MOVING FORWARD
Greet greetings from downtown Storrs, Connecticut. We have completed the fall semester with an entering class of very talented freshman students. This is the start of my twenty-ninth year as a member of the College’s faculty, and I am pleased to report that positive changes have continued to occur—some of which are highlighted in the following pages—and several more are scheduled for the coming year.

As I type this, we are home to 2,054 undergraduate students and 358 graduate students. During the past year, our faculty members secured approximately $25 million dollars in funding to support their research and creative activities. The Doctor of Physical Therapy Program moved into newly renovated space on the east side of campus, Koons Hall’s classroom and faculty office spaces were improved and new autoclaves and growth chambers were installed in the Agriculture Biotechnology Laboratory. We also recently opened a new laboratory for the study of heat effects on athletic performance, the only one of its kind in the country, and ground was broken for a new robotic milking system for the Kellogg Dairy Center. And, we have been working with the University to provide for shared use of lands under our stewardship while maintaining the integrity of pastures and forest lands used for support of our teaching, research and extension programs.

With strong support from the faculty, the College has returned to an administrative structure of three mission-based associate deans. The College has expanded its international program interests and acquired funds to establish relationships with health and agriculture colleagues in Cuba. And most recently, the Zwick Center for Food and Resource Policy released Economic Impacts of Connecticut’s Agricultural Industry: Update 2015, which estimates the economic value of Connecticut’s agriculture and natural resources industries to be between $3.5 and $4.0 billion annually.

I wish all of our alumni, wherever you may be, all the best and encourage you stop by for a visit when you are next in the area.

Cheers,
Cameron Faustman
Interim Dean
President’s Message

Dear alumni and friends,

I am pleased to write to you on behalf of UConn Agriculture, Health and Natural Resources Alumni (UCAHNRA). As president, I have the privilege of working with a dedicated volunteer board that supports the alumni, students, faculty and staff of the College. Through signature programs and new initiatives, we seek to advance the College of Agriculture, Health and Natural Resources.

This fall has been busy, with a series of events for our alumni and friends. In September, we hosted a pop-up event at Grounded Coffee Company, an alumni-owned coffee shop in Willimantic where we enjoyed a limited-edition iced coffee float.

October featured Huskies Forever Weekend, which included our annual UCAHNRA auction, held in conjunction with Husky Bluegrass, Brews and More! This event offered a live band as well as beer and wine tastings from alumni-owned and local wineries and breweries. This year, our silent auction was dedicated to Herm Weingart, past president of UCAHNRA and the driving force behind the success of the auction each year. Many thanks to those who attended and to those who supported our auction. Proceeds benefit our endowed scholarship, as well as programs and activities throughout the year. Watch for this event again next fall!

In addition, we once again hosted a buffet dinner for career representatives at the CAHNR Career Night, an event that saw a record number of both career representatives and of students in attendance.

To round out the fall, we partnered with another alumni-owned establishment, Over AndOver in Andover, to celebrate the one-year anniversary of their opening. Fall Fest welcomed alumni, friends and community members with music, artists and Dairy Bar ice cream.

We are proud to continue to award scholarships to students each year through the UCAHNRA Endowed Scholarship Fund. We are happy to support students as they work to achieve their goals.

As this calendar year comes to an end, we look forward to the New Year and the exciting projects and activities planned for the College and our alumni, friends and students. You will read about some of them in the pages of this issue of Pathways. We hope to see you at some of our future events and invite you to join us in supporting the College.

Sincerely,

Pam Roberts ’70, ’77
New Associate Dean Sees a Bigger Picture

By Patsy Evans

For CAHNR’s newest associate dean, this position is about increasing the scale of his life’s work. Associate Dean for Research and Graduate Studies Kumar Venkitanarayanan has demonstrated success in obtaining research grants, supervising graduate students through to completion and supporting CAHNR as a team leader and player. “Now, I can use all my skills and experience and do it on a bigger canvas for the College,” he said about the new role he started in May.

Faculty are part of the picture
The portrait that he wants to paint as associate dean will include two main subjects, reflecting the “research” and “graduate studies” in his title. For example, Venkitanarayanan hopes to provide CAHNR’s research faculty members with increased funding opportunities to help them reach their goals in spite of the current economy. “I want to make it easy for them,” he said.

One of his solutions for budgetary constraints is to “spread our wings wider.” This means he wants to identify previously overlooked programs, to apply for grants offered by different federal agencies and to cooperate with other universities in seeking funds. He thinks that the College has enjoyed much success with USDA grants, but it needs to diversify to improve the probability of receiving funding.

In addition, Venkitanarayanan observes that most of the granting agencies are looking for interdisciplinary, multi-university and/or international collaborations in the research projects that they fund. To help faculty members be more competitive in receiving grants, Venkitanarayanan plans to mentor them in forming successful partnerships.

Students matter, too
On the bigger canvas that he envisions, Venkitanarayanan allots plenty of space for future graduate students, as well.

One of Venkitanarayanan’s recruitment strategies to get the “quality and quantity” he desires is to target students for grant monies, like those provided in the National Institute of Food and Agriculture’s National Needs Graduate and Postgraduate Fellowship Grants. He is familiar with these programs after serving as a member and manager on various USDA proposal review panels.

Furthermore, Venkitanarayanan will not ignore students after they enter graduate school. He thinks they need mentoring and professional development opportunities as well as training in leadership and grant skills. “I want to play a role in shaping the next generation of the work force,” he said. He adds that he is proud when former students find meaningful careers in academia or industry.

“Graduate education and research have always been my passion,” he said. When Venkitanarayanan came to the College’s faculty in 1999, he was the first person to study food safety. As he takes up the associate dean title, his animal science research into natural antimicrobials as controls for food-borne pathogens will continue with his current graduate students (two Ph.D. and two MS candidates).

Venkitanarayanan’s appointment brings the College’s total of associate deans up to three, which has not been the case for a long time, according to Interim Dean and Director Cameron Faustman. However, Faustman adds that it is important to have “an individual dedicated solely to championing the research cause.”

“Our College has enjoyed significant growth in its research portfolio during the past few years and that, together with the need to increase cross-disciplinary approaches and meet evolving compliance requirements, more than justifies Kumar’s position,” Faustman said. With Venkitanarayanan as an associate dean, one suspects that the picture is about to grow even bigger.

...spread our wings wider...
Sandra Bushmich has been appointed associate dean for academic programs and director of the Ratcliffe Hicks School of Agriculture. Bushmich started her new position March 17, 2017, replacing Cameron Faustman, currently interim dean of the College.

"Sandy is known to students and her colleagues as a committed teacher and advisor," Faustman says. "Our College’s Office of Academic Programs will benefit tremendously from her commitment to the student experience, both curricular and co-curricular, and her energy and enthusiasm."

"My vision as associate dean for academic programs directly relates to how this office can best serve the College and the University to achieve the optimal potential of our diverse students by providing them with the knowledge and skills to improve their world, from their daily personal interactions to global impacts," Bushmich says.

There are several projects at the top of her list, including a Transfer Year Experience course that specifically focuses on the unique challenges of transfer students, particularly those commuting to campus. "We need to improve retention and success of these students," she says.

In addition, Bushmich would like to promote the College’s majors and programs to both traditional and under-served student populations, as well as increase career development initiatives for students via internships and partnered programs that allow two-year and four-year graduates to sit for certification exams.

"It would be one of my goals to give our students an edge on direct employment after graduation equal to the edge they receive for graduate school admissions after working in a top-notch research laboratory."

"This is an opportunity to provide service to the students and the faculty in the College," Bushmich says. "Our College emphasizes direct faculty advising. We need to make that a valued and important activity. It’s very influential, and the students so appreciate it."

"Our College really cares about undergraduate education, and I want to help the faculty perform optimally by streamlining and enhancing some of the processes involved in undergraduate teaching, advising and learning."

Bushmich joined the College in 1988 as an assistant professor and extension veterinarian in the Department of Pathobiology and Veterinary Science. In 2007, she was promoted to full professor and in 2009 she was appointed interim director of the Connecticut Veterinary Medical Diagnostic Laboratory (CVMDL). In 2011 she was appointed director of the CVMDL.

Bushmich holds a DVM degree from Cornell University, as well as a BS degree in animal science from Cornell and an MS in physiology of reproduction from Texas A&M University. As an undergraduate student, Bushmich studied abroad at Reading University in England. To maintain a direct connection with students, the associate dean for academic programs continues to teach. Bushmich will teach Biomedical Issues in Pathobiology, an introductory core course for students in the Department of Pathobiology and Veterinary Science.

"I've always had a passion for undergraduate education," she says. "I love to teach."

The academic programs office focuses on undergraduate academic programing and advising, internships, scholarships and career services, as well as events such as commencement, the scholarship banquet, student orientation and the College student ambassador program.

"We have a really beautiful college," Bushmich says. "It incorporates components of the natural world in human and animal health with the environment. Our College has grown and become more diverse. I’d like to continue that trend by encouraging integrative programs so that students have a holistic feeling of belonging to the College and their department."

"This is a college where people really care about each other. That’s really important. We never want to lose that."
Robots are Coming to the Dairy Center  By Patsy Evans

Robots vacuum floors and assist surgeons. Soon, they will be milking the UConn dairy herd. To house the robots, a 3,000-square-foot Kellogg Dairy Center addition is underway with an expected opening in April 2018. When it is finished, the facility will be among the first voluntary milking systems installed at a university.

This state-of-the-art robotic technology will benefit the cows’ health and welfare, the farm staff's ability to care for the animals in an individual way and the students' experiential learning, according to Steven Zinn, professor and head of the Department of Animal Science.

The idea was first suggested by Mary-Margaret Cole, animal science’s executive program director, and took about two years of “patience and persistence” to be realized, but it resulted in a “true collaboration.”

“Now, the University dairy herd will have cutting-edge technology made possible by the partnership between the Department of Animal Science, the CAHNR Dean’s Office, the Provost’s Office and the UConn Foundation,” Zinn said. The $1.8 million cost covers the whole project from the design phase to the installation of the robots.

The new milking system will use the current data collection process and integrate into existing equipment, such as the milk storage tank, which holds two days’ worth of milk. Improved features include two robots working around the clock, an area that facilitates the cows’ movements, equipment to harvest and

Robots, continued on next page...
cool the milk and a viewing room.

“Overall, robotic milking meets the needs of individual cows better,” Zinn said. For example, some cows produce up to 150 pounds of milk per day and will be milked more often than others in the herd. Staff members will set up parameters that determine the maximum frequency of milking for each cow.

How the robots work

The system is called “voluntary” because the cow decides when she needs to be milked, based on a physical urge. When she enters the machine, the information on her ear tag is read. If she is within her particular parameters, she will receive a food reward and be milked. However, it will take time for the cows to get used to the process. For example, a cow might come back too soon when her udder is not full because she is lured by another opportunity to be fed. In that case, the robot will deny permission and release the cow.

In the process, the robots collect data, such as the cow’s weight and milk yield. These records can be viewed on the robot, a computer or a mobile device.

Advantages for the cows

The robotic method fosters the cows’ welfare in many ways. Data obtained by the robots will determine the amount of feed each animal is allocated and the timing of the feeding. This is different from the past system where feeding was based on the average requirements of the group and distributed to every cow at about the same time. An added advantage is that the barn is quieter and calmer when the cows eat when they want to eat, according to Zinn.

Nutritional needs can be addressed on a one-on-one basis, as well. In addition, if a cow has not come for milking at the usual frequency, a staff member can investigate the reason for her absence. The robots also assure that the cow is not under or over milked, and they can detect early signs of illness.

Changes for the farm staff

With automatic milking, staff members will not have the manual labor of prepping cows for milking and attaching the milking machines. Zinn says that the half day that it formerly took to do the milking will be spent in other ways.

For one, the data collected will inform animal care decisions. Also, more time will go toward giving individual attention to the 75 Holstein and 25 Jersey cows, who produce about 900 gallons of milk daily. Potentially, this attention will increase the herd’s productivity and health.

Benefits for students

Animal science students will benefit from the robots, as well. They have a unique opportunity to work with the robots and the data collection as part of their college classes. Cole said, “The most important reason I am excited to begin working with the robots is that our students will have access to the latest technology for managing our cows’ health and production.”

In addition, students will be better equipped for using state-of-the-art dairy farm technology as voluntary milking systems become more popular around the world.

The Kellogg Dairy Center herd has many distinctions. Among its honors is a gold “Best of the Best” National Dairy Quality Award from Hoard’s Dairyman for being in the top 20 dairy herds in the country. In addition, milk (4.18 percent butterfat) from these cows is made into ice cream at the UConn Creamery, which is served at the Dairy Bar. Hopefully, when the robots arrive they will bring even more success to the herd in the form of health, happiness and increased production.

The voluntary milking system is a product of DeLaval, a Swedish company. Advantages of the robots are described in this YouTube video.
Benjamin Franklin Koons Hall, home to the Department of Allied Health Sciences (AHS), underwent a renovation this past summer. Koons Hall was constructed as a dormitory in 1913, when UConn was known as the Connecticut Agricultural College. When the dormitories of the North Campus opened in the early 1950s, Koons Hall was converted to office and classroom space. The renovation project redesigned these classroom spaces, expanded teaching and research labs, refurbished offices, centralized the advising center, remodeled the student lounge and replaced the heating, ventilation and air conditioning system in the building. AHS is now settled back into a space better equipped to support their commitment to health education and research.

CAHNRS at United Nations Climate Change Conference

Staff and students from CAHNRS joined others from the University of Connecticut to attend the United Nations Climate Change Conference, the 23rd Conference of Parties (COP23). They were part of a group called UConn@COP, environmental advocates dedicated to attending these annual meetings with people from around the world. This year, COP was hosted by the small Pacific island state Fiji and held in Bonn, Germany from November 6 to November 17.

From left to right: Dr. Tracy Rittenhouse of Natural Resources and the Environment (NRE); Lindsay Tenenbaum, NRE and International Business Management double major; Mary Donato, NRE major; Weston Henry, Landscape Architecture and Ecology and Evolutionary Biology double major at COP23.
AWARDS AND RECOGNITION

UConn Agriculture, Health and Natural Resources Alumni Awards

UCAHNRA EXCELLENCE IN PHYSICAL THERAPY AWARD
Juan Garbalosa

Dr. Juan Garbalosa ’81 currently serves as clinical associate professor and director of the Motion Analysis Laboratory (MAL) in the Department of Physical Therapy at Quinnipiac University. He has dedicated his career to educating future professionals while at the same time pursuing research designed to benefit the lives of individuals with injuries and disabilities.

In his position as director, Dr. Garbalosa has a keen vision and has established the MAL in a dynamic fashion that is not only fiscally responsible but also assures sustainability. The primary goal of the work performed in the MAL is to contribute to knowledge through research and scholarship. Students receive valuable experience participating in scientific and clinical inquiry.

Dr. Garbalosa has successfully mentored many students, nurturing interests in research and helping to launch careers in the field. He has prepared students for the rigors of the physical therapy profession and has laid a foundation for careers in higher education and research. In addition, Dr. Garbalosa is a highly decorated researcher in the field of physical therapy, specializing in the biomechanics of the foot and ankle. He has authored numerous peer-reviewed publications and presentations and has received many awards, including the Fulbright Specialist Award. His dedication to the advancement of knowledge and his enthusiasm for engaging students and colleagues is evident in his publications and peer-reviewed and invited presentations.

Dr. Garbalosa’s integrity is uncompromised, his standards are very high and his colleagues and mentees benefit tremendously from his knowledge and experience.

UCAHNRA EXCELLENCE IN EXERCISE SCIENCE AWARD
Eric Cressy

Eric Cressey ’06 is president and co-founder of Cressey Sports Performance, a high-performance training facility with locations in Massachusetts and Florida. Mr. Cressey works with athletes from a variety of sports and from all levels, from youth sports to professional and Olympic athletes. He has coached more than 100 professional baseball players and has contributed to their success as athletes. In 2015, Mr. Cressey served as strength and conditioning coach for the USA Baseball under-18 National Team, which won the gold medal at the World Cup in Japan.

Mr. Cressey is also an accomplished author and speaker. He has written six books and multiple articles; he has co-created DVD sets; he has spoken around the United States and around the world; and his work has been featured in local and national publications, including Men’s Health, ESPN and Yahoo! Sports. In addition, he serves as a consultant to New Balance and on advisory boards for Precision Nutrition and the International Youth Conditioning Association.

Mr. Cressey is a competitive powerlifter who holds state, national and world records. He is recognized as a “coach who can jump, sprint and lift alongside his best athletes to push them to higher levels—and keep them healthy in the process.”

His impact on the strength and conditioning community is evidenced by his informational and educational emails and blogs. Mr. Cressey has established himself as an expert in his field and is a highly sought-after educator, speaker and author.

UCAHNRA EXCELLENCE IN ATHLETIC TRAINING AWARD
Bob Howard

Bob Howard, ’88 (Neag), ’91 (CAHNR) has been with the University of Connecticut for more than twenty-five years, joining the University as an assistant athletic trainer and currently serving as assistant director of athletics—athletic training. During his time with the University, Mr. Howard has dedicated his career to mentoring athletic training students and the student athletes for whom he is providing care. He supports, teaches and provides...
an environment that helps his student athletes succeed on the playing field and his athletic training students develop as critical thinkers. Mr. Howard challenges students to apply their knowledge, but encourages them to be proactive learners. His forward thinking has led to new policies and procedures with the focus on the treatment and care of the student athlete.

In addition to his contributions to UConn, Mr. Howard has served on local and national committees, including the NATA District 1 College University Athletic Trainer Committee and the University of Connecticut Performance Enhancement and Recovery Team, and as president of the Big East Sports Medicine Society. Regardless of his role, he works tirelessly to improve the profession. He earns the respect of those around him with his thoughtful insight and assessments. He truly believes in what athletic trainers do and the value of the profession, and he has put in hard work and countless hours over the years to ensure that it remains viable and relevant. His vast experience, great character and calm demeanor make him a nationally respected representative of the athletic training profession.

For his contributions to the field, Mr. Howard has received numerous awards and recognition, including the Connecticut Athletic Trainers Association’s 2006 Athletic Trainer of the Year and the 2004 University of Connecticut Neag School of Education Alumni Society Outstanding Kinesiology Professional Award. It is impossible to ignore the profound effect he has had on this profession through his selfless, tireless and principled work.

**UCAHNRA EXCELLENCE IN TEACHING AWARD**

**Sarah Reed**  
Department of Animal Science

Dr. Sarah Reed joined the UConn faculty in 2011 with a 50 percent research, 50 percent teaching appointment. She has made significant contributions to improve the learning experience of animal science students in the classroom, as an academic advisor and in the laboratory.

Dr. Reed advises forty to sixty undergraduate animal science students and is one of three Honors advisors in the department. She has also mentored more than twenty undergraduate students in research in her laboratory. Dr. Reed is an excellent advisor and students seek her out for course and career advice. She has also been very involved with recruiting incoming students by participating in Open House and meeting with prospective students.

Dr. Reed continues to enhance her teaching skills to improve student-based learning. She participates in Center for Excellence in Teaching and Learning (CETL) lunch-time workshops and the CETL Winter Teaching Institute. She was also an active participant at the 2013 ADSA-ASAS Teaching and Learning in the Animal Sciences Workshop and was part of a cohort organized by the writing Center to develop appropriate metrics for measurement and assessment of writing assignments in UConn’s W courses.

Since coming to UConn, Dr. Reed has made a connection with students. She is an energetic, enthusiastic, engaged and caring teacher, and her students find her classes challenging and rewarding. Student evaluations of Dr. Reed’s courses consistently exceed the average in the department, the College and the University. Her passion for student learning and the positive environment she creates in her classes is evident as she engages students in discussions of current literature, challenges long-held beliefs and stimulates critical examination of current topics. Dr. Reed has worked hard to create a positive classroom where students are challenged to think, question and learn.

**UCAHNRA OUTSTANDING STAFF AWARD**  
**Katrease Sharavolli**

Over the past decade, Katrease Sharavolli has been instrumental in the development of the Doctor of Physical Therapy (DPT) program and the Department of Kinesiology. She coordinates admissions and assists with annual reports, compliance requirements and self-studies required for accreditation.

She has assisted in the development and implementation of the cumulative exam for students transitioning from classroom to clinic; she promotes the program through the program website and newsletter. What sets Ms. Sharavolli apart, though, is her tremendous dedication to the success and well-being of students, getting to know them personally and advocating for them as they face challenges both inside and outside the classroom.

In the past two years, Ms. Sharavolli has dedicated her time and talents to the relocation of the DPT program to the newly renovated space in the Bio4 Building, organiz-
ing planning meetings, ordering equipment and directing the delivery and setup of the new facility. She also coordinated the relocation of a Hawley Armory laboratory to Gampel Pavilion and the ordering of all equipment and supplies for the newly opened motion capture laboratory in Gampel Pavilion. All of these projects were completed in the fall of 2016 on time and within budget. These facilities benefit students and faculty across a spectrum of programs and departments and are a testament to Ms. Sharavolli’s exceptional commitment to the department, College and University.

Ms. Sharavolli has also been vital to the success of three international exchange experiences as the department hosted delegations from the China State General Sports Administration in 2014 and 2016 and a delegation of Japanese physical therapy faculty and students in 2015. She assists faculty and staff in a department that sponsors two accredited professional programs, occupies two buildings and supports multiple research laboratories and the Korey Stringer Institute. She leads the staff in a manner that maximizes the services available to support research, teaching, clinical education and curriculum success.

UCAHNRA DISTINGUISHED ALUMNI AWARD

William Cullina

William Cullina ’91, president and CEO of the Coastal Maine Botanical Gardens (CMBG), has become known throughout the country as the authority on North American native plants. In 2008, Mr. Cullina became the director of horticulture and plant and garden curator of CMBG. In 2012 he was promoted to executive director of the Gardens, and since then he has helped establish CMBG as one of the region’s premier horticultural destinations. Prior to his time at the Coastal Maine Botanical Gardens, Mr. Cullina was nursery director and head propagator at the New England Wildflower Society, where he established one of the finest native plant nurseries in the Northeast.

A Connecticut native, Mr. Cullina has shared his knowledge with gardeners in six books considered by many to be horticultural masterpieces. His most recent book, Coastal Maine Botanical Gardens: A People’s Garden, was released in 2011. In addition, he contributes articles to many popular gardening magazines, lectures throughout North America and has appeared on television and radio programs. Mr. Cullina has also been responsible for numerous valuable introductions of plants to the nursery industry.

With his friendly, courteous demeanor, Mr. Cullina has shared his vast knowledge of the plant world with eager gardeners across America and has inspired others to pick up a shovel and get their hands dirty. For his contributions to the field, he has received numerous awards, including the Perennial Plant Association’s highest honor, the Award of Merit, and the National Garden Clubs of America Award of Excellence. In 2012, he was given the prestigious Scott Medal from The Scott Arboretum of Swarthmore College, presented to someone who “has made an outstanding national contribution to the science and the art of gardening.”
**Gray Receives National Award**

Catherine Gray ’72 BS (Physical Therapy) received the Intellectual Disabilities/Developmental Disabilities Hero of the Year Award from the American Health Care Association and National Center for Assisted Living. The award recognizes commitment and dedication to serving people with intellectual and developmental disabilities. Gray was honored at the AHCA/NCAL 67th annual convention in Las Vegas in October.

Cathy Gray is president and CEO of Cedarcrest Center for Children with Disabilities, which provides short- and long-term medical care, special education and therapy services for children with complex needs. The center provides medical services for infants to age 21 and school services for children ages 3 to 21. Gray has led Cedarcrest since 1995.

**Myder Recognized with Award**

Janet A. Myder ’68 BS (Physical Therapy) of Mount Pleasant, SC, was honored as Volunteer of the Year by the Myasthenia Gravis Foundation of America (MGFA) in May. A former member of the MGFA Board of Directors, she has been involved with MGFA for nineteen years, starting in Maryland and continuing her advocacy and dedication in South Carolina since 2009. In 2010, she co-founded the Low Country Myasthenia Gravis Support Group in Mount Pleasant, SC, the first MG support group established in the state. She is editor of the MGFA quarterly E-Update.

**Marcoux Wins Award**

John Thomas Marcoux ’89 BS (Physical Therapy) DPM received the 2017 American College of Foot and Ankle Surgeons’ (ACFAS) Distinguished Service Award, one of the College’s highest honors. Marcoux was recognized at the ACFAS Annual Scientific Conference in Las Vegas on February 28, 2017.

This award recognizes ACFAS members who volunteer their time, expertise and service behind the scenes to help enhance the College’s mission to advance the profession of foot and ankle surgery for the benefit of the patients they serve.

Marcoux is a board-certified foot and ankle surgeon. He serves as the program director of Podiatric Medicine and Surgery Residency at St. Elizabeth’s Medical Center in Brighton, MA. He is also a Fellow Member of the American College of Foot and Ankle Surgeons.

**Semler recognized as Distinguished Alumnus**

Jeff Semler ’84 MS (Animal Science) was named a distinguished alumnus by the West Virginia University Davis College of Agriculture, Natural Resources and Design Alumni Association. He earned his BS degree from West Virginia University.

After leaving Connecticut, Semler served as an extension agent in Berkeley County, WV. He went on to become a herdsman for several large dairies in West Virginia and Maryland before joining the University of Maryland in 1988. He now is the University of Maryland Extension Educator, Agriculture and Natural Resources for Washington County and a columnist for Herald-Mail Media.

**Thomas named Director**

Corey Thomas ’15 BS (Animal Science) ’17 MA (Curriculum and Instruction) has been named director of the town-owned Wakeman Town Farm in Westport, CT. Prior to joining the farm, Thomas was the education director at Massaro Community Farm in Woodbridge, CT.
With the fast-paced schedule needed to obtain three degrees from UConn in two CAHNR academic departments, Laura Kunces feels prepared for the job of keeping up with the nutritional needs of professional athletes and coaches. Here is what the nutritional sciences and kinesiology graduate told us about UConn and her current career.

What was your major in the College? When did you graduate? With what degree?
I graduated in May 2008 with a bachelor’s in nutritional sciences. I minored in nutrition for exercise and sport. In addition, I received two degrees, a MS in 2012 and a PhD in 2014 in kinesiology with a focus on low-carb diets and metabolism.

What class was most useful to you? When I was still a student, some of my favorite classes were Nutrition for Exercise and Sport, Medical Nutrition Therapy and the foods lab course. Now that I have more work experience, I recognize that other classes, such as Human Anatomy and Physiology and Organic Chemistry, have great relevance to what I do on a daily basis. Almost every class from graduate school has a direct link to my work now.

Tell us some of your fond memories of UConn. When I was an undergraduate, one of the most memorable days was the dietetic internship match day!

Some of my fondest memories of UConn were from things I did outside the classroom, such as walking in the snow from the West Campus Residence Halls all the way to the nutritional sciences buildings and the Dairy Bar.

As a member of women’s varsity swim team, I spent hundreds of hours in the Wolff-Zackin Natatorium and made a lot of great friends and memories. I remember early morning practices followed by quick breakfasts, running to classes all day and going to evening swim practice and study halls.

I will never forget the cold windy weather, meals at McMahon dining hall, spring weekends, stressful finals week and all three of my graduation days.

In graduate school, I had amazing opportunities to travel for field studies and assist with lab studies. This drove my passion for educating athletes about nutrition and working with healthy populations who are seeking performance-related benefits. I am forever grateful for all of my professors and lab mates from kinesiology and nutritional sciences.

Please describe your current job. I currently work for a large Danish dairy co-operative called Arla Foods. (People in the United States know us for our cheeses.)

As head of performance nutrition research and development, I work under our parent company on a start-up project that designs nutritional supplements, which we personalize via genetics and the athlete’s needs and taste preferences. I interact with professional athletes and coaches, such as runners, triathletes, cross-fit participants and winter Olympians. With our food scientists, I translate the information we collect into a personalized system. I also get to work directly with the geneticists on customized DNA reports our customers receive.

In addition, I use my own and others’ research to make sure the ingredients are efficacious, and I communicate the results to scientists and consumers. My job involves traveling and conference attendance, which allows exposure to international culture, networking and learning from other companies’ business models.

As most start-ups do, I operate on a lean and fast team because I have to keep up with what the customer wants and how the science, economy and FDA requirements are changing. However, I also navigate through the policy and depth of a large company.

Do you have any advice for current students that will help them in the future? Get involved! My professors told me that, and I wish I started earlier. I was lacking hands-on experience during my undergraduate days because so much of my time was devoted to swimming on the team.

I corrected that after I graduated. I volunteered. I worked long days and long hours. I never said “no” to any opportunity. Every experience will help you learn what you like or don’t like. You stay humble in the process.

Is there anything else you would like us to know about you? I have a MS and RD in clinical nutrition from the University of Memphis.

My husband is also a UConn graduate (Electrical Engineering, ’06, ’10, ’13). It is true that some people you meet at UConn will be in your life forever! Although we live in Scottsdale, Arizona, we still bleed blue!
Leticia Riva was born in Uruguay and moved to Spain at eighteen. She received her master’s degree in resource economics from the College’s Department of Agricultural and Resource Economics, where she is currently a Ph.D. candidate. Riva has studied in Spain, Germany, England and the United States. These experiences opened her eyes to the circumstances of people in various parts of the world, inspiring Riva to study economics as a way to understand and improve the lives of others. Her research focuses on topics related to trust, poverty and communities. Here is what she said in an interview.

Where did you study as an undergraduate? What was your major? I studied as an undergraduate in Málaga, Spain. My major was economics.

Why did you decide to go to graduate school? I decided to go to graduate school because I liked (and I like) economics and I wanted to acquire more knowledge. I also think that nowadays it is one of the paths to follow if we want to work in positions where we can have more freedom to develop ideas and study them.

Who is your advisor? What is your field of research? My advisor is Nathan Fiala, and my field of research is economic development.

Name one aspect of your work that you like. What I like is the possibility of developing ideas and trying to implement them. This work allows me to research topics that I am interested in and study them deeper while I am in an environment with people who give me feedback and have experience in related topics. This is great.

In your opinion, what is your greatest accomplishment so far? My greatest accomplishment so far is having the opportunity to come to the United States to study for my Ph.D. From where I come from and now to be here, this is a great accomplishment for me. I am now developing my research and I hope to have success related to publications.

When do you expect to finish your degree? What then? I expect to finish my degree in 2019. After that, I may return to Spain since I have some contacts at universities there, and they know that I am at UConn working on my Ph.D. I keep updating them with my progress and my research. However, in the next two years I would also like to explore other possibilities in the United States or other countries in Europe.

Is there anything else you would like us to know about you? I love dancing. I like to dance a lot of types of Latin American dances like salsa, bachata or merengue.
Consolidated major offers hands-on training and real-world experience
By Jason M. Sheldon

The Department of Plant Science and Landscape Architecture has unified two of its undergraduate programs with the creation of the new Sustainable Plant and Soil Systems major. By combining the Horticulture major with the Turfgrass and Soil Science major, the realignment acknowledges the common attributes these fields share and offers students a versatile career path.

For the new major, students complete a set of required courses and then choose a concentration in Turfgrass Science, Environmental Horticulture or Sustainable Agriculture. These concentrations offer further options for students to specialize their education to align with their interests and career goals.

Turfgrass Science focuses on the management of golf courses, athletic fields and residential, commercial and municipal grounds. Environmental Horticulture involves the commercial production of ornamental plants, as in nurseries and greenhouses, and the landscape use and maintenance for both aesthetics and the essential ecosystem services they provide. The Sustainable Agriculture concentration focuses on the use of ecologically-sound production practices for the production of food crops.

“The department consolidated the old Horticulture major with the Turfgrass and Soil Science major because we recognized these programs shared the common goal of promoting sustainable practices within managed systems, whether those managed systems involve a farm, an athletic field or a residential community,” says Richard McAvoy, professor and head of the Department of Plant Science and Landscape Architecture. “The Sustainable Plant and Soil Systems major is all about producing crops and managing plant systems for human use.”

The requirements of the new major provide students the general science background and emphasize reducing environmental impacts, promoting best management practices and developing productive and profitable cropping systems. The courses in the concentrations help students refine their knowledge and skills.

Now required for both the Turfgrass Science and Sustainable Agriculture concentrations is a field study internship, a practice previously required only in the former Turfgrass and Soil Science major. Under the close supervision of Steven Rackliffe, associate extension professor, students in the Turfgrass Science concentration complete internships that are typically during the summer, with an extensive report due in the fall. To date, over 200 students in the turfgrass program have completed internships in venues with professional athletic fields and golf courses, including Boston Red Sox’s Fenway Park and the Milwaukee Brewers’ Miller Park, as well as for minor league teams, including the Pawtucket Red Sox’s McCoy Stadium and the New Hampshire Fisher Cats’ Northeast Delta Dental Stadium. Students also gain valuable experience interning at golf courses like Shinnecock Hills, Whistling Straits and Turnberry. “We’ve had students working at courses that host the US Open, the Walker Cup and PGA tours. These internships put students at incredible sites where they can learn from the best,” says Rackliffe.

Students are required to complete only one three-credit internship but often complete a second because of the academic and employment experience they gain.

In the plant science programs last year, students completed thirty internships, but industry demand far outpaces the number of students available in the department.

The department also offers a Landscape Architecture major, five minors and, through the Ratcliffe Hicks School of Agriculture, a two-year associate degree.

David Sotire (’15) taking soil moisture readings.
Emergency preparedness is an issue for an increasing number of people and families. No matter the season, take steps in advance and be ready for storms or other natural disasters. Personal experiences with storms—Tropical Storm Irene (2011), Sandy (2012)—and conditions that produce snow, winds, flooding and storm surge, serve as reminders. Weather events can impair your health and safety, limit access to roads, cause property and tree damage and loss of electricity.

At the Universities of Connecticut and Rhode Island, a team of Extension and Sea Grant educators is addressing coastal preparedness through a USDA-NIFA Special Needs grant. UConn Extension has created a preparedness education program to help people, including those with pets and livestock, prepare for storm emergencies. UConn Extension’s EDEN (Extension Disaster Education Network) website contains a compilation of emergency preparedness resources designed by experts.

The team includes Mary Ellen Welch, disaster preparedness team leader; Robert Ricard, UConn EDEN team leader; Juliana Barrett, coastal preparedness; Karen Filchak, family and community development; Diane Wright Hirsch, food safety; Joyce Meader, dairy and livestock; Jenifer Nadeau, equine specialist; Faye Griffiths-Smith, family economics and resource management; and Pamela Rubinoff, University of Rhode Island, coastal resilience specialist.

Pamela Rubinoff is developing Rapid PACE (rapid Property Assessment of Coastal Exposure), a storm mapping, assessment and planning tool, so municipal officials, coastal communities and residents can assess potential storm hazards. The tool aggregates existing high-resolution map data from multiple sources and will generate user-friendly reports that summarize the potential impacts of storms upon specific parcels of land in coastal Rhode Island.

In Connecticut, focus groups met in four coastal communities—East Lyme, Old Lyme, Groton and Stonington. A diverse group of community representatives participated: fire marshals, emergency/health managers, social services, school and library personnel, housing/senior center directors and beach association members. Their knowledge about local residents and resources is guiding the team to reach audiences with functional needs; people living alone without family nearby; people with limited English proficiency; part-time residents or visitors; the large and mobile military service population; seniors and families.

Juliana Barrett is assisting communities with finding new ways to reach both their year round residents and transient populations who might be on vacation for a weekend or a couple of weeks. By developing flyers for rental units with pertinent information, she hopes to engage people in what to do and where to go should an emergency occur.

“Prepare your family now so they will feel in control when severe weather arises,” affirms Faye Griffiths-Smith. “Have emergency kits as well as a plan for communicating if you are separated. A pre-determined place you will go can make dealing with a stressful situation more manageable. Review these plans and your emergency supplies periodically.”

Karen Filchak recommends, “Think about and prepare for situations where property may be damaged, lost or destroyed. Do you have insurance information for repairs, records to prove ownership of a vehicle that floated away or documents to prove the value of the contents of your home? Having the appropriate documents and financial
Faculty researchers in the College are credited with developing methods to determine caloric contents of foods; discovering the relationship between bovine tuberculosis and human tuberculosis; performing pioneering research in the role of viruses in poultry diseases; successfully isolating and growing *Vibrio fetus*, which led to a vaccination program for vibriosis in 1954; discerning the involvement of different bacteria in bovine mastitis and their control; developing the first high-efficiency poultry feed, “Connecticut Ration”; establishing the interrelationships of vitamins A, D and E; and characterizing the nutritional value of human breast milk. Faculty members in the plant sciences have developed new plant varieties, particularly in horticultural crops, that have generated significant licensing income for the University. Professor Jerry Yang and his research team announced in 1999 that they had delivered the first cloned bovine calf in the world.

Ph.D. students in the Verardi laboratory, Brittany Jasperse (left) and Caitlin O’Connell (right), examine cells infected with VACV.
Researcher uses nanotechnology to design food-based nutrient delivery systems for treatment and prevention of chronic diseases
By Nancy P. Weiss and Yangchao Luo

Yangchao Luo’s passion is food. At home, Luo likes to cook Chinese food and tasty soups for his toddler daughter. In his lab at UConn, where he holds his primary appointment as assistant professor in the Department of Nutritional Sciences and joint appointments in the Department of Pharmaceutical Sciences and the Institute of Materials Sciences, he focuses on groundbreaking work in the emerging science of nanotechnology as applied to food. He wants to make healthy food healthier for individuals with special needs as well as for the rest of us. Luo became interested in functional foods as an undergraduate, and his interest grew as he worked toward his MS in food science and Ph.D. in nutrition and food science.

When foods are fortified or enriched, they become functional foods. But the biological efficacy of nutrients in functional foods is hardly realized due to limited bioavailability when the foods are ingested. Bioavailability is the proportion of a nutrient absorbed and therefore able to produce a particular effect. Many nutrients, such as vitamins and phytochemicals, are known to have a low bioavailability. The major goal of research in Luo’s laboratory is to use nanotechnology to improve the bioavailability of those nutrients and eventually help treat and prevent chronic diseases when they are put back into food. Luo uses food-grade biomaterials, including proteins, carbohydrates and lipids, to create non-toxic nanoscale vehicles that can carry nutrients and boost their absorption, making them more bioavailable.

“The most challenging part of my job is to try to discover the naturally occurring biomaterials within the foods and use those raw materials to prepare safe-to-eat nanoparticles. This requires application of many techniques to ensure that the preparation process does not compromise the food-grade status of developed nanoparticles, so that they can be used for nutrient fortification in real foods. The field of food nanotechnology was developed about ten years ago as an outgrowth of work in nanomedicine,” says Luo.

Currently no nano-foods are accepted by the USDA or FDA for human consumption as they are being evaluated for potential side effects. Luo received a grant from the USDA to develop lipid nanoparticles for astaxanthin, a carotenoid widely found in salmonids and crustacean aquaculture, and test their safety and effectiveness in mice in his lab. Results of the work will be available by the end of next year.

At a time when nearly half the population is either overweight or obese, Luo and the students in his lab focus on the benefits of nanoformulations in treating diseases such as fatty liver. Through targeted nutrient delivery systems, food-grade nanomaterials can go directly to the tissues that need help from certain nutrients. Astaxanthin has been proven to be protective against liver diseases, but due to its poor bioavailability it is hard to realize its health benefits at a dosage suitable for daily consumption. By encapsulating astaxanthin into specially designed food-grade nanoparticles, Luo hopes to deliver it directly to the liver to achieve its maximal health benefits for fatty liver through.

Although Luo speaks in the deliberate tones of a scientist, it is clear that his belief that food nanotechnology will revolutionize the functional food industry inspires his efforts and the work of four Ph.D. students and a half dozen undergraduates in his lab. They are dedicated to exploring the many applications that food-grade nanoparticles will have in creating bigger health benefits of functional foods to prevent diseases.

From his office in the Advanced Technology Laboratory, Yangchao Luo works on the cutting edge of new discoveries that will change the way food and health interact. His work is innovative but he also takes pleasure in teaching and advising as well as training students in the hands-on basics of lab work that underlies scientific discovery. He is a committed scientist who also values the a good bowl of homemade soup.
Competing, training and doing physical work in hot or humid conditions trigger complex responses in the body, which diminish performance and put some people at risk for heat-related illness or death.

Now, UConn has a one-of-a-kind facility to test individuals in a tightly controlled environment to see how their bodies react to heat. It is the MISSION Heat Lab at UConn's Korey Stringer Institute (KSI), which was unveiled to key donors, corporate partners and UConn dignitaries on September 22.

“The new heat lab allows KSI to expand the capacity to access athletes, warfighters and laborers in their quest to enhance performance and maximize safety,” said Professor Douglas Casa. Casa is chief executive officer of KSI and on the faculty of the Department of Kinesiology. Luke Belval, manager of the project and a graduate student, said that he is excited that the heat lab has finally come to completion three years after the initial idea was proposed.

Casa likened the heat lab at UConn to the one he visited at Nike, Inc. and said that the facility is “the best heat lab on a college campus in America for human use.”

The structure and equipment cost $700,000 and were funded by UConn, KSI, MISSION and numerous benefactors. KSI is a not-for-profit organization housed in kinesiology and named in honor of Korey Stringer, a professional football player who fell prey to exertional heat stroke. The corporate sponsor, MISSION, sells thermoregulation clothing and accessories that keep athletes cool in summer and warm in winter.

Who will be tested in the lab? Athletes, warfighters and laborers who use the lab are monitored by computers, which collect data about such processes as sweat and heart rate, body temperature and the maximum amount of oxygen they use while exercising. Research assistants and staff members, working in shifts inside and outside the lab, interact with the participants. They also watch to make sure that the research subjects or athletes being tested stay safe.

The information obtained in the tests varies from person to person, and, therefore, the analysis of the results is tailored to and discussed with the individual. How is the lab useful? The capabilities of the MISSION Heat Lab at the UConn Korey Stringer Institute make it useful in several scenarios.

Kinesiology research projects will benefit from the new facility. Casa says that there will be typically four to six smaller studies done in the lab in a year. Some studies are “enormous” and take more time to complete, according to Casa.
This research helps scientists to understand the effect of heat and humidity on the body, develop better methods for cooling and make recommendations for human health and safety. KSI works with companies who develop wearable technologies, cooling products, hydration solutions, clothing/equipment, biomarkers and many other techniques/devices/strategies that can enhance performance when doing intense exercise in the heat and maximize safety.

In addition, the lab can acclimatize athletes to warm or hot weather in order to improve performance. For example, the lab prepares the UConn women’s cross-country team to go from 50 degree weather here in order to run in the NCAA championship meet where it is 85 degrees. Ten to fourteen days of heat acclimatization in the lab under controlled conditions can decrease the athletes’ body temperature and heart rate and produce more efficient sweating.

The lab also performs heat tolerance tests on individuals to observe how their bodies handle heat stress so that they can properly prepare for training. The people can find out what they need while exercising or working in high heat, such as how much fluid to take in and body cooling strategies. Special meetings with experts are available for those who suffered from heat-related illness in the past and want to resume activity. KSI partners with several groups, such as the Professional Football Athletic Trainers Society. It, as well as the National Football League, might send individual players to the heat lab for testing, according to Casa. Additional information about the MISSION Heat Lab at the University of Connecticut’s Korey Stringer Institute is available from a recent UConn Today story and a YouTube video. In addition, it was covered in the the Washington Post and the New York Times.
Students show animals at the 88th Little “I” 
By Erin Norris

On a chilly October morning, UConn animal science students made the long trek out to Horsebarn Hill, to begin preparing for the 88th Little International Livestock Show (Little “I”). Students bathed, brushed and blow dried their animals, in the wee hours of the morning, to prepare for the show they had been practicing for all semester.

Little “I” was first held in the spring of 1929 and is hosted by the UConn Block and Bridle Club and Department of Animal Science. Traditionally, it was a voluntary two-day event held in late March in the Ratcliffe Hicks Arena, where students would show horses, beef cattle, sheep and swine.

In 1996, Department of Animal Science Professor Michael Darre made the event a requirement of the introduction to animal science class in order to boost participation. In doing so, the event was changed from March to October. To provide more animals for the increasing number of students participating, Darre added dairy cattle and poultry to the event. When the Horsebarn Hill Arena was built in 2001, the show moved there and became a one-day event.

Each year around 150 students from the introduction to animal science class participate. The purpose is to help students learn how to work with a species of livestock or poultry that they are unfamiliar with. Each student is assigned a species to work with, which they train for about two months. They learn how to clean and fit the animal themselves for the show.

The show is held each year at the end of October, and friends and family are invited to see how much the students have learned over the past two months. Around 100 guests fill the Horsebarn Hill Arena, to catch a peek at what students have accomplished over the semester.

At this year’s show, students patiently waited outside the ring, trying to remember everything they learned over the course of the semester. They adjusted their halters, and took hold of their animals as they carefully entered the arena. In the end, Laura Irwin took the title of Premier Showman, and Cloe LaBranche finished out the day as Reserve Premier Showman.

After the contest was over, Irwin said, “I really got to know my animal and this made the show a lot easier. My sheep learned to trust me and relax when I talked to her. I think the best part of the show was seeing all of the work over those weeks coming together and it all paying off in the end. It will be something I will always remember.” The students had a beautiful day to showcase their new found talents, and all students, similar to Irwin, will remember the experience for years to come. Keep an eye out for next year’s Little “I” in October 2018!
IN MEMORIAM

*UConn Today* reported that the UConn Board of Trustees approved the **naming of Jerry Yang Road** to honor the memory of **Xiangzhong ‘Jerry’ Yang**, who was an internationally renowned animal science professor before his death. The article said, “He is best remembered for cloning Amy, a Holstein calf born at UConn in June 1999, the first cloned farm animal in the United States.” Yang is also memorialized at several sites in his native Hebei Province, China.

The new sign is installed on the street that leads to the UConn Dairy Bar from Route 195.

By Patsy Evans

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The College of Agriculture, Health and Natural Resources remembers **Herm Weingart**, Class of 1956, past president of **UCAHNRA**, annual auction chairman and recipient of the 2013 UConn Alumni Association Service Award.

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