. The final portion of the course will take place in Saratoga Springs, New York during flat track season, where we will spend time understanding the racing industry. **Travel dates:** June 16-20, 2014 and July 18-21, 2014.  [http://www.uvm.edu/~summer/course-detail/?crn=60898](http://www.uvm.edu/~summer/course-detail/?crn=60898)
CREAM 2013 marked the 25th anniversary of the program which has become one of the most developed experiential based learning classes at UVM.

The CREAM 2013 annual dinner was held on November 21, 2013. An illustrious audience from Industry Representatives to the Dean and Associate Dean of CALS heard how the CREAM program has changed the lives of another 13 proud members. CREAM provides more than just an education, it enriches people’s lives.

The audience heard of the win-wins for CREAM this year. A pairing of CREAM with researchers to do simple trials on CREAM cows is such an example of a win-win. For the CREAMers there are the added benefits of participating in some basic research and providing another revenue stream to assist our bottom line.

Numbers don’t lie, and the CREAM program made a profit, not a large profit but still we are in the black. We welcomed the addition of Matthew Bodette to our team whilst fare welling Doug Watkin after 30 years of service to UVM.

CREAM 2014 is a relatively large group of 16 students. As with the bakers dozen of CREAM 2013, this new group will face many challenges and tough decisions. But hopefully they are safe in the knowledge that they have joined an elite group of people that in the past have gone on to be leaders of industry, and maybe more importantly, friends for life.

Visit the CREAM website at: http://asci.uvm.edu/cream

L to R: CREAM faculty advisor Norm Purdie, student advisors Dylan Devino and Danielle Semick, Samantha Cox, Sam Scheu, Lilly Rogers, Beth Kennett, Meredith Chamberlain, Annie Kaufman, Joe Marchell, Emily Stephens, Morgan Summers, Sarah Zeger, Rachel Lundsted, Rachel Freund, Julia Balionis, Ashley Hudson, Tyler Launhardt.

Photo courtesy of Jane Kennedy O’Neil
Meet our 2014 CREAMers

Hey, I’m Ashley Aloe! I hail from Pittsburgh, Pennsylvania where I live between two homes with four cats and a dog. As a Zoology major, I became interested in CREAM to view a different perspective of animal care. After spending the summer in Montana and seeing how attitudes of ranchers affect large carnivore conservation, I was curious to see conservation through the perspective of the farmer and hoped to engage in conservation out west through friendly farming techniques. CREAM so far has been a fantastic experience and I couldn’t be happier that I was accepted into the program. Outside of the barn I am an avid skier, musician, and outing club leader. When not out and about I can usually be found reading a good novel or watching a Netflix series. I am currently pursuing my EMT license and plan to take the licensure exam in May.

Hola! I’m Fernando Betancourt and I am a sophomore at the University of Vermont studying Animal Science with pre-vet requirements. I was born and raised in San Juan, Puerto Rico. I'm currently working in Dr. Stephanie McKay's Lab as an undergraduate researcher where our main focus is genetic, genomic, and epigenetic work with beef cattle. My plan is to earn my degree in veterinarian medicine while focusing on large animals/exotics. Before CREAM, I had worked in a small animal clinic, but until now have had no experience with cows or the dairy industry. So far it’s been a great start and an increasingly rewarding experience. I’m excited to be part of this hands-on experience with large animals. I'm also eager to be in a team that works hard everyday to manage the farm and make decisions that will impact the production and welfare of the animals. From the small amount of time I’ve already spent in CREAM, I could truly say it's a priceless experience and hopefully I will be able to expand my knowledge and learn more about the animal science world. Besides my interest in animals, I enjoying running outdoors, hiking, volleyball, and going to the beach back in Puerto Rico. I encourage others to take advantage of CREAM and the opportunities it offers, you will not regret it.

Hello! My name is Kristen Bowen and I am a freshman here at UVM. My major is Animal Science with a pre-vet concentration. I have lived all over the world as a military brat, but have come back to Vermont and decided to stay for school. I hope to one day attend vet school and am currently undecided on whether to concentrate on large animals or small animal surgery. I have always had a passion for animals and an interest in agriculture. I grew up around my grandparent’s dairy farm, and I am currently an assistant at a small animal veterinary hospital. Participating in CREAM is giving me the chance to learn more about large animal care and medicine, and gain more experience with animals, people, and the dairy industry. Outside of school I enjoy hiking with my dog, riding horses, swimming, and kayaking. I look forward to naming a calf and the future experiences to come with the other 2014 CREAMers!

Hi! My name is Amy Degelman and I’m a junior, majoring in Animal Science here at UVM. I transferred in the fall of 2013 from my local community college. I grew up in Waldwick, New Jersey, a small town in the northeastern part of the state. I came to UVM because of the awesome animal science department and because of CREAM. The hands-on experience it provides, and working with cows, is something new to me. I have experience with horses and many other animals, but you’ve gotta love cows! My future plans aren’t set in stone but I know I want to work in agriculture, primarily with livestock and CREAM is giving me the firsthand experience I need. I love being a part of this program and hope that CREAM 2014 can live up to the challenge of running a farm!
Meet OUR 2014 CREAMers—cont’d.

Submitted by 2014 CREAM students

Hi, my name is Sydney Friedman! I am an Animal Science sophomore from Montville, New Jersey. I am very interested in large animal medicine, and I have not previously had any experiences with cows before CREAM. I chose to do CREAM because it gives me the hands-on experience with large animals that I was looking for. I have learned a lot about the cows themselves as well as the dairy industry as a whole. After college, I plan to continue my education through veterinary school. Some of my other interests include singing, skiing and soccer.

Hi! I’m Molly Hayden, a post-graduate here at UVM. I graduated from the University of New England last spring and decided to return home to Stowe, Vermont before applying to veterinary school. I came to UVM so I could participate in CREAM and so far I love it! I have always loved cows and have some previous experience working with them through the vet clinics I have worked at. I was drawn to CREAM for the in-depth and hands-on experience it provides. I plan on attending vet school in the fall and I hope to eventually practice large and small animal medicine with a focus in dairy. When I’m not at the barn I work at Sequist Animal Hospital and I teach skiing at Stowe. In my free time I love skiing, hiking, shooting and backpacking with my dog, Kimber.

Howdy, my name is Grant Robinson Oden Jessup. I am a freshman here at UVM and I am majoring in Animal Science. I grew up in Westport, Connecticut where I went to high school for three years. My freshman year I lived in Sandpoint, Idaho but then moved back to Connecticut for a better education. My family owns a beef farm in Pennsylvania that I recently moved to because I have lived in Connecticut way too long. In the future I would like to take over the family farm and create a cool business out of it. Here are some fun facts about me; I like to rock climb, hunt, fish, and snowboard. CREAM is a sick experience.

Hi! My name is Natalie Kane, and I’m a junior here at UVM majoring in Animal Science with a minor in Nutrition and Food Science. I’m far from home here on the East Coast as I grew up in Burlingame, California, but I’ve really enjoyed the past three years here in Vermont! I chose to participate in the CREAM program, as thus far my only experience with large animals has been limited to horses. I thought the CREAM program would be a wonderful introduction to the dairy world (...and it sure has!) Although I’m still not quite sure what I’d like to do after graduating, over the past couple of years I’ve developed an interest in animal nutrition and food systems so I would welcome any opportunity to work in those fields. I’m looking forward to a year filled with new experiences and cows!

Hello everyone! My name is Petty Kim from Methuen, Massachusetts. I am currently an Animal Science Pre-Vet major with a Chemistry minor. I chose to do CREAM because as a Pre-Vet major, I was seriously lacking in large animal experience. Also, I love interacting with animals! It is to the point where I had withdrawals from not playing with any animals last year and I do not need a repeat of that! So far, I am absolutely loving my experience in CREAM. Of course the time commitment is rigorous, and my sleeping schedule has been redefined, but I feel no regrets. My other interests include Tae Kwon Do, snowboarding, gymnastics and tutoring. For my future, I am really hoping to attend Tuft’s Cummings School of Veterinary Medicine. With it being close to home, having a great academic program and the most affordable tuition, it seems to be the perfect place to go!
Meet OUR 2014 CREAMers—cont’d.

Submitted by 2014 CREAM students

Hey everyone! My name is Sarah Lawson and I am from Middlebury, Vermont. Currently, I am a junior Animal Science major with a pre-veterinary concentration. I chose to do the CREAM program through the university because I wanted a fun, new experience to spice up my schedule that is mostly hard sciences otherwise. So far, CREAM has been a great experience, from meeting new people, to in-depth learning about a different species, to the hands-on aspects of the class. I plan to apply to veterinary schools this upcoming fall but who knows where I’ll end up. The only thing I currently know is that my career will definitely let me spend my days in my favorite place, the barn!

Hey everyone! My name is Ava McPhail, and I’m a sophomore studying Animal Science with a Pre-Veterinary concentration. I’m from New London, Connecticut, but I went to an agricultural high school in Ledyard, Connecticut, which was awesome because we had cows on school grounds! Throughout high school I worked as a vet tech in a small animal hospital, but I always preferred large animals. I joined CREAM because I had enjoyed working with cows in the past, and I hope to become a large animal veterinarian someday. So far, CREAM has been wonderful; working with the cows has been very rewarding. Outside of the barn I love to run, watch Doctor Who, draw, play with my dog Eddie, and work with snakes! After graduation I hope to attend the Royal Veterinary College in London and specialize in equine/bovine reproduction, equine orthopedic surgery, and reptile medicine.

Oi, I am Sean Nuzzo. I’m a junior majoring in Animal Science. I hail from Franklin, Massachusetts. I’ve worked as a butcher for the past few years, and I’d like to move out of the meat industry and move into the dairy industry. CREAM seems like the perfect opportunity to get my foot in the dairy door. Working with the live CREAM cows is much more enjoyable and rewarding than working with deceased cattle. Outside of school I enjoy cycling, goldfish breeding and showing, and I have a passion for steel that borders obsession. I don’t have any grand aspirations for the future; I do not intend to pursue a DVM or any sort of graduate degree. I imagine I’d be happy launching myself right into the dairy world after graduation. Then again, future plans are always subject to change, and I may be saying something different a month from now.

My name is Katy Nelligan. I’m from Standish, Maine, and I’m an Animal Science major on the pre-vet track. I decided to apply to CREAM because I saw it as an extraordinary opportunity to start applying what I’ve learned in classes to a hands-on situation, and to gain further experience around large animals to help me move closer to my goal of becoming a large animal veterinarian. CREAM has been a very valuable experience so far. I love having such an exciting responsibility, working with a great group of people, and learning about the care and management of a dairy herd. Aside from being at the barn, I enjoy the coast of Maine, marine science, hiking, photography, playing the piano, painting, doing pottery, goats, and spending time at home with my family.

Hey there, my name is Chase Pomerantz and I am from Weston, Connecticut. I am a freshman Biological Science major in the College of Agriculture and Life Sciences. I have worked on farms with fruit and vegetables, but never in my life had the opportunity to work with animals. I chose CREAM to have this experience and I couldn’t be luckier to be working with a herd of dairy cattle. As of now, I have no regrets with the program and I am having the best time being able to get out of school and do hard work with animals, outside, and for a good cause.
Meet OUR 2014 CREAMers—cont’d.

Hi there! I’m Carolyne Ricardo and I am an Animal Science Major and Chemistry Minor on the pre-vet track. I am from New York City, so I’ve only ever had experience with small animal medicine but I am so excited to be in the CREAM program here at UVM. My cousins in Portugal had ostriches, pigs, and dogs of all breeds, so I loved spending my summers there, and it is also where I figured out I wanted to work with animals for the rest of my life! The two weeks before I started CREAM, I was on a Wildlife Reserve in the Andean Mountains of Ecuador working with a large alpaca herd. It has been amazing to see the similarities and differences in management practices with both animals in the two countries. I want to return to South America because I am fluent in Portuguese and Spanish, and the experiences I had there were beyond wonderful. I want to get my DVM degree so that I can practice as I travel the world. I am new to the Dairy Industry; but nonetheless, I look forward to my time at the barn every day, and I can’t wait for what is to come this year in CREAM!

Hello! My name is Sam Traficante, I’m a sophomore Animal Science student from Kingston, Massachusetts. I chose to do CREAM because it seemed like a wonderful opportunity to gain hands-on experience working with cows and with a group of other students, as well as being a unique opportunity to be able to make our own management and business decisions. So far I have not been disappointed, and I can’t wait to see what the rest of the semester has in store. After graduation I hope to attend veterinary school to become a large animal veterinarian, then work in reproduction. Outside of school I like to horseback ride, hike, ski, and read.

Plans for a new CREAM Barn

Plans are underway to construct a new CREAM barn, milking center, and dairy research barn which will be built as part of the first phase of major renovations to the Paul Miller Agricultural Research Farm: http://asci.uvm.edu/cream/miller_center-renovation.pdf

There are naming and donor recognition opportunities for gifts at all levels: http://asci.uvm.edu/cream/name_opportunities.pdf. We welcome your investment to further the exceptional experiential learning available through the CREAM Program and advance the important work of the UVM Dairy Center of Excellence.
New England Driving Enthusiasts.

A Morgan Horse Farm (MHF) photo was selected to grace the cover of the Addison County Chamber of Commerce Membership Directory & Community Profile. This directory is sent to all members, given to new residents, and sent to tour companies to promote the county and region. The UVM Morgans and their historic home continue to be a leading attraction from local to international audiences.

In response to UVM President Tom Sullivan’s initiative to MHF’s Advisory Committee, College of Agriculture and Life Sciences Dean Tom Vogelmann has coordinated an oral history review of the UVM Morgan program. Under the guidance of Richard Watts (Director, Center for Research on Vermont/Assistant Research Professor, Community Development and Applied Economics), and with assistance from Kelly Hamshaw (Research Specialist, Center for Rural Studies), Katie Cox (Rubenstein School of Environment and Natural Resources ENVS ’14) and Lauren Mair (College of Arts and Sciences HIST ’14). The project will begin with interviews with former UVM Morgan Horse Farm Director, Dr. Donald Balch, former UVM Morgan Horse Farm veterinarian Dr. Don Hunt (UVM ’57, Cornell ’71) and President’s Advisory Board to UVM MHF member Polly Quinn.

Senior sire UVM Abington (1992) works for Apprentice Intern Danielle Black from New Brunswick, Canada. Increasing day length and more rigorous exercise all factor into the preparation of breeding stallions for the program’s upcoming Reproduction Workshop (March 28 & 29, 2014) given in collaboration with Miner Institute and Dr.’s Mary O’Donovan and Molly Witters.

‘Fat,’ Fuzzy, and full of FOAL. Our broodmares are coming along in their 11-month gestation period. UVM Halcyon (199 mare), due in April. Is seen here.

Seven bred mares are wintering well, with expected due dates from March through May. We hope to have named our Raffle Foal for 2014 by late June.

Members of the Carriage Association of America included a Morgan Horse Farm visit during their February Meeting and Learning weekend. Stops in Bromont, Quebec CANADA; Shelburne Farms, Shelburne; MHF, Weybridge; and the National Museum of the Morgan Horse in Middlebury, Vermont were all included on their ambitious schedule.

Visit the Morgan Horse Farm website: 
http://www.uvm.edu/morgan/

Remember, the ‘formal’ tourism season is May 1 through October 31. Visitors are always welcome, however, during our “off-season.” Weekdays, 9 am until 3 pm, Saturdays 9 am until 11 am. Sundays the grounds are closed.
Established in 2004, Everything Equine has educated equestrians of all levels on the latest innovations in the horse industry. This decade long partnership between UVM Extension, Champlain Valley Exposition, and Vermont equine industry business partners is now expanding to include our canine friends! “Everything Equine & Canine” will be held on Saturday, April 26th from 8:30 am until 5:00 pm and on Sunday, April 27th from 8:30 am until 4:30 pm at the Champlain Valley Exposition in Essex Junction, VT.

In addition to informative seminars and demonstrations throughout the weekend, Everything Equine & Canine seeks to entertain horsemen and horse and dog lovers alike with its "Horsin' Around on Saturday Night" show. Many of the clinicians featured in the educational portions of the show often perform for the audience in the arena featuring horses, dogs, music, and more.

A highlight for those interested in shopping for their equine and canine friends, are over 100 commercial and informational booths at the show. From a new hoof pick, to a new horse trailer, to dog collars and toys, you can find most anything you may need for horse, rider and your canine friends.

One of the hottest events to hit the horse world, The Extreme Trail Challenge, will take place in the Poulin Grain/Guy's Farm and Yard Arena on Sunday, April 27 at 9:30 am to benefit the Vermont Horse Council. The challenge welcomes up to 25 of the top horse and rider teams from New England who will vie for up to $2,700 in prize money as well as other prizes. The horse and rider teams will show off their partnership by completing a series of judged and timed obstacles. The Vermont Horse Council is pleased to bring their expertise in coordinating this event at Everything Equine. The course promises to be exciting, creative and challenging!

Renowned author and trainer, Shawna Karrasch of “On Target Training” will offer demonstrations and training techniques embraced by the US Olympic equestrian team. Shawna spent nearly ten years working to perfect her training skills not with horses, but in the pools at Sea World of California with killer whales, dolphins, and other marine mammals. Her infectious enthusiasm, sense of humor, and rapport with an audience, put her center-stage in the Sea World show. She also worked backstage with show producers, facilitating the writing, blocking, and staging of performances. She will be demonstrating how her training techniques will work for horses and dogs. Shawna will be presenting on both Saturday and Sunday. More info: https://asci.uvm.edu/?Page=equine/
Horse Barn Update

I think we can all agree that this winter has been cold and icy, limiting our outdoor activities and requiring extra protection when we venture outside. Now imagine that you are a horse living in the area with ice-covered walkways and subzero temperatures! Luckily for those of us associated with the UVM Horse Barn, our four-legged friends are fairly rugged and don’t complain too often. The horses have been enjoying turnout in the indoor arena with thick, comfy blankets. The students caring for them on a daily basis, including UVM Horse Barn Cooperative members and Equus students, also keep their complaints to a minimum, recognizing that our responsibilities to our equine companions outweigh the extra layers and frozen fingers. But we are definitely looking forward to spring!

This semester, we have a lot going on in the horse barn. First, students are planning the first ever UVM Farm Easter Egg Hunt on Sunday, April 13th from 10:00 am until 1:00 pm.

Equine Instructing students will be teaching the Beginner and Intermediate Equitation classes starting after spring break, giving both riders and instructors an opportunity to practice their horse skills. Students in Equus will have presentations by both Linda Corey, a local equine dentist, and Dr. Liz Poulsen, an equine veterinarian specializing in homeopathy. Tim Hayes will also be back to teach the students about Natural Horsemanship. Overall, we have lots of opportunity to learn and enjoy our horses.

The UVM Horse Barn Cooperative will have several open spots for next fall. If interested, please submit an application by April 1st. We look for students with a strong work ethic and horses with an easy disposition. Any questions, please contact Dr. Jenny Wilkinson at jtwilkin@uvm.edu. You can find the application and more information about the cooperative experience on our website: http://asci.uvm.edu/horsebarn/

Please feel free to stop by the horse barn and feed our furry, good-spirited horses a spare apple or carrot. And feel free to complain about the weather; they are excellent listeners.

Submitted by Dr. Jenny Wilkinson

Equine dentist Linda Corey demonstrates oral horse health to Equus students.
ASCI Peer-reviewed Publications for 2013


ASCI Peer-reviewed Publications for 2013


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21st Annual Alumni & Friends Dinner
Saturday, May 10, 2014
5:00 - 8:00 pm
Grand Maple Ballroom | Dudley H. Davis Center | Burlington, VT
Support UVM Animal Science

The Department of Animal Science is home to some of the best and brightest students, 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://alumni.uvm.edu/foundation/giving/online/

Please specify Animal Science Department in the “Other” category.

Calendar of Events

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<tr>
<th>Year</th>
<th>Month</th>
<th>Event Description</th>
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| 2014 | April | Apr. 13, 2014. UVM Farm Easter Egg Hunt  
Apr. 18, 2014. Honors Day  
Apr. 30, 2014. Last Day of Classes |
|      | May   | May 2, 5, 6, 8, 9, 2014. Exam Days  
May 4-6, 2014. Digestive Disease Week (DDW), Chicago, IL  
May 10, 2014. CALS 21st Annual Alumni & Friends Dinner, Grand Maple Ballroom, Dudley H. Davis Center  
May 17-20, 2014. 114th General Meeting of the American Society of Microbiology; Boston, MA  
May 18, 2014. Commencement  
May 26, 2014. Memorial Day Holiday |
|      | June  | Jun. 12-13, 2014. The 20th annual Boston Bacterial Meeting (BBM2014) will take place at the Harvard University Science Center. |
|      | July  | Jul. 4, 2014. Fourth of July Holiday  
Jul. 20-24, 2014. The 2014 Joint Annual Meetings of the American Dairy Science Association (ADSA), American Society of Animal Science (ASAS), and the ASAS Western Section (WSASAS) will be held together in Kansas City, MO |
|      | August| Aug. 25, 2014. First Day of Classes |
|      | September | Sep. 1, 2014. Labor Day Holiday |
|      | October | Oct. 10-12, 2014. UVM Homecoming & Family Weekend  
Oct. 27, 2014. UVM Horse Barn Co-op Halloween Barn  
Oct. 31, 2014. Morgan Horse Farm Raffle Drawing |
|      | November | Nov. 25-29, 2013. Thanksgiving Recess |
|      | December | Dec. 3, 2014. Last Day of Classes  
Dec. 5, 8, 9, 11, 12, 2014. Exam Days |