



ANFS *Scratchings*

THE NEWSLETTER OF THE DEPARTMENT OF ANIMAL AND FOOD SCIENCES

Spring 2018

Issue 11



Message from the Chair

A belated Happy New Year to everyone!

The past year has been busy for us in the Department of Animal and Food Sciences (ANFS).

Dean Mark Rieger's 2013 Master Plan included the goal of increasing enrollment in the College of Agriculture and Natural Resources (CANR) by 20% by 2020. In 2017, CANR moved quickly toward that goal, welcoming 215 new freshmen and transfer students, a 36% increase from 2012. Our department is happy to count 14 Food Science, 20 Animal Science, and 113 Pre-Veterinary Medicine and Animal Biosciences majors among the new incoming students. Total enrollment in CANR, including undergraduate and graduate students, topped 1,000 students for the first time since the 1970s!

As highlighted in this issue, four of our faculty members, Dr. Larry Cogburn, Dr. Bob Dyer, Dr. Marlene Emará and Dr. Jack Gelb, have retired or will soon retire after many years of teaching, advising and research. We cannot thank them enough for their contributions to the Department and students and wish them the best as they move on to the next chapters in their lives. We have just started a search process for filling two of these positions and hope to have these new faculty on board by Fall of 2018. To assist us during the transition of filling positions, we were able to bring Dr. Annie Renzetti on board as a full-time, temporary instructor. In addition to teaching some of our equine courses, Annie will play a critical role by teaching our Anatomy course for the next year or two.

Thanks to the University and generous support from donors like you, a full renovation of the teaching and research laboratories in Worrilow Hall is set to begin about a year from now. Upon completion, the state-of-the-art facilities will greatly enhance our teaching and research capabilities. We will keep you updated on this progress.

As always, the ANFS Department is very grateful for the donations you make, as they allow us to help our students pay for travel to research meetings and our researchers with paying for the costs of research publications. Donations also are used to fund stipends for undergraduate summer scholars, so they can gain valuable research experiences. One hundred percent of your gifts will impact the program you wish to support.

You may make your gift to the University, the College of Agriculture and Natural Resources or another program by visiting www.udel.edu/development/makegift.htm. However, designating the gift specifically to our department (ANFS) ensures that it will be used in direct support of ANFS faculty and students. Please be sure to complete the "Other designation – indicate a specific purpose below" section and input "Dept. of Animal and Food Sciences." If you have any questions or require assistance to complete any of these forms, please contact Daniel Sarkissian, Director of Development, College of Agriculture and Natural Resources at 302-831-4595 or djs@udel.edu.

We hope you will continue to stay in touch with us in 2018. If you have any updates or news, please contact Becky at bgeorge@udel.edu, and she will connect you with the right person.


Limin Kung, Jr.

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Worrilow Hall to be Renovated and Upgraded

After the Delaware State General Assembly had appropriated \$400,000 for the initial planning and then \$3 million in its next session, groundbreaking for Worrilow Hall took place on October 14, 1978. Construction was completed in 1981 and the building has served as a place of research and teaching ever since, but in recent years, the building's infrastructure has begun to show its age. Now, Worrilow Hall is slated for a \$30 million renovation and upgrade. \$20 million will come from the University's General Fund and \$10 million from fundraising efforts by the College. (Please visit <http://canr.udel.edu/giving/> to learn more about how you can contribute towards making Worrilow Hall a University building for the 21st century.)



The current Worrilow Anatomy Lab will host its last group of students in Spring 2018

State-of-the-art teaching and research spaces will replace many of the current facilities in the building. The Anatomy Lab, so familiar to our Animal Science and Pre-veterinary students, will remain at its current location and a pathology/genomics teaching lab will be set up on the first floor. The teaching lab now primarily used for Food Science classes, 202 WOR, will disappear and Food Science students will gain hands-on

experiences in a new teaching lab on the first floor. The planned addition of a room for food sensory analysis space will also enhance the Food Science learning experience. Open labs dedicated to Animal Science and Food Science research will be housed on the second and third floors of the renovated building. 🐦

News from Students and Their Organizations

2017 began prosperously for the **Animal Science Club**. Members attended the Northeast Student Affiliate, NESAs, competition at the University of Rhode Island. The annual competition included livestock judging, a quiz bowl and paper presentations. Two members placed in the top 10 bracket for livestock judging and one team reached the quarterfinals in the quiz bowl, a remarkable achievement against the nine schools in attendance. Each semester, the members provided volunteer services to the House Rabbit Society, Cook Farms, as well as UD's Webb Farm. Speakers including veterinarians, lab technicians and industry representatives came to club meetings to educate members on their fields and offer internship and employment opportunities. At Ag Day, the club had



Animal Science Club's E-board at Fall Fest

one of the largest tents, showcasing animals raised at the University, with informative and interactive tables for the public.

In the fall, club members participated in the College's Fall Fest for the first time by providing students

and children of faculty and staff with the opportunity to craft animal-shaped wreaths. Members also visited an Alpaca farm and the Adventure Aquarium. Friendships among club members grew with bonding



Animal Science Club members at the 2017 NESAs Competition

opportunities at Cowtown Rodeo, apple picking, PAWS De-Stress events, Zombies at the Zoo and their holiday party at the home of the club's advisor, **Dr. Lesa Griffiths**. 2017 was a companionable and productive time for club members!

The **Food Science Club** had another great year, practicing old and new traditions alike. Students participated in the second annual CANR Fall Fest, where they held activities furthering the club's mission of sharing food science with all those interested. In

October, UD alum **Weber Stibolt** returned to talk with club members about a day in the life of a coffee scientist, while offering useful career advice for life after graduation. Additionally, the club hosted a dining etiquette dinner to round out professional behavior over a meal, learning about the different classes of eating behavior. At the end of November, members volunteered at the Newark Food Bank to bake dozens of sweet potato pies to be shared with those in need during the holiday season. As an exciting end to

2017, the club participated in a “Festive Foodie” gift exchange with other Food Science clubs through the Institute of Food Technologists’ Student Association. We sent a small box of regional goods to the University of California-Davis, and received a holiday box, full of delicious dried fruits, decorations, and foodie fun, from the California State Polytechnic University at Pomona. Members are looking forward to another great year to learn more together through speakers and field trips, and as always, to enjoy food! 🐦

Celebrating Distinguished Alumni



Dr. Robert Cohen (2nd from left) and Phung Luu (4th from left), pose with Dr. Limin Kung (1st on left), Dr. Paul Sammelwitz (3rd from left), Dr. Bill Saylor, Dr. Jack Gelb and Dr. Lesa Griffiths for a photo after the awards ceremony.

Dr. Robert Cohen was recognized as a 2017 **Distinguished Alumnus** by the College of Agriculture and Natural Resources. Dr. Cohen attended the University of Delaware and graduated with a Degree with Distinction in 1972. He obtained his veterinary degree from the University of Pennsylvania School of

Veterinary Medicine and continued his training at the Animal Medical Center (AMC) of New York, an institution where he ultimately became head of cardiology and director of clinics. Together with another veterinary cardiologist he founded what would become the largest provider of veterinary consulting services in the world. The company has since been sold and now Dr. Cohen owns Bay Street Animal Hospital, a six-doctor veterinary practice on Staten Island in New York.

Phung Luu was honored as a **Distinguished Young Alumnus**. Luu owns and operates Behavior and Training Solutions, a consulting company for animal and staff training and Animal Behavior and Conservation Connections, a free-flight bird show production company. After graduating in 1997, Luu made it his life mission to connect people with nature and wildlife and to raise awareness and money to support conservation projects for wild birds. 🐦

Animal Agriculture Career Seminar and Atlanta Trip

Since 2012, the U.S. Poultry and Egg Harold E. Ford Foundation has generously supported our poultry science career education program. In 2017, the program was expanded to include all animal agriculture, companion animal and food science career education. This fall, the four weekly seminars included speakers from Danisco Animal Nutrition/DuPont Industrial Bioscience, Bayer Animal Health, Roorer Laboratories, Mountaire Farms, Agri Stats, Perdue Farms, LANXESS, Elanco and University of Pennsylvania New Bolton Center. The speakers discussed their career paths and presented information about career, internship and scholarship opportunities in their businesses or organizations. By participating in the U.S. Poultry Foundation’s



Five of the students that attended the 2017 International Production and Processing Expo in Atlanta, Georgia

College Student Career Program and attending the International Production and Processing Expo in Atlanta, Ga., two of our students landed jobs with poultry production companies. Eighteen students participated in the program in Atlanta at the end of January 2018. Other activities promoted careers in animal agriculture, food science and allied industries. Other efforts included Exploration Day (see below),

Delmarva poultry industry facility tours, a visit to the Merck Animal Health production facilities in Millsboro, Del., which was made possible by **Alice Rand**, V.M.D. and Department M.S. graduate in 1986, and a tour of the Lasher Lab (UD Poultry Diagnostic Laboratory) in Georgetown, Del. 🐦

Celebrating Retirements of Faculty and Staff Members

Dr. Larry Cogburn retired after 38.5 years of research and teaching, and is now Professor Emeritus. He is best remembered by many of his former students for his comprehensive and challenging comparative physiology course that prepared them extremely well for veterinary and graduate school. Together with undergraduate and graduate students and postdoctoral researchers in his lab, Dr. Cogburn conducted molecular endocrinology and functional genomics research. He published numerous research papers and several book chapters and was granted



Dr. Cogburn Coho Salmon fishing on the Kenai River, Alaska

three U.S. Patents. He and his colleague, Dr. Joan Burnside, were the first to sequence the growth hormone receptor gene in an avian

species. In collaboration with the Universities of Maryland and Georgia and the Institut National de la Recherche Agronomique (INRA) in France, Dr. Cogburn developed genomic resources and tools enjoyed by avian biologists world-wide. Dr. Cogburn is an avid flyfisherman and mountaineer who enjoys adventures and expeditions in the high country. He plans on spending his golden years enjoying his family, traveling and healthy-active living.

Dr. Robert Dyer, VMD 1975, PhD 1991, came to the University of Delaware in 1998. Using the tools of molecular biology, immunology and cell biology Dr. Dyer studied viral-bacterial synergy in the lung and the role of immunology and inflammation in hoof horn diseases and metabolic disorders of cattle. A 20-year collaboration with engineers from the University of Maryland led to the development of an automated method for the detection of lameness; however, he considers having made an impact on his students as one of his greatest achievements. His approach, to never give a lecture that did not include something that he just learned himself, set the bar very high for students and translated into enthusiastic, exciting and energy-filled lectures. Students experienced first-hand how to employ the tools of basic science to explore the biology of healthy and diseased animals. His students learned that hard work, persistence and a healthy

amount of intellectual curiosity lead to successes they thought were previously unattainable. When students offered a humble “thanks,” his reply always was, “In the future, you can thank me by reaching out to other young students and give them a hand.”

Dr. Marlene Emara joined the University of Delaware in 1994. With a background in genetics and immunology, she focused her research on several immune-related genes, in particular, those of the major histocompatibility complex, as well as on microsatellite DNA markers to evaluate their role in disease resistance in broiler chickens. She discovered genetic differences between these meat-type birds and breeds used for egg production. Dr. Emara developed a strong teaching program with popular courses in immunology, disease pathogenesis, animal behavior, and the human-animal bond. Dr. Emara enjoyed her many interactions with students, and it gave her great satisfaction to discuss course topics that were specifically related to each student’s situation and/or interest. Upon retirement, Dr. Emara will be joining her husband, Moe, in managing their native plant greenhouse and nursery business, but she will not surround herself only with plants. “With our new farm, I am planning to keep a few animals in my life—maybe chickens and some cattle. I will always be an animal enthusiast!”



Dr. Jack Gelb, an avian virologist, retired after 39 years as a professor in our department. Dr. Gelb was Department Chair from 2005–2014 and Director of the Avian Biosciences Center (ABC) from 2006–2016. Outside of his strong leadership roles, Dr. Gelb is best known for his research on avian respiratory diseases, avian influenza, and Gumboro Disease. Dr. Gelb was awarded the George Worriow Award in 2012 from our College and the Medal of Achievement Award in 2001 from the Delmarva Poultry Industry trade association. He was instrumental in obtaining funding for the \$4 million renovation of the Lasher Laboratory in Georgetown, Del. This laboratory provides many services to Delmarva’s \$3.2 billion poultry industry and is the front line of defense against avian disease outbreaks through its diagnostic and disease-control efforts. As ABC Director, Dr. Gelb oversaw the application process that led to the Lasher Lab and the Charles C. Allen, Jr. Biotechnology Laboratory, a



world class, BSL-3, infectious disease research facility in Newark, becoming part of the USDA National Animal Health Laboratory Network (NAHLN). Dr. Gelb testified before the Senate Homeland Security and Governmental Affairs Committee as an expert panelist addressing the highly pathogenic avian influenza outbreak of 2014–2015,

the largest poultry health disaster in U.S. history. He also helped develop and participated in emergency response programs such as the Emergency Poultry Disease Response (EPDR) and the Veterinary Diagnostic Laboratory Quality Assurance (VDLQA) Certificate training programs, which are multidisciplinary, professional education programs that combine science, policy, and hands-on experience, delivered to over 155 veterinarians and poultry professionals from six continents and over 70 countries. We wish Dr. Gelb and his wife Becky all the best in their retirement.

Richard Morris, Dairy Manager, and **Mark Baker**, Farm Assistant, retired from UD's dairy after 31 years of service. (Fortunately, the third long-time dairy staff

member, **Ronald Gouge**, does not have plans for retirement anytime soon.) **Richard Morris** now keeps busy at Cool Rock Stock where he and his brother-in-law raise heifers, including those from UD's farm. When Richard is not working, he enjoys spending time with his family and two grandsons, Bryce and Wyatt. Like Richard, **Mark Baker** is spending his retirement



From left to right: Ron Gouge, Mark Baker and Richard Morris

farming. In addition to helping at Baker Farms, Mark stays in touch with Richard and can sometimes be found lending a hand at Cool Rock Stock. Mark's family is doing well and he was delighted to celebrate his daughter Amber's marriage this past summer. 🐦

Welcome to Our New Faculty and Staff Members

Dr. Annie Renzetti is originally from Wilmington, Del. She earned a VMD specializing in equine medicine from the University of Pennsylvania School of Veterinary Medicine in 2004. Horses, riding and competing have always been a large part of her life. After vet school, Dr. Renzetti practiced ambulatory equine medicine for two



years. For the past 10 years, she was the regulatory veterinarian for the Delaware Harness Racing Commission. In the fall of 2014, Dr. Renzetti began teaching equine science as an adjunct faculty member in our department. She has found teaching to be amazingly fulfilling and enjoyable and was thrilled to be given the opportunity to join the faculty full-time starting in the fall

of 2017. In her new position, Dr. Renzetti is responsible for teaching courses, including Animal Anatomy, and for overseeing the care of UD's farm animals as the large animal attending veterinarian. Currently she lives on a farm downstate with her husband, three shelties and six horses.

Jonathan Leith started as Dairy Manager in June. Jon came to us after having served 22 years at the USDA in Beltsville, Md., the last 18 of which he managed its dairy unit. He is also a veteran of the U.S. Army. Since arriving, he has jumped right into assisting with our department's research and teaching efforts.



Jon Leith talking with students enrolled in ANFS 111

Joseph Anderson, native of Lewes, Del., took a position as Farm Assistant II at the dairy in June. Joe is not new to UD's dairy, having worked there as a freshman and through his graduation in 2017 with a B.S. in Agriculture and Natural Resources and a minor in Environmental Soil Science. 🐦

Blue Hens at Football Games

This year, our College, Athletics, and ANFS partnered to allow our Real Blue Hens to tailgate at Delaware home football games. The Blue Hens partied with fans (or were on display) for two hours in the Anchor Buick GM Blue Hen Fan Zone before the games. The birds traveled in style to the games in a custom trailer designed and built by Dan Hougentogler, ANFS Research Associate II. This beautiful trailer has a hen clubhouse, a mock football field with AstroTurf and goal posts, and battery-operated fans to keep the birds cool. The design provides proper airflow, water, feed, shade, and space to ensure the comfort, safety and health of the birds. The Blue Hen flock at UD features descendants of birds donated by S. Hallock du Pont in the 1960s, as well as three newer birds donated in 2016 by **Dr. Wesley Towers**, a 1964 Department graduate who served as the Delaware state veterinarian for over 37 years and was also a member of the University's Board of Trustees. Three ANFS undergraduate interns, **Anna Desmond**, **Melanie Lopez** and **Meghan Young**, were on site at the games to educate the public and to keep an eye on the birds. Initially two roosters and three hens

were on hand for the first two games for football fans to participate in a naming contest. Three birds were chosen for the "Birdgade": Captain Cluckers (a hen) whose motto is "the Cluck Stops Here" is a natural-born leader and rules the roost; Private Poultry is



Meaghan Young (left), Anna Desmond, and Melanie Lopez (right) with the Blue Hen trailer

new to the Birdgade and needs a little confidence; Corporal Doodle-Doo is the funniest of the group but also a strong fighter and high in the Captain's pecking order. 🐔

Animal and Food Science Exploration Day



Participants in the Animal Science Exploration Program

Animal and Food Science Exploration Day programs hosted 50 high school students from the mid-Atlantic region, providing unique opportunities to participate in laboratory and critical thinking exercises with Department faculty and staff members. The high schoolers also met current students as well as alumni who enthusiastically shared their experiences in and out of the classroom.

The Animal Science program was supported by the U.S. Poultry Foundation and included demonstrations on broiler house environmental management, learning about "Why Cows are Cool," visiting the farm animal facilities and Charles C. Allen Laboratory, food safety investigations, avian histopathology and disease diagnosis. The Food Science program opened with a visit to the UDairy Creamery where participants created their own ice cream flavors and conducted sensory testing. The program continued with hands-on sessions on food quality and safety and an interactive session on foodborne illness outbreaks. Both programs concluded with an ice cream social featuring the ice cream made by participants earlier in the day. 🐔



Food Science Exploration Program students got creative with their alginate beads of fruit juice flavors

Awards and Recognitions

Dr. Sue Snider led a team that was awarded a Northeast Region Excellence in Teamwork Award by the National Extension Association of 4-H. The other team members were **Lindsey Hughes**, Extension Agent II and Sussex County youth agent, and **Karen Johnson**, Extension Agent III and 4-H grant manager.



Alumna **Dr. Cynthia M. Stewart**, who received her B.S. and M.S. degrees in Food Science from the University of Delaware and a Ph.D. from Rutgers University, is serving as President of the Institute of Food Technologists (IFT), the largest society of food science and technology professionals in the world.



Sophomore Pre-Veterinary Medicine and Animal Biosciences major **Sarah Bussard** received a prestigious Benjamin A. Gilman International Scholarship to take part in the ANFS 2018 Study Abroad Program to New Zealand led by **Dr. Lesa Griffiths** and **Susan Garey**. Sarah is from Upper Falls, Md., and hopes to be working as a veterinarian one day.



June Teichmann (B.S. 2017) won Second Place in the Undergraduate Student Award Competition at the Annual Meeting of the International Association for Food Protection in Tampa, Fla. in July 2017. She

Envisioning Future Researchers

This past summer, ANFS launched a three-year undergraduate research experience funded through the United States Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA). The program known as *Envision* is focused on developing the next generation of agricultural scientists. Entitled "Undergraduate Research and Education Exploring *One Health*: Protecting our food supply, animal health, and the environment," the project addresses the disparity of underrepresented individuals in agricultural sciences, specifically as this applies to the *One Health* initiative connecting safe food production to animal health and to environmental stewardship. **Dr. Mark Parcels**, lead project investigator, said, "This program involves researchers across many disciplines and provides a great opportunity for students to develop into scientists, not just work in a laboratory or in a field study. As a first-generation college student



June Teichmann (middle of front row) with Dr. Kali Kniel (second from left) and other members of Dr. Kniel's lab group

conducted undergraduate research with **Dr. Kali Kniel** and her presentation was entitled "Influence of Amendment Type on Persistence of Salmonella Newport in Soil".



Multiple students who work in **Dr. Amy Biddle's** lab received awards in 2017. Masters student **Justin Blair** received a \$500 travel grant from the American Association of Veterinary Parasitologists (AAVP) to present a talk on his research characterizing the cyathostomin taxa preferences of a predatory fungus at the July AAVP meeting in Indianapolis, Ind. Junior **Kathryn Babiarz** and **Kimmy Hildreth** (B.S. 2017) were awarded \$1,000 scholarships from the Delaware Equine Council. Juniors **Anthony Pompetti** and **Rebecca Davis**, and senior **Lauren Weems**, were each awarded \$250 research supply and expense grants from the UD Undergraduate Research Office.



Envision participants present their research videos at the Delaware State Fair

myself, I see where education can lead and the opportunities it can provide, and now, we as educators and researchers have a duty to provide these opportunities as broadly and inclusively as possible." Twelve students participated in summer 2017, and in addition to their research, their experiences included training in video equipment, editing and storytelling, laboratory and safety training, industry trips and participation in camaraderie-building activities. 

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The Department of Animal and Food Sciences is pleased to recognize alumni, faculty, staff, parents, students, organizations and friends who supported the department during calendar year 2017. The following listing includes donors who made gifts to support designations within the ANFS Department from January 1, 2017 through December 31, 2017.

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