CVM researchers test novel cattle reproduction protocol

A MESSAGE FROM THE DEAN

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WHY I GIVE
DEAR ALUMNI AND FRIENDS OF THE COLLEGE:

I’m honored to be back at the University of Georgia as your dean. This is a spectacular time to be here. Your previous deans, Drs. Sheila Allen and Keith Harris, have led the college into a great place, and I’m pleased to step in, work with the college community, university administration and our stakeholders to continue the forward momentum. In my opinion, the college is in its ascendency.

One message I want to pass along to you as I step into this position is that I’m also an alumna. Just like you, I want our CVM to be the best veterinary college in the world. I know what a wonderful education I received here, and I want everybody else to understand how good it is, too.

That’s why you’ll see this issue of the *Aesculapian* filled with diverse stories about the College, including innovative research on heartworms, production medicine and Gulf War illness in veterans. You’ll read about major updates from our Veterinary Teaching Hospital, such as the expansion of our equine ophthalmology service and the launch of our diabetes clinic. You’ll see pages filled with fascinating stories about our outstanding students and employees, their impact on our college, clients, profession and society, and the awards, internships and honors bestowed upon them. You’ll read about Dr. Mike Topper, an alumnus from the DVM Class of 1980 and incoming president of the American Veterinary Medical Association, as well as our CVM Alumni President Dr. Marian Shuler Holladay.

When I came to campus for the Alumni Weekend in March, it was invigorating to be with others who love this College. I made new friends and reconnected with “old” friends who’ve made this CVM special. Part of my visit that weekend included sitting down with staff and faculty around the College to begin forming a five-year plan to reach our goal of making this the best veterinary college in the nation.

That five-year plan includes bringing a laser focus on our upcoming 2019 AVMA Council on Education accreditation site visit. It’s a new day in accreditation, with many changes occurring over the past three to five years, and since we do not want to be just good enough, we’ll need to start right away to ensure that our reviewers will not just be satisfied with us but impressed! We’ll be judged against 11 standards that touch on our entire operation, so we’ll be working across the board to improve every aspect of what we do and document it appropriately. Although 2019 isn’t far away, we have a great team of administrators, staff and faculty already working to ensure that we are ready.

None of this would be possible without your ongoing support. Thank you for helping our students, faculty and staff move the College onward and upward!

I truly look forward to serving as your dean.

*Lisa K. Nolan*
Dean
DEAN
Lisa K. Nolan:
Home is where the Arch is
What is it like to be on campus again?
It’s been amazing. I’ve met so many wonderful people and seen classmates and former instructors I haven’t seen in 25 years. I’ve learned so much about the College and what faculty, staff and students are doing. Their excitement for their work is contagious … and I’ve caught a good dose! I can’t tell you how truly thrilling it is to be back in such a gracious, yet dynamic and impactful place.

What inspired you to take this step as dean?
It was a big step actually. When I was first called about the position, I thought I would complete my career at Iowa State because I had devoted much of my career and energy to ISU’s College of Veterinary Medicine. It has a lot of momentum now, and I’m excited about where it’s going. But after the call, I realized this was my chance to come back to the place that gave rise to my career and lifted it up to where it is. With that in mind, I knew I’d be foolish not to take a look, and it was worth it. I honestly believe that the UGA CVM could be the best veterinary college in the United States. It’s doable.

How did your time as dean at Iowa State prepare you?
All veterinary schools are accredited by the same body and must cover similar aspects, but they all have different flavors, strengths and populations they serve. Iowa is the second largest agriculture state in the nation behind California, which is impressive when you consider how large California is. Although it does many things well, the ISU CVM has a major strength in swine production medicine. But Georgia is strong across the board with big agriculture and companion animals covered. And it is a dynamo in pushing the boundaries of health knowledge as one of the country’s top CVMs for research. UGA has to be strong across its whole mission. That’s what I love—the full range of veterinary medicine here.

Do you have hopes about any particular department you’d like to share at this time?
Part of my visit this weekend was to sit down with people to form a five-year plan for how to make this the best veterinary college in the country. I want to hit the ground running. I spent 6.5 years at Iowa State as dean trying different options on for size, and I don’t think I have to go through that learning experience again. We just have to get a plan in place and start chipping away at it. We can work on many different aspects at one time, and we’ll have a plan for each aspect of what we want to do. For starters, we need to grow and diversify our budget. That will fuel growth, enable new curricular and assessment efforts, help us recruit outstanding faculty, staff and students, power research initiatives and seed new clinical efforts. By doing so, we can better serve our teaching, research and service missions while still remaining a “best place” to become a first-rate veterinarian or veterinary researcher. Importantly, I want this to be the best veterinary school in the nation in which to work.

What are your proudest moments at Iowa State?
I believe, over time, it became a great place to work. It’s a place where people can be creative, do the best work of their lives, and recruit outstanding colleagues. Such change happened over time, had a lot of moving parts, and required the dedication of many good people. We assembled a great leadership team at all levels and put an equity and advancement officer in place to help people advance in their careers. We got serious about misbehavior and gave people clear expectations for productivity. Altogether, it worked, and it is a
point of great pride to me that during my time as dean, nobody was turned down for promotion or tenure despite a rigorous process. When we asked ourselves, “What’s more important than investing in the lives and careers of those in the College?”, we realized nothing was. We embarked on a plan to create a collegial and productive team of dedicated people across the College hungry for success. Of course, there are many other things I’d love to brag on, but really, everything evolves out of the College’s people.

You also implemented an impressive curriculum review and teaching assessment. Tell us about that.

Teaching veterinary students is at the core of what we do. We put an emphasis on that with a data-driven total curriculum review. Iowa State has a fantastic assessment group, led by Drs. Jared Danielson and Courtney Vengrin, that is recognized as one of the country’s best. When we laid out new curricular ideas, it was based on data collected over several years reflecting student, alumni, and employer surveys. Though faculty, like me, fall in love with their courses as taught, they are amenable to change when the data show that improvement is needed. That’s what we did, making our process both collegial and efficient.

With your research, you’ve had a major hand in *Escherichia coli* developments. What interested you in bacterial diseases?

To be honest, I wanted to be a mixed animal practitioner when I first started my veterinary path. During my freshman year in veterinary school, however, medical microbiology professor Dick Wooley asked me to work in his lab during the summer, and then I worked with him throughout veterinary school. After graduation, he encouraged me to hang around for a master’s. By the end of that degree, I was totally hooked. I did my PhD with him, where I worked on *E. coli* that cause disease in poultry, and that became my life’s work. During this time, I met or worked with great people. For instance, Dr. Margie Lee, now a UGA CVM professor but fellow doctoral student at that time, and I shared an office, and I took the first course (it was great!) taught by Dr. Harry Dickerson, as a new faculty member, now a UGA CVM Associate Dean.

You’ve also worked with biomarker of avian *E. coli* virulence, several vaccines and have five patents. What has it been like to be in this line of discovery?

When I was a graduate student, I used to worry where new ideas would come from for my research. But I soon learned that once you start pulling on a thread of an idea, the thread gets longer and knottier, and before you know it, you’ve spent a lifetime trying to unravel the whole sweater. Your search for that next bit of thread is exciting, too, fueling a sense of discovery and excitement. My students, colleagues and I began every new experiment like astronauts about to put a first step on the moon—would we step into green cheese or the dust of ancients? We didn’t know, but it was thrilling to find out! Every day was like that, and you never knew what you might find. Over the course of my career, we had some eye-popping discoveries that I could never have predicted, which are now helping to better control and understand important animal and human pathogens. You can’t ask for more than that in a career—the thrill of discovery, working alongside bright students with amazing careers ahead of them and doing good in the world—that’s awesome.

You are also interested in food safety and became the founding director of the Great Plains Institute of Food Safety at North Dakota State, right?

Yes. I had an amazing boss at NDSU, Ms. Patricia Jensen. As a former Undersecretary of Agriculture, Pat had spoken directly to families who’d lost children from eating hamburgers contaminated with *E. coli* O157. Her powerful connection to these families inspired me and a great team of faculty at NDSU to do something special by creating the Great Plains Institute of Food Safety and the country’s most comprehensive food safety educational program at that time. I am truly proud of what we accomplished together. For instance, several of our graduates have been food industry leaders, such as Dr. Chantal Nde, mentored by Dr. Catherine Logue, who is now a principal scientist for food safety at PepsiCo Frito-Lay.
What CVM moment from your years as a student sticks out the most?

There are lots, but one of my favorites involves my doctoral mentor, Dr. Wooley. I was sitting in his office one day when the phone rang—and it was for me! I was looking for a job at the time, and North Dakota State called and said my veterinary bacteriology background was exactly what they needed. I turned to Wooley and asked him where Fargo was, and he didn’t know either. We looked it up on his computer, and he said, “Omigosh, it’s in Canada!” I remember that like it was yesterday, but then, all his teaching moments were memorable. While sitting side-by-side streaking agar with bacteria, he used to give me career advice. I chuckle at the memories of him saying, “When you’re dean, you’ll need to do this, that or the other.” Little did either of us know that his advice would come in handy! He was an exceptionally good mentor—one I’ve strived to emulate my entire career.

While you’re here, you’ve also found a home near Jennings Mill Road to live with your father and two cats, Katy and Molly. What’s it like to be back in Georgia?

I don’t know that I have the words to explain it, but it’s as if the world is right again. In other places, you walk outside your home and don’t know what’s different, but it’s not quite right. The trees are different, there’s no kudzu, there’s no red mud line on the base of houses and people think YOU talk funny ... but here, all seems as it should. No matter where I’ve been, I’ve met good people, but this is home. It feels right, and I’m thrilled to be back. There’s truly no place like it.

Education

Bachelor’s in biology at Valdosta State College, 1975
DVM at the University of Georgia, 1988
Master’s in medical microbiology at UGA, 1989
PhD in medical microbiology at UGA, 1992

Previous positions

Professor and Founding Director, Great Plains Institute of Food Safety, 1993–2003
Professor and Chair of the Iowa State University Department of Veterinary Microbiology and Preventive Medicine program, 2003–2008
Associate dean of academic and student affairs at the ISU CVM, 2007–2009
Associate dean of research and graduate studies at the ISU CVM, 2009–2011
Dr. Stephen G. Juelsgaard Dean of the ISU CVM, 2011–2017

Recent major awards and service

American Veterinary Epidemiology Society Honorary Diplomat, 2014
Philbro Animal Health Excellence in Poultry Research Award, 2014
UGA CVM Academic Alumnus of the Year, 2016
Fellow of the American Academy of Microbiology, 2016
Member of the FDA’s science board, 2014–2017
Chair, FDA Science Board Subcommittee to Review the U.S. National Antimicrobial Resistance Monitoring System (NARMS), 2017
Dr. Fred C. Davison Award for Service to Veterinary Medicine, UGA OTS Fraternity, 2017
By Erica Hensley

THREE LABS at the University of Georgia College of Veterinary Medicine are combining expertise to research the impact of potential heartworm medication resistance in dogs.

Spread by mosquitoes and characterized by small, thread-like roundworms, heartworms (*Dirofilaria immitis*) are an extremely common and important filarial nematode parasite, primarily of dogs, which can cause severe disease and even death in dogs.

Resistance appears to be rare, and current evidence indicates it is limited to the Mississippi Delta region in the United States. Researchers are not sure if the problem will spread and become a national threat to dog populations or if resistance will remain mostly localized.

In most cases, preventive heartworm medicines—part of the Macrocyclic Lactone drug family—given as a monthly pills or topicals, or by a six-month injection, are effective at completely blocking infections. Interestingly, despite decades of use, researchers still are not quite sure how these drugs actually kill the worms or why the meds might fail in cases of drug-resistant heartworms. However, recent research points to a complicated interaction between the worm, the drug, and the dog’s immune response.

Ray Kaplan and Adrian Wolstenholme, both professors and parasitologists, work with Andy Moorhead, an associate research scientist and parasitologist, to improve understanding of medication failure patterns and host-parasite interaction in hopes of developing a test that rapidly detects resistance. All three are based in the CVM’s Department of Infectious Diseases. Kaplan’s work also extends to poultry, horses and livestock. Wolstenholme also researches parasitic roundworms, or nematodes, that infect people.

Moorhead says three questions need to be answered about the suspected pocket of resistance in the Mississippi Delta: How widespread is resistance? How can we detect it? Is there another drug that could be used to prevent it?

Moorhead’s lab looks at treatment options and host-specific cues that allow filarial parasites to establish in their particular hosts.
“We have to figure out how this worm without a brain figures out how to get to a dog’s pulmonary artery in these complicated migrations,” he said. “They have two goals—eat and reproduce—which go toward their own survival and the survival of their species.”

But first, parasitology researchers need to take a step back and assess the nature of drug resistance from an epidemiological standpoint, Kaplan said. There are several false understandings that can cause panic among researchers and animal owners, which should be tempered, he cautioned. Just because we see resistance in a pocket of the Mississippi Delta does not mean resistance will spread rapidly, he said. Kaplan points to certain epidemiological factors specific to that region that are likely important in the emergence of drug resistance, such as dense mosquito and dog populations, which lead to high heartworm infection rates.

“From a clinical perspective, resistance doesn’t appear to have spread yet, but we need an accurate genetic test to study this issue in a meaningful way,” Kaplan said. “Without a good genetic test, we are unable to perform proper epidemiological surveillance.”

Kaplan also studies resistance to deworming drugs at the population level in small ruminants—such as goats and sheep—as well as cattle, horses and poultry. His lab conducts diagnostic drug resistance testing for gastrointestinal parasites such as *Haemonchus contortus*, the barber pole worm, in small ruminants, and develops new diagnostic tests for resistance in worms of cattle, horses and poultry. Kaplan is also working with Wolstenholme’s lab to develop a genetic diagnostic test for resistance in heartworm, which would work similarly to tests used in human forensics.

Kaplan and Wolstenholme say there is simultaneously too much and too little speculation around resistance in dogs. “We should be concerned and vigilant, but there is no evidence that it will be a big problem, and we should not scare owners into thinking heartworm drugs don’t work,” Kaplan said. Heartworm drugs are effective at preventing disease, and in those rare cases that a few parasites do get in, yearly heartworm monitoring will detect the infection before a dog gets sick, he said. An infected dog can then be treated to eliminate the parasite.

Wolstenholme’s lab studies the dynamic interaction between the heartworm drug Ivermectin, host and parasite. A better understanding of how the drug works will enable researchers to better intervene on resistance cases, he said. His research points to the possibility that the effect of the heartworm drug is not on the parasite itself but on the host’s immune systems interaction with the worm.

“Given as a preventive drug, a very low dose is 100 percent effective at preventing infection and development of the disease,” he said. “But, if we try to kill worms in the lab at the larval stages with the same drug, we need a thousand times higher concentration, and that’s a puzzle.”

Wolstenholme uses the analogy of the cloaking device from “Star Trek,” which rendered ships and other celestial objects invisible.
“There are millions and millions of larvae moving around in the host, and yet the immune system doesn’t respond without the heartworm drug,” he said. “Our theory is that the drug deactivates the cloaking device so the worms ‘appear’ to the immune system, which can then see them and react.” His lab has some evidence to support this theory, and some of the evidence suggests it’s not that simple, but understanding how the drug triggers immune response is a vital step toward understanding drug efficacy and potential resistance, Wolstenholme said.

Though heartworm drug efficacy and resistance are key aspects of their work, the three researchers all point to their work’s concurrence to human medicine, specifically neglected tropical diseases (NTDs) caused by worm infection, such as lymphatic filariasis. Control efforts for several NTDs, including river blindness and lymphatic filariasis, are based on mass drug administration programs that use drugs in the same class as heartworm medicines.

“If we are getting resistance with heartworms, which is closely related to human filarial worms, might we see resistance as the elimination programs really crank up and we start putting a lot of selection pressure on the human parasites?” Wolstenhome asked.

The risk is there, he says, and heartworms might be an interesting model to study what could happen if human filarial parasites evolve to drug resistance.

Moorhead agrees, and though he works more with heartworm treatment options at the clinician-patient interface, he also helps science communities do the kind of research needed to ask and answer these questions about animal and human filaria.

As director of the UGA-based Filariasis Research Reagent Resource Center (FR3), funded by the National Institutes of Health, Moorhead leads efforts to grow and send worms to investigators across the country that need the parasites for their research.

“Worms don’t grow on trees,” he said, adding that it’s important to the worldwide work of understanding parasites to provide worms to institutions that might not have the resources to acquire their own. At the
intersection of veterinarian and human medicine, FR3 gives researchers the resources they need to test different treatment strategies and understand how diseases like heartworm and lymphatic filariasis establish within the host.

As for resistance, Moorhead and Kaplan developed a clinical diagnostic algorithm that functions as a flowchart and allows veterinarians to diagnose potential heartworm resistance. Upon apparent medication failure and positive heartworm infection test, veterinarians can use the diagnostic algorithm to determine if resistance was the likely cause of the medication failure, and if so, the next treatment options.

Moorhead reiterates that resistance is rare and currently isolated, and although dog owners should not question heartworm drug efficacy, veterinarians should keep a lookout for cases of drug failure and vigilantly track drug compliance. Kaplan, Wolstenholme and Moorhead are interested in identifying any suspect cases of resistance, and veterinarians who thinks they have a case are urged to contact one of the UGA CVM researchers.

Monitoring parasites and drug resistance

Small ruminant producers can use the FAMACHA diagnostic test to identify animals that require deworming treatments, versus animals that don’t need to be treated. The tool is a card that matches eyelid color to anemia levels as an indicator of clinical barber pole worm (Haemonchus contortus) infection. Producers must receive training in order to receive a card.

Dr. Ray Kaplan’s lab offers various clinical testing for parasite control and drug resistance monitoring for large animals. For information, or to reach anyone affiliated with the Kaplan lab, contact Sue Howell, jsch@uga.edu, or Bob Storey, bstorey@uga.edu, or call the lab at 706.542.0742.

For more information, visit the website of the American Consortium for Small Ruminant Control (www.wormx.info), which Dr. Kaplan started with several colleagues to address the problems posed by drug resistant worms in sheep and goats.

The Department’s Parasitology Diagnostic Lab also offers a series of diagnostic tests for livestock, wildlife, and companion and exotic animals. Offered through the UGA Veterinary Diagnostic Laboratories, tests include fecal floatation for Giardia and helminth parasites; Baermann for lungworms; Sedimentation for flukes and identification of ecto and endoparasites; and Knott and SNAP tests for heartworm. Dr. Guilherme (Gui) Verocai, DVM, who joined UGA CVM in May 2016, directs the lab. For more information on these tests, please visit www.vet.uga.edu/dlab.
CVM researchers test novel cattle reproduction protocol.
Story and photos by Erica Hensley

AS THE SUN RISES over a quintessential red barn on a crispy February morning in Quitman, Georgia, Dr. Roberto Palomares, DVM, PhD, dons his coveralls, rubber gloves and boots. He sets up a couple of ultrasound machines and chats with farm hands as they corral dairy heifers into chutes that lead to individual stalls—the exam room for the day.

Palomares is testing the efficacy and returns on a new ovulation synchronization protocol that standardizes the artificial insemination across the workweek. The standard protocol calls for hormone injections and inseminations across varied days, or observational estrus—detection that relies on staff looking for heifers that are in heat. Both can be confusing, hectic and costly for farmers to keep up with, he said.

It’s colder than it has been at Brooks Co. Dairy but still warm for the time of year—Palomares hopes the fluctuation in weather won’t interfere with the pregnancy rates that he is here to diagnose. Dairy cattle prefer 45-degree Fahrenheit weather while in heat, and a sudden change in temperature can affect their cycle and disrupt ovulation synchronization across the herd.

There is a palpable sense of tension as the cattle line up single-file—this particular group has been doing this since November. They were artificially inseminated about 35 days ago, and Palomares made the trip from the University of Georgia to check for pregnancy rates among a sample of the Brooks Co. herd.

Today, 69 of the 109 tested leave the barn with a bright pink “P” drawn across their back, and the first-time dams will expect calves in about nine months.

Palomares, assistant professor of bovine production medicine and theriogenology in the College of Veterinary Medicine, specializes in infectious diseases that impact cattle production and advanced reproductive techniques.
This particular project focuses on synchronizing ovulation across cattle herds to help farms standardize their reproduction management, and a big part of the research is getting out of the lab and onto the farm, he said.

“The key to this project is that it is not about us—it is about the partnership and integration with people at the farm,” he said. “They have been so focused, interested and willing to do this study with us.”

Over the last few years, Palomares has tested a novel 4–day ovulation synchronization and timed artificial insemination protocol, attempting to improve the often-variable and expensive process and make it easier on farmers’ schedules. Shown to be efficacious in smaller studies, the new approach shortens the hormone delivery period by one day, decreases the number of shots needed, and artificially inseminates six hours later. It may sound complicated, but is far more standardized than the comparison 5–day protocol because it operates on a Monday through Friday schedule, Palomares said.

On top of standardizing timing, this protocol decreases the number drugs needed per insemination from four to two doses, which reduces the cost per heifer by $6.

Heifers in this study are just a handful of the 6,000 dairy cattle comprising the main Brooks Co. farm, in addition to the 1,500 more at satellite farms. Producing five tanker-loads of milk per day, about 30,000 gallons, the farm sells to the Southeast Milk Cooperative that distributes across Florida and Georgia.

“It’s a balance between the farms’ economics and management, the scientific efficacy, and the on-the-ground effectiveness,” he said. “And we want it to be easy for the farmers as well.”

More than 800 heifers have been enrolled during this project. The pregnancy rate so far has been 55.5 percent (4–day group) versus 59 percent (5–day group), with no statistical difference between groups. The 4–day protocol provided a more consistent pregnancy percentage throughout eight replicates, while the 5–day group showed high variability in the outcomes.

The hormone progesterone is given to the cows through an intravaginal extended release device called CIDR (Controlled Internal Drug Release). Progesterone regulates the hormone release at hypothalamus, pituitary gland and ovaries, controlling follicular development, which helps to synchronize herd ovulation.

By inserting the CIDRs across a group of heifers, farmers can standardize pregnancy rates and birth dates across the farm. After the CIDR is removed, the group goes through timed artificial insemination 72 to 78 hours later, depending on which protocol they receive.

CIDRs not only enable farmers to rely less strictly on heat-detection methods, but also increase reproductive performance by standardizing ovulation cycles across the herd. There is also less room for error with an internal device, compared to hormone–laced feed, Palomares said.

Heifers that start the 5–day protocol on Monday, for example, have their CIDRs removed on Saturday, and then are inseminated 72 hours later on Tuesday. If the protocol started immediately again on a different group, they would be on a Tuesday to Sunday protocol, with insemination on Wednesday. Some farms try to work the 5–day protocol around the weekday schedule (starting on Wednesday or Thursday), but it’s confusing and time-consuming to count down a different schedule every week, Palomares said.

This is stressful for the farmers and the cows, he said, and leaves a lot of room for error. The 4–day protocol

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(4-day Co-Synch+CIDR)

CIDR

PGF$_2$

--- 78 h ---

GnRH + TAI

Pregn. Confirm.

Pregn Diagn

Days post treatment

0 1 2 3 4 5 6 7 8 // 35 // 60

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Graphic provided by Dr. Palomares.
eliminates the need to constantly mark the calendar and ask staff to come in off-hours, because the program runs Monday through Friday.

Initially a hypothesis, the 6-hour difference in artificial insemination between the two groups is the latest addition to Palomares’ research. Originally, his team continued to inseminate 72 hours after removing the CIDR, as called for in the 5-day protocol, but was let down by the results. He realized that because the CIDR was removed earlier, the heifers’ follicular waves were not fully developed and needed more time before ovulation.

After 24-consecutive hours of on-the-ground observation testing ovulation activation via ultrasounds, Palomares’ team found that for the 4-day protocol heifers, ovulation occurs six hours later. Palomares adjusted their insemination by six hours as well, and landed on a 78-hour wait period for heifer insemination.
“It sounds easy and not important, but from the scientific point of view, that little bit of time makes a big difference on physiological implications,” Palomares said.

And, it’s working. Brooks Co. plans to implement the 4-day protocol by expanding it to a larger group of heifers. Reproduction manager Renato Rizzo said the accuracy and reproducibility of the protocol help him improve quality overall, and hopefully with it, the farm’s business.

As the second largest dairy farm in Georgia, the business has an incentive to standardize and improve the efficiency of their insemination protocol, which currently produces about 250 pregnancies a month.

Brooks Co.’s full-time veterinarian Justin Graham (DVM ’13) said a big part of his job involves overseeing protocols, such as the new Monday through Friday insemination schedule, and the standardization ensures the farm is on the same page.

Incorporating the new protocol into the system gives the farm an edge and provides a beneficial relationship with UGA, Graham said. A big goal for the farm is improving heifer reproduction.

“It used to be ‘her’ schedule around the farmers’ needs and time—now it’s the other way around,” he said about the new 4-day timing.

The new ovulation standardization helps the farm predict and limit variations in birth numbers. And the 4-day protocol lets them do it during the workweek.

“It’s just a more consistent way to generate pregnancy and helps standardize heifers’ move into maternity,” he said.

Palomares said the beauty of this study is the integration of the clinical skills and lab research, which forms a reliable fundamental basis that farmers can trust.

This particular study, to which Brooks Co. loaned 920 heifers, tests the new 4-day protocol against a control group using the standard 5-day protocol. Zoetis Animal Health® donated more than 2,500 hormone treatments for this study and has supported this research for the last four years. Graduate students in the Veterinary and Biomedical Sciences program—Dr. João Bittar, DVM, MS, pursuing a PhD; Dr. Alejandro Hoyos, DVM, pursuing an MS; and Heidi Fishman, DVM, pursuing a PhD—also participated in this research. Dr. María S. Ferrer, DVM, MS, Dipl.ACT, an associate professor of theriogenology, consulted on the research as well.

For Palomares, it’s the perfect job. He loves the research, service and teaching veterinary students in the classroom and clinic. This project has been rewarding because it helps UGA impact the community and the industry, he said.

“Brooks Co. and other farms can take our work and apply it in their regular management,” he said. “We can impact the cattle industry as the protocol is extrapolated to other farms across the U.S.”
By Elizabeth Fite

High-fat foods are often the primary target when fighting obesity, but sugar-laden “diet” foods could be contributing to unwanted weight gain as well, according to a new study from the University of Georgia.

Researchers found that rats fed a diet high in sugar but low in fat—meant to imitate many popular diet foods—increased body fat mass when compared to rats fed a balanced rodent diet. The high-sugar diet induced a host of other problems, including liver damage and brain inflammation.

"Most so-called diet products containing low or no fat have an increased amount of sugar and are camouflaged under fancy names, giving the impression that they are healthy, but the reality is that those foods may damage the liver and lead to obesity as well," said the study’s principal investigator, Krzysztof Czaja, an associate professor of veterinary biosciences and diagnostic imaging in UGA’s College of Veterinary Medicine.

“What’s really troubling in our findings is that the rats consuming high-sugar, low-fat diets didn’t consume significantly more calories than the rats fed a balanced diet,” Czaja said. “Our research shows that in rats fed a low-fat, high-sugar diet, the efficiency of generating body fat is more than twice as high. In other words, rats consuming low-fat, high-sugar diets need less than half the number of calories to generate the same amount of body fat.”

Over a four-week period, researchers monitored body weight, caloric intake, body composition and fecal samples in three groups of rats. One group of test subjects consumed a diet high in fat and sugar, another group was fed a low-fat, high-sugar diet and a third group was given a balanced or “normal” diet.

Both the low-fat, high-sugar and high-fat, high-sugar groups displayed an increase in liver fat and significant increases in body weight and body fat when compared to the balanced diet group. Liver fat accumulation was significant in the high-sugar, low-fat group, which Czaja said “is a very dangerous situation, because the liver accumulating more fat mimics the effect of non-alcoholic fatty liver disease.”

Non-alcoholic fatty liver disease is caused by fat buildup in the liver, and serious forms of the disease can result in liver damage comparable to that caused by heavy alcohol use.

The unbalanced diets also induced chronic inflammation in the intestinal tract and brain. Former studies in rats conducted by Czaja have shown that brain inflammation alters gut-brain communication by damaging the vagus nerve, which controls sensory signals, including the brain’s ability to determine when one is full.

“The brain changes resulting from these unbalanced diets seem to be long term, and it is still not known if they are reversible by balanced diets,” Czaja said.

This study expands upon the researchers’ previous work that determined high-fat diets alter the gut microbiome, the collection of bacteria, viruses and other microbes that live in the digestive tract. The recent study found that the unbalanced diets decreased the microbiome’s bacterial diversity, and the low-fat, high-sugar diet increased gut bacteria that are associated with liver damage.

The study was published online in the journal Physiology and Behavior and is available at bit.ly/2sl2Fu6.

Co-author Claire de La Serre, an assistant professor of foods and nutrition in UGA’s College of Family and Consumer Sciences, conducted metabolic analysis for the study.
A NEW STUDY from researchers at the University of Georgia and the U.S. Centers for Disease Control and Prevention found that “raccoon roundworm,” a potentially deadly parasite that can infect humans and animals, may not always make its host sick.

The raccoon parasite *Baylisascaris procyonis* has been found in the U.S., Costa Rica, and several countries in Europe and Asia where raccoons have become established. Since being recognized, at least 70 clinical human cases have been confirmed in the U.S. Historically, this parasite has not been common in the Southeastern U.S.; most infections in the area are from the Appalachian region. However, in recent years the parasite has been found throughout Florida and parts of Georgia, and it recently caused the death of two beavers at an Athens-area zoo after raccoons entered the beavers’ enclosure and contaminated it with feces. Infections in people, although rare, can cause neurological symptoms, including blindness, coma, and death.

In their study, the researchers found that people who tested positive for antibodies to the parasite showed no signs of disease.

“‘This suggests that not all infections with this parasite lead to severe disease,’” said Michael Yabsley, a professor with the Southeastern Cooperative Wildlife Disease Study, based at the UGA College of Veterinary Medicine, who is jointly appointed to the Warnell School of Forestry and Natural Resources. “‘This is in contrast to what has been previously reported for most diagnosed patients.’”

Animals and people acquire the parasite by ingesting the microscopic larvae found in raccoon feces. The larvae move into the bloodstream and damage tissues as they move around and grow. Children known to eat dirt or animal feces, as well as people diagnosed with pica disorder (which compels them to eat substances that contain no nutrition), are at risk of infection. Also at risk are animals that come into contact with contaminated raccoon feces and anyone who may unknowingly come into contact with the larvae and accidentally ingest them. As the larvae grows and tissues are damaged, symptoms that emerge may include nausea, liver enlargement, loss of coordination, loss of muscle control, blindness, coma and death.

Yabsley and his collaborators published their findings in the Centers for Disease Control and Prevention’s journal, Emerging Infectious Diseases ([bit.ly/2qSWpWY](bit.ly/2qSWpWY)). Their study tested 347 wildlife rehabilitators who participated in the study, 24 which tested positive for *Baylisascaris* antibodies but showed no signs of disease.

“But we believe that these presumably healthy adults were exposed to low numbers of eggs, in contrast with children who may ingest large numbers of eggs by ingesting raccoon feces or items contaminated with feces,” said Sarah Sapp, a graduate student working under Yabsley in the Department of Infectious Diseases.

Although it is not certain how those rehabilitators who tested positive for the parasite became infected, they did report contact with raccoons, as well as inconsistent hand washing and glove use.

Washing hands with soap and water, wearing gloves when handling animals or feces, monitoring children when they are playing outside, and avoiding raccoons are all ways to prevent human cases of *Baylisascaris procyonis*. To help prevent spread of the parasite in animals, keep captive animals in enclosures that have not previously housed raccoons or sturdy enclosures that exclude raccoons. Bedding and food containers should prevent raccoon access. Domestic dogs and exotic pets (e.g., kinkajous, skunks) that may also be infected with *Baylisascaris* should be regularly tested and dewormed.

For additional information about recent cases of raccoon roundworm in the U.S., see [bit.ly/2sojzP9](bit.ly/2sojzP9).
By Megan Prescott

RESEARCHERS at the UGA College of Veterinary Medicine are testing a treatment to combat Gulf War illness in soldiers who served in Operation Desert Storm and other Gulf War combats from 1990 through 1991. About 25 percent of the 700,000 troops who engaged in combat during the war suffer from Gulf War illness.

Although there is some debate, research indicates that the stress of war, combined with unprecedented exposure to pesticides, nerve agents and other chemicals, led to debilitating cognitive, learning and motor deficits for some soldiers. The effects of Gulf War illness also include extensive pain, headache, fatigue, breathing problems, gastrointestinal issues and skin abnormalities.

“The most pressing issue is that veterans with Gulf War illness are growing older, so the cognitive symptoms will be amplified as age takes a toll on the brain,” said Nick Filipov, an associate professor in the department of physiology and pharmacology, whose research focuses on neurotoxicology and neuroimmunology. “There is increasing evidence that the immune system is dysfunctional in the veterans with Gulf War illness, and perhaps neuroinflammation plays an important part in the manifestations of the disease.”

In this collaborative project, Filipov is working with John Wagner, a professor in the department of physiology and pharmacology, and Don Harn, a professor in the department of infectious diseases, to test a novel sugar-based molecule, which was developed by Harn, as a possible treatment for the illness. The investigators will administer the molecule to mice exposed to chemicals or stressors similar to those experienced by veterans with Gulf War illness. During the course of two years, behavioral, cellular and molecular tests will be used to assess the treatment’s effectiveness at restoring the immune system and reducing inflammation in the brain.

This study is funded by a $750,000 grant from the U.S. Department of Defense.
The Hospital has hired an additional board-certified ophthalmologist with a special interest in equine ophthalmology to bolster our offerings in this area.

Sarah Czerwinski, DVM, DACVO, gained extensive experience in equine ophthalmology during her residency at the University of Florida and then spent a year in private practice. She joined the Hospital’s ophthalmology team last winter.

Additionally, the Hospital has purchased specialized equipment to perform cataract surgery in horses, and we have expanded our patient receiving schedule so that appointments are now available daily.

Services we offer:
• Management of Corneal Ulcers and Uveitis
• Corneal Grafting
• Cyclosporine Implants
• Glaucoma Surgery
• Cataract Surgery
• Iris Cyst Ablation
• Squamous Cell Treatment
• And More!

Our equine ophthalmology team consists of (l. to r.) Dr. Sarah Czerwinski, Dr. Katie Diehl and Dr. Kate Myrna. Photo by Christopher B. Herron.

With the addition of Dr. Sarah Czerwinski (shown here), we can now offer appointments daily! Photo by Christopher B. Herron.
Diabetes Clinic

Our Hospital's new diabetes clinic is aimed at helping owners and referring veterinarians with the management of diabetes mellitus in cats and dogs.

The Hospital is proud to be among the first in the nation to offer a comprehensive veterinary diabetes clinic. Our goal is to provide diagnostics, treatment and support to help practitioners and owners with the management of diabetes mellitus in cats and dogs. We welcome both straightforward and difficult-to-control cases and will work with you to design a customized treatment plan for each patient.

Services we offer:
- Continuous interstitial glucose monitoring (CIGM): This is a great way to perform glucose curves to monitor insulin therapy and can be done at home. Blood glucose values are measured every 5 minutes for up to 5 days.
- Blood glucose curve interpretations: Interpreting blood glucose curves to determine optimal insulin therapy is complicated. We will be happy to interpret your curves and make treatment recommendations.
- Evaluation and initial treatment recommendations for diabetic patients
- Follow-up care for diabetic patients
- Educational resources for owners and practitioners

For more information, please visit vet.uga.edu/hospital/services/diabetes-clinic.

Did You Know?

With so many new things going on at the Hospital, it can be hard to keep up with what we currently offer. Below is a list of services we provide to referring veterinarians and their clients. Services that have been created since we have moved into our new facility are highlighted in red.

- Behavioral Medicine
- Cardiology
- Dermatology
- Diabetes Clinic
- Diagnostic imaging: MRI, CT for small and large animals, Ultrasound, Nuclear-scintigraphy
- Emergency & Critical Care
- Equine Podiatry
- Intermediate Care Ward
- Internal Medicine
- Interventional Radiology
- Lameness/Sports Medicine
- Neurology
- Oncology/Stereotactic Radiation Therapy
- Ophthalmology
- Production Medicine
- Small Animal Rehabilitation
- Soft Tissue, Orthopedic and Minimally Invasive Surgery
- Theriogenology
- Wildlife Treatment Center
- Zoological Medicine/Exotics
WHEN TRYING TO FIGURE OUT how to best honor the memory of David A. Forehand (DVM ’76), who passed away in 2004, his family decided that in lieu of flowers they would rather do something that would support what he was passionate about – the field of veterinary medicine. With that, the David A. Forehand Scholarship at the UGA College of Veterinary Medicine was established.

But his family and friends didn’t stop there, and eventually the David Forehand Foundation was created. The foundation board, along with Forehand’s wife, Susan, have continued to be strong supporters of both the College and the Hospital.

In 2006, Susan started the annual Vet School for a Day program, which invites high school students to campus to show them a day in the life of a veterinary student. Additionally, the David A. Forehand Externship Award was recently created, which provides financial support to a student participating in a unique off-campus experience at the Atlanta Humane Society, where they learn more about shelter medicine education.

On the Hospital side, Susan and the foundation board made a gift to support the building of the College’s state-of-the-art Veterinary Teaching Hospital. In April, that gift was recognized through a ceremony to officially dedicate the new Dr. David A. Forehand Small Animal Emergency Waiting Area.

Forehand’s family and friends were present during the ceremony to remember the impact he had as a small animal practitioner for more than 25 years and to celebrate how his legacy will live on through the thousands of animals that the Hospital serves each year through its emergency and critical care service.
**Current clinical trials**

**THE HOSPITAL IS CURRENTLY SEEKING PARTICIPANTS** for the clinical trials listed below. If you know of an animal that would be a good fit, please contact Lisa Reno, our clinical trials coordinator, at 706.296.7818 or lisar@uga.edu. For more information about these trials, visit [vet.uga.edu/clinical-trials](http://vet.uga.edu/clinical-trials).

<table>
<thead>
<tr>
<th>What we are looking for</th>
<th>Study description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cats diagnosed with diabetes mellitus for less than 1 week</td>
<td>Study to determine if computed tomography (CT) imaging can predict which cats with diabetes will go into remission</td>
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<tr>
<td>Cats diagnosed with thromboembolism (blood clot) due to cardiac disease</td>
<td>Study to compare the effectiveness of two different medications for preventing recurrent blood clots in cats</td>
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<tr>
<td>Cats with cancerous tumors</td>
<td>Study to determine the effectiveness of an adjunct therapy in cats with fibrosarcoma</td>
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<tr>
<td>Dogs with proteinuria due to chronic kidney disease</td>
<td>Study to determine the effectiveness of a new treatment to reduce urine protein loss in dogs</td>
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<tr>
<td>Dogs with epileptic seizures</td>
<td>Study evaluating a handheld nerve stimulator for the treatment of refractory seizure activity associated with a diagnosis of canine epilepsy</td>
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<tr>
<td>Cats with lymphoma</td>
<td>Study to determine the safety and effectiveness of TANOVEA™ for the treatment of cats with lymphoma</td>
</tr>
<tr>
<td>Male dogs requiring surgery to correct a urinary obstruction</td>
<td>Study to evaluate a treatment to reduce post-operative hemorrhage in male dogs undergoing surgery for urinary obstructions</td>
</tr>
<tr>
<td>Dogs newly diagnosed with heartworms that have not received treatment</td>
<td>Study to evaluate the effectiveness of an altered dosing schedule and use of an alternative tetracycline for the treatment of heartworms</td>
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<tr>
<td>Dogs who have had a TPLO surgery occurring between 2 and 4 months prior to enrollment</td>
<td>Study to evaluate the effectiveness of a novel disease-modifying osteoarthritis drug on the development and progression of osteoarthritis</td>
</tr>
<tr>
<td>Dogs that have received oral NSAIDs daily for at least 30 days</td>
<td>Evaluation of a new pill endoscopy capsule to detect gastrointestinal ulceration in dogs receiving long-term oral NSAID therapy</td>
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INSIDE THE THIRD-YEAR LECTURE HALL, a whiteboard counts down the time to clinical rotations. Each day, this number grows smaller and serves as a steady reminder of what lies ahead. The closer it moved toward zero this year, the more we developed feelings of excitement and anxiety.

“What if I don’t know enough?” or “What happens if I forget something important?” were common thoughts. I had these worries myself; except for me, these were also accompanied with, “What if I miss my flight?”

I started my clinical rotations with a six-week long externship working with the Global Influenza Programme (GIP), which is one of the many health teams located at the World Health Organization (WHO) headquarters in Geneva, Switzerland. WHO is a specialized agency of the United Nations that promotes international public health, which is my particular area of interest in veterinary medicine.

My journey to Switzerland actually began a few time zones to the east in Vietnam. The summer after my second year in veterinary school, I worked with the United States Agency for International Development (USAID)-funded PREDICT project based out of Vietnam’s capital, Hanoi. PREDICT is part of the USAID Emerging Pandemic Threats program, which helps developing countries prevent, detect, and control infectious diseases in animals and people before they become a threat to humans. Influenza is one of these monitored viruses, among others. While at one of these PREDICT meetings in my internship, I met Dr. Gina Samaan, who is an epidemiologist from WHO and the GIP.

A few email exchanges and seven months later, I found myself on a plane to join Gina and her team at the GIP in Switzerland. The GIP is a team of several medical professionals from human and animal health sectors who primarily provide guidance and support to countries to better prepare them against seasonal influenza viruses, as well as zoonotic and pandemic threats. Monitoring the ongoing influenza activity among humans and at the human-animal interface is vital and was a large part of my role working at WHO during my externship.

While in Geneva, I helped with the team’s biweekly surveillance of influenza activity throughout the world. Our team looked at data reported to WHO from each country and analyzed the trends for reported seasonal influenza infections in humans and what subtypes were present in those countries. We also assessed data reported under the
international health regulations to WHO on non-seasonal influenza infecting humans to determine their pandemic potential. To understand the risk for human exposure to these zoonotic influenza viruses, we investigated data reported by the World Organization for Animal Health (OIE) and Food and Agriculture Organization (FAO) on a monthly basis.

One of the specific projects I worked on while at WHO was the Tool for Influenza Pandemic Risk Assessment, or TIPRA. This newly developed tool from WHO is based on a model used by the Centers for Disease Control and Prevention and provides a risk assessment of how likely a virus is to become a pandemic, and if it did, what the resulting impact would be. Compiling this information can identify any knowledge gaps that may exist, which promotes future research, highlights subtypes that require more focus, and enhances public health preparedness overall.

For example, I assisted with a historical assessment of swine influenza A (H1N1) triple reassortant viruses, which were the precursor viruses to the 2009 H1N1 pandemic virus. This means the viruses had components of influenza A viruses found in humans, poultry and swine. Our goal was to evaluate scientific literature published before 2009 and determine if there was evidence available that would have suggested if this virus, in fact, had a higher likelihood of becoming a pandemic problem using the TIPRA model.

Although “One Health” has become a common phrase in veterinary medicine, I found a lack of representation of veterinary students among the other WHO interns during this externship. Most of the others I met were either in or had recently finished medical school, or comprised a mix of other human health specialists such as nurses, dentists and epidemiologists. When I introduced myself as a veterinary student, I was often met with inquisitive questions, wondering, “Why are you working at the WHO if you are in vet school?”

In most countries, including the United States, the public perception of veterinarians is often associated with companion animal care or food animal management. Considering these are the fields in which many veterinary students ultimately pursue careers, this isn’t completely unwarranted, and the idea of a veterinarian working in public health is often a pretty foreign concept to most people.

Even I did not realize how interconnected human and animal health sectors could be. I took time off and traveled between my undergraduate degree and entering vet school, and it was during this time I first learned about public health and its relevance at the international level. I started school knowing I wanted to continue pursuing these interests, but I was not sure how to combine this with veterinary medicine.

Since entering veterinary school, my interests in public health have continued to grow exponentially. I have spent each of my summers working in international public health projects and have also worked in Dr. Danny Mead’s lab during the school year assisting with the surveillance of West Nile Virus. I am currently enrolled in the DVM/MPH dual degree program, and I am particularly interested in zoonotic infectious diseases and how animals and insects can play a role in disease transmission to humans.

Although I love clinical medicine and much of my experience is working with small animals, I want to ultimately have a career that contributes to the betterment of human health. I love the idea that this profession can have such a great impact on a global scale, and I am excited to see where this path will take me.
Mt. Brevent has an elevation of 2525 meters, and at the top sits the viewpoint pictured here, as well as a café where skiers can eat lunch and have a quick coffee. Julie was not prepared for skiing but thoroughly enjoyed the views and delicious food.

Natalie Yap, a Junior Doctor from Melbourne, Australia, who was working with the WHO Department of Maternal Newborn Child and Adolescent Health, joined Julie on a weekend trip to Chamonix, France. They walked inside a glacier, ate delicious French food, and took in stunning views of the Alps.

The Louvre Museum is an iconic landmark in Europe, and Julie made a brief visit during a weekend trip to Paris.

All the artwork present within the World Health Organization in Geneva was donated by various WHO member states. This mural was painted by Brazilian artist Iberê Camargo in 1966 and serves as a meeting location within the main building for people headed to lunch together.

Julie represented the country of Mauritius in a mock voting exercise for the World Health Assembly, the annual event where representatives from each WHO member state meet to discuss relevant events and public health topics. This year, the World Health Assembly will vote to select a new Director-General, as Dr. Margaret Chan, MD will finish her second term.

Julie posed in front of the United Nations Office in Geneva, located within the Palais de Nations building, which was originally constructed for the League of Nations after World War I. There are currently 193 member states and six official languages, which include Arabic, Chinese, English, French, Russian and Spanish.

Photos can often exclude what led to capturing a specific moment. While Julie had some amazing views of the Alps during her trip to Chamonix, visibility was highly limited due to clouds and rain. Julie took advantage of a weather transition to view the mountain range.

Inside the main assembly hall within the World Health Organization’s main building, Julie snapped a selfie. This is the largest hall located within the WHO, and this was a rare occasion when it was not in use.

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**Influenza Surveillance and Monitoring Team, Global Influenza Programme, World Health Organization**

www.who.int/influenza/en/

Geneva, Switzerland

All interested applicants should contact WHOinfluenza@who.int as early as possible and apply at the link below.

www.who.int/careers/internships/en/

Deadlines for application to WHO internships:

- **Summer**: To be considered for a summer internship, applications are accepted from February 1 to February 28 each year. Summer internships usually take place between May and October.
- **Winter**: To be considered for a winter internship, applications are accepted from September 1 to September 30. Winter internships usually take place between November and April.
IN MARCH, Kelley Glikin and Nikki Dowgos traveled to the Student American Veterinary Medical Association (SAVMA) Symposium 2017, hosted by Texas A&M University, to make sure that Georgia is on everyone’s mind—specifically, Athens!

As delegates of the UGA CVM’s Student Chapter of the American Veterinary Medical Association, Glikin and Dowgos headed to “Aggieland” in hopes of securing UGA as the site for the 2019 symposium. Thanks to two years of preparation from UGA CVM students, they did just that by presenting the winning bid to host the 2019 event. In the meantime, the College will prepare to welcome approximately 1,200 symposium attendees to Athens—something it hasn’t done since 2003.

SAVMA is the national umbrella for all the student AVMA chapters. Representatives from schools in the U.S., Canada, the Caribbean, and the U.K. make up the governing body of SAVMA, which creates committees to work on student interests that include wellness, advocacy, professional development and economic issues. The governing body meets at the SAVMA Symposium, hosted by a different university each year, to work on these initiatives. Students expand their knowledge and connect with other students and veterinary professionals. The conference features lectures, interactive wet labs and exhibit halls aimed at helping students in their studies and future careers, as well as much-beloved academic and athletic competitions that foster friendships between universities.

Athens’ award-winning, newly expanded Classic Center will serve as the conference hub in 2019, hosting the opening ceremonies, exhibitors and lectures. The symposium’s wet labs will mostly take place on campus, bringing students to the UGA CVM’s main campus as well as its new state-of-the-art Veterinary Medical Center, which opened in 2015. The closing ceremony will be an evening filled with outdoor fun and lots of food, as we feature local food trucks and music at the city’s newest brewery, The Southern Brewing Company.

Athens holds a special place in the hearts of every current and former UGA student. The veterinary students are excited for the opportunity to share this special place with their colleagues—a place where football is king on Saturdays, a great meal and a good friend are never far away, and red and black are always in style. With that in mind, UGA students are excited to begin the two-year-long conference planning process with the hope that SAVMA 2019 symposium-goers will leave Athens with new knowledge, gain practical skills, expand their professional network, and renew their enthusiasm for the wonderful field of veterinary medicine.
Twenty-two students from the class of 2020 were chosen to serve as student ambassadors. Ambassadors assist with recruitment, outreach and College-related activities to enhance the public image of the College, its students and its programs. The new ambassadors are listed here.

*Photos by Christopher B. Herron.*

**NEW STUDENT AMBASSADORS**

Madison Bajc  Caitlin Brennan

Emily Clifton  Emily Cook  Joette Crews  Lizzy Evernham  Jayme Holmes

Ariel Imler  Hunter Lamar  Courtney Lee  Jordan Linahan  Rebecca McInroe

Justin McKinley  Rebecca Mears  Serena Nayee  Julia Pogue  Jennifer Roveto

Bridget Savitske  Nathan Siegel  Corinne Talhouk  Jazmyne Taylor  Lizzie Wilson
Valerie Marcano (DVM 2020), who is a graduate student in the Scientist Training dual DVM-PhD program, was one of five U.S. students to receive the American Association of Avian Pathologists Foundation/Merck Animal Health Veterinary Student Scholarship for students focused on avian health. Since 2013, Valerie has worked as a graduate assistant at the Southeast Poultry Research Laboratory to study Newcastle disease virus. Valerie is the founder of the UGA CVM Swine, Aquaculture and Poultry Food Animal Club and vice president of the national Veterinary Students as One in Culture and Ethnicity organization.

Christina Lora M. Leyson, PhD, postdoctoral student in Dr. Mark Jackwood’s lab at the Poultry Diagnostic and Research Center, was awarded the first Merck Animal Health High Quality Poultry Science Award for the Latin American region. As winner of the award, Merck will sponsor her trip to Brazil in August 2017 to present her research at the High Quality Poultry Congress.
THE AWARDS LISTED BELOW represent the senior clinical awards and a sampling of the scholarships that were bestowed upon UGA CVM students during the 2017 Honors and Awards Banquet, held in April. Thanks to our many supporters of student scholarships. Photos by Christopher B. Herron.

**Bridgitte Gravitt** (DVM 2017) received the Dilmus Blackmon Scholarship and a certificate of merit for Proficiency in Clinical Pathology.

**Andrea Osborne** (DVM 2017) received the Dr. John T. and Loraine Westbrook Bradberry Scholarship and certificates of merit for Proficiency in Anatomic Pathology and Clinical Pathology.

**Dylan Djani** (DVM 2017) received the Dr. David A. Forehand Scholarship, the American Association of Feline Practitioners Outstanding Senior Award, and a certificate of merit for Proficiency in Small Animal Medicine and Surgery.

**Dane Knudsen** (DVM 2017) received the William Morris Grayson Scholarship.

**Amanda Jara** (DVM 2017) received the Bobby L. Johnson Scholarship.

**Annemarieke de Vlaming** (DVM 2017) received the Clifford Westerfield Award, Barbara C. Joslin Scholarship, the David Tyler Scholarship, the Blanch D. Hayes Award, a certificate of merit for Proficiency in Large Animal Medicine and Surgery, and an American College of Veterinary Internal Medicine certificate of Clinical Excellence. (See also the Special Recognition box in this section).

**Sangeeta Macko** (DVM 2017) received the Hugh and Victoria Leary Scholarship.

**John Rossow** (DVM 2017) received the Hugh and Victoria Leary Scholarship and an International Veterinary Student Association Travel Stipend.

**Elizabeth Worn** (DVM 2017) received the Hugh and Victoria Leary Scholarship and the John Morton Award for Humane Animal Care.

**Grace Castro** (DVM 2017) received the Mary Katherine Ownby Scholarship.

**Amanda Schmidt** (DVM 2017) received the Anne Munroe Shapiro Memorial Scholarship and the Award for Proficiency in Emergency & Critical Care.

**Betsy Andrews** (DVM 2017) received the Ben Tucker Memorial Scholarship.

**Yari Torres Mendoza** (DVM 2017) received the Christopher P. Wetherbee Scholarship and the John and Jeanne Capozzi Scholarship.

**Lydia Peña** (DVM 2017) received the Alumni Award (sponsored by the UGA Veterinary Alumni Association).

**Eric Schimler** (DVM 2017) received the Neil and Dorothy Bates Scholarship.

**Bo Barillo** (DVM 2017) received the Dr. Gary and Brenda Bullard SCAVMA Scholarship.

**Vivian McWilliams** (DVM 2017) received the For the Love of a Horse scholarship, and a certificate of merit for Proficiency in Large Animal Medicine and Surgery.

**Kaylee Quinn** (DVM 2017) received the Drs. Allen and Paren Causey Scholarship.

**Chloe Hancock** (DVM 2017) received the Dr. Rinaldo DeNuzzo Family Memorial Scholarship.

**Sarah Cleary** (DVM 2017) received the David A. Forehand Externship Award, a certificate of merit for Proficiency in Small Animal Medicine and Surgery.
Antwan Cuffie (DVM 2017) received the David A. Forehand Externship Award and a certificate of merit for Proficiency in Anatomic Pathology.

Ryan Dover (DVM 2017) received the David A. Forehand Externship Award.

Rachel Yates (DVM 2017) received the David A. Forehand Externship Award and the Bayer Excellence in Communication Award.

Alena Strelchik (DVM 2017) received the Georgia S. Downing Trust scholarship and a certificate of merit for Proficiency in Small Animal Medicine and Surgery.

Brittany Feldhausser (DVM 2017) received a Gould Family Scholarship, the Rafter Memorial Scholarship, the Bob Rosenthall Senior Student Award for Proficiency in Clinical Oncology, and a certificate of merit for Proficiency in Small Animal Medicine and Surgery.

Jennifer Velasco (DVM 2017) received the Dennis Wylie Jordan Memorial Scholarship and the Clifford Westerfield Award.

Sarah Robertson (DVM 2017) received the Monica Kucher “Good Hands” Award for Clinical Proficiency.

Lacey Pepples (DVM 2017) received the Dr. J.T. Mercer Scholarship.

Rachel Jarrett (DVM 2017) received the Sonny and Mary Perdue Scholarship and the Dr. Andrew Bugbee Scholarship.

Caitlin McManamon (DVM 2017) received The Atlanta Kennel Club Scholarship and a certificate of merit for Proficiency in Small Animal Medicine and Surgery.

Rachel Over (DVM 2017) received the David A. Forehand Externship Award.

Marcie Eldred (DVM 2017) received the Conyers Kennel Club Scholarship and a certificate of merit for Proficiency in Small Animal Medicine and Surgery.

Lauren Washburn (DVM 2017) received the Lawrenceville Kennel Club Scholarship.

Joey Sapora (DVM 2017) received the American College of Veterinary Surgeons Award, the Jesse L. Roberts Award, and a certificate of merit for Proficiency in Anatomic Pathology.

David Moses (DVM 2018) received the Peyton Anderson Foundation Veterinary Scholarship.

Jacqueline Marinoff (DVM 2018) received the Deanna Bowen Armstrong Memorial Scholarship.

Michael Pabon (DVM 2018) received the Betty Butler Memorial Scholarship.

Jillian Condrey (DVM 2018) received the Alumni Award (sponsored by the UGA Veterinary Alumni Association).

Kaitlin Iulo (DVM 2018) received the SCAVMA Outstanding Contribution Award, the Dr. Jack Walther Leadership Award and the Spartanburg Kennel Club Scholarship.

William Clark (DVM 2018) received the Thomas L. Huber – Nestlé Purina Award for Excellence in Companion Animal Nutrition and the SCAVMA Outstanding Contribution Award.

Kevin Spiegel (DVM 2018) received the Thomas L. Huber – Nestlé Purina Award for Excellence in Companion Animal Nutrition.

Kencade Sumner (DVM 2018) received the Thomas L. Huber – Nestlé Purina Award for Excellence in Companion Animal Nutrition.

Tessa Sghiatti (DVM 2018) received the Thomas L. Huber – Nestlé Purina Award for Excellence in Companion Animal Nutrition and the Zoetis Veterinary Student Scholarship.

Mireya Smith (DVM 2018) received the Thomas L. Huber – Nestlé Purina Award for Excellence in Companion Animal Nutrition.

Megan Korpita (DVM 2018) received the Thomas L. Huber – Nestlé Purina Award for Excellence in Companion Animal Nutrition and the Salsbury Foundation Scholarship.

Anna Catherine Bowden (DVM 2018) received the Thomas L. Huber – Nestlé Purina Award for Excellence in Companion Animal Nutrition and the Martha F. Cannon Award for Academic Excellence in Ophthalmology.

Caroline Roxon (DVM 2018) received the Thomas L. Huber – Nestlé Purina Award for Excellence in Companion Animal Nutrition.
Anna Slagle (DVM 2018) received the Dr. Gary and Brenda Bullard Veterinary Scholarship and the Zoetis Veterinary Student Scholarship.

Stephanie Howell (DVM 2018) received the Georgia S. Downing Trust award.

Elizabeth Foreman (DVM 2018) received the Gould Family Scholarship.

Katie Beth Murray (DVM 2018) received the Edward E. Hood Foundation Companion Animal Scholarship.

Julie Tarabula (DVM 2018) received the Edward E. Hood Foundation Companion Animal Scholarship and The Atlanta Kennel Club Scholarship.

Amy Brandon (DVM 2018) received the Edward E. Hood Foundation Equine Scholarship.

Alex Scharf (DVM 2018) received the Edward E. Hood Foundation Equine Scholarship and the Student Chapter of the American Association of Equine Practitioners Award.

Anna Sirchman (DVM 2018) received the Dr. Kerry Young Jackson Scholarship.

Katarina Yi (DVM 2018) received the Northwest Georgia Veterinary Medical Association Scholarship.

Christine Casey (DVM 2018) received the Scott Satterfield Scholarship.

Kaitlin Jones Miller (DVM 2018) received the Simmons Educational Fund Business Aptitude Award.

Kelsey Johnson (DVM 2018) received the Frances Wood Wilson Scholarship.

Morgan Adkins (DVM 2018) received the Zoetis Veterinary Student Scholarship.

Hunter Goldsmith (DVM 2018) received the Zoetis Veterinary Student Scholarship.

Wai Hanson (DVM 2018) received the Zoetis Veterinary Student Scholarship.

Amanda Morvai (DVM 2018) received the Zoetis Veterinary Student Scholarship and the Mary Katherine Ownby Scholarship.

Kellyn Sweeley (DVM 2018) received the Zoetis Veterinary Student Scholarship and the Valerie Alexandra Johnston Scholarship of Excellence.

Breanna Marshall (DVM 2018) received the Newnan Kennel Club Scholarship.

Laura Burns (DVM 2018) received the Hugh and Victoria Leary Scholarship.

Ching Li Jen (DVM 2018) received the Hugh and Victoria Leary Scholarship.

Andrea Powalie (DVM 2018) received the Hugh and Victoria Leary Scholarship.

Rachel Luoma (DVM 2019) received the Dr. John T. and Loraine Westbrook Bradberry Scholarship and the Zoetis Veterinary Student Scholarship.

Katherine Neal (DVM 2019) received the Greg Jaffe Memorial Veterinary Scholarship and the Zoetis Veterinary Student Scholarship.

Leah Hixon (DVM 2018) received the Oconee River Kennel Club Scholarship.

Allison Haspel (DVM 2019) received the Hugh and Victoria Leary Scholarship.

Brigette Hoang (DVM 2019) received the Hugh and Victoria Leary Scholarship.

Emily Wright (DVM 2019) received the Hugh and Victoria Leary Scholarship.

Hannah Creech (DVM 2019) received the Walter C. and Elizabeth D. Cottingham Scholarship.

Tyler Bennett (DVM 2019) received the Zach Cowart Memorial Scholarship.

Clinton Lynn (DVM 2019) received the William Morris Grayson Scholarship.

Emily Vermillion (DVM 2019) received the Josh Howle Memorial Veterinary Scholarship.

Lillian Greener (DVM 2019) received the Alumni Award (sponsored by UGA Veterinary Alumni Association).
Kacie Minner (DVM 2019) received the Bobby L. Johnson Scholarship.

Trey Callahan (DVM 2019) received the Dr. R. Bruce Hollett Fellowship in Veterinary Medicine and the Frances Wood Wilson Scholarship.

Amanda Hanafi (DVM 2019) received the Steve Lee Memorial Research Scholarship.

Andrew Gough (DVM 2019) received the Samara Coffman Nation Memorial Scholarship.

Matthew Tanner (DVM 2019) received the Mary Katherine Ownby Scholarship, the SCAVMA Outstanding Contribution Award and was selected to participate in the Georgia Veterinary Scholar Program (Sponsored by Merial Ltd., NIH and the College of Veterinary Medicine).

Alysha McGrath (DVM 2019) received the Donald Ralph Prescott Scholarship.

Ryan Peiffer (DVM 2019) received the Dean Sheila Allen Scholarship and was selected to participate in the Georgia Veterinary Scholar Program (Sponsored by Merial Ltd., NIH and the College of Veterinary Medicine).

Caitlin Quinn (DVM 2019) received the Thomas T. and Bernice Irvin Foundation Large Animal Scholarship.

James Graves (DVM 2019) received the John and Jeanne Capozzi Scholarship and was selected to participate in the Georgia Veterinary Scholar Program (Sponsored by Merial Ltd., NIH and the College of Veterinary Medicine).

Paul Elias (DVM 2019) received the Georgia S. Downing Trust Scholarship.

Amy Harding (DVM 2019) received the Dr. Jesse C. Hardy Scholarship.

Veronica Buhler (DVM 2019) received the Grace Hargens Memorial Scholarship and was selected to participate in the Georgia Veterinary Scholar Program (Sponsored by Merial Ltd., NIH and the College of Veterinary Medicine).

Carly Illo (DVM 2019) received the Dr. Thomas A. Hutto Memorial Scholarship.

Gray Barnett (DVM 2019) received the Dr. Brett Levitzke Scholarship.

Alexa DeAntonio (DVM 2019) received the Edward L. Roberson, DVM Scholarship.

Makenzie Blalock (DVM 2019) received the Cecelia Seiler Memorial Scholarship.

Kensey Lauber (DVM 2019) received the South Carolina Association of Veterinarians Leadership Award.

Rebecca Beardall (DVM 2019) received the Zoetis Veterinary Student Scholarship.

Paige Mercer (DVM 2019) received the Zoetis Veterinary Student Scholarship.

Holly Nelson (DVM 2019) received the The Atlanta Kennel Club Scholarship.

Kim Connor (DVM 2019) received the Griffin Kennel Club Scholarship.

Sara Croft (DVM 2019) received the Griffin Kennel Club Scholarship.

Parker Collins (DVM 2019) received the Lawrenceville Kennel Club Scholarship.

Kayce Cash (DVM 2019) received the Frances Wood Wilson Scholarship.

Cook English (2020) received the Dr. John T. and Loraine Westbrook Bradberry Scholarship and was selected to participate in the Georgia Veterinary Scholar Program (Sponsored by Merial Ltd., NIH and the College of Veterinary Medicine).

Katie Carignan (DVM 2019) received the Conyers Kennel Club Scholarship.

Rebecca Mears (2020) received the Dr. and Mrs. Bill Connolly Veterinary Scholarship.

Kayla Barth (2020) received the William Morris Grayson Scholarship.

Caitlyn Heatherly (2020) received the Bobby L. Johnson Scholarship.

Nicole Dowgos (2020) received the Hugh and Victoria Leary Scholarship.

Gabriella Sandberg (2020) received the Margaret Peeples Award.

Morgan Coslett (2020) received the Donald Ralph Prescott Scholarship.
ALEX MACLEAN (2020) received the Hugh and Victoria Leary Scholarship and was selected to participate in the Georgia Veterinary Scholar Program (Sponsored by Merial Ltd., NIH and the College of Veterinary Medicine).

MOLLY THEUS (2020) received the Hugh and Victoria Leary Scholarship.

ALLISON THRIFILEY (2020) received the Steve Lee Memorial Research Scholarship.

EMILY CLIFTON (2020) received the William and Florence McFarlane Scholarship, the North American Veterinary Conference Student Award; and was selected to participate in the Georgia Veterinary Scholar Program (Sponsored by Merial Ltd., NIH and the College of Veterinary Medicine).

EMILY COOK (2020) received the William and Florence McFarlane Scholarship, the North American Veterinary Conference Student Award; and was selected to participate in the Georgia Veterinary Scholar Program (Sponsored by Merial Ltd., NIH and the College of Veterinary Medicine).

JOHN ELLINGTON (2020) received the William and Florence McFarlane Scholarship.

EMILY GUERRY (2020) received the William and Florence McFarlane Scholarship.

PHOEBE HOUIGAN (2020) received the William and Florence McFarlane Scholarship.

ALEXANDRA MILFORD (2020) received the William and Florence McFarlane Scholarship.

SERENA NAYEE (2020) received the William and Florence McFarlane Scholarship.

LEA PEARLMAN (2020) received the William and Florence McFarlane Scholarship and was selected to participate in the Georgia Veterinary Scholar Program (Sponsored by Merial Ltd., NIH and the College of Veterinary Medicine).

KRISTEN PURVIS (2020) received the William and Florence McFarlane Scholarship.

BARI YATES (2020) received the William and Florence McFarlane Scholarship.

KRISTEN HOGGARD (2020) received the Lawrenceville Kennel Club Scholarship.

KAYLYN ANDREWS (2020) received the Thomas T. and Bernice Irvin Foundation Large Animal Scholarship.

MACKENZIE YOUNG (2020) received the Alumni Award (sponsored by the UGA Veterinary Alumni Association).

BRIDGET SAVITSKE (2020) received the The Atlanta Kennel Club Scholarship.

JAZMYNE TAYLOR (2020) received the Mary Katherine Ownby Scholarship was selected to participate in the Georgia Veterinary Scholar Program (Sponsored by Merial Ltd., NIH and the College of Veterinary Medicine).

JUAN NARVAEZ (2020) received the Carl Jack Forman II Memorial Scholarship.

ZOE LATIMER (2020) received the Fred B. Gent Food Animal Scholarship.

TIARRA ROGERS (2020) received the Georgia S. Downing Trust scholarship.

CARLY SMYTH (2020) received the Donald E. McKinney Award.

JOETTE CREWS (2020) received the Douglasville Kennel Club Scholarship.

JAYME HOLMES (2020) received the Sawnee Mountain Kennel Club Scholarship.

Special Recognition Award

ANNEMARIEKE DE VLAMING received the top award during the 2017 Honors and Awards Ceremony.

She received the Dean Emeritus Thomas J. Jones Cup, sponsored by the College of Veterinary Medicine, which is awarded to an outstanding fourth-year student selected on the basis of personality, professional proficiency, and scholarship achievement.
THE COLLEGE RECENTLY RECOGNIZED outstanding faculty and students with honors for excellence in teaching, research and service at its annual Phi Zeta Veterinary Honor Society Induction Ceremony held in April.

The following DVM students, residents, interns and other graduate students received awards during the 2017 ceremony:

The Morrow B. Thompson Award was presented to Danielle Dunn, DVM, a third-year resident on the Internal Medicine service, who has demonstrated both her love and aptitude for clinical pathology since her arrival at UGA. Dr. Dunn always made it a point to visit with the pathology team assigned to her patients’ samples, and she spent many of her elective blocks on rotation with the clinical pathology team to hone her cytology skills. The award is presented annually to a senior student, resident or graduate student who excels in veterinary clinical pathology, and is given in memory of Morrow B. Thompson (DVM ’76).

The Dennis Sikes Scholarship in Experimental Pathology was awarded to Christina Varian, a PhD candidate in the Department of Pathology, who has focused her research on how food webs fluctuate due to deforestation, and how these changing food webs may impact Chagas disease transmission. Nominators noted that Dr. Varian’s “highly innovative” work may lead to new disease management practices in areas where disease transmission is dominated by insect vectors that feed on wildlife. This award is presented to a pathology graduate student who excels in research of disease processes, also known as experimental or investigative pathology. It is given in memory of Dr. Dennis “Chock” Sikes, a research professor and veterinarian biologist at UGA who was the first Georgian to receive the Royal Society Award. He was a consultant pathologist for the Atomic Energy Commission.

Winners of the Phi Zeta Manuscript competition: Jennifer Dill, DVM, (PhD ’16), won the basic research category for “Distinct viral lineages from fish and amphibians reveal the complex evolutionary history of hepadnaviruses,” which was published as the cover article of the September 2016 edition of the Journal of Virology (bit.ly/2sKRXdo). Dr. Dill...
completed a combined pathology residency/PhD program in 2016; her PhD program focused on fish pathology. Jamie Brown, (DVM ’07), won the clinical applied science research category for “Effect of aminocaproic acid on clot strength and clot lysis of canine blood determined by use of an in vitro model of hyperfibrinolysis,” which was published in the November 2016 issue of American Journal of Veterinary Research (bit.ly/2rDOFsX). Dr. Brown was a resident in small animal surgery and completed his program in 2016.

Camara Carter and Kacie Minner, both from the class of 2019, received the Outstanding Sophomore Student Award for having the highest cumulative grade point average and outstanding professionalism in the second-year class. As part of their award, they will serve as co-vice presidents on the Phi Zeta Board for one year.

Four students, who were nominated by their peers, received the R. Bruce Hollett Student Leadership, Service and Outreach Awards: Bo Barillo (DVM 2017), Matthew Bradley (DVM 2018), Matthew Tanner (DVM 2019) and Jayme Holmes (DVM 2020). The award recognizes students for their leadership, service and outreach in the community, their place of worship, the College, student clubs or veterinary fraternities.


Two residents/graduate students were inducted: Karen Segovia Hinostroza, a PhD candidate at PDRC, and Bridgette Wells, DVM, a resident in clinical pathology.

The awards were presented at the College’s annual Phi Zeta awards ceremony, held April 13. The Phi Zeta Veterinary Honor Society was formally established in 1925 at Cornell University for the advancement of the veterinary profession, for higher educational requirements and for high scholarship. Phi Zeta recognizes and promotes scholarship and research in matters pertaining to the welfare and diseases of animals. There are 27 chapters of Phi Zeta throughout the United States. The Xi chapter of Phi Zeta was established in 1959 at the University of Georgia.
The Zoetis Award for Excellence in Research was presented to Steeve Giguère, DVM, PhD, Dip ACVIM, the Marguerite Hodgson Chair in Equine Studies in the Department of Large Animal Medicine at the College of Veterinary Medicine. Dr. Giguère is recognized internationally for his research on infectious diseases and neonatology. The majority of his work is focused on the pathogenesis of infectious disease in foals, specifically Rhodococcus equi, the pharmacokinetics of antimicrobial agents used to treat infectious diseases, and the clinical monitoring of foals with septic processes. Nominators praised Dr. Giguère for his abilities as a researcher, a mentor to others, and a collaborator. He was also praised for his research that has contributed to the development of strategies to promote identification of R. equi infections prior to development of clinical signs, including his discovery that 88 percent of foals that develop small pulmonary lesions detected by ultrasound will recover spontaneously without antimicrobial treatment. This discovery can help clinicians better understand the infections and decrease the development of drug resistance.

The Clinical Research Award was presented to Samuel Franklin, DVM, PhD, MS, DACVS, DACVSMR, assistant professor of orthopedics in the Department of Small Animal Medicine and Surgery, in recognition of his research on canine joint disease, with an emphasis on regenerative treatment using platelet rich plasma. Dr. Franklin has been highly productive with the accepted manuscripts and abstracts generated from these studies, which help clinicians make evidence-based decisions. It is hoped that this work will benefit dogs in addition to having translational applicability for treating musculoskeletal conditions in people.

The John M. Bowen Award for Excellence in Animal/Biomedical Research was awarded to Courtney Murdock, PhD, in recognition for her research applying ecological and evolutionary theory to better understand host–vector–parasite interactions, fitness impacts of parasites on their hosts, and the transmission dynamics of vector–borne disease in a rapidly changing world. She is jointly appointed to the College of Veterinary Medicine’s Department of Infectious Diseases and the Odum School of Ecology.

The Charles Dobbins Award for Excellence in Service was awarded to Al Camus, DVM, PhD, a certified fish pathologist and professor in the Department of Pathology. Camus was selected for his outstanding work with the Georgia Aquarium, the Western Hemisphere’s largest aquarium and a major tourist attraction for the state of Georgia. Camus’ partnership with the Aquarium provides a unique opportunity for the Department of Pathology, the CVM, and UGA to be integrated into the health care program of one of the world’s largest aquariums as well as their conservation and environmental missions.

The Outstanding Laboratory Service Award was presented to Marcia Ilha, DVM, DACVP, associate professor and anatomic pathologist for the Tifton Veterinary Diagnostic and

Photos by Whitney Mathisen.

1. Steve Giguère, left, with Dr. Harry Dickerson.
2. Samuel Franklin, left, with Dr. Steve Budsberg.
3. Courtney Murdock, left, with Dr. Harry Dickerson.
4. Al Camus, right, with Dr. Keith Harris.
5. Simon Platt, right, with Dr. Scott Brown.
Investigational Laboratory (TVDIL), for her outstanding biopsy and necropsy services to veterinary practitioners across the state of Georgia and beyond, over the seven years she has been at the TVDIL. Her work contributed significantly to the improvement of the diagnostic laboratories’ outreach program through her service as editor of the newsletter *Diagnostic Veterinary Matters*. Nominators praised her work that helps the laboratories stay engaged with clients and stakeholders by disseminating useful scientific and service information through the newsletter.

The Outstanding Hospital Service Award was presented to **Gregg Rapoport**, DVM, DACVIM (Cardiology), a clinical assistant professor in cardiology, for his dedication to the patients, clients and referring veterinarians who use the Cardiology service and to the Small Animal Medicine and Surgery department overall. In addition, through his dedication to teaching, Dr. Rapoport is successful at providing teaching opportunities for the students while maintaining an efficiently operating service, which is particularly important for an outpatient service such as Cardiology. He is praised for his support of residents in case management, making himself available whenever needed to assist. He often provides consults for the Internal Medicine service at the Veterinary Teaching Hospital and consistently does so thoroughly, pleasantly, and in a timely manner, even on the busiest of days for his own service. Dr. Rapoport is based in the Department of Small Animal Medicine and Surgery.

The David Tyler Award for Advances in Teaching was awarded to **Simon Platt**, DVM&S, MRCVS, DACVIM (Neurology), DECVN, a professor of neurology and neurosurgery based in the Department of Small Animal Medicine and Surgery. Nominators praised the advancements he has made to address bridging the gap between pre-clinical anatomy and physiology and clinical neurology, including creating the iBook Nerve Dawg that serves as a 3D interactive animated neurological exam model. He received this award in 2012 after developing a website focused on teaching veterinary students cranial nerve anatomy and clinical function.

**Kathryn Diehl**, DVM, MS, an assistant professor of ophthalmology who is based in the Department of Small Animal Medicine and Surgery, was inducted into Phi Zeta.
Tifton diagnostic lab names new director

By Paula Krimer, DVM, DVSc, DACVP, and Erica Hensley

DR. HEMANT NAIKARE has been named the new director of the UGA Tifton Veterinary Diagnostic and Investigational Laboratory. He plans to transform the lab into a stakeholder and customer-centric center offering high-quality, accurate, rapid and cost-effective diagnostic services that aid veterinarians in diagnosing livestock disease.

Dr. Naikare hopes to expand current services by focusing on improved communication with clients and visiting local operations. His combination of laboratory experience, livestock-focused background, and advanced business training give him a pivotal understanding of the opportunities for growth in the Tifton area.

Fostering relationships with cattle stakeholders, reducing costs, and applying new technologies to make better diagnoses will all factor into improved operations, he said.

“The laboratory should continuously strive to be a key player by offering relevant diagnostic solutions to the multimillion-dollar Georgia beef industry, protecting food safety, animal agriculture, and public health as they are all intertwined.”

Dr. Naikare comes to Georgia with a wealth of experience serving the cattle industry as department head of the Diagnostic Bacteriology & Molecular Diagnostics at the Texas A&M Veterinary Medical Diagnostic Laboratory in Amarillo, Texas, where he focused on serving the needs of beef producers and food animal veterinarians. Approximately 1.3 million cattle funnel more than $2 billion into the Georgia economy and account for the state’s sixth largest commodity, according to estimates by the UGA Cooperative Extension.

A native of Mumbai, India, Dr. Naikare earned his veterinary degree and a master’s degree in veterinary microbiology from the Bombay Veterinary College in India. He received his PhD. in molecular microbiology from Oklahoma State University and has 10 years of diagnostic laboratory experience. In addition, Dr. Naikare earned an MBA with a specialization in marketing from West Texas A&M University, which helped him develop a customer service focus and apply business concepts to laboratory processes.
PRONE NT INFECTIOUS DISEASE RESEARCHER Dennis Kyle, PhD, joined the University of Georgia faculty in January as the Georgia Research Alliance Eminent Scholar in Antiparasitic Drug Discovery.

Kyle holds a joint appointment in the College of Veterinary Medicine’s Department of Infectious Diseases and Franklin College of Arts’ Department of Cellular Biology. He also serves as the new director of UGA’s Center for Tropical and Emerging Global Diseases.

His research focuses on understanding antimalarial drug resistance and finding new drugs to combat the world’s deadliest parasitic diseases. As Distinguished Health Professor at the University of South Florida, Kyle co-led an international research team that identified a new antimalarial drug called ELQ-300, which has not only shown great promise in preclinical trials as a therapeutic, but also blocks the transmission of malaria from mosquitos to humans.

Kyle’s laboratory recently discovered two new compounds that are 500 times more potent than drugs currently used to treat a rare and devastating infection of the brain called primary amoebic meningoencephalitis, or PAM. PAM is caused by the brain-eating amoeba known as Naegleria fowleri, which Kyle studies. This discovery could pave the way to new therapeutics for PAM, which normally has a fatality rate of about 95 percent.

Before joining USF, Kyle was chief of the Malaria Research Laboratory at the Walter Reed Army Institute of Research; chief of parasitology for the Armed Forces Research Institute of the Medical Sciences in Bangkok, Thailand; and he served as deputy director of the Division of Experimental Therapeutics for the U.S. Army’s Drug and Vaccine Development program in Washington, D.C. He also served as chair of the Genomics and Discovery Research Steering Committee and the Compound Evaluation Network for the World Health Organization.
By Erica Hensley

DANIEL PEREZ’S RESEARCH is driven by one question: What exactly makes the influenza virus tick? Particularly, he studies what causes the influenza A virus to catch and spread through avian hosts and how to disrupt the virus and prevent it from jumping to other species.

Perez is part of the Poultry Diagnostic and Research Center in the population health department at the College of Veterinary Medicine. His work focuses on interspecies transmission, specifically stemming from avian reservoirs, and how the pathogenesis of the virus affects said transmission.

Understanding surface-level protein interaction of the avian flu, the largest reservoir with the most viral diversity, is key to understanding how it jumps within its own species. The next step is to understand how it jumps to other species and can potentially cause a human pandemic, according to Perez.

“Flu is not jumping species to make you sick, flu is jumping to survive,” he said. “And, we don’t immediately have an outbreak just because one chicken gets it, but the proteins dictate what a virus can and cannot do.”

For the virus to develop in a host and potentially cause an outbreak in other species, the virus needs a perfect storm of the right strain at the right time, according to Perez.

“There are many hits and misses within transmission, so we need to figure out what exactly makes the virus hold onto a new host,” he said.

Originally from Argentina, Perez earned a doctorate from the University of Nebraska Medical Center in 1995 and has been focusing on influenza ever since. It was at Nebraska that he started focusing on the protein level of the virus. Understanding how the viral proteins interact with one another aids researchers in disrupting this interaction. If you disrupt the protein interaction, he said, you can disrupt the virus replication. If you can disrupt the replication, you have a better chance at intervention.

At UGA, Perez holds the Caswell Eidson Chair in Poultry Medicine where he executes studies that support PDRC’s threefold mission of teaching, research and service in poultry medicine. His lab is part of the Center for Research on Influenza Pathogenesis, one of five Centers of Excellence for Influenza Research and Surveillance funded by the National Institute of Allergy and Infectious Diseases.
In addition, the Perez lab carries out active surveillance in birds and pigs in collaboration with institutions in Guatemala and Argentina. Perez also maintains active collaborations with investigators at the USDA’s National Animal Disease Center in Ames, Iowa, and the Southeast Poultry Research Laboratory in Athens.

Working at the animal–human interface at the PDRC helps drive research and resources, he said. Though the PDRC prioritizes understanding avian transmission to protect population health and develop alternative poultry vaccination strategies, the information is directly related to human and other species’ susceptibility because influenza A has an avian reservoir, he said.

Perez’s latest publication shifted away from avian hosts and toward Argentinian pigs. He worked with Argentinian researchers on a two-year surveillance of the evolution of influenza A in swine. Published in Comparative Immunology, Microbiology and Infectious Diseases in February, the study found herds with endemic influenza A infection on a single farm, which enabled the population to generate genetic mutations that elude host immune responses and further the viral evolution. (The study is available online at tinyurl.com/zrtoboz).

Based on Perez’s prior work, this study reaffirms the importance of isolating the evolution of influenza A in swine due to the risk of reestablishment of novel viruses into the human population. Because the 2009 H1N1 pandemic likely originated in swine, the study further reinforces the need for understanding how viruses circulate and develop vaccines based on locally circulating strains to stop further transmission.

Facts

Daniel Perez
Professor
Department of Poultry Medicine
College of Veterinary Medicine
Ph.D., Molecular Virology, University of Nebraska Medical Center, 1995
B.Sc., Biochemistry, Universidad Nacional de Cordoba, Argentina, 1989
At UGA: 2 years

GET YOUR OWN ANATOMIC DOG

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By Erica Hensely

**WHETHER Fluttering across** her classroom imitating the long-tailed manakin’s courtship rituals or leading students across the steamy hills of Costa Rican rainforests on nocturnal hikes, Sonia Hernandez leads by example.

She feels most effective as an educator in the field. It is harder work than traditional classroom teaching—from the long hours and the logistics of international travel to the organized chaos of real-world research—but worth every minute, she said.

In addition to multiple ecology and wildlife disease courses, she also teaches Conservation Medicine and Biology every year in Costa Rica, the only abroad field–based class of its kind in the nation offered to undergraduate students.

Her team wakes up at 6 a.m., works hands-on projects all day and falls asleep exhausted and dirty, but very happy.

“Yet, it is the course I enjoy the most, as I get to teach by doing,” she said. “Interdisciplinary work comes easily, students own their activities and take pride in their projects, and it is a beautiful phenomenon to watch students transform in a relatively short period.”

Hernandez posits her teaching style from the position of the student. Teaching applied ecological sciences requires attention to detail and a tender patience, she said, but also provides a critical opportunity to inspire student ownership and future wildlife and veterinary leaders. Her teaching philosophy boils down to a dynamic recipe: promote multidisciplinary education that fosters in–the–field experiential learning, add commitment to life–long mentorship and pledge to support diversity in wildlife conservation and veterinary fields.

Students say her enthusiasm for conservation is contagious and inspires a commitment to wildlife ecology. Her colleagues are awe–inspired by her ability to dovetail wildlife disease research and exotic animal medicine, and infuse the technical curriculum with passion and hands–on teaching. Her enthusiasm and teaching style tends to raise students’ test scores and also inspire ownership over their education and future careers, colleagues say.

“Sometimes elite research scientists prefer to exclusively conduct research and have neither the time nor aptitude for relating their academic training and exciting research to students, especially undergraduates,” said Susan Wilde, an associate professor in Warnell.

Hernandez’s willingness and enthusiasm for teaching are fostered by her commitment to continuing her own education, Wilde said. Hernandez not only encourages students to get out of the classroom and challenge themselves, but she also continues to challenge herself by taking advantage of UGA’s Center for Teaching and Learning, which offers opportunities to enhance teaching effectiveness.

“Sonia opened the door for me to wildlife diseases, ecology, ornithology, perils of working in the field, the glamour of data entry and analysis, molecular biology, and the cultural awakening of living with a family in rural Costa Rica,” said former student Dr. Rajesh Joshi, who was conferred a DVM from UGA in 2012. “It changed my way of thinking … that is the power of a great teacher.”
Each DVM class annually selects a faculty member who the class feels made the greatest contribution to their education during the last academic year. Faculty recognition Awards for 2017 went to Puliyur MohanKumar, BVSc, PhD, selected by the class of 2020; Rachel Reed, DVM, DACVAA, selected by the class of 2019; Jarred Williams, DVM, PhD, MS, DACVS (Large Animal), DACVECC, selected by the class of 2018; and, Jane Quandt, DVM, MS, DACVECC (Anesthesia and ECC), DACVEAA, selected by the class of 2017.

Puliyur S. MohanKumar, BVSc, PhD, received the Zoetis Distinguished Veterinary Teacher Award, presented to a teaching member of the faculty, selected on the basis of character, leadership, and teaching ability as judged by the responsiveness of his/her students.

John Maurer, PhD, a professor of population health in the Poultry Diagnostic and Research Center, received the First-Year Odyssey Teaching Award. He has taught one of the most sought-after FYO courses by first-year students for the last five years. “The Zombie Plague,” uses popular culture to engage students in scientific discussion of infectious diseases, epidemiology and public health.

Joe Bartges, DVM, ’87, PhD, DACVIM, DACVN, a professor of internal medicine and nutrition in the Small Animal Medicine and Surgery department, was appointed to the new Blue Buffalo Veterinary Advisory Board. The 10-person board will provide expertise on nutritional advances, scientific research and evidence-based treatments.

Mark Tompkins, PhD, a professor in the Department of Infectious Diseases, received a research award through the UGA’s Presidential Interdisciplinary Seed Grant Program. He was selected to research the effects of microbial diversity on respiratory infection, disease and transmission.

New Faculty

Brandy Burgess, DVM, MSc, PhD, DACVIM, DACVPM, assistant professor of epidemiology, Food Animal Health and Management, Department of Population Health.

Daniela de Souza Rajao, MSc, DVM, PhD, assistant professor of virology, Poultry Diagnostic and Research Center, Department of Population Health.

Tony Puglisi, DVM, MS, DACVS, clinical assistant professor of surgery, Department of Small Animal Medicine and Surgery.

Jennifer Good, DVM, DACVECC, clinical assistant professor of emergency/ critical care, Department of Small Animal Medicine and Surgery.
By Gordon Thomas

DR. ED ROBERSON is a name synonymous with the UGA College of Veterinary Medicine. For 24 years, Dr. Roberson was a teacher, friend and colleague. As a professor of parasitology, his love of teaching and mentoring touched the lives of numerous CVM alumni. With such deep ties, it’s no surprise Dr. Roberson still is very active with the CVM community in his retirement.

Roberson grew up in a small town in Conetoe, North Carolina, presumably where he honed his distinct and gentlemanly southern drawl. Growing up on a farm, Roberson recalls having a love of animals at a young age. It was this interest that led him to study biology at Duke University, where he graduated with his undergraduate degree in 1957. Soon after graduating from Duke, Roberson enrolled at the CVM to pursue his DVM. While a student, Dr. Roberson became active in Alpha Psi as a way to meet people as an out-of-state student. To this day, Dr. Roberson talks of the “wonderful social events we threw” and the “camaraderie and connections we had and still have today with fellow members.”

It was in his first year as a DVM student where he went on a blind date with a young woman, Nancy Carpenter, who was studying Fine Arts at UGA. Ed and Nancy married in 1960, Ed’s junior year in vet school. After graduating with his degree in 1961, Dr. Roberson enlisted to serve in the Army where he was a sanitation inspector for U.S. Army dairy and slaughter plants in Fort Bragg, North Carolina. While serving in the Army, Dr. Roberson found a “great respect for veterinarians,” and he became exposed to many other aspects of veterinary medicine outside of private practice. Dr. Roberson recalls during this time working for the Army, “I realized a passion for teaching – instructing and showing workers in those plants how to do things, teaching workers what to look out for.” Roberson wrapped up his service, earning the rank of Captain, and went back to Duke University where his passion for teaching began and he earned a master’s in teaching. Immediately after graduating with his master’s, Roberson put his degree to work and began teaching chemistry at Raleigh High School.

Dr. Roberson’s passion for teaching eventually led him back to the CVM. It was during his time as a high school teacher that he reconnected with Helen Jordan, a parasitologist working at the CVM. Jordan talked Roberson into coming back and working in the lab. Roberson’s passion for learning resulted in his fourth degree—a doctorate in parasitology. “William L. Hanson was my major professor at the time of my PhD program. I fell in love with parasitology and am
so appreciative of his tutelage and guidance," Roberson said. "Seeing different parasites, identifying them, and studying them was so enjoyable to me."

Dr. Roberson stayed on to teach after finishing his PhD. for 24 years with the College of Veterinary Medicine. He excelled in the classroom, receiving multiple awards and honors, including the Norden Distinguished Teacher Award in 1982 and 1996 and the Outstanding Faculty Award presented by the Classes of 1984, 1987, 1994, 1997 and 1998.

Such awards are not a surprise for those who know Dr. Roberson. Dr. Flynn Nance (DVM '77), a former master’s student under Roberson and close friend, recalls Dr. Roberson’s guidance and mentoring. “I wouldn’t be a veterinarian if not for Dr. Roberson,” Nance said.

Flynn’s wife, Susan (DVM ’78), recalls both Ed and Nancy’s kindness towards students. “Ed and Nancy would open their house up during the holidays for those who couldn’t go home. They just went above and beyond.,” she said. “Dr. Roberson was the kind of professor you’d want to introduce to your parents.”

Now Roberson stays busy with yardwork, taking care of the house, seeing family and connecting with colleagues and former students at UGA and the CVM. Nancy and Ed both volunteer outside of the home, too. Nancy delivers food twice a week as a part of the Meals on Wheels program in Athens. When she is not volunteering, she is painting. An accomplished painter, Nancy works predominantly in portrait and still life paintings. She actively sells her work in the community and enjoys doing commissioned pieces as well. Both attend classical music offerings at Hodgson Hall. As to why he continues to remain so involved with the College, Roberson said, “I enjoy knowing what is going on and keeping in touch—there are awfully good folks working [at the CVM], and my students have done some great things, too.”

A mentor and friend to many, Dr. Roberson wanted to share this advice with current students: “Technology is so different now ... We don’t know what the future will bring. Expose yourselves to many different aspects of veterinary medicine. At some point, a real ‘click’ might occur and you’ll find that part of the field that makes you want to get up in the morning. Don’t forget to always keep learning!”
Hello Alumni!

I hope this issue of Aesculapian finds all of you well. If you are like me, you’re glad winter is behind you and look forward to those warm spring and long summer days (minus the pollen and bugs).

A lot has happened in the last year, and I find myself reflecting on many things lately, but mostly on how quickly everything seems to be happening. Like many of you, I have had several LIFE MOMENTS in the last year—the birth of my second child and the wedding of my baby brother. With life events come change. Sometimes change is hard because we are nervous about the unknown. Over the years, I have learned that change can bring about wonderful new opportunities that we never would have dreamed were possible. Likewise, while we are all sad to see Dr. Sheila Allen journey on from UGA, we are SO excited to welcome Dr. Lisa Nolan to our beloved college as dean of the College of Veterinary Medicine. Like many others, I am very much looking forward to working with her and seeing all that she has to offer unfold. The CVM is fortunate to have her at our helm, to say the least.

Some things, however, should never change—things like our love and commitment to this profession and to each other as colleagues and friends. We all know the devastating statistics about veterinarians and mental health. I’d like to challenge each of you to reach out to at least one classmate over the next few weeks, if only to say hello. Send a virtual smile or hug. And if you are in need of a smile or hug, find me on Facebook or Instagram ... I’ll be your friend. Better yet, become involved in your Alumni Association or your local VMA, where you’ll have many friends to lean on.

So here’s to good change and the good things that should never change. Stay well, my friends, until we see you at the next meeting!

Marian Shuler Holladay

Marian Shuler Holladay
(DVM ’05), CCRP
CVM Alumni Association President
FORMER GEORGIA GOV. SONNY PERDUE (DVM ’71) was confirmed as the U.S. Department of Agriculture secretary in April. He is the first University of Georgia alumnus to serve in the White House cabinet, as well as the first veterinarian to serve as Secretary of Agriculture and the governor of Georgia.

As head of the $150 billion department, Perdue leads 29 agencies and directs the country’s farm production and food and nutrition public policy. The USDA is also the funding authority for UGA and other land-grant university research and extension programs in agriculture, family and consumer science, and forestry.

The USDA also runs a veterinary medicine loan repayment program, which pays $25,000 per year and comes with a three-year commitment for veterinarians who serve in shortage areas, such as rural Georgia counties.

“Secretary Perdue is a distinguished alumnus of the University of Georgia, and we are grateful for the tremendous support he has demonstrated for his alma mater over the years,” said UGA President Jere W. Morehead. “We look forward to the important contributions he will make to the nation’s vital agricultural industry in this new role.”

As governor, Perdue championed UGA projects such as the new College of Veterinary Medicine hospital, the Richard B. Russell Building Special Collections Libraries, and the Medical Partnership.

After graduating from UGA, Perdue served in the U.S. Air Force and was honorably discharged in 1974 as a captain. He worked as a veterinarian in Raleigh, North Carolina, before returning to Bonaire, Georgia, to start businesses in grain trading and trucking.

Perdue was elected to the state legislature in 1990 and became the state’s first Republican governor since Reconstruction in 2003. Under Perdue’s tenure, Georgia added new food safety regulations after a salmonella outbreak was traced to peanut butter made in the state. He oversaw the state’s decades-long water dispute with Alabama and Florida, as well as a historic drought that prompted Perdue to call for strict water restrictions.
Michael Topper (DVM 1980, PhD 1997) was sworn in as the American Veterinary Medical Association (AVMA) president in July 2017. His veterinary career has been a diverse and unique one, embodied by a commitment to leadership.

As the AVMA president, he hopes to instill the importance of career diversity and leadership development within organized veterinary medicine. A retired U.S. Army Veterinary Corps colonel and former director of clinical pathology for Merck Research Laboratories, Dr. Topper has served as the AVMA president-elect since August 2016.

Developing leadership within the varied professions represented by the AVMA members is one of Dr. Topper’s main goals. He campaigned heavily upon this promise and says the AVMA should have a role in developing leaders by providing leadership-training opportunities for veterinarians who aren’t able to get it in their work place.

AVMA members working for corporations, large practices or within the government likely encounter leadership training and team-building experiences, but practitioners in smaller clinical settings are less likely to see the same opportunities, he said.

“If you can create team-building and know how to work within your practice team, then you can translate that to a community team and within an organized veterinary medicine team,” he said. “It’s a basic thing, but I think the AVMA needs to partner with some corporations that already do this and try to offer it to those veterinarians who don’t have the opportunity—we have to develop those leaders in that regard.”

Dr. Topper also sees importance in advocating for a holistic approach to veterinary medicine. “We need to promote a one-health concept of human, animal and environmental concerns that we as veterinarians get, and are trying to get our human medicine counterparts to embrace also,” he said.

He is the first pathologist to be elected AVMA president, and hopes that his background will inspire others to see that veterinary medicine is a diverse profession open to wide-ranging careers outside of traditional clinical practice.

“I was in the Army and then the human pharmaceutical side, so my entire veterinary career has been one-health directed by supporting human medical research and development,” he said, most of that career being outside of a clinic. “We need to explain to those younger veterinarians that there are multiple career paths that they can aspire to and their degree allows them to do anything like that—from research and development, to academia or working with the government.”

A Triple Dawg, Dr. Topper graduated as a DVM in 1980, and with a PhD in clinical pathology in 1997. He also attended UGA as an undergraduate through an ROTC scholarship, and graduated with a BSA in 1976.
Growing up in Baltimore, Maryland, Dr. Topper knew early on that he wanted to become a veterinarian and worked at a local clinic during high school. He also knew that attending UGA as an undergraduate would likely help his chances of getting into the vet school. Because Maryland didn’t have a veterinary program at the time, he successfully gained a spot in the UGA CVM 1980 class through a quota program that designated spaces for Maryland residents.

Dr. Topper’s ROTC scholarship mandated four years of military service after college. Because he was accepted into vet school, he deferred his service until 1980 when he joined the U.S. Army Veterinary Corps as a captain. He held a varied career in the Army for the next 22 years in general veterinary medicine, which meant tending to private and military-working dogs and supervising veterinary food safety and security, and as a veterinary pathologist in medical research, developing new vaccines and treatments and preparing for biological and chemical defense.

During his military research career, Dr. Topper supported the characterization of two protozoan diseases of animals: Neospora caninum and Sarcocystis neurona. For his final military post, he served as director of the Division of Pathology at Walter Reed Army Institute of Research.

After retiring from the Army, Dr. Topper continued to focus on the human side of medicine through pharmaceutical research and development as director of clinical pathology at Merck Research Laboratories, Merck & Co., Inc., in West Point, Pennsylvania from 2005 to 2017. He retired from Merck in January 2017 to focus full-time on his commitment to the AVMA.

His time at UGA dovetailed with ROTC and the Army to forge his bonds to service and leadership and helped him approach veterinary medicine with an open mind, he said.

“UGA prepared me for my career by giving me a diverse education that could allow me to use it in a number of ways upon graduation.”

“UGA prepared me for my career by giving me a broad overview of what veterinarians do and a diverse education that could allow me to use it in a number of ways upon graduation,” he said. Until returning to UGA for this pathology training, Dr. Topper purposefully approached his education and training with a flexible approach to maximize his potential for diverse placement in the Army.

After leaving UGA as a student, Dr. Topper has remained actively committed to student success and engaged in alumni relations. He served on the Executive Board for the College of Veterinary Medicine Alumni Association from 2004 to 2014 and as president from 2010 to 2012.

Before becoming the AVMA president, Dr. Topper served on multiple regional and national organized veterinary medical associations, including as president of the District of Columbia Veterinary Medical Association and secretary/treasurer and councilor for the American College of Veterinary Pathologists. His highest military honor was the Legion of Merit, awarded for exceptionally meritorious conduct in the performance of outstanding services to the Army.

Dr. Topper married his wife, Kimberly, in 1976, just before he started vet school. Kimberly actively supports veterinary medicine and sits on the American Veterinary Medical Foundation and the Pennsylvania Veterinary Foundation.

“My wife and I are both engaged in supporting veterinary medicine as a profession and the people within it,” he said. “I firmly believe in the AVMA, our passion and our profession—and am more than willing to help it move forward to make it enjoyable and profitable for those who are engaged in it.”
THE UNIVERSITY OF GEORGIA College of Veterinary Medicine recognized four alumni with awards for service to the College and to the veterinary profession.

The awards were presented by the Alumni Association of the College of Veterinary Medicine during the college’s 54th Annual Veterinary Conference and Alumni Weekend.

The association recognizes alumni contributions to animal and human health-related public service; involvement in the local community, state or nation; veterinary educational research and/or service to veterinary associations at various levels; contributions to the college’s alumni association; and professional service.

Send In Your Nominations Today!
Award nominations deadline is October 16, 2017

To get a nomination form, contact Tanya Eidson at teidson@uga.edu or 706-542-7415.
JARRED M. WILLIAMS (DVM ’06), of Athens, Georgia, has amassed an impressive set of credentials and secured his foothold in veterinary academia, specifically in the budding area of large animal emergency and critical care medicine, during the 11 years since his graduation.

A Triple Dawg, Williams earned his bachelor’s (’00), master’s (’02) and DVM (’06) degrees at UGA. He returned to Athens in 2013 as a clinical assistant professor of large animal emergency medicine and surgery.

During his time away, Dr. Williams honed his focus. He first undertook an internship in equine medicine and surgery at the Alamo Pintado Equine Medical Center in Los Olivos, California. He then tackled two residencies and a PhD program—within a span of six years—at the Ohio State University. He is among a handful, but growing number, of faculty at the UGA CVM who are board-certified in two veterinary specialties. Dr. Williams is board-certified by the American College of Veterinary Surgeons, in Large Animal, and by the American College of Veterinary Emergency and Critical Care.

Still early in his career, Dr. Williams has already presented at more than 20 professional conferences, contributed more than a dozen peer-reviewed articles to veterinary journals, and has authored several chapters for large animal textbooks.

His selection to be a UGA Teaching Academy Fellow in 2014 is the most recent accolade atop an already long list. Other highlights include the Veterinary Orthopedic Society Mark S. Bloomberg Memorial Resident Research Award, bestowed to him twice, in 2010 and 2013; the Ohio State University Hospital Service Award, in 2010; and the Ohio State University Resident Representative Award, which he also won twice, in 2010 and 2013.

JAMIE C. BROWN (DVM ’07), of San Antonio, Texas, currently serves as chief of surgery at the Department of Defense LTC Daniel E. Holland Military Working Dog Hospital. He oversees surgical care of more than 800 dogs in training and a worldwide referral network for military and governmental agency working dogs.

Dr. Brown earned his bachelor’s degree from the UGA College of Agriculture and Environmental Sciences in 2002, followed by his DVM in 2007; he graduated from the CVM cum laude. He returned to the CVM in 2013 for a small animal surgical residency and became board-certified by the American College of Veterinary Surgeons in March 2017.

Dr. Brown entered the U.S. Army Veterinary Corps as a captain; in 2012, he was promoted to major—the only member of his cohort to be promoted early. He has deployed to Mali, Africa and Afghanistan in support of Operation Enduring Freedom, where he provided humanitarian support, coordinated evacuation plans for working dogs, and trained human emergency personnel for veterinary emergencies. He served five years supporting special operations forces, including the 75th Ranger Regiment. As regimental veterinarian, he designed and implemented canine trauma training for handlers and medics and ensured deployment readiness for working dogs. His professional military education includes the Army Command and General Staff College.

Dr. Brown has already garnered numerous awards and decorations. In 2009, he became the first veterinarian to complete the Army’s most demanding and prestigious leadership course—Ranger School—earning his Ranger Tab. Other awards include the Meritorious Service Medal, two Army Commendation Medals, a National Defense Service Medal, two Afghanistan Campaign Medals, a Global War on Terrorism Service Medal, the Army Service Ribbon, the NATO Medal, and the Parachutist Badge (or “jump wings”).
DAVID G. PUGH (DVM ’81), of Waverly, Alabama, earned his bachelor’s in biological and animal science (’76), master’s degree in nutritional physiology (’78), and his DVM (’81) from the University of Georgia. He was a postdoc at Virginia Tech, a resident at Texas A&M University, and completed a second master’s degree in entomology and external parasites from Auburn University—after he turned 60. He is board certified in the disciplines of theriogenology, nutrition and parasitology.

Dr. Pugh is currently the director of the Alabama Veterinary Diagnostic Laboratory System and a clinical professor in the Department of Pathobiology at the Auburn University College of Veterinary Medicine.

As an equine and small ruminant veterinarian, Dr. Pugh has contributed to 14 textbooks as author and editor, and has authored or co-authored more than 600 publications. He has also served on more than three dozen committees with outcomes directly impacting animal health at the state, regional and national levels. He has been an invited lecturer, on the topics of parasitology and clinical nutrition, at 34 universities across North America and Great Britain.

An extraordinarily decorated veterinarian, his awards stem from his time as a student, teacher and clinician. His accolades include Western Veterinary Conference Food Animal Continuing Educator of the Year, 2012, 2014 and 2016; the North American Veterinary Conference Food Animal Educator of the Year, 1999 and 2001; the A.M. Mills Award, from the Alpha Psi chapter at the University of Georgia, in 2006; the Norden Distinguished Teacher Award, in 1994; and Outstanding Teacher Award, College of Veterinary Medicine, Auburn University, 1992 and 1996.

KAREN M. BRADLEY (DVM ’96), of Middlesex, Vermont, is a small animal practitioner and owner of Onion River Animal Hospital in Middlesex, Vermont. She is active in leadership roles at the state and national levels, and encourages other women to become leaders, too.

Recently elected to a six-year term as the District I Director on the American Veterinary Medical Association’s Board of Directors, Dr. Bradley has been involved with the AVMA since 2008, when the Vermont Veterinary Medical Association elected her alternate delegate to the AVMA House of Delegates. Since then, she has served as Vermont’s lead delegate; also, three years on the House Advisory Committee, as both vice chair and chair. From 2013–2014, she chaired the Governance Engagement Team.

In 2013, Dr. Bradley helped found the not-for-profit Women’s Veterinary Leadership Development Initiative, which inspires and supports women in seeking leadership, policy and decision-making positions within all areas of veterinary medicine. As an advocate, Dr. Bradley has spoken at more than a dozen conferences nationwide over the last three years. Her work with WVLDI led her to be listed on the “14 Vets to Watch in 2014” list by Veterinary Practice News.

Her involvement with organized veterinary medicine started when she became active with the VVMA. She served on the VVMA executive board from 2002 to 2015, including time as co-chair of its Animal Welfare Committee and chair of its Legislative Advisory/ Governmental Relations Committee.

Dr. Bradley has also served the Central Vermont Humane Society as a visiting shelter veterinarian, and her practice provides support for most of the shelter’s events. She has also spread her enthusiasm for small animals, veterinary medicine and leadership by volunteering at events hosted by schools in her community.
A.M. Mills Award

Alpha Psi recognized Puliyur Seshadri Mohan Kumar, BVSc, PhD, professor in the Department of Veterinary Biosciences & Diagnostic Imaging, with the A.M. Mills Award for 2017. Dr. Mohan Kumar received the award for his dedication to all students and his selfless approach to teaching his anatomy and neuroendocrinology specializations. Students value his patience and thoroughness and praise his after-hour study sessions, often for students who are not enrolled in his class.

“Dr. Mohan Kumar is always helping students, staying late in the anatomy lab to help them study, holding review sessions, and is incredibly patient with all students in order to make sure everyone understands all of the information,” said nominators. “Dr. Mohan Kumar goes above and beyond for his students, including bringing homemade food to cheer up the class and being overall just a wonderful supportive mentor to the entire class.”

The A.M. Mills award was established in 1961 by the Alpha Psi Lambda Chapter to remember Dr. Adrian M. Mills, who was known for his respect for all individuals, persons and animals alike, and his continuous efforts to improve the welfare of the veterinary profession.

Fred C. Davison Award

This year, OTS recognized Lisa K. Nolan (DVM ’88, PhD ’92), by presenting her with the Fred C. Davison Award. Named dean of the College of Veterinary Medicine in February 2017, the fraternity recognized Dr. Nolan for her diverse expertise—from pathogenic microbiology and bacterial diseases in food production animals to women’s studies and academic wellness—and the wonderful example she sets for her students by keeping balance in her life and work as a veteran educator, administrator and leader.

“One of the nation’s most respected veterinary educators and administrators, she truly cares about her students and they know it,” OTS chapter members said. She has received numerous awards for her teaching, service and research and has served as a professor, associate dean, and dean. Dr. Nolan joined the OTS chapter when she was a student at the UGA CVM.

Each year the OTS fraternity presents an award in honor of Dr. Fred C. Davison, who served as dean of the College of Veterinary Medicine; Dr. Davison also served president of UGA from 1967-1986. The award is presented to a UGA faculty member or alumnus who has shown continued outstanding leadership and support of veterinary medicine and the CVM.
Dr. Edward B. Breitschwerdt (DVM ’74), received the 2017 Association of American Veterinary Medical Colleges (AAVMC) Excellence in Research Award. Selected by a committee of peers, the honor designates Dr. Breitschwerdt as the outstanding veterinary medical researcher of the year.

Dr. Breitschwerdt is a professor of medicine and infectious diseases at North Carolina State University College of Veterinary Medicine and adjunct professor of medicine at the Duke University Medical Center. He directs NCSU’s Intracellular Pathogens Research Laboratory in the Comparative Medicine Institute. His research focuses on proving the link between biting insects and hard-to-culture intravascular and intracellular organisms, as well as creating reliable diagnostic testing methods.

The award recognizes Dr. Breitschwerdt’s work over the course his career—for demonstrating excellence in original research, leadership in the scientific community, and mentoring of trainees and colleagues in any discipline of veterinary medicine.

Linlei Ward’s (DVM ’12) veterinary practice, Four Square Veterinary Care in Kingstree, South Carolina, received the Image Award presented by the Williamsburg HomeTown Chamber. The award recognized Ward for purchasing and maintaining the practice since its previous owner, Dr. Walter Cottingham (DVM ’61), retired in May 2013.

Richard Dixon (DVM ’70) received a 2017 Heart of the Community Award presented by Redmond Regional Medical Center and the Heart of the Community Board of Governors in Rome, Georgia. He received the Board of Governors Award for his significant impact across Rome and Floyd County through his volunteer service and veterinary practice.

Sheila McGuiirk (DVM ’77) was named Wisconsin Veterinary Medical Association (WVMA) Veterinarian of the Year. She was a professor of large animal internal medicine and food animal production medicine at the University of Wisconsin–Madison School of Veterinary Medicine prior to retirement in 2016, where she was known for her expertise in calf health and disease and as the “queen of bovine internal medicine.” She is the only two-time recipient of this award in WVMA history.

Boyd Parr (DVM ’78), South Carolina state veterinarian and Clemson University Livestock Poultry Health director, was introduced into the South Carolina Dairy Producer Hall of Fame for his 26-year career as a private practitioner serving mostly dairy cattle. The honor recognizes Parr for his outstanding contributions to the advancement of the dairy industry.

Heather Riley Gleaton (DVM ’98), owner of Roper Mountain Animal Hospital in Greenville, South Carolina, was one of 600 out of more than 77,000 applicants chosen to compete on NBC’s American Ninja Warrior, which aired June 2017.

Obituaries: Edwin C. Anderson (DVM ’61); Simpsonville, SC; Jan. 1 • Robert L. Land (DVM ’67); Rural Hall, NC; Jan. 2 • William H. Pryor (DVM ’59); Greenville, NC; Jan. 17 • William K. Settle (DVM ’57); Sanford, NC; Jan. 27 • Robert O. Shannon (DVM ’50); Willis, TX; Feb. 26 • Ralph E. Ayers (DVM ’55); Daleville, VA; Mar. 4 • William F. Fox (PhD ’65); E Brunswick, NJ; Mar. 16 • Horace G. Blalock (DVM ’54); Evans, GA; Apr. 13 • Dilmus M. Blackmon (DVM ’56); Athens, GA; Apr. 17 • William A. Knapp (DVM ’51); Raleigh, NC; Apr. 25

Dr. Blackmon, center, with friends.

Dr. Dilmus Martin Blackmon, of Athens, Georgia, died on April 17 after a long illness. Born in Washington, Georgia, Dr. Blackmon graduated from the UGA College of Veterinary Medicine in 1956. He spent a large portion of his career as a UGA professor of large animal medicine, and he was honored by the creation of an endowed scholarship in his name that benefits a veterinary student with a concentration in equine medicine or large animal mixed practice.
Colleagues, friends and alumni,

Please know I have maintained Lee Highway Animal Hospital (a small animal clinical practice) in Abingdon, Virginia, since 1980. I founded my practice soon after returning home from UGA where I graduated Doctor of Veterinary Medicine on 11 of June 1979. I also own a beef cattle (cow-calf) operation in Virginia’s Clinch Valley—an area my forefathers have agriculturally engaged since the late 1780s.

Today, I continue my passion for our profession and if allowed competency into my 80s, I plan to continue working. I realize this is a lofty and aggressive goal, but that is and has always been my position for our profession.

My mother and father donated to causes they believed worthy. Typically, churches, civic groups and students were recipients of their kindness. Their example showed me the importance of giving back.

Since the early 1980s, I have wholeheartedly supported Georgia athletics. Funding a winning program (Herschel Walker dominated his opponents) is easy. Even during the “down” years, I never wavered in my support of our athletic department. Circa fifteen years ago, I had an epiphany. I realized since leaving Athens, I had not financially supported our College of Veterinary Medicine to any degree comparable to athletics. This was not fair. I immediately wanted to make amends. I am happy to report I have been donating annually to the academic side of our university through the College of Veterinary Medicine.

Supporting a veterinary student’s education gives me a most pleasant feeling of “fuzzy.” Assisting the propulsion of veterinary education is very gratifying, and I suggest you enlist your person for same. The recipient of my scholarship this year is Zoe Latimer (Class of 2020).

Soon I will be supporting our university in a third fashion. Our youngest daughter of three, Anna Louise, will begin attending the University of Georgia in August 2017.

Please consider an annual contribution (a sum you feel comfortable with) to the College of Veterinary Medicine. Keep in mind, you as the donor can designate the area benefiting from your support. This feature allows parting with one’s money easier! All financial support contributed to our college is most appreciated and never wasted.

With best wishes and warm regards ...

F.B. Gent (DVM ’79)

P.S. “Forever a Virginian ... Always a Bulldog”
A lot happens on our social media pages, but some posts stand above the others and get the most interactions from our followers! Here are our top 5 posts of 2017 so far.

**1. Congratulations CVM Class of 2017!**
A few of your teachers have some advice for you. Check out this video to find out what they said! #UGA17

Watch it here: bit.ly/2pgVEpJ

**2. Meet Dr. Sarah Czerwinski, the Hospital’s newest board-certified ophthalmologist!**
Dr. Czerwinski specializes in equine ophthalmology, which has allowed us to bolster our offerings in this area.

**3. Congratulations to our four alumni award recipients!**

**4. Calling all owners of service animals!**
The UGA Veterinary Teaching Hospital is once again offering free eye exam screenings to service animals this May as part of the 10th Annual American College of Veterinary Ophthalmologists (ACVO) and Stokes Pharmacy National Service Animal Eye Exam Event. Registration by April 30 at www.ACVOeyeexam.org is required to participate.

**5. If you do what you love, you love what you do!**

Dr. Lisa K. Nolan has been named dean of the UGA College of Veterinary Medicine. She has served as dean of the CVM at Iowa State University since 2011. #ugavetmed

(page 4)

Follow “UGAVetMed” on Facebook, Twitter and Instagram!
UPCOMING EVENTS

**AUGUST 5**    Hawaii Dawg-O (Georgia Theater)
**AUGUST 13**    White Coat Ceremony
**AUGUST 30**    GVMA Barbeque (at the Veterinary Medical Center)
**OCTOBER 14**   Dean’s Tailgate
**NOVEMBER 9**   Alumni Reception at SCAV annual conference
**NOVEMBER 19**  Alumni Reception at AAEP
**MARCH 9–10, 2018**  55th Annual Veterinary Conference & Alumni Weekend

CONTINUING EDUCATION COURSES

*CE dates and topics are subject to change. Questions about CE? Contact Melissa Kilpatrick at melissak@uga.edu or 706.542.1451, or online at www.vet.uga.edu/ce*

**AUGUST 19**    Lymphoid Neoplasia in Dogs & Cats
**SEPTEMBER 9–10**    Small Animal – Surgical Stapling
**SEPTEMBER 30–OCT. 1**    Advanced Laparoscopy
**OCTOBER 21**    Fall Vet Tech Conference
**NOVEMBER 9–10**    Equine Encore
**NOVEMBER 11–12**    Internal Medicine
**DECEMBER 2–3**    Avian, Rabbit & Reptile Endoscopy
**DECEMBER 9–10**    Outpatient Medicine

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