

Animal Science Update

The Department of Animal Sciences

Newsletter

2017-2018



Wendie Cohick, Troy Roepke & Carol Bagnell



Polina Semenoff '19 & Sydney Gavinelli '19 work with Ramble to prepare for Ag Field Day's Animal Fitting & Showmanship Contest



Society of Animal Science Executive Board: Grace Seeds, Ann Tyrillo, Kristen Jeansson, Dana Tsuchida & Bobby D'Albora

Chair's Message

by Wendie Cohick, Ph.D., Department Chair

I hope you join us on the Cook Campus Farm for Ag Field Day's Animal Fitting and Showmanship Contests (aka the Animal Shows). Beginning in 2018, the cattle competition showcases our new beef cattle herd, rather than dairy heifers. The Campus Farm has recently transitioned from raising dairy heifers, in partnership with the University of Delaware, to a more sustainable, pasture-based program with Angus and Hereford beef cattle. Our students will now have the opportunity for hands-on learning with all life-cycle stages of our beef cattle, from breeding and calving to weaning and finishing. The beef will be sold at the Farm Store as Scarlet Beef.

For successfully hosting the 2018 NESA Competition, the **Society of Animal Science (SAS)** was selected from hundreds of nominations to receive the "**Spirit of Rutgers Award**" at the Chancellor's Student Leadership Gala in early May! Many of our alumni remember participating in the friendly but fierce competitions sponsored by the Northeast Student Affiliate (NESA) of the American Society of Animal Science and American Dairy Science Association. Each year, Animal Science undergraduates from 8-10 Northeast universities gather for the NESA competition, which includes livestock judging, quiz bowl, and presentations pertaining to agricultural topics or original student research.

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Faculty Milestones

Congratulations to **Dr. Troy Roepke**, who was promoted to Associate Professor with tenure. Troy (*pictured here with his research students*) is a neuroendocrinologist who studies how estrogens act on the brain to regulate energy homeostasis, metabolism, and reproduction. His research, at the nexus of endocrinology and toxicology, is central to the Rutgers Strategic Plan to improve health and wellness. Troy teaches *Animal Reproduction*, *Reproductive and Developmental Toxicology*, and *Exploring Graduate School*. In addition to training graduate students and postdocs, he has provided research opportunities for over 30 undergraduates. We are so glad that Troy is here to stay!

After serving as Senior Associate Director of the NJ Agricultural Experiment Station and Director of Rutgers Cooperative Extension, **Dr. Larry Katz** (*pictured on page 2 with Susan Becker and their G. H. Cook Scholars*) will return to his teaching and research role as a Professor in our department following an administrative leave in 2018-2019.



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Undergraduate Program News

by Aparna Zama, PhD, Undergraduate Program Director

Four hundred fifty students are majoring in Animal Science this year, making ours the largest major on campus! Pre-veterinary Medicine and Research remains our most popular curriculum option, but many select the Companion Animal Science, Equine Science, Lab Animal Science, or Production Animal Science option.

G. H. Cook Scholars, Class of 2018: Eight Animal Science seniors and one Biotech major are completing their research with department faculty on a variety of topics:

- **Chloe Baker** (Roepke), The Effects of Perinatal Exposure to Organophosphate Flame-Retardants on Glucose Homeostasis and Liver Gene Expression in Mice
- **Lisa Botros** (Roepke), The Role of ER-alpha on the Hemodynamics of Female and Male Mice on a High-Fat Diet
- **Jessica Chmiel** (Katz & Becker), The Effect of Co-Twin Gender on Sexual Behavior in Does
- **Carly DeAntoneo** (Belden; Biotechnology major), Histone Modification in *Neurospora crassa* and Epigenetic Silencing
- **Nicole Meddaugh** (Katz & Becker), The Role of Chemical Communication in Social Organization in the Male Goat: Social Dominance
- **Taryn Mooney*** (Katz & Becker), The Role of Chemical Communication in Social Organization in the Male Goat: Self-Enurination
- **Caroline Pawlowski*** (Williams), Forage Recovery in Rotational vs. Continuous Pasture Systems after Intensive Horse Grazing
- **Jamie Sutherland** (Katz & Becker), Effect of Proximity to Females on Integument Damage Caused by Self-Enurination in the Male Goat

**Caroline and Taryn presented their honors research at NESA, winning first and second place, respectively!*

Below: G. H. Cook Scholars Jessica, Nicole, Jamie, and Taryn with mentors Larry Katz and Susan Becker (third from left).



Senior Awards: In recognition of their excellence in academics, research, and/or service, these three students will receive department endowed scholarship awards: **Jaclyn Bird** (pictured below right on horseback at NESA with Eline Hjelle), **Kelsey Gesner** (pictured below left), and **Nicole Meddaugh**.

The Rex Gilbreath Memorial Award will be given to **Caroline Pawlowski** (pictured below center with **Carey Williams** and **Grace Pawlowski**).



Club news: The Society of Animal Science hosts a reception for graduating seniors every year following the SEBS Convocation. Pictured below are the outgoing executive board and other members of the Class of 2017.



At the 2018 American Pre-Veterinary Medical Association (APVMA) Symposium at Auburn University, members of our Veterinary Science Club decorated a repurposed barrel (below) to be used as a dog house at a local shelter.



Graduate Program Highlights

by Carol Bagnell, PhD, Graduate Program Director

We welcome **Diana Roopchand** (Food Science) and **Harini Sampath** (Nutritional Sciences) to the Endocrinology and Animal Biosciences (EAB) faculty. Both are members of the NJ Institute for Food, Nutrition, and Health.

Four graduate students completed their degrees during the 2017-2018 academic year, including my Ph.D. advisee, **Ashley George** (pictured with me at right, along with Drs. Skip Bartol and Teh Ho; and at bottom, with our graduate students at the department holiday party). Her dissertation shed light on the effects of nursing on maternal programming of the neonatal uterus and its impact on the adult uterus at implantation. Ashley will soon begin a postdoctoral fellowship at the University of California–San Francisco.



Jennifer Skorupa (pictured at left) investigated the role of glycosylation in IGFBP-3 trafficking during ribotoxic stress in mammary epithelial cells. Her M.S. advisor was Wendie Cohick. Jennifer defended her thesis in December 2017.



Two Iraqi scholars completed their Ph.D. dissertation research under the supervision of Dipak Sarkar during Summer 2017. **Shaima Amore Jabbar** studied whether fetal alcohol exposure increases the susceptibility to estrogen-induced, prolactin-secreting pituitary tumors. Shaima is now an instructor in the Department of Pharmacology and Toxicology in the Pharmacy School of Karbala University (Iraq). **Ali Al-Yasari's** dissertation research explored the question, "Does preconception alcohol abuse make the offspring vulnerable to developing type II diabetes?" Ali is now an assistant dean for scientific affairs at the College of Veterinary Medicine of Al-Muthanna University.



The 2018 Nutrition, Endocrinology and Food Science (NEFS) Graduate Student Conference was held on April 10. Highlights included a keynote address by **Dr. Drew Kiraly** of the Icahn School of Medicine at Mt. Sinai, a poster session, and talks by three graduate students, including **Mariana Saboya**. NEFS is a collaboration between our EAB Graduate Student Organization (GSO) and the Nutritional Sciences and Food Science GSOs.

In addition to our EAB students, nine graduate students from other programs (e.g., Nutritional Sciences, Toxicology, Molecular Biosciences) work with Animal Sciences faculty and are active in the EAB GSO. Many volunteered at NESAs, and all of our grad students will be helping out on Ag Field Day.

Hope you can join us on the Campus Farm on Ag Field Day: at the BBQ, animal shows (beginning at 10 AM), petting zoo, and other club activities.



Photo credits: Tory Gombosi (p 1, top left); Anna Fojtik (p 1, top right; p 4, top left & middle); Dan Meddaugh (p 2, bottom left); University Career Services (p 2, top: KG); Carey Williams (p 2, top: Mounted Patrol); Veterinary Science Club (p 2, bottom right); Ali Al-Yasari (p 3, left: AA); Wendie Cohick (p 3, right - top & bottom); Mike Westendorf (p 4, bottom right); and Kathy Manger, Newsletter Editor (all other photos)

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Rutgers Cross-bred Market Hogs at NESA



Society of Animal Science members and advisors relax at NESA banquet.



Bill Fritz, Ph.D. (at right) returned to campus with Del Val's NESA team.

Rutgers Hosts 2018 NESA Competition (continued from Chair's Message, page 1)

Successful hosting of the event, which was held on the weekend of February 23-25, included SAS garnering sponsorships to support expenses; recruiting volunteers (over 50 faculty, staff members, and alumni plus over 70 undergraduate and graduate students) to help run the competition; planning the final banquet; and running on-site registration. SAS collaborated with Cedar Lane Farm in Oldwick to host the livestock judging portion of the competition and with the Companion Animal Club, Rutgers Mounted Patrol, Rutgers Veterinary Science

Club, and Endocrinology and Animal Biosciences Graduate Student Organization to help the Hickman Hall events (quiz bowl and presentations) run smoothly. The executive board demonstrated outstanding initiative in raising over \$10,000 to support the conference, the largest amount in the history of NESA. This included a Northeast Agriculture Enhancement Grant from Farm Credit East for \$4,000 that was written by SAS President Grace Seeds. We applaud the Society of Animal Science executive board and *everyone* who helped!

Dave Lee Retires

by Mike Westendorf, Ph.D., Extension Specialist

Congratulations to Dave Lee, Salem County Extension Agent, on his retirement (effective April 2018). Dave oversaw dairy and livestock programs in Salem County and throughout the state. He was known for his hands-on work, his willingness to work with all constituents, and the effectiveness with which he translated research into practical solutions. As the state's demographics changed, he adapted by taking the lead in financial management programs for farmers. We congratulate Dave on a great career. We wish him the best in retirement, but Dave will never really "retire." (Dave is pictured here with Carey Williams at Jim Wohlt's 2010 retirement party.)



Horse Management Seminar Looks at Gut Health

by Carey Williams, Ph.D., Associate Extension Specialist

"This seminar will make me much more aware of what I am feeding my horses, and how much I am feeding them." This comment was written by one of the 100 individuals attending the 2018 Horse Management Seminar, which focused on gastrointestinal health and management of horses. The hit of the seminar was **Dr. Burt Staniar** from Penn State, who gave a demo of what different diets look like in your horse's stomach and why different fiber sizes matter. **Dr. Mary Durando** from Equine Sports Medicine Consultants gave a good overview of gastric ulcers in horses, and **Dr. Amy Biddle** from the University of Delaware presented on the equine microbiome. The afternoon ended with two short talks presented by me and my graduate student, **Jennifer Weinert**, on current and future Rutgers research dealing with gastrointestinal health. SAVE THE DATE for next year's seminar: Sunday, February 10, 2019!

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