

A female student in a white lab coat and safety goggles is working in a laboratory. She is wearing purple gloves and is using a pipette to transfer liquid into a clear plastic bag. In the background, another student is visible, and there are various laboratory equipment and supplies on the counter.

UCONN

COLLEGE OF AGRICULTURE,
HEALTH AND NATURAL
RESOURCES

ANIMAL SCIENCE

WINTER/SPRING STUDENT NEWSLETTER

JANUARY 2024

LECTURES AT THE BARN

Students in Dr. Govoni's ANSC 3313/5613: "Growth Biology and Metabolism in Domestic Livestock" class took a trip down to Livestock Unit 2 in October to learn more on protein synthesis and degradation.





A MESSAGE FROM THE DEPARTMENT HEAD



January 30, 2024

Happy New Year!

Welcome back and congratulations to our December graduates and those who made the Dean's list in the fall of 2023.

I am excited to start 2024 by sharing some great news about the Department. Following a national search, we are also thrilled to share that Dr. Pedram Rezamand will serve as the next Head of the Department of Animal Science. A UConn alum and international expert in dairy nutrition, Dr. Rezamand will return to the College of Agriculture, Health and Natural Resources in the summer of 2024 to lead our department. We are looking forward to welcoming him back to our department later this year.

We also welcomed two new faculty members in the fall of 2023: Dr. Maria Gracia Gervasi (reproductive physiologist from UMass Amherst) and Dr. Elias Uddin (ruminant nutritionist from South Dakota State University). By fall 2024, we will have had five new faculty members in three years, which is unprecedented in our Department's history. While these new colleagues get settled, I thank our returning faculty for taking on extra duties in service, teaching, and advising. We specifically thank Dr. Sheila Andrew, Dr. Sau-mei Leung, Dr. Amy Safran, Dr. Steven Zinn,

Dr. Jenifer Nadeau, Dr. Thomas Hoagland, and Dr. Nicole Tillquist for teaching additional courses. I also thank everyone who went above and beyond the call of duty with dedication, loyalty, and hard work by keeping the department running smoothly for the past two years.

Research and scholarship in the Department have been bolstered by faculty and students, both new and returning. Dr. Abhinav Upadhyay won a \$3.5 million research grant from the USDA Organic Program to enhance microbial safety in organic poultry farming. Undergraduate and graduate students continue to thrive through transformational academic offerings and experiential opportunities, like developing a unique ice cream flavor sold at the UConn Dairy Bar.

Our Kellogg Dairy Center continued a winning streak by bringing in three major awards: Connecticut Outstanding Dairy Farm (New England Green Pastures Program), the 17th Year of Progressive Breeders Registry Award (Progressive Breeders Registry), and Excellence in Quality Performance Award (AgriMark).

This semester promises new challenges and growth, and we are here to support you every step of the way. Our Department is a hub of innovation, collaboration, and learning. Take full advantage of the opportunities ahead – engage in research, participate in events, and connect with your fellow students and professors. Your journey is unique and we can't wait to see the incredible contributions you will make to our dynamic academic environment. Here's to a semester filled with inspiration, achievement, and success!

A handwritten signature in dark ink, appearing to read 'C. Tian', with a long, sweeping horizontal line extending to the left.

Dr. Cindy Tian, Interim Department Head

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UPCOMING EVENTS AND DEADLINES:

**[S.UCONN.EDU/ANSC-
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PEDRAM REZAMAND APPOINTED HEAD OF UCONN ANIMAL SCIENCE

A UConn alum and international expert in dairy nutrition, Rezamand will return to the College of Agriculture, Health and Natural Resources in the summer of 2024 to lead the Department of Animal Science

Following a national search, UConn's College of Agriculture, Health and Natural Resources is pleased to announce that Pedram Rezamand, Ph.D. will serve as the next head of the Department of Animal Science. Rezamand will be taking over for Cindy Tian, Ph.D. who has served in an interim role since 2021.

"Dr. Rezamand is a recognized expert in his field, who brings valuable experience to UConn's Department of Animal Science, including our award-winning dairy operation. He has also already exhibited strong leadership in previous roles and within national professional organizations," says Dean Indrajeet Chaubey. "I am thrilled that Dr. Rezamand will leverage his talents within CAHNR as head of the Department of Animal Science."

Rezamand, a UConn alum, served most recently as professor of dairy nutrition at the University of Idaho.

His research focuses on understanding the interactions between nutrient metabolism and inflammation, mastitis, retinol-binding protein (RBP), lipids and inflammatory mediators, lactation and biology of transition cows. He has been involved with securing approximately \$3.6 million in external research funding. In recent years, his research has focused on two areas: early life stressors in dairy calves and the impact of wildfires smoke inhalation on health and productivity of dairy cows and calves. Rezamand also has extensive experience working with industry partners in conducting applied dairy nutrition research. He commonly teaches courses within animal nutrition area both at undergraduate and graduate levels.

"I am so excited to return to UConn to lead the Department of Animal Science," Rezamand says. "I welcome the opportunity to help advance scholarship, workforce development, and extension outreach within the discipline of sustainable and safe animal production systems that positively impact humans and their communities."

Rezamand's appointment as department head will begin in late August 2024.

—DR. JESSICA MCBRIDE/UCONN CAHNR

BACK IN "AUCTION"

While UConn beef cattle have been sold at Middlesex Livestock Auction the last several years, the UConn Beef Auction returned to campus this October. The sale included a total of 27 animals. This year, Wolf Auction Group oversaw virtual and live bidding, and the UConn Block & Bridle Club assisted in preparing the sale animals for the event.





UConn Morgans at Equine Affaire

Horse Unit Manager and Equine Club Advisor, Lisa Streff, attended the 2023 Equine Affaire in West Springfield, MA in November with four UConn bred Morgans and several UConn students. The department and college sponsored a booth in the Breed Pavilion, where students shared the history of UConn's Morgans, Animal Science Department, and equine activities.

THE 94TH ANNUAL LITTLE "I" LIVESTOCK SHOW

The 94th Annual Little "I" Livestock Show was held on October 21st. This year, over 170 students enrolled in the Introduction to Animal Science course showcased animals they trained over a 7-week training period leading up to the event. Many Animal Science faculty, staff, graduate students and undergraduate students assisted during the semester and on show day. Family and friends enjoyed watching the friendly competition despite the wet weather!

UConn's Livestock staff were honored with the Guest of Distinction award for their continual hard work and dedication to this quintessential Animal Science experiential learning project.

Thanks to all who patiently helped, fed, cleaned, taught, judged and participated in this annual event; this could not have happened without all of you!





UConn Gives 2024 is coming...

MARK YOUR CALENDARS!

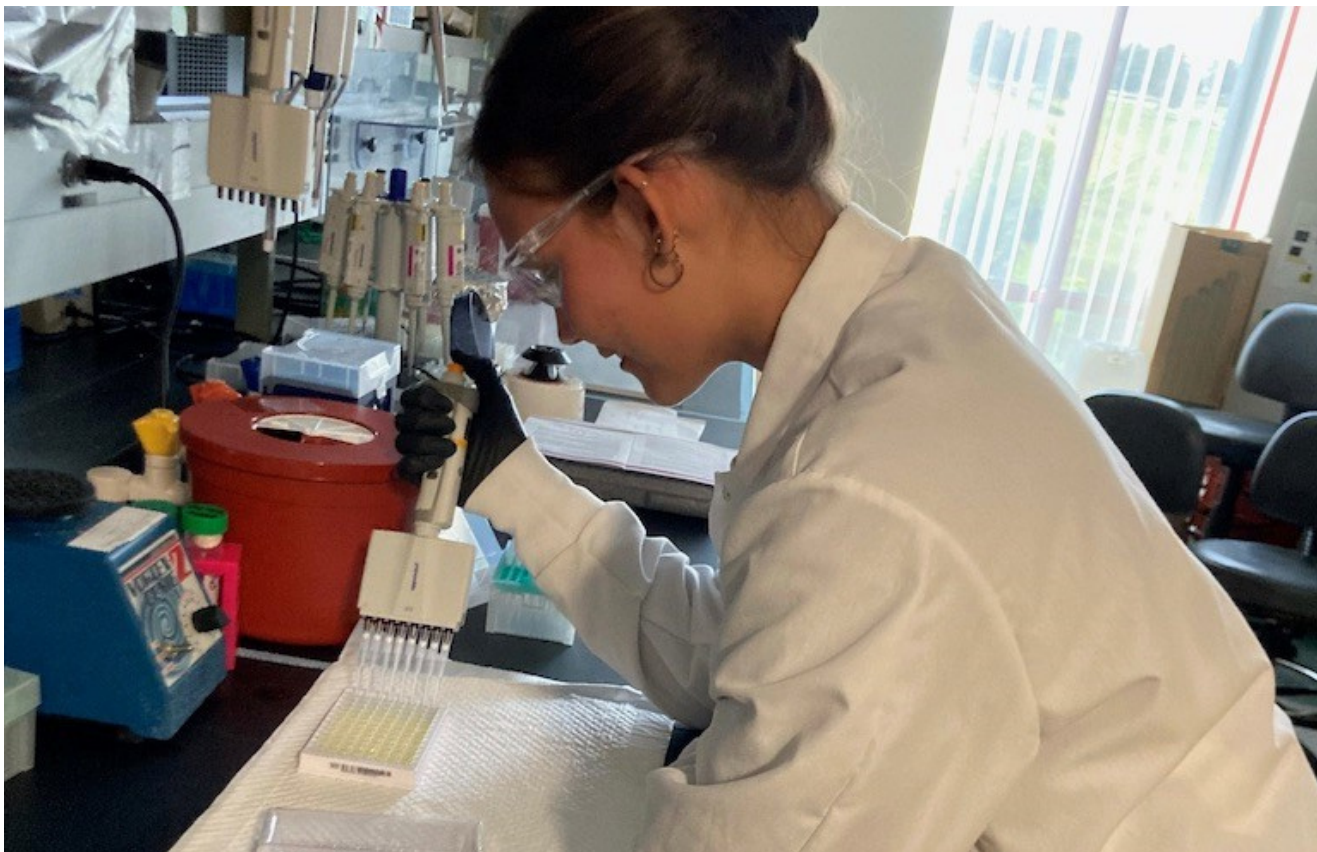
UConn Gives 2024 is coming April 17-18, 2024.

This year our Department will be raising funds towards supporting **Food Systems Sustainability Research, Teaching, and Outreach, UConn Creamery Equipment Upgrades and Additions, and the Samantha Calzone Scholarship.**

Huskies everywhere know that UConn is committed to providing an exceptional education for students. During UConn Gives, a 36-hour giving initiative on April 17-18, alumni, students, parents, faculty, staff, and friends worldwide come together to give back and celebrate what they care about at UConn.

No gift is too small to support our current students and programs and we welcome your support!

Stay Tuned for More Information!



ARIEL KUHL '24 **ZINN LAB**

Ariel Kuhl, an Animal Science senior on the Pre-Vet track, joined Dr. Steven Zinn's lab in spring 2021. She began working on a group project between Drs. Reed, Govoni and Zinn's lab focused on the effects of poor maternal nutrition during gestation in ewes. She assisted in feeding and handling sheep, collecting blood samples via jugular venipuncture, LPS challenges, glucose tolerance tests, muscle biopsies, and necropsies. She has also been involved with Dr. Reed's joint project regarding the nutritive effects on the growth performance of beef x dairy crossbreeds. She assisted with feedings, ultrasounds, muscle biopsies, and blood collection.

She started working on her own project last spring, investigating the effects of poor maternal nutrition on their offspring's reproductive hormones, which demonstrates reproductive efficacy. With the help of Dr. Nicole Tillquist, she is currently conducting enzyme-linked immunosorbent assays (ELISAs), which allows her to determine the concentrations of follicle stimulating hormone, luteinizing hormone, and progesterone in blood samples of ewes around the time they became pregnant. She plans to continue to work on this project for the rest of the year and analyze the data to complete her honors thesis.

She is grateful for all the support of the PIs and graduate students for allowing her to gain hands-on experience in various environments. She plans on applying to veterinary school this year to hopefully work with large and/or small animals. She believes that the skills she acquired both in the lab and the barns will be extremely useful for vet school and beyond.



ALEXA FAYAD-COSTA '24

TIAN LAB

Alexa Fayad-Costa, an Animal Science senior, joined Dr. Cindy Tian's Embryology lab in the fall of 2022. Dr. Tian's lab is focused on projects involving mouse and bovine sperm as well as fertilization and embryo development. Throughout her time in the lab, Alexa has been assisting the graduate students performing experiments and helping to collect data for their projects.

During the 2022-2023 school year under the guidance of graduate student Ray Zhao, Alexa learned several different techniques frequently used in Dr. Tian's lab. She also learned how to use computerized and manual counting methods of bovine sperm to compare counting efficiencies. She had learned how to use polymerase chain reaction (PCR) and gel electrophoresis to detect and analyze DNA fragments in bovine sperm. She has practiced handling embryos and transferring them from one medium to another using a specialized pipette.

This past semester, she continued to use PCR and gel electrophoresis to determine the results of gene editing in embryonic stem cells. Alexa also assisted the graduate students in a different approach to karyotyping of embryos and embryonic stem cells. Throughout the semester, she presented her lab results in weekly lab meetings and discussed the results with Dr. Tian and the graduate students working in her lab.

Alexa is very passionate about the work that she does and is grateful to have the opportunity to work with graduate students and gain a lot of knowledge learning from them. She knows that these experiences will help prepare her for her future as she wants to apply to graduate programs in the future.



ELLEN NEALE '24 NADEAU LAB

Ellen Neale, an Animal Science senior in the Honors Program, is working with Dr. Jenifer Nadeau to conduct research on the effect of therapy dog use on the involved therapy dogs themselves.

The overall value and benefit provided by therapy dogs is widely understood and appreciated, but there is some growing concern in the field that serving as therapy dogs places unnecessary stress on the dogs. Background analysis revealed that the research on this subject is quite limited and has oftentimes led to varying results and conclusions. They hypothesize that therapy dogs are not exposed to unnecessary stress through being involved in therapy, and look forward to providing additional data and analysis to the research in this area.

To conduct the research, the number of stress behaviors visibly displayed by therapy dogs both in a therapy session and in a control period at home will be observed. At the therapy session, investigators will record the number and type of stress behaviors shown by the therapy dogs during the session.

The data for the control period will be collected through a video from home that will be recorded by the therapy dog owners which will then be viewed and interpreted by Ellen and Dr. Nadeau. The in-session results will then be compared to the numbers and results from the control period. Through analysis of any differences, Ellen and Dr. Nadeau will then be able to develop conclusions as to whether or not the collected data shows that therapy dogs are exposed to unnecessary stress from therapy work.

Throughout this process, Ellen will continue to learn about animal behavior and interaction, specifically about detection of stress behaviors, and will be exposed to the processes of data interpretation, analysis, and scientific writing after the completion of the study.

In the summer months, Ellen interned for the Saco River Wildlife Center. The goal of the organization is to provide rehabilitative care to ill, injured, or orphaned wildlife and to promote compassion and awareness through educational resources and programs.

Following her research at UConn and her work at the Saco River Wildlife Center, Ellen hopes to apply her knowledge and skills of animal behavior in a companion animal and/or wildlife setting to promote the wellness of animals.

Ellen is incredibly grateful for all of the experiences she has been afforded through the Animal Science program at UConn and for the relationships that she has forged with the faculty members and staff. She is also particularly grateful for the leadership and guidance of Dr. Nadeau throughout this project.



EMMA FORSTER '23 FRAGOMENI LAB

Emma Forster, started research with Dr. Breno Fragomeni in the fall of her sophomore year looking to gain more experience in the fields of Genetics and Reproduction. Her project focused on the impact of the vaginal microbiome on reproductive success in beef cattle. This involved the analysis of microbiome data collected from three herds of beef cattle in Miles City, MT. Under Dr. Fragomeni's advisement, Emma worked to determine differences in the diversity of bacteria between the cattle based on pregnancy status, breed, and parity. In order to achieve this, she trained on the computer program R Studio and worked with code to understand the complexities of the data.

During her time working with Dr. Fragomeni, Emma found significance in the subject, and worked on finalizing results to be able to submit her research to the Translational Journal of Animal Science for review this past fall. The paper included results collected during her investigation into the topic and an outline of

considerations for future experiments. In spring of 2023, she presented her research at the UConn Frontiers in Undergraduate Research Exhibition.

Emma applied to veterinary schools for fall 2024 and graduated in December of 2023. Additionally, she accepted a position at Rood and Riddle Equine Hospital in Lexington, KY, where she will work as a nursing intern this spring, with hopes to gain more experience in the equine medical field and the reproductive specialty. She is grateful for the opportunity to work on this project with Dr. Fragomeni and their collaborators, and intends to include research alongside her future career.

**Interested in Conducting Research
in a Lab? Contact Your Faculty
Advisor!**

➔ In November, **Ana Letícia de Almeida (MS, Upadhyaya)** presented her research at the 2023 National Produce Safety Consortium in St. Louis, Missouri.



➔ **Brindhalakshmi Balasubramanian (PhD, Upadhyay)** co-authored an original research article alongside ANSC faculty member Abhinav Upadhyay that was featured in the 2023 Frontiers in Sustainable Food Systems Journal.



➔ **Gopi Yalavarthi (MS, Nadeau)** was selected as one of the top 5 finalists for the 2023 Lallemand Forward Scholarship, awarded to select, full-time undergraduate, graduate, DVM and PhD students pursuing degrees in agriculture.



➔ **Divya Joseph (PhD, Venkitanarayanan)** received a Core Incentive Plan Proteomics Grant from UConn COR2E.

➔ **Divya Joseph (PhD, Venkitanarayanan)** and **Leya Viju (PhD, Venkitanarayanan)** co-authored 3 publications alongside ANSC faculty members Kumar Venkitanarayanan Poonam Vinayamohan, and ANSC alumni Abraham Pellissery '19 PhD.



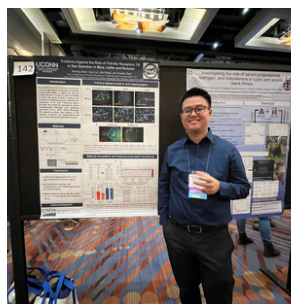
➔ **Trushenkumar Shah (PhD, Upadhyay)** was selected for the USDA FSIS - ORISE Fellowship Program for the year 2023-24.



➔ **Issabelle Ampofo (PhD, Fragomeni)** had 2 authored and 1 co-authored abstracts published in the Journal of Animal Sciences in November 2023. She also had an abstract accepted for Oral Presentation at the 2024 World Aquaculture Forum.



➔ **Ruifeng Zhao (PhD, Tian)** presented his research at the International Embryo Technology Society (IETS) 2024 annual conference in Denver, Colorado.



➔ **Jodie Allen (PhD, Upadhyay)** received the Xiangzhong (Jerry) Yang Graduate Research Excellence Award during the Annual CAHNR Scholars Celebration.



➔ **Chen Zhu (MS, Upadhyay)** and **Atul Walunj (MS, Upadhyay)** both passed their master's defenses.

Chen is now pursuing her PhD under the guidance of Dr. Chaoyu Zhai, and Atul has joined the Technical Resource Department team at Kent Scientific.



WELCOME, NEW GRADUATE STUDENTS!

This spring, our department welcomed two new graduate students, **Swara Bhatt (left)** - MS Student, D'Amico Lab - and **Shauneen O'Neill (right)** - PhD Student, Fragomeni Lab.

➔ **The Kellogg Dairy Center (KDC)** was selected as the 2023 Connecticut Outstanding Dairy Farm for New England Green Pastures, an annual competition that recognizes farms and agriculture leaders. In addition, the KDC was awarded the Progressive Breeders Registry Award from the Holstein Association for the 17th year in a row, as well as the Excellence Quality Performance/Producer of High-Quality Milk Award from AgriMark for the 11th time.



➔ **Dr. Kumar Venkitanarayanan** and **Dr. Abhinav Upadhyay** were invited to speak and present at an Indo-US workshop on sustainability of poultry sector organized by ICAR-NMRI.

Dr. Venkitanarayanan, project leader, highlighted the transformation of US poultry sector to become the global leader, while Dr. Upadhyay, project co-PD, provided an update on market potential for natural poultry production and antibiotic-free poultry production in USA respectively.



➔ **Dr. Kristen Govoni**, co-Principal Investigator (co-PI) and co-director of the CAHNR Fellow's Program, received \$4.5 million in funding from the U.S. Department of Agriculture's National Institute of Food and Agriculture (NIFA), which will be used to provide career opportunities and sponsor CAHNR students at UConn Waterbury and UConn Stamford.

Dr. Govoni also received the 2023 Northeast Region award for Excellence in College and University Teaching Award in Food and Agricultural Sciences from the the U.S. Department of Agriculture's (USDA) National Institute of Food and Agriculture (NIFA) and the Association of Public and Land-grant Universities (APLU).



➔ **Dr. Abhinav Upadhyay** received a NIFA-OAREI grant of \$3.34 million for a duration of four years, with a focus on "Enhancing Microbial Safety and Production Efficiency in Organic Poultry Farming: An Interdisciplinary Investigation of Innovative Strategies."



➔ **Dr. Mary Anne Amalaradjou** patented a novel method of spraying eggs with a probiotic before they hatch. Through a USDA funded project, Dr. Amalaradjou is now investigating the egg production among layers to see if those treated with probiotics before they hatch produce more eggs as an adult.

Dr. Amalaradjou is also using Next-Gen sequencing techniques to determine why and how she is seeing these outcomes. She also received a USDA grant to study the intestinal development of chickens from eggs sprayed with probiotics.



➔ **Dr. Dennis D'Amico** discussed the ice cream flavor development process for

students enrolled in Animal Food Products: Dairy Technology (ANSC 3641) and more with Joseph Tucci of CT Insider in an October feature on the UConn Creamery.



➔ **Dr. Breno Fragomeni's** genomic research to determine how to make dairy cattle better adapted to heat stress was highlighted in UConn Today and featured across a number of national media platforms, including NBC News.



➔ **Dr. Poonam Vinayamohan, Dr. Maria Gervasi, Dr. Amy Safran, Sharon Aborn, and Bill Scituro** showing off their 'Click Clack Moo' gingerbread house at CAHNR's Annual Gingerbread House Competition on Wednesday, December 20th, 2023 in the Ratcliffe Hicks Arena.

COMPLIANCE CORNER

Initial IACUC Training

Faculty, Staff, Graduate and Undergraduate Students:

If you will be working with animals this semester, you may require Institutional Animal Care and Use Committee (IACUC) training or re-training. It is required for personnel listed on protocols, independent study students, and student barn employees.

If you have never received IACUC training, you must attend a live WebEx or complete the “Working with IACUC” module online through the CITI program (provided below).

IACUC Training | Office of the Vice President for Research (uconn.edu)

- s.uconn.edu/iacuc-training

Re-Training

Retraining is required annually for most and every 3 years for PIs.

There are three options for renewal:

- Complete the Biological Safety Considerations: Farm Animal Research and Production course on Husky SMS available through the link below:
 - s.uconn.edu/scishield (click on “Training and Course Directory” to find the specific course)
- Complete a course through the CITI program
 - s.uconn.edu/iacuc-training
- Attend a live WebEx
- [IACUC Training](https://s.uconn.edu/iacuc-training), [Office of the Vice President for Research \(uconn.edu\)](https://s.uconn.edu/office-of-the-vice-president-for-research)

If you are interested in working at the barn units or in an Animal Science lab, be sure to check out the Compliance Corner page at s.uconn.edu/ansc-compliance.





GIVE A GIFT

ANSC Students, Faculty and Staff Welcome Your Support

Many donors choose to honor a loved one or friend with a gift to support UConn in their name. Perhaps the gift is in memory of someone who loved UConn's animals, from an alumnus who attended the Department of Animal Science, or in honor of an inspirational professor.

Please consider donating to one of the following featured funds:

[Animal Science Department Fund](#)
[Friends of UConn Morgan Horses Fund](#)

For more information, contact Barbara Palmer by email at bpalmer@foundation.uconn.edu. The Foundation is a tax-exempt, non-profit corporation dedicated to UConn. Donors to the Foundation have the right to request in writing that their identity be anonymous.

