



# Aesculapian

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Vol. 13, No. 2



## Heart Help for the Great Apes

UGA CVM takes part in innovative Great Ape Heart Project based at Zoo Atlanta

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Spring/Summer 2013  
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### On the Cover:

Batek is a western lowland gorilla who loves the mangoes that fall from the trees into his habitat at the Limbe Wildlife Centre in Cameroon. Photo by Adam K. Thompson/ Courtesy of Zoo Atlanta.

## *Dear Alumni and Friends of the College,*

While summer is just settling in, we are just weeks away from welcoming the Class of 2017, and launching yet another academic year. This class will be the first to do its entire clinical training year in our new Veterinary Medical Learning Center, for which construction began this past March. (The Class of 2016 will spend the first portion of its clinical training year in our old Hospital, and then transition — along with our clinical faculty and staff — to the new one.)

This issue of our Aesculapian includes a story about the reuse of materials from the old large animal Snyder Barn, which for decades stood on the property where we are building our VMLC. We are very pleased to not only have spared our area landfills of these materials, but to have also spread a little of our CVM history throughout Athens. Be sure to read this story, and also our brief update on our VMLC fundraising efforts. (The short story on our fundraising: We are close, but we still need your help!)

Also included in this issue:

- Our cover story on the Great Ape Heart Project, which is based at Zoo Atlanta, and is currently comprised of more than 50 collaborators from 33 institutions, including zoos, universities, and other groups throughout the United States and beyond.
- Our profile on Donald Harn, PhD, one of the world's leading experts on schistosomiasis. Harn works primarily in the areas of vaccine discovery and development, but his research has taken some interesting digressions. You might recall news about one of his recently published studies in which he found that worms secrete a specific sugar-based molecule that is also found in human breast milk, and that the anti-inflammatory properties in these molecules may help treat metabolic diseases associated with obesity.
- Our profile on Dr. Nina Marano (DVM '84), who has for years served Atlantans as a small animal practitioner, while also serving her country and the world by protecting public health. Dr. Marano recently moved to Kenya, where she is director of the U.S. Centers for Disease Control and Prevention's Refugee Health Program for Africa.
- And Taylor "Eve" Winkleman, from our Class of 2015, reminds us all how much times have changed, as Eve tells us about how she and her classmates embrace modern technology both inside the classroom and out.

I hope you enjoy reading these stories, and other news about our College contained in this issue! And, as always, thanks so much for your support of our CVM. We could not do all that we do without your help!

Sincerely,

*Sheila W. Allen*  
Dean



## CVM Professor Biao He Develops rabies vaccine that could reduce cost, risk

By April Sorrow

Researchers at the UGA College of Veterinary Medicine used a common dog disease—canine parainfluenza—to build a new vaccine to protect humans and animals from the rabies virus. Developers hope the new treatment will reduce costs and increase accessibility to a vaccine for a disease that currently kills 55,000 people a year, according to the World Health Organization.

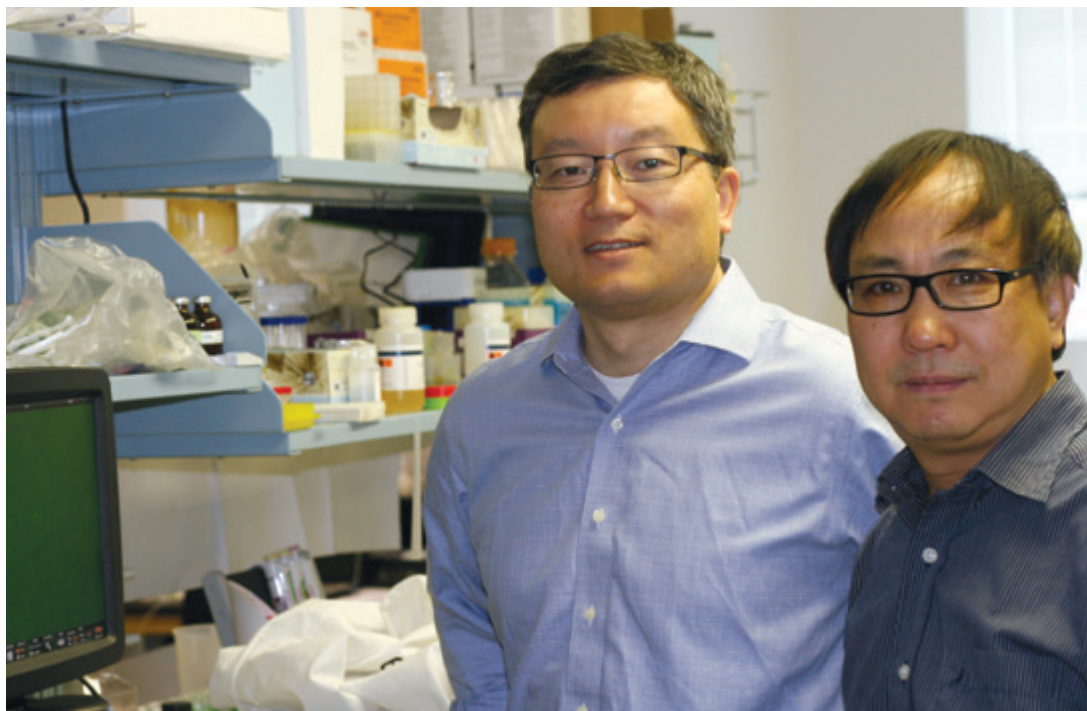
Current rabies vaccines use weakened pathogens to develop resistance. UGA professor Biao He's technique is different. Using genetic engineering, He and his team of researchers inserted a non-viral piece of the rabies virus into parainfluenza virus 5, called PIV5, which is a virus that infects the respiratory tract of dogs without causing any illness. Using PIV5 as a delivery mechanism to expose humans and other animals to important pathogens—rabies in this case—allows them to create antibodies that will protect against future infections.

"This could be man's new best friend in delivering vaccines," said He, who is a professor of infectious diseases in the UGA College of Veterinary Medicine and the study's lead author.

According to results recently published in the *Journal of Virology*, the vaccine is effective in building immunity. The study tested the efficacy of the drug on a mouse model when administered orally, through the nose, and into muscle. When the mice were administered a lethal dose of rabies, survival was 100 percent when they had received the vaccine nasally or into muscle; survival was 50 percent when the vaccine was administered orally.

"This is first report of an orally effective rabies vaccine candidate in animals based on PIV5 as a vector," said He, who also is a Georgia Research Alliance Distinguished Investigator and member of the Faculty of Infectious Diseases. "These results indicate this is an excellent candidate for a new generation of recombinant rabies vaccine for humans and animals, and PIV5 is a potential vector for oral vaccines."

In the U.S., rabies is seen most often in wild animal



Biao He, left, and study co-author Zhen Fu. Photo by Jessica Luton.

populations. The Centers for Disease Control and Prevention reports an average of two human deaths per year from rabies in the U.S.

While death rates in the U.S. are low, rabies is expensive to control. The CDC estimates the disease costs more than \$300 million annually, costs that include the vaccination of companion animals, animal control programs, maintenance of rabies laboratories and medical costs. Humans at risk for contracting rabies, like those who work with wild animal populations, even if immunized need booster shots after the fact if a rabid animal bites them. Humans infected with rabies who have not been vaccinated pay high prices for medical treatment that is time consuming and painful.

He is hopeful the new vaccine will be more effective and will require few doses, reducing the cost.

"The virus we are using as a vector has been used as a component for kennel cough vaccines, so we know how to mass-produce it. And, we also know that manufacturing it won't be a problem in terms of producing a large quantity at a cheaper price," He said. "This becomes very important in areas where resources are limited."

Initial results from canine tests look very promising. He hopes the vaccine will be available for animals in three to five years. Human vaccines will take longer.

"We are doing various things using the platform technology," He said. "What we are really good at is re-engineering them to make them do the things we like them to do. So, we are looking at different kinds of pathogens to develop into vaccine form, and so far we have been very fortunate that many of them worked really well. Some of

them worked better than I would have imagined.”

He’s lab also is working on vaccines for HIV, tuberculosis and malaria using this technology.

“That is the fun part of science: You come up with ideas, and of course it takes a long time to push it through, and sometimes what you thought would work doesn’t, but sometimes it works out really well, and that is really exciting and fun,” He said.

Contributing authors include: Zhen Fu, Zhenhai Chen, Ming Zhou, Xiudan Gao, Guoqing Zhang, Guiping Ren and Clement W. Gnanadurai.

## FOR MORE INFORMATION

For an abstract of the article, please visit [tinyurl.com/lyhnxtl](http://tinyurl.com/lyhnxtl)

## Game developed at UGA helps students understand neuroscience

University of Georgia researchers are developing a video game that teaches students about the complex networks in the brain and the nervous system by challenging them to solve puzzles using music, colors and shapes.

Interactive Science in 3D, or IS3D, the UGA start-up company developing the game called Nurbits, will soon



test it in Athens and Atlanta schools. The company, based in UGA’s Georgia BioBusiness Center, recently won a National Institutes of Health Small Business Innovation Research grant for \$535,000 to develop the game over

the next two years. The award will fund a game designer, computer programmer, artists and neuroscience content experts.

“We’ve learned to create entertaining games, and kids learn complex concepts without literally putting the concepts in front of them,” said Tom Robertson, an associate professor of physiology and pharmacology in the UGA College of Veterinary Medicine and CEO of IS3D. “It becomes a conversation piece in class and makes students think about the concepts in relation to the real world.”

During the game, students first make decisions that help chips on a computer circuit board communicate using

attractive colors, shapes, and musical sounds to represent electrons that pass between the chips.

As the students progress through the levels of the game, they learn concepts of neuroscience through success and failure. At higher levels of the game, they control neurons and neurotransmitters and learn about the brain and nervous system. At the most advanced levels, they learn about electrical and chemical disruptions to nerve function, which represent abnormalities that underlie diseases such as Parkinson’s, Alzheimer’s, depression, or the ill effects of toxins such as Botulinum.

Nurbits will join several other educational, science-based video games created by Robertson and a handful of other UGA professors involved with IS3D. Stephen Borden, a UGA computer science graduate and now software engineer and game designer for IS3D, is the principal investigator for the grant. He is documenting the process of creating Nurbits at [blog.nurbits.com](http://blog.nurbits.com)

The project is funded through a grant from the National Institutes of Health under award number 1R43OD010798-01A1.

## CVM research finds sterilized dogs live longer

Many dog owners have their pets spayed or neutered to help control the pet population, but new research from the University of Georgia suggests the procedure could add to the length of their lives and alter the risk of specific causes of death.

Looking at a sample of 40,139 death records from the Veterinary Medical Database from 1984-2004, researchers determined the average age at death for intact dogs—dogs that had not been spayed or neutered—was 7.9 years versus 9.4 years for sterilized dogs. The results of the study were published April 17 in *PLOS ONE*.

“There is a long tradition of research into the cost of reproduction, and what has been shown across species is if you reproduce, you don’t live as long,” said Dr. Kate Creevy, an assistant professor of internal medicine at the College of Veterinary Medicine. “The question that raises is why would you die younger if you have offspring?”

Historically, studies on the effects of reproduction on life span have been done in model systems like mice, nematode worms and fruit flies, where it is difficult to figure out eventual cause of death. For the first time, researchers have been able to measure costs of reproduction in terms of the actual causes of death, finding that the causes of death differed between sterilized and intact dogs. Dogs who had undergone a gonadectomy



Study collaborators Daniel Promislow, PhD, a professor of genetics at the UGA Franklin College of Arts and Sciences, and Kate Creevy, DVM, MS, DACVIM, an assistant professor of internal medicine at the College of Veterinary Medicine. Photo by Paul Efland.

(a spay or castration) were more likely to die from cancer or autoimmune diseases. Those in the sample who still had functional reproduction systems at death were more likely to die from infectious disease and trauma.

“Intact dogs are still dying from cancer; it is just a more common cause of death for those that are sterilized,” said Jessica Hoffman, a UGA doctoral candidate in the Franklin College of Arts of Sciences who co-authored the study.

Creevy added, “At the level of the individual dog owner, our study tells pet owners that, overall, sterilized dogs will live longer, which is good to know. Also, if you are going to sterilize your dog, you should be aware of possible risks of immune-mediated diseases and cancer; and if you are going to keep him or her intact, you need to keep your eye out for trauma and infection.”

Their findings are valuable not only for learning about dogs, she said, but also for studying reproductive effects in humans as well.

“There is no other species where we can even begin to study cause of death as closely as we do with dogs,” Creevy said. “They model our own disease risk because they live in our homes, sleep in our beds and eat our food. All of the things that impact us and our health impact them.”

Some of the reproductive hormones, particularly progesterone and testosterone, she said, could suppress the immune system, explaining why there is an increased risk of infection among dogs that have not been sterilized.

“There are a few studies of people who are sterilized, specifically among men who are castrated for cultural or

medical reasons,” Creevy said. “Interestingly, there was a difference in their life spans too, and the castrated men tended to live longer. The men in that study who were not sterilized also got more infections, supporting the idea that there is a physiological reason for this.”

According to Daniel Promislow, a genetics professor in the Franklin College and co-author of the paper, “when researchers have looked at the effect of reproduction on survival rates in humans, the results have varied from one study to the next. Our findings suggest that we might get a clearer sense of potential costs of reproduction if we focus on how reproduction affects actual causes of mortality rather than its effect on life span.”

The authors note that the average life span seen in this study is likely lower than what would be observed in the population of dogs at large. Those observed for the study had been referred to a veterinary teaching hospital and represent a population of sick animals.

“The overall average life span is likely shorter than what we would observe in private practice, because these were dogs seen at teaching hospitals, but the difference in life span between sterilized and intact is real,” Creevy said. “The proportionate effects on causes of death are translatable to the global dog population, and it will be interesting to see if explanations for these effects can be found in future studies.”

The complete journal article is available at: [tinyurl.com/bwwwwnd](http://tinyurl.com/bwwwwnd)

UGA Veterinary Teaching Hospital Update:

## Veterinary Teaching Hospital offers take-home glucose monitors for diabetic pets

By Sarah Freeman



The iPro device features a small disposable sensor, about the size of a paperclip, in which one end is inserted under the animal's skin to read the blood glucose levels. Once the sensor is in place, a small recorder about the size of a quarter is plugged into the other end of the sensor to collect the data. Photo by Christopher B. Herron.

Another example of the incredible link between animal and human medicine is now being used at the University of Georgia Veterinary Teaching Hospital (UGA VTH): iPro Continuous Glucose Monitoring (CGM) devices are available to cats and dogs with diabetes mellitus. The devices, commonly used for human patients with diabetes, are used to gather data on the patient's response to insulin from the comfort of their homes.

"We wanted the best possible care for our diabetic patients, and since continuous glucose monitors are the standard of care in human medicine, we knew we had to introduce it here at the University of Georgia," said Cynthia Ward, VMD, PhD and professor of small animal internal medicine at the UGA College of Veterinary Medicine. "Very few places in the United States offer the monitors for animal healthcare."

The iPro device features a small disposable sensor, about the size of a paperclip. One end of the sensor is

inserted under the animal's skin to read the blood glucose levels. Once the sensor is in place, a small recorder about the size of a quarter is plugged into the other end of the sensor to collect the data. To ensure the device stays in place and the pet does not bother it, a snug garment, like a ThunderShirt™, is put on the animal. After the system is equilibrated, the device takes the blood glucose reading every five minutes and stores the data on the recorder for future download. Three to five days after the sensor is put in place, the sensor and recorder are easily removed and mailed back to the UGA VTH. The sensor is discarded and the recorder is plugged into a computer where the data is downloaded and analyzed. The UGA veterinarians use this information to evaluate insulin levels and recommend changes, if necessary, in medication levels.

The benefits of the CGM devices are numerous: The animal does not need to have blood drawn every two hours, and owners can keep their pets at home and

maintain a normal lifestyle. Animals feel very little discomfort when the sensor is placed, and they do not need to be sedated while being monitored, which is sometimes the case if blood must be drawn. The biggest benefit is that the information collected is more accurate with the monitor than with a standard blood test every two hours. Dogs and cats can easily get agitated when blood is drawn repeatedly in a veterinary hospital setting, and this can artificially increase glucose levels.

Murphy Hansen, a Silky Terrier who was diagnosed with diabetes five years ago, was outfitted with one of the iPro devices to provide information about his blood glucose levels since he gets insulin shots three times a day.

“We decided to try the iPro because getting a continuous glucose test is the best way to get a good reading of levels so we can decide the best protocol for treatment,” explains Murphy’s owner, Stephen Hansen. “I know the benefit of getting good readings, and this process is more convenient than having to wear a bulky monitor,” says Hansen, who has diabetes and has had continuous glucose monitor screenings himself.

**The biggest benefit is that the information collected is more accurate with the monitor than with a standard blood test every two hours. Dogs and cats can easily get agitated when blood is drawn repeatedly in a veterinary hospital setting, and this can artificially increase glucose levels.**

Pet owners are still responsible for keeping a log of food intake, insulin shots, and exercise during the time the pet has the iPro. At least two glucose blood tests should be collected each day, as well.

According to the Banfield State of Pet Health Report 2012, sponsored by Banfield Pet Hospital, the prevalence of pet obesity has risen 37 percent for dogs and 90 percent for cats since 2007. Diabetes, a common result of obesity in pets as well as humans, is diagnosed in 42 percent of overweight dogs and 40 percent of overweight cats.

Signs of diabetes in dogs or cats include animals that drink more, urinate more, eat more, sleep more, show signs of tiredness, and decreased exercise tolerance.

“Diabetes is a big problem in animals,” reminds Ward, who serves on the UGA Obesity Initiative, a collaborative effort among colleges at UGA to raise awareness and research solutions to the ongoing health issues that typically occur with obesity.

Clients interested in learning more about continuous glucose monitoring can contact the UGA VTH through a referral from their family veterinarian. Animals will need to visit the UGA VTH to have the chip inserted. The resulting data is analyzed by the UGA VTH faculty who can work with the referring veterinarian to manage diabetes treatment.

“This is new technology in animals and it is accurate technology,” according to Ward. “People should take advantage of it.”

## FOR MORE INFORMATION

Are you interested in the iPro for your diabetic pet? Ask your veterinarian to contact the Internal Medicine Service for Small Animals at the UGA Veterinary Teaching Hospital.



# Warriors for Chief

By Sarah Freeman

Kathy Ivy, a volunteer from For the Love of a Horse; Lynley Edwards, of Equine Advocates of North Georgia, Inc.; Chief; Dr. Harry Markwell, a resident in large animal medicine and surgery; Dr. Randy Eggleston; and Miaka Palmieri, of For the Love of a Horse. Photo by Christopher B. Herron.

In the bustle of the UGA Veterinary Teaching Hospital (VTH) three ladies, who didn't know one another the month before, sit anxiously waiting for a report from Dr. Randy Eggleston and his team following a complex surgery on Chief, a 13-year-old Appaloosa. Several hundred miles away, another woman eagerly waits for news of how the surgery went. This is a case of several strangers coming together to save a horse. And, for as tough a time as Chief has had over the past several years, he certainly has an angel—or several—smiling over his shoulder now.

Chief was brought to the UGA Veterinary Teaching Hospital in early October 2012. He is the equine charge of Lynley Edwards of Equine Advocates of North Georgia, Inc., a 501(c)(3) organization dedicated to providing advocacy and sanctuary for horses in need. Chief had been assigned to her care after he was taken from his previous owner by the Georgia Department of Agriculture due to suspected neglect and abuse.

Following the examination by Eggleston, a large animal surgeon at the VTH and an associate professor of large animal medicine, it was determined that Chief had a

severe case of osteoarthritis of the fetlock and pastern joints of the same limb; it appeared as though the fetlock arthritis originated from a previous fracture. Due to the severity of the disease, the only treatment option was arthrodesis (fusion) of the fetlock and pastern joints.

Edwards knew after having one of her previous rescue horses here last year, that the UGA VTH would provide excellent care to Chief, however the challenge was coming up with the money to pay the bill for Chief's surgery, bone plates and expected six- to eight-week stay in the hospital. Without the funds for surgery, it was likely that Chief would have to be euthanized.

That's where the power of spreading the word came into play. Edwards was at a horse show and saw the state investigator who worked on Chief's suspected abuse case. When Edwards told her the bad news of Chief's prognosis, the investigator contacted Miaka Palmieri, who runs For the Love of a Horse, another 501(c)(3) equine rescue organization, requesting they contact Edwards to help with Chief. Where Equine Advocates has land and facilities to offer as a sanctuary to rescue horses in need, For the Love

of a Horse, raises and donates money for the care of animals that would otherwise be euthanized because their owners couldn't afford medical care. Palmieri said she would help Edwards with the money needed for Chief's surgery.

"Everything happens for a reason," explains Palmieri of her introduction to Edwards and Equine Advocates. "We don't have the a sanctuary or legal background that Equine Advocates has, but we do have the financial resources to help raise money." (Edwards is a paralegal and one of Equine Advocates' missions is to have input in legislation and advocacy for cases involving horses.)

Palmieri didn't have all of the money for Chief's surgery, but she pledged to get it.

Around that same time, Kathy Ivy, who volunteers with Palmieri, started sending out emails regarding Chief's plight. One of the emails was delivered to Kimberly Burke, a sales representative from Synthes Vet, a veterinary equipment manufacturer in Pennsylvania. Among other animal medical care items, Synthes manufactures the plates and screws needed for Chief's leg, and they volunteered to donate these materials for the surgery.

"It's very difficult to raise money in this economy," Palmieri explains, "and as passionate as we are, we are very, very lucky to have friends, family and contacts who support us. These are not our personal horses. They are animals that we do not personally know, but through the goodness of Lynley's heart, and the personal sacrifice and time, we believe in this and we will support it. And, at the end of the day, it's that guy we care about—Chief."

With the money in hand and the major supplies donated by Synthes, Edwards was ready to commit to the surgery, which took place late October.

The surgery went as well as could be expected, and by spring, Chief was doing great.

"His progress is right on schedule," says Eggleston, following a re-check examination earlier this year. After months of stall rest, Chief is ready to be turned out for minimal hand walking.

"Chief is doing so well and we are so glad we did this," Edwards comments. "This handsome guy has been tolerating the pain for a long time, and he deserves a second chance."

## FOR MORE INFORMATION

For more details about Equine Advocates of North Georgia, Inc., visit: [www.facebook.com/EquineAdvocatesOfNorthGeorgiaInc](http://www.facebook.com/EquineAdvocatesOfNorthGeorgiaInc)

For more information about For the Love of a Horse, visit [www.ForTheLoveOfAHorse.com](http://www.ForTheLoveOfAHorse.com)



Petey Frame's owner enrolled him in a clinical trial to have a brain tumor surgically resected, and to treat the tumor site with the convection-enhanced delivery of a medication called Cetuximab. This treatment may one day be available to humans with similar brain tumors. Photo provided by Alexander Frame.

## VTH Seeking Dogs for Brain Tumor Clinical Trial

The UGA Veterinary Teaching Hospital is seeking dogs with spontaneous gliomas to participate in a clinical trial to test a new treatment aimed at slowing the growth of these brain tumors.

The goal of the research is to help translate new brain cancer therapies to humans by assessing results in dogs with similar diseases. In dogs, spontaneous gliomas are very similar to human malignant brain tumors both in imaging and biology, and both tend to grow back rapidly.

Funding for the study is provided by the American Kennel Club Canine Health Foundation, Inc. The research is being done in collaboration with the Winship Cancer Institute of Emory University.

## FOR MORE INFORMATION

For more information about this clinical trial contact the UGA VTH at 706.542.3221, or visit [t.uga.edu/gQ](http://t.uga.edu/gQ)

# Harn's Lifesaving Worms

Story and photos by  
Stephanie Schupska

Donald Harn picks up a pint-sized jar of tapeworms sitting at the front of his desk. The specimens of *Diphyllobothrium latum* have been floating behind glass since March 1, 1944—longer than most of the researchers in his lab have been alive. Just over four years ago, the human-infesting wigglers moved with him from the halls of Harvard University to the tree-shaded labs of the College of Veterinary Medicine's Department of Infectious Diseases.

He left 29 years of familiar in Boston to work with other faculty at UGA to contribute to the upward trajectory of infectious disease research at UGA. "We're well on the way on that track," said Harn, a professor of infectious diseases and a Georgia Research Alliance Distinguished Investigator.

Worms and vaccines: Those two seemingly separate areas of research are what keep Harn's lab hopping and his fingers busy typing away on applications for grant dollars. The connector between the two is schistosomiasis, a parasitic worm disease that, at any given time, globally infects 200 million people.

Harn's schistosomiasis research started when he was a post doctoral associate at Harvard "in the Dark Ages," he said. His field trials in China and the



Philippines still revolve around the infection. As he worked on a vaccine to stop the disease, his research spun out into what are now the two main focuses of his lab—vaccine discovery and development and analysis of the anti-inflammatory molecules found in parasitic worms.

## Lifesaving worms

Some of Harn's most recent research, which appeared in the journal *Nature Medicine* in late 2012, found that worms secrete a certain sugar-based molecule—the same found in human breast milk. It's good news for obesity researchers: The molecules

have anti-inflammatory properties that can be used to help treat metabolic disorders—like diabetes—associated with obesity.

While he's not suggesting that humans struggling with diabetes or obesity should be infected with worms, his lab is looking for "the molecules that could become drugs," he said. "We're looking for ways to scale up the synthetic production" of lacto-N-fucopentaose III, or LNFPIII for short.

But in some situations, like severe gastrointestinal diseases, worms themselves could be a useful treatment, he said. "We would argue that for certain diseases, worms could be a lifesaver."

Harn conducted the study with researchers from the Harvard School of Public Health, the Université François Rabelais in Tours, France, and the Central South University, Changsha, Hunan, China.

### Considering One Health

Harn's vaccine discovery and development extends to the parasitic disease he's been studying for 33 years.

In Hunan, China, as well as the Philippines, schistosomiasis doesn't just infect humans. Seventy-five to 80 percent of the human cases start with infected water buffalo. The livestock—which many families use as their tractors, consider to be close family members and are ultimately useful for trade, meat and milk—can die, or don't grow or gain weight properly when infested with the parasite.

"With the Wellcome Trust program 'Animal Health in the Developing World,'" which funded Harn's research, "the tenet was that 'you need to do something to intervene in animal disease that benefits the animals but then will also have a direct impact on human disease,'" he said. "If we could do something to help the water buffalo, and thereby reduce transmission, we would then impact human disease."

Harn and his fellow researchers are taking what's called a "One Health" approach to the situation. They are looking at humans and animals and are working to develop treatments for both.

"We're one part of this multi-intervention



Donald Harn, PhD, joined the UGA CVM faculty in 2009. Photo by Stephanie Schupska.

approach," he said. "We go in and drug-treat the human populations in the villages, we drug-treat the water buffalo and cattle, and then we vaccinate the cattle."

In the Philippines, they recently finished one pilot study and have just embarked on a massive 18-village trial testing vaccination in bovines.

Through field trials in both of these countries, they're on their way to developing a human vaccine, Harn said. Instead of just using drug intervention—the current method of

treatment—they're hoping to change the course of the disease through a therapy that could help prevent future outbreaks.

## Changing plans

Harn headed to the University of Northern Colorado as an undergraduate with one goal in mind—to teach high school biology. He stayed to get his master's degree and started taking classes taught by Gerald Schmidt, who at one time was one of the world's foremost parasitologists.

“From that, I changed course completely and went back home to Los Angeles and went to UCLA,” he said, and worked on a doctorate in biology. There, he was “exposed to some world-class biology and biochemistry people. But, again, there was a parasitologist there. When it came to looking for post docs, I knew there were these tropical medical groups at Harvard Medical School, and I wrote to them, and they said ‘yes.’”

Because of his background in molecules and his parasite knowledge, the Harvard researchers asked

him to work on a schistosome vaccine.

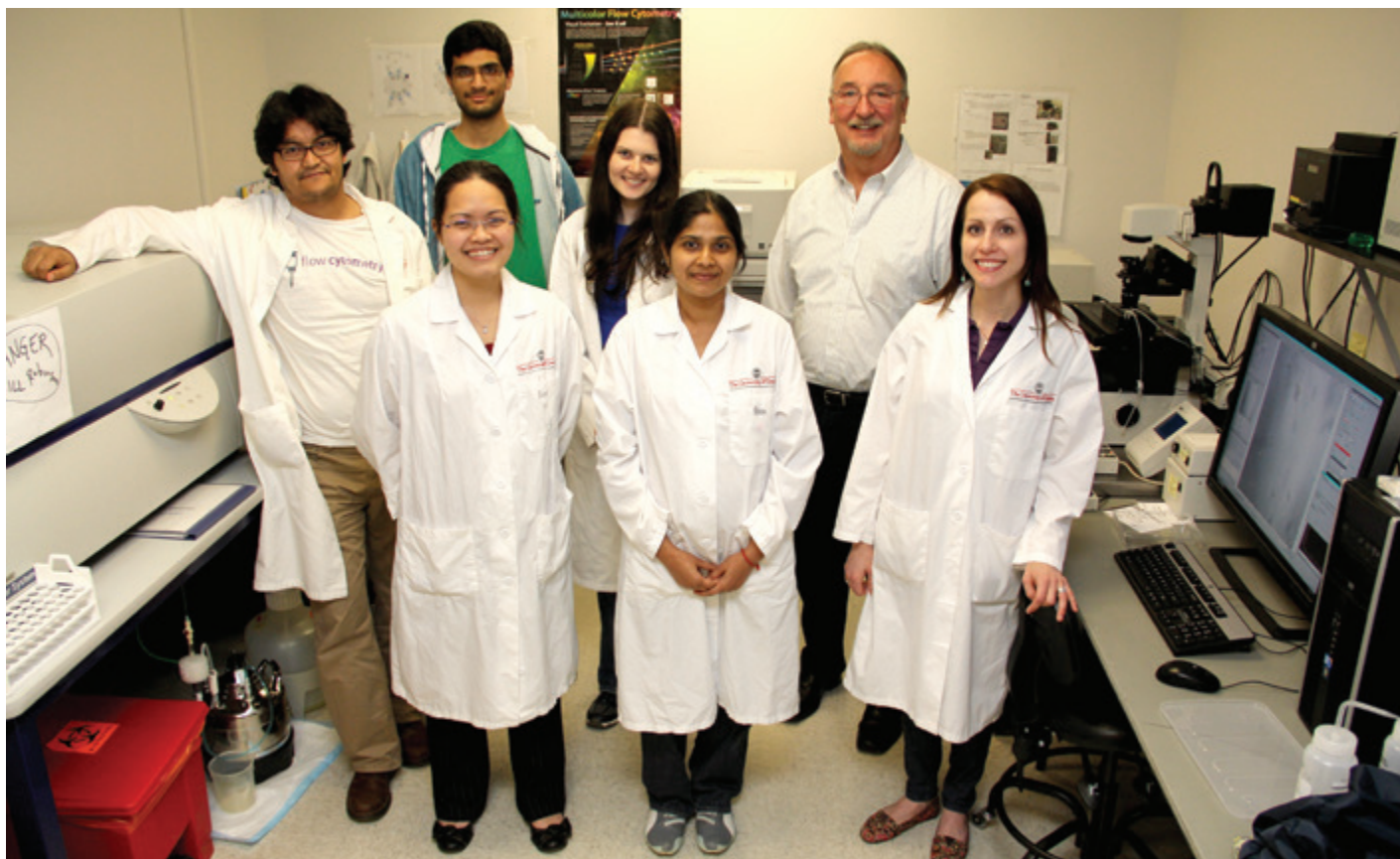
He stuck around for 29 years.

## Moving South

Harn was closing in on the end of a career at Harvard when he was faced with a decision—to move and try something different, or finish at Harvard, he said. His sons both lived on the West Coast; nothing was tying him to Boston. So he called fellow schistosomiasis researcher Dan Colley, who is director of the Center for Tropical and Emerging Global Diseases at the University of Georgia.

UGA had an opening. And with the prospect of several high-level faculty coming on board as part of a Georgia Regents initiative, the College of Veterinary Medicine was gutting labs and moving walls in preparation for new talent.

The renovations paid off. For example, this year the department applied for its first Center of Excellence in Translational Research Grant on an influenza vaccine. Since the parasitic worm research came out, Harn's lab has been added to UGA's Obesity Initiative.



Members of Dr. Harn's Laboratory. **Front:** Cac Bui, Dr. Leena Srivastava, E. Farah Samli. **Back Row left to right:** Dr. Smanla Tundup, Kapil Chandora, Hillary Danz and Harn. Photo by Stephanie Schuppska.

They're also a part of the new Center for Molecular Medicine.

There's a freedom at UGA that Harn likes, a spirit of collaboration. "UGA is fun for me because it's a highly interactive environment," he said, specifically mentioning faculty in the chemistry department and at the Complex Carbohydrate Research Center.

"The bottom line is, as you look around UGA, you have a massive amount of brain power," he said. "There's a lot of talent. It's pretty stellar. There is a lot of firepower here.

"I get razzed, I got razzed a lot about 'how could you be a tenured professor at Harvard and give that up to go to UGA?' It's different. Again, I've been there, done that. And while it was exciting to be a part of that wonderful place, here I have the chance to try and do something different and work with the great investigators here and help continue moving UGA forward."

His lab recently developed a new vaccine delivery method, which has now been used for the flu vaccine. This research has been aided by fellow CVM faculty members Jeff Hogan, an associate professor of cell biology; Biao He, a professor of infectious diseases and GRA Distinguished Investigator; and Ralph Tripp, a professor of infectious diseases, GRA Eminent Scholar, and GRA Chair of Animal Health Vaccine Development. Doctoral student E. Farah Samli, who works on the research, said, "There's a lot of excitement surrounding VacSIM™ for influenza," and then joked: "We've cured a lot of diseases in mice."

### Training the next generation

Harn didn't move to Georgia alone. He brought post-doctoral associates with him, and now Smanla Tundup, Leena Srivastava and Lisa M. Shollenberger are training the next generation of researchers, specifically doctoral students Samli, Cac Bui and Hillary Danz.

"I wanted to make sure we had one postdoctoral mentor for every doctoral student in the lab," he said, "so that the students are not wandering aimlessly."

Bui, who is hoping to graduate in December, appreciates the attention. "It's nice to learn from people ahead of you, who are willing to share their experiences with you," she said. "They've been really great friends and great colleagues and great mentors."

One of the main reasons she joined Harn's lab was because of the teamwork. Danz, who plans to finish in late 2014, echoes her appreciation.

"Having people in your lab who you can feel connected to really helps make a lab more of a home," she said, "and makes coming to work every day something to look forward to."

Samli said the opportunity to work with Harn has been "amazing. You don't often get to see inside the minds of great people like Don. It's really exciting to see that UGA is doing a lot of things well and sometimes even better than Harvard."

Having graduate students—and undergraduates—in his lab has been a big change for Harn. At Harvard, his staff consisted of people who all had their doctoral degrees.

"We've had some unbelievably talented undergraduates," he said. "I'm really proud of the kids we have here... It's great when you know that when people take your students, they're getting someone good."

He likes to teach them "that anything's possible," he said. "It may take a little poking and twisting, but you can get there."

### Smoked meat and music

Harn used to drive an hour and a half to and from work every day. Now he walks to his office. A gourmet grocery store, several of Athens' best restaurants and a few quick food establishments are right around the corner from the house he shares with his wife Susan.

He considers himself both a foodie and an audiophile—he has the speakers in his office to prove it. And he has the smoker in his backyard to test his meat-curing savvy.

Preferring savory dishes—rack of lamb, anyone?—to sweet—although he fashioned a pear tart for his wife recently—Harn "likes to mess around in the kitchen."

It's one thing he's passed onto his sons, who both live in Portland, Ore., and to one son in particular, who will graduate from culinary school in October.

With their children in the Northwest, he, his wife and their golden retriever Luci don't see themselves settling long-term in Athens. But they're planning to enjoy it for the next few years.

"Athens is a very comfortable place to live," Harn said. "There's not a whole lot lacking here."

# Heart help for the Great Apes

UGA Pathologists and Clinicians Play Big Role in Groundbreaking Great Ape Heart Project Based at Zoo Atlanta

By Jessica Luton

Just over an hour away from the UGA CVM, Zoo Atlanta has embarked on a project aimed at helping the great apes, which, similar to humans, are impacted by heart disease as a leading chronic disease and cause of mortality.

Of the four taxa of great apes living in U.S. zoos, about 41 percent of gorillas, 20 percent of orangutans, 38 percent of chimpanzees, and 45 percent of bonobos die from heart disease. It has also been found in wild apes, although much less is known about the prevalence of disease in this population.

For zoo veterinarians throughout the United States, the frequency of heart disease in captive apes has been cause for concern for some time. About a decade ago, zoo veterinarians began to realize that the criteria used to diagnose and classify heart disease in humans were not necessarily applicable to apes. In 2006, representatives from Zoo Atlanta, the UGA CVM, and a small group of gorilla clinicians from other organizations convened a meeting in Chicago to discuss heart disease in great apes, and agreed that their medical approaches to identifying and treating the disease needed to change. Subsequent meetings,



The entire team examines Margaret, a chimpanzee, at the Limbe Wildlife Centre in Cameroon. Pictured from left: Dr. Ben Brainard, of the UGA CVM; Dr. Kyang John Anyam, of the LWC; Dr. Gregg Rapoport, of the UGA CVM; Dr. Jennifer Glavis, a volunteer veterinarian at LWC; Dr. Hayley Murphy, of Zoo Atlanta; and Dr. Ilana Kutinsky, of the Michigan Heart Rhythm Group and a clinical associate professor of cardiology at the Oakland University William Beaumont Hospital School of Medicine. Photo by Adam Thompson/Courtesy of Zoo Atlanta.

involving a growing group of stakeholders, led to the identification of specific goals to better understand the development of and therapy for heart disease in apes. Thus began the evolution of what is now known as the Great Ape Heart Project (GAHP).

The GAHP officially began in 2010 — the same year the principal investigators were awarded a National Leadership Planning Grant from the Institute of Museum and Library Services (IMLS) for about \$100,000, affording the group an opportunity to plan for a long-term collaborative project. The organizing

partners on the project included Zoo Atlanta, the Emerging Diseases Research Group of the University of Georgia College of Veterinary Medicine, the School of Veterinary Medicine at the University of California-Davis, and the Cleveland Metroparks Zoo. Their major goals, as outlined in a 2012 grant application, include "...designing an innovative and coordinated national program to investigate ape heart disease and establish uniform, state-of-the-art cardiac disease diagnostics, treatment and prevention strategies for great ape heart disease."

To meet this goal, the project acts as a communication hub, bringing together a wide range of interested parties—zoos across the world, university researchers, veterinarians, human and veterinary cardiologists, geneticists, epidemiologists, nutritionists, pathologists and others—to develop a timely and coordinated plan to address this critical health need for the great apes. To date, more than 50 representatives from 33 institutions are taking part in the project, which is based at Zoo Atlanta.

Zoo veterinarians and other scientists have been monitoring apes and taking diagnostic and pathologic samples for the benefit of individual animal health for many decades. This information, coupled with other data collected over the years, is now being entered into an electronic database that will help scientists pinpoint trends on a larger population-wide scale, and give caretakers and scientists clues about the causes and progression of heart disease in apes. Made possible by another National Leadership Grant in 2012 from the IMLS for \$486,580, the database is the key to information sharing and collaboration on the project.

The UGA College of Veterinary Medicine has been involved with the GAHP from the beginning. Key collaborators on the database development project include several UGA CVM pathologists and clinicians representing a wide range of specialties—from the Infectious Diseases Laboratory, Department of Small Animal Medicine and Surgery, Department of Pathology, Department of Physiology and Pharmacology, and the Athens Veterinary Diagnostic Laboratory. Each collaborator contributes a unique perspective and set of skills.

### Pathological Insight

Rita McManamon, DVM, is uniquely suited for her role on the GAHP team. As the former senior veterinary medicine clinician for Zoo Atlanta, she came to the University of Georgia in 2005 as a

clinical instructor working for the Infectious Diseases Laboratory as a postgraduate resident in anatomic veterinary pathology. She is now jointly appointed to the CVM departments of Small Animal Medicine and Surgery, and Pathology, and she serves as the director of the UGA Zoo and Exotic Animal Pathology Service (ZEAPS). (ZEAPS is a partnership that combines the expertise of researchers from the UGA Infectious Diseases Laboratory, based in the Department of Small Animal Medicine and Surgery, and pathologists from the Department of Pathology.)

McManamon is team organizer for the UGA Great Ape Heart Project team, as well as the pathology database organizer for the GAHP.

"Since Rita has extensive experience as both a clinician and a pathologist at Zoo Atlanta and UGA respectively, she not only serves as a bridge between the various organizations involved, but she also brings a unique multidisciplinary perspective to this initiative," said Keith Harris, head of the CVM's department of Pathology.

McManamon recalls her earlier frustrations as a zoo clinician when evaluating an ape for potential heart disease. Just as in humans, heart disease can be a silent killer, and animals often hide symptoms of underlying disease. "Zoo Atlanta has always been a leader in providing cutting-edge animal health care, and nonhuman primate care crosses the borders of veterinary and human medicine," she said. "Our routine examinations were thorough and helped by consultation from veterinary and physician specialists."

But early efforts were limited by available technology, techniques and lack of coordinated efforts among zoos. "Early ultrasound machines produced very grainy images, and anesthesia was always required for cardiac ultrasounds, blood pressure measurements, and blood sampling for lab tests," she explained. "Few zoos had access to ultrasound machines; physician or veterinarian cardiologists didn't know what the 'normal' values for heart



McManamon



The collaborative team at Limbe Wildlife Centre (LWC) in Cameroon poses for a group photo. Pictured from left: Adam Thompson, a photographer for Zoo Atlanta; Dr. Pam Dennis, of the Cleveland Metroparks Zoo; Dr. Gregg Rapoport, of the UGA CVM; Dr. Ben Brainard, of the UGA CVM; Dr. Ainare Idoiaga, of LWC; Dr. Hayley Murphy, of Zoo Atlanta; Akih Emmanuel, a veterinary technician at the LWC; Dr. Kyang John Anyam, of LWC; Jennifer Draiss, a volunteer for the LWC; Javier Daga, manager of the LWC; Dr. Jennifer Glavis, a volunteer for the LWC. Photo by Adam Thompson/Courtesy of Zoo Atlanta.

measurements were; and, zoos were examining and managing these animals independently. We relied on human heart ultrasound values. Occasionally, I or my colleagues suspected heart disease, but it was not apparent from our test results. Some earlier human treatment drugs were risky to use in apes, since we could not regularly monitor our treated patients through unanesthetized blood pressure and ultrasound tests. We did our best, but felt that more information and coordination was needed. Meanwhile, in the early 1990s, veterinary pathologist Dr. Linda Lowenstine (at UC Davis School of Veterinary Medicine) and others were reporting unusual patterns of myocardial fibrosis in all four great ape taxa, which was not similar to any known form of human heart disease.”

Pathology, McManamon says, can give insight into trends within and across species. Carefully studying microscopic cell changes may provide clues to the underlying cause or causes of that disease. “In human medicine, examining the heart muscle itself allows classification of different types of cardiac disease, and this may help guide treatment. Physicians may use myocardial (heart muscle) biopsies, an invasive technique, while the patient is still alive. In apes, the traditional way to look at the heart muscle microscopically is when postmortem tests are performed. By carefully examining those changes, and correlating them with whatever clinical tests were

performed, we might be able to piece together what is happening in other living animals, and intervene earlier to improve and save lives. My belief that clinicians and pathologists needed to work together to solve these problems, and my desire to help train new generations of veterinarians in this holistic way, led me to join the UGA CVM and to recruit other professors to the cause.”

### **A Passion for Collaboration**

Great Ape Heart Project Director and Zoo Atlanta Senior Veterinarian Hayley Murphy leads the members of the project group. As a veterinary advisor to the gorilla Species Survival Plan (SSP) and a veterinarian working with gorillas at Zoo New England, Murphy saw similar patterns of clinical symptoms in gorillas. In 2000, Murphy started the Gorilla Cardiac Database (GCD), which focused on heart disease in gorillas; this effort eventually led to the idea of creating a larger database to incorporate heart disease data on all four great ape taxa.

When Murphy joined the staff at Zoo Atlanta and McManamon came to UGA, both were eager to join forces and combine their expertise with their passion for apes in an effort to examine cardiac disease in all four great ape taxa. (Zoo Atlanta is home to the nation’s largest zoological collection of western lowland gorillas and orangutans, and serves as a center of excellence in research into ape husbandry,

cognition and veterinary care.) During a meeting of similarly concerned veterinarians and researchers hosted by the Milwaukee County Zoo in 2009, the participants agreed that the use of a database to show large patterns in pathology information and clinical documentation would empower the researchers to look at the problem from all directions.

“The IMLS funding will allow the GAHP to develop a platform for an expanded and technologically advanced database,” explained Murphy. “Part of our job in this endeavor is to not only design a database that will answer our many questions about ape heart disease, but also to ensure that we are designing and promoting valid methodologies for data collection and analysis. This will provide for the Project’s needs into the future, therefore aid apes for many generations to come.

“There’s a true devotion at UGA CVM,” McManamon added, “to teaching and developing new scientists, clinicians and pathologists who are collaborative and excited by cross-talk interdisciplinary perspectives. Right now, our UGA pathology team is working with Dr. Lowenstine, and other national experts in human and veterinary cardiac pathology, to revise our recommended approach to postmortem ape cardiac evaluation for the zoo community. We want to incorporate previous clinical findings into our approach whenever possible, and we will develop new gross and histopathologic criteria for ape cardiovascular pathology over the next few years.”

In addition to their contributions to the GAHP database, the UGA CVM pathologists are collaborating with the College’s Educational Resources Center to create an image-based guide to the revised postmortem cardiac evaluation approach, said McManamon. The guide will be used by zoo pathologists and clinicians, and the images will help teach pathology to veterinary students. The guide is being funded by the Birmingham Zoo, in Alabama.

### **A Cardiac Exchange: The Clinical Side**

Gregg Rapoport never dreamed he’d be sitting at breakfast in Africa as a member of the Great Ape Heart Project team. As a veterinarian and board-certified expert in canine and feline cardiology, Rapoport was recruited for his expertise in animal cardiac health issues.

“Heart disease affects all four of the great ape taxa,” said Rapoport, an assistant professor of cardiology based in the Small Animal Medicine and Surgery

department at the UGA CVM. A number of different kinds of heart disease have been diagnosed over the years, with the most attention in recent years paid to heart muscle disease (as opposed to valve disease) of older apes. “Veterinarians in zoos have recognized this for a few decades, but we still have much to learn. For example, we do not know: What causes it? What is the best way to obtain an early diagnosis? How do we treat it? And, is ‘it’ one disease or multiple different conditions?”

Rapoport says that one of the types of heart disease commonly affecting the older apes includes “fibrosis,” or scar tissue, as a prominent feature. Sometimes referred to as “fibrosing cardiomyopathy” in veterinary medical literature, these animals have evidence of scar tissue that has replaced heart muscle throughout portions of the heart’s walls. “But this term is actually very vague,” said Rapoport. “It tells us nothing about what causes the disease. It implies that what we see is likely the end result of some process, perhaps involving injury or damage to muscle in these areas. We need to know the cause of that process.”

Earlier this year, to gather comparative data, Rapoport, Murphy, Benjamin Brainard (a UGA



An umbrella turned out to be quite the useful tool on the recent field expedition to the Limbe Wildlife Centre. Pictured from left: Dr. Gregg Rapoport, a cardiologist from the UGA CVM, and Dr. Ilana Kutinsky, of the Michigan Heart Rhythm Group and a clinical associate professor of cardiology at the Oakland University William Beaumont Hospital School of Medicine. Photo by Adam Thompson/Courtesy of Zoo Atlanta.

CVM associate professor of emergency and critical care medicine and a board-certified expert in anesthesiology), and members of other collaborating institutions traveled to Africa to perform examinations of gorillas and chimpanzees at the Limbe Wildlife Centre in Cameroon. The trip served as part of an effort to assess possible differences between captive apes in the U.S., and those living in native sanctuaries where the living conditions are closer to that of truly “wild” living apes. Brainard, who is also based in the CVM’s department of Small Animal Medicine and Surgery, is on the project for his expertise in anesthesia, because different types of anesthesia may impact cardiac function.

The GAHP aims to develop an organized methodology for collecting and storing data from the great apes, including evaluations of blood work, animal nutrition, cardiac ultrasounds, blood pressure and electrocardiograms.

“We’re going to bank, in this database, all the information that we can and look for patterns,” Rapoport said. “Patterns will help us better define the type or types of heart disease that we’re seeing. We have to define ‘normal’ and then distinguish the difference between normal and abnormal. Only with that understanding can we hope to make a difference here.”

As a veterinary cardiologist who performs and interprets cardiac ultrasounds on apes at Zoo Atlanta, and occasionally other zoos, Rapoport’s involvement with the GAHP is integral to the project. For the GAHP, he serves as the cardiac advisory group leader, and has oversight over all cardiac exams performed for each of the ape taxa.

## Each Team Member Contributes to the Puzzle

Drs. McManamon, Rapoport and Brainard are only a small portion of a very large team of collaborators and contributors who are spread out across North America, Mexico, Canada, Europe, and even New Zealand. At UGA, other collaborators include: Dr. Scott Brown, a professor who is jointly appointed to the departments of Small Animal Medicine and Surgery and Physiology and Pharmacology, and who is an expert in renal disease and hypertension; Dr. Cathy Brown, a professor of anatomic pathology with expertise in renal pathology and experience with creation of a software database to evaluate canine kidney disease; and Dr. Angela Ellis, an associate professor of pathology with expertise and special interest in zoo, wildlife, comparative cardiac and



Dr. Jennifer Glavis, a volunteer veterinarian with the Limbe Wildlife Centre, examines chimpanzee Papa’s ear during his check-up, while Dr. Ben Brainard, an expert in anesthesia and emergency/critical care veterinary medicine, monitors Papa’s vitals. Dr. Brainard is an associate professor of emergency and critical care medicine at the University of Georgia College of Veterinary Medicine. Photo by Adam Thompson/Courtesy of Zoo Atlanta.

ophthalmic pathology. Drs. Ellis and Cathy Brown are based in the Athens Veterinary Diagnostic Laboratory.

The CVM’s relationship with Zoo Atlanta, along with its proximity to Zoo Atlanta and to Murphy, has provided both faculty and students a unique opportunity to participate in the project and to collaborate and learn with others. “Hayley Murphy is the ring leader of this project,” said Rapoport. “There are a number of people who have played key roles in the various stages of what is now the GAHP, but she has driven and continues to drive the project forward.”

For Rapoport, the project has great potential for the future health and well being of great apes. “Heart disease is a major cause of death in these incredibly charismatic animals, so the potential to better understand and treat their heart disease equals a potential to improve both quality and length of life for our aging great apes,” he said.

Creating the database, with both clinical and pathologic data, will take some time, but the hope is that such large amounts of information will eventually show patterns and clues as to how the disease can be

treated and prevented—information that will help clinician and pathology researchers determine what else needs to be studied. “Within the next three years, we’ll have a really robust database,” said Murphy. “Part of the challenge has been to develop this robust database and data collection methodologies, while maintaining the day-to-day role of the GAHP in helping zoo veterinarians with their present day care of apes with suspected heart disease. The GAHP plays a central and vital role in connecting clinicians to subject matter experts—such as human and veterinary cardiologists, anesthesiologists, and others. Because we cannot take time off from that important mission, creating this database platform will take us some time,” explained Murphy. “In the end, by combining our growing clinical knowledge with the pathology data that McManamon and her team are collecting, we will have a much better base

of knowledge to work from in order to make sound clinical decisions and improve the health and welfare of the apes living in zoos.”

And the GAHP could even have further implications for future studies to help save other animal species. “It will be, we’re hoping, a model for future investigations by zoos across the world,” said Murphy. “We’re really hopeful that we’ll not only help the apes, but help other species with what we develop.”

## FOR MORE INFORMATION

For more information about the Great Ape Heart Project, visit [greatapeheartproject.org](http://greatapeheartproject.org)

### Staff, Partners and Key Collaborators on the Great Ape Heart Project

#### PROJECT STAFF

**Hayley Murphy, DVM** — GAHP Director; Director of Veterinary Services, Zoo Atlanta; Veterinary Advisor to Gorilla Species Survival Plans (SSP); Co-Founder of the Gorilla Health Project; Founder of the Gorilla Cardiac Database

**Marietta Dindo Danforth, PhD** — GAHP Project and Database Manager, Zoo Atlanta

#### PARTNERS

**Rita McManamon, DVM** — GAHP Pathology Organizer/UGA Team Coordinator; Director, UGA Zoo & Exotic Animal Pathology Service; UGA Emerging Diseases & Research Group; UGA CVM departments of Pathology, and Small Animal Medicine and Surgery; Co-Pathology Veterinary Advisor to Orangutan SSP

**Pam Dennis, DVM, PhD, DACZM**  
Adjunct Professor, Department of Biology, The Ohio State University; Clinical Assistant Professor, Cleveland Metroparks Zoo; Director, Gorilla Health Project; Veterinary Advisor to Gorilla SSP and Ape Taxon Advisory Group (TAG)

#### KEY COLLABORATORS

**Linda Lowenstine, DVM, PhD, DACVP**  
Professor of Veterinary Pathology, University of California—Davis; Pathology Veterinary Advisor to Gorilla, Orangutan and Bonobo SSPs and Ape TAG Principal Pathologist working with Mountain Gorilla Veterinary Project

**Scott Brown, VMD, PhD, DACVIM**  
Professor, UGA CVM departments of Small Animal Medicine and Surgery, and Physiology and Pharmacology

**Cathy Brown, VMD, PhD, DACVP**  
Professor, UGA CVM Department of Pathology, Athens Veterinary Diagnostic Laboratory

**Angela Ellis, DVM, PhD**  
Associate Professor, UGA CVM Department of Pathology, Athens Veterinary Diagnostic Laboratory

**Gregg Rapoport, DVM, DACVIM (Cardiology)**  
GAHP Cardiac Advisory Group Leader; Assistant Professor of Cardiology, UGA CVM Department of Small Animal Medicine and Surgery

**Benjamin Brainard, VMD, DACVA, DACVECC**  
Associate Professor of Emergency and Critical Care Medicine, UGA CVM Department of Small Animal Medicine and Surgery

**Karen Terio, DVM, PhD, DACVP**  
Clinical Assistant Professor, Zoological Pathology Program, University of Illinois; Pathology Veterinary Advisor, Chimpanzee SSP; Lead Pathologist, Gombe Ecosystem Health Project

**Suzan Murray, DVM, DACZM**  
Chief Veterinarian, Head of the Department of Animal Health, Smithsonian National Zoological Park



Class of 2015 members Shannon Larsen (left) and Emily Hadaway chat over coffee and Facebook in the CVM lobby after a test. Photo by Taylor “Eve” Winkleman.

## Bonded through Technology

For today’s students, technology enhances learning, relationships

By Taylor “Eve” Winkleman (DVM '15)

As I was studying for my recent large animal anesthesia final, I found myself wishing I had made some sort of chart so that I could keep the information better organized while I studied. Was xylazine the best alpha-2 antagonist to use in the horse? Was it reversible? What could I use to reverse it? I found myself wishing I had started studying a few hours earlier so that I could have had the time to make one.

My worrying was interrupted by the buzz of my iPhone with the latest Facebook notification. It just so happened to be the posting of just such a chart on our private Facebook class page by one of my classmates, Rachel Di Pietro, with the tag, “For people in LA Anesthesia.” With the 10 likes and several comments that followed, I was not the only one who was grateful for just such a chart. I went back to my studying, using Rachel’s chart to help, and was better off for it.

As the World Wide Web (the “www.”) turns roughly 22, and we move even further into the 21st

century, we are moving more and more toward a computerized way of life. We have an “app” for this AND that, and it seems that every other person has an iPhone or an “iWhatever.”

When I was in undergrad, it was a rare day that I brought my computer to school. All of my notes were written. But veterinary school is a different animal altogether, and a computer is required. Notes are downloaded, typed, or PowerPoints are annotated. I haven’t bought a paper notebook for school in the past two years. And with the computers at every seat and the Wi-Fi available everywhere, social media becomes inevitable. As second-year veterinary student Holly Burchfield puts it, “It helps a lot, but it can be very distracting.”

Confession: I have used Facebook in class. And not necessarily to find study materials or ask someone a class-related question. I apologize to all of my professors (because I won’t admit to which class or classes I’ve done it in). I can remember a time when the Web was newer, and no one used it to keep in

touch because you had to pay for it by the minute (Does anyone actually remember AOL?). But now, I don't know if my life could be maintained without this chronic electronic connection.

My family is in California, and since I was in the military and didn't do my undergraduate studies at the University of Georgia, most of my friends are scattered all across the country and even around the globe. Maintaining those contacts can be difficult, but I find it necessary to be able to talk to friends who aren't in veterinary school, because after a long day or a punishing test, it is easy to forget how hard I worked to get here, or how many people think that just being in vet school is a pretty huge accomplishment. Without Facebook, I don't think I'd be able to stay in touch as well, because let's face it, a veterinary student's most precious commodity is time. We never have enough of it, and the maintenance of relationships costs time. There are groups for everything, from my class to my pathology group to friends who were stationed in Germany together to one of my most precious support networks, the people I went to London with on a study abroad in 2008. There are about 12 of us who get together several times a year, and we use Facebook to coordinate where and when. We are actors and teachers and social workers and a vet student, and we've been able to be there for each other largely through Facebook.

But Facebook isn't just for maintaining my relationships outside of vet school. As my classmate Chris Perry said to me, "We are in the relationship age, and tools such as Facebook, LinkedIn, and other social media sites are necessary to maintain these relationships and further network." There are 102 students in each class at the UGA CVM, and there just isn't enough time to get to know every single classmate as well as I'd like. There are times that I can empathize with Bilbo Baggins and the speech he gave at his eleventy-first birthday party, in J.R.R. Tolkien's *The Fellowship of the Ring*: "I don't know half of you half as well as I should like; and I like less than half of you half as much as you deserve." Let me assure you, especially Class of 2015: I love my class. But without Facebook allowing us to share our thoughts, our

fears, our worries, I don't think I'd feel as connected to my class as I do. We started our private Facebook class page before we even began orientation, and used it to organize a get-together before we began the official orientation. We can use it to keep each other informed (*Does anyone know which lectures are covered by tomorrow's quiz?*), to keep each other entertained (*Need a study break? Watch this!*), and just to keep in touch. This is something I am very familiar with, as I spent the entirety of last summer overseas. And when I say entirety, I mean I left the day after finals and came back the night before second-year classes began.

**“Without Facebook, I don't think I'd be able to stay in touch as well, because let's face it, a veterinary student's most precious commodity is time.”**

I was so thrilled to see my classmates again I nearly cried when I returned. But I was able to keep in touch with everyone while I was overseas, where phone contact would have been prohibitively expensive and the nine-hour time difference meant people were sleeping when I was free to talk and vice versa. It was on Facebook that I found out Athens was getting its own Chipotle Mexican Grill (I have a serious

obsession with those burritos), that classmates were going on their own adventures, and that people were back in Athens and ready to see everyone again. It was through Facebook that I got a ride home from the airport.

I was even able to consult with my colleagues while I was gone. I spent the summer working at a shelter, and my mentor was the only veterinarian present (and we had no techs, either). One week, his wife had a baby, and I was in the clinic alone. I had a problem with one of our patients, and couldn't reach my mentor. So I turned on Facebook, found a senior in clinics, and was able to do a consult with her to make sure that I wasn't about to harm my patient with good intentions and bad medicine. With regular email, I may or may not have gotten a response quickly enough to help. Because I had Facebook, I didn't have to face that problem alone.

Jennifer Abi Younes, another of my classmates, is going to Wyoming for nine weeks this summer. When I asked her if she planned on using Facebook while out there, she said, "Well, yeah. I'll be all alone out there." No, Jenn. You won't be.



Julie Rushmore in Uganda for part of her dissertation work. Photo provided by Julie Rushmore.

## Q&A with Julie Rushmore

Julie Rushmore is enrolled in the CVM's DVM-PhD dual degree program. She just completed her PhD in ecology, and begins her DVM program this fall.

### Where are you from and what brought you to UGA?

I grew up in Alpharetta, Ga. From 2002 to 2006, I attended Duke University for undergraduate training in biological anthropology. After Duke, I came to the University of Georgia for its top-notch College of Veterinary Medicine and highly-ranked Ecology PhD program (based in the UGA Odum School of Ecology). I was first admitted to UGA's CVM program in 2006, but I deferred for a year to gain some additional research experience. In 2007, I applied to UGA's DVM-PhD dual degree program and started work on my PhD program in the Odum School of Ecology.

### You graduated in May 2013 with a PhD from the UGA Odum School of Ecology. What did you study/research?

My dissertation work focuses on how social behavior affects pathogen transmission and control in wild primates. After spending a year in Uganda collecting non-invasive biological samples and behavioral data for

a community of wild chimpanzees, I used 1) molecular approaches to detect novel chimpanzee sexually transmitted diseases (STDs), and, 2) quantitative modeling techniques to simulate pathogen spread based on behavioral data. With these models, my colleagues and I evaluated the efficacy of several disease intervention strategies. Notably, we used network analysis to identify "risk groups," such as highly-social adult females, that should be targeted in disease control efforts for a variety of pathogen types (e.g., respiratory infections, STDs, Ebola). As compared to randomized vaccination, our modeling showed that targeting highly-social individuals could curtail large disease outbreaks while reducing the number of individuals requiring vaccination by up to 35 percent. Such a reduction could substantially decrease the logistical and financial pressures associated with disease control programs, particularly in the context of endangered wildlife populations. Importantly, the techniques that we used can readily be applied to other species, including humans.

### What prompted you to pursue a dual DVM-PhD degree?

During my four years of undergraduate training at Duke University, I was involved with several ongoing projects at the Duke Lemur Center, including behavioral research projects and a veterinary assistant position to help with lemur health checks. Through this experience, I became increasingly interested in wildlife behavior, ecology and health.

After graduating in 2006 and defending a senior honors thesis on foraging ecology in lemurs, I traveled for several months to learn more about in situ primate conservation. I spent three months studying wildlife health and conservation in Madagascar with Duke researchers, and a month in Vietnam assessing a dwindling population of endangered langurs (monkeys) with a PhD student. By learning first hand about the impact disease transmission has on declining wildlife populations, I became increasingly interested in the role of infectious diseases in wildlife conservation. I saw UGA's DVM-PhD program as an excellent way to bridge my interests in veterinary medicine, disease ecology, and animal behavior. Through this program, I could learn both clinical and research skills that could be applied to wildlife health issues.

#### **And what do you hope to do with this degree?**

My ultimate goal is to merge applied ecological research techniques with clinical knowledge and innovative epidemiological modeling approaches to serve human and animal communities confronted with disease. In particular, my career goals include investigating how patterns of social interactions affect pathogen transmission between humans, wildlife, and domestic animals, with a focus on developing strategies for pathogen control. I envision pursuing this work through academic or governmental avenues (as a university professor or in a CDC federal position), and I aim to maintain a strong applied component to my research.

#### **How does a dual DVM-PhD career help you in pursuing your career goals?**

During my PhD, I learned how to conduct a research project from start to finish. My project focused on a different study species and question than that of my adviser's. In many ways, this pushed me to be quite independent and gave me the opportunity to learn how to truly build a project from scratch (e.g., finding funding, networking to find collaborators, locating a field site and study community). Additionally, pursuing a degree in disease ecology gave me a strong foundation in both field techniques and quantitative modeling approaches. I'm very grateful for my PhD experience because I think it prepared me well for future research.

Additionally, veterinary medicine teaches students to work broadly across multiple host and pathogen systems, and thus will provide a crucial foundation for studying zoonotic diseases affecting a range of host species. Moreover, formal training in clinical medicine will equip me with invaluable skills for outbreak investigation including experience with conducting field necropsies, chemically immobilizing wildlife, and collecting biological samples from wild and domestic animals. During

veterinary school, I will maintain a public health focus in my elective coursework.

I believe that the combination of research skills and clinical veterinary knowledge will be a valuable combination for conducting applied research at the interface of animal and human health.

#### **What aspects of the dual degree program do you hope are most beneficial to you going forward?**

I am really looking forward to participating in externships and clinics. These periods of veterinary school seem like excellent opportunities to network with potential employers and to experience different work environments. In particular, I would like to get involved with public health and wildlife conservation programs in developing countries through organizations such as the CDC and EcoHealth Alliance.

#### **What are you most looking forward to learning about during your time at the CVM?**

I am particularly interested in learning more about the role that veterinarians play in public health and international medicine.

#### **Was there a mentor along the way that helped you take this path?**

Two important mentors come to mind.

While at Duke, I was pre-vet and very focused on applying to veterinary school. My biological anthropology teaching assistant, Catherine Workman (now Dr. Catherine Workman), was extremely influential in pushing me to pursue a more research-based career. Catherine studied foraging behavior in an endangered species of langurs in Vietnam. I visited her at her field site in 2006, which was extremely influential in my decision to apply to the DVM-PhD program.

Dr. Sonia Altizer, an associate professor of infectious disease ecology at the Odum School of Ecology, was my PhD mentor and has played a hugely important role in shaping my ideas and interests as a scientist. Sonia helped me develop a broad foundation in disease ecology and has provided essential feedback and guidance throughout my PhD.

## FOR MORE INFORMATION

For more information about Julie Rushmore's PhD project, visit [t.uga.edu/g4](http://t.uga.edu/g4)

## UGA College of Veterinary Medicine presents Phi Zeta honors to students



Award recipients from the 2013 Phi Zeta Veterinary Honor Society Induction Ceremony. **Back row, left to right:** Don Harn, PhD, professor of infectious diseases; Thomas Griner (DVM '15); Atticus Mabry (DVM '15). **Third row, left to right:** Katie Griner (DVM '15); Elizabeth Rivers (DVM '14); Jennifer Covington (DVM '14); Alyson Frederick (DVM '15); Matthew Beeson (DVM '15). **Second row, left to right:** Amanda DiMascio (DVM '15); Annie Page-Karjian (DVM '11), PhD Candidate in Pathology; Alessandra Keenan (DVM '15); Elizabeth Howerth, DVM, PhD, professor of anatomic pathology; Will Basinger (DVM '16); **First row, left to right:** Karen Christ (DVM '16); Jed Darden (DVM '16); Kaori Sakamoto, MLS, DVM, MS, PhD, DACVP, assistant professor of anatomic pathology; Jane Quandt, DVM, MS, DACVAA, DACVECC (Anesthesia & ECC), associate professor of anesthesiology; Jennifer Munhofen (DVM '16).

The University of Georgia College of Veterinary Medicine 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. Below are the awards given to students. Faculty awards are featured in the Faculty News section.

**The Morrow B. Thompson Award was presented to Dr. Andrew Bugbee**, a third-year resident in small animal internal medicine. The award is presented annually to a senior student, resident or graduate student who excels in veterinary clinical pathology. It is given in memory of its namesake, who received his doctor of veterinary medicine degree from UGA in 1976.

**Matthew Beeson received the Outstanding Sophomore Student Award** for having the highest cumulative grade point average in the second-year class. As part of his award, Beeson will serve as vice president on the Phi Zeta committee for one year.

Fifteen students, who were nominated by their peers, were recognized for their leadership, service and outreach in the community, their place of worship, the UGA College of Veterinary Medicine, student clubs or veterinary fraternities. **The following students received Phi Zeta Leadership, Service and Outreach awards: Stephanie Pullin** from the class of 2013; **Jennifer Covington, Alan Power and Elizabeth Rivers** from the class of 2014; **Amanda DiMascio, Alyson Frederick, Katie Griner,**

**Thomas Griner, Alessandra Keenan and Atticus Mabry** from the class of 2015; **Will Basinger, Karen Christ, Jed Darden, Megan Mathews and Jennifer Munhofen** from the class of 2016.

**New inductees** into the Phi Zeta Honorary Society were **Samantha Baker, Nicole Balsone, Shawna Buerkle, Elizabeth Clemmons, Steven Costello, Shannon Day, Amber Hines, Virginia Poorbaugh, Stephanie Pullin, Claudia Reyner, Erin Schellinger, Heather Trelease, Jennifer Trzcinski, Eleanor Warner and Travis White** from the class of 2013; and **Sarah Blanton, Erin Edwards, Kari Fine, Jenna Gilkeson, Robert Holly, Kirsten Jacobs, Ameyalli Rios Alba, Courtney Sampson, Jenna Shafer and Amanda Vance** from the class of 2014.

Eight residents and graduate students who were inducted are **Dr. Paola Cazzini, Dr. Sheryl Coutermarsh-Ott, Dr.**

**Jennifer Dill, Dr. Monique Silva Franca, Dr. Karelma Frontera-Acevedo, Dr. Nicole Nemeth and Dr. Victoria Watson**, all from the department of pathology. **Dr. Shawn Zimmerman** of the department of infectious diseases also was inducted.

**Winners of the Phi Zeta Manuscript Competition** were **Dr. Annie Page-Karjian** for her study on the “Presence of chelonid fibropapilloma-associated herpesvirus in tumored and non-tumored green turtles, as detected by polymerase chain reaction, in endemic and nonendemic aggregations, Puerto Rico” and **Dr. Erin McConachie** for her study on “Doppler and Volumetric Echocardiographic Methods for Cardiac Output Measurement in Standing Adult Horses.”

## Breitschwerdt focuses on Bartonellosis for Phi Zeta Day



Photo by Christopher B. Herron.

Edward B. Breitschwerdt (DVM '74; pictured above), a professor of internal medicine and infectious disease at North Carolina State University College of Veterinary Medicine, and an adjunct professor of medicine at Duke University Medical Center, was this year's keynote speaker for the annual Phi Zeta Veterinary Honor Society Induction Ceremony. His talk was entitled, “Bartonellosis: Of Cats, Dogs, Mice and Men.”

Breitschwerdt's clinical interests include infectious

diseases, immunology, and nephrology. For more than two decades, his research has emphasized vector-transmitted, intracellular pathogens. He is known internationally for his work, especially with regards to his cutting-edge research in animal and human bartonellosis, which can cause a variety of diseases, including “cat-scratch” disease.

Research in Breitschwerdt's laboratory has uncovered more than 30 new *Bartonella* species, multiple chronically infected animal reservoirs, as well as multiple insects that can transmit the bacteria to both humans and animals. Breitschwerdt and his colleagues recently proposed adding a new postulate of comparative infectious disease causation to Koch's Postulates (a series of criteria used to determine whether a pathogen causes disease).

The Alumni Association of the UGA College of Veterinary Medicine recognized Breitschwerdt in 2004 with a Distinguished Alumnus Award. In addition to his teaching duties, Breitschwerdt also directs the Intracellular Pathogens Research Laboratory in the Center for Comparative Medicine and Translational Research at NCSU, co-directs the Vector Borne Diseases Diagnostic Laboratory, and is director of the NCSU-CVM Biosafety Level 3 Laboratory.

## Grand Council Preparations Given a Southern Twist

By Taylor “Eve” Winkleman (DVM '15)

Omega Tau Sigma’s Eta Chapter has been busy preparing to host the annual OTS Grand Council, the national meeting of all the chapters. The weekend-long event, to be held in November, is designed to showcase the hosting chapter and to bring together OTS members from throughout the United States and Canada.

“The reason we ‘host’ Grand Council is to invite other schools in and show them how we operate, including how awesome our house and parties are,” says Thomas Griner, president of the Eta Chapter and a member of the Class of 2015. “A lot of chapters do not even own a house. We are proud to have one to share with our OTS brothers and sisters from elsewhere in North America.”

Over the past two years, Griner and other chapter members have been making improvements to the OTS house on Burnett St. The lower and upper outdoor decks have been refinished, the flooring in the common room has been replaced, and the basement has been completely renovated, repainted, and redecorated. Recent donations mean that Eta now has a large grill in addition to the rebuilt brick barbecue (site of both the annual pig roast and the perennial favorite Chicken-Q), as well as a new soda fountain, to serve the Chapter’s members and their guests.

The Grand Council committee members plan to give the anticipated 150 guests a true taste of southern hospitality all weekend long. Friday, Nov. 15, the guests will arrive to a true southern barbeque spread, complete with vegetarian and even vegan options. If vegan options can’t be catered, says Grand Council committee co-chair Elyse Paske, “we’ll grill the tofu ourselves.”

“We’re pushing tradition,” says Griner of the Council’s decision to allow spouses and significant others to join in the festivities, as well as extending an invitation to Eta Chapter’s alumni.

Of course, dinner for 250, not to mention a catered awards dinner and a Cowboys-and-Indians-themed Saturday night party full of surprises doesn’t come cheap. The Council estimates that it needs to raise upwards of \$10,000 for the event. “We don’t want to take the money out of member dues because those are supposed to cover their activities for the semester,” says Griner. Nor does the Committee want to cease Eta’s philanthropic activities. (Winning the annual Horse Collar games meant the chapter was able to donate 75 percent of the proceeds of the games to Vets for Pets and People. In addition, members continue to raise money for and volunteer at Athens-Clarke County Animal Control, a service headed up by Philanthropy Chair Marion Floyd.)

Eta Chapter is reaching out to local and national businesses and corporations, asking them to sponsor the event. As its members scatter across the country (and globe) for summer research positions, clinic work and externships, they continue to reach out and work towards making

Grand Council a grand ol’ success, with a southern flair you’d only find in the Classic City.



FOR MORE  
INFORMATION

For more information on Grand Council or to donate, please visit [www.otseta.org](http://www.otseta.org)

# Our Student Ambassadors

CVM student ambassadors serve as representatives of the College's student body and assist with recruitment, outreach and college-related activities to enhance the public image of the College, its students and its programs. Selected each winter, ambassadors must attend training sessions on public speaking, the College's strategic plan, and etiquette to prepare for their role as representatives of the CVM. CVM ambassadors are chosen for their strong leadership qualities, interpersonal skills, and sense of school spirit and pride. CVM ambassadors are available to speak on topics related to student recruitment, veterinary medicine and veterinary-related issues.



Photo by Christopher B. Herron

**Back row, from left to right:** Will Basinger (DVM '16); Matthew Jones (DVM '16); Scott Kelley (DVM '15); William Frederick Marscher IV (DVM '15); Zack Moore (DVM '15); Justin Brown (DVM '16); Patrick Singletary (DVM '16); Brad Angel (DVM '15); Christopher Perry (DVM '15); Deana Veal (DVM '15). **Third row, left to right:** Sarah Breidling (DVM '16); Jennifer James (DVM '15); Heidi Morton (DVM '15); Brittany Paschal (DVM '15); David Lavernoch (DVM '16); Brian Hayes (DVM '16); Megan Harris (DVM '15); Alex Sigmund (DVM '16). **Second row, left to right:** Anna Hill (DVM '16); Kristen Hamsley (DVM '15); Brittany Murphy (DVM '15); Meryl Anderson (DVM '16); Mari-Ashli Foy (DVM '16); Allison Willard (DVM '16); Ashland Roquemore (DVM '16). **Front row, left to right:** Natalie Toulme (DVM '16); Naemah Johnson (DVM '15); Alyson Frederick (DVM '15); Joshua "Jed" Darden (DVM '16); Adrian "Cody" Mannino (DVM '16); Kimberly Pueblo (DVM '16); Annette Louviere (DVM '16); Marion Floyd (DVM '15).

## Highlights from the 2013 Honors and Awards Banquet

**Emily Waggoner (DVM '13)** was awarded the American College of Veterinary Radiology Award, for demonstrating outstanding enthusiasm and understanding for diagnostic and therapeutic radiology. She was also awarded the Large Animal "In-House" Award, awarded to a fourth-year student who demonstrates exceptional proficiency in large animal medicine and surgery to "in-house" faculty. She also received the Food Animal Production Medicine Clinical Proficiency Award; the Faculty Scholastic Plaque and Clifford E. Westerfield Award, for having the highest scholastic average for her entire four years at the CVM; and the Dean Emeritus Thomas J. Jones Cup, which honors an outstanding fourth-year student selected on the basis of personality, professional proficiency, and scholastic achievement.

**Claudia Reyner (DVM '13)** was awarded the American College of Veterinary Internal Medicine Certificate of Clinical Excellence, given to a senior student who demonstrates a sincere interest in internal medicine.

**Alec Davern (DVM '13)** received the American College of Veterinary Surgeons Award, given to a senior student who has excelled in large animal surgery, and the Field Services Award, given to the student who has demonstrated exceptional clinical proficiency and a general interest in large animal medicine to the field service faculty.

**Victoria Churchill (DVM '13)** was awarded the John Morton Award for Humane Animal Care, which recognizes a senior student in large animal medicine demonstrating the most concern for the humane treatment of animals in the hospital. The award is named in memory of retired CVM faculty member Dr. John D. Morton.

**Dustin Major (DVM '13)** received the Novartis/Ethicon Surgical Excellence Award, given to a senior student who has demonstrated outstanding surgical skill and academic performance at the CVM.

**Stephanie Bradshaw, Robert Campbell, Tori Moore, Erin Schellinger, Christy Cain Stancil, Cheryl Stiehl, Caitlin Tenewitz and Lea Warner, all members of the Class of 2013,** were all awarded

Certificates of Merit for Proficiency in Large Animal Medicine and Surgery.

**Jessica Beck, Elizabeth Dale, Ember Epperson, Anna Jeffers, Christina Parr and Lacy Strom, all members of the Class of 2013,** were awarded Certificates of Merit for Proficiency in Pathology.

**Justin Graham, Sawyer Howell, and Brian Warr, members of the Class of 2013,** each received the Food Animal Production Medicine Clinical Proficiency Award, given to students who have consistently demonstrated a sincere passion and outstanding performance in the field of beef, dairy or swine production medicine.

**Morika Ogawa (DVM '13)** was awarded the American College of Veterinary Anesthesia and Analgesia Award, presented to a senior student who exemplified clinical proficiency in anesthesia.

**Clara Moran and Amanda Smith, members of the Class of 2013,** were each awarded an American College of Veterinary Internal Medicine Certificate of Clinical Excellence, presented to senior students who demonstrate a sincere interest in internal medicine and outstanding didactic and clinical expertise in internal medicine.

**Clara Moran (DVM '13)** also received the John Oliver Neurology Award, awarded to a senior student who demonstrates exceptional proficiency and interest in clinical neurology.

**Jennifer Trzcinski Given (DVM '13)** received the American College of Veterinary Surgeons Award, given to a senior student who has excelled in small animal surgery, and also the Veterinarian-of-the-Year Award, presented to a senior student who has demonstrated professionalism, commitment, and scholastic excellence.

**Zachary Daniel (DVM '13)** received the Award for Academic Excellence in Veterinary Ophthalmology, given to a fourth-year student who demonstrates a sincere interest in and aptitude for veterinary ophthalmology. He also received the Bayer Excellence in Communication Award, for presenting the strongest communication skills during a client

interview, and the Novartis/Ethicon Surgical Excellence Award, for demonstrating outstanding surgical skill and academic performance.

**Cheryl Coplon (DVM '13)** received the Award for Proficiency in Emergency and Critical Care, given to a fourth-year student who demonstrates exceptional proficiency and commitment to veterinary emergency and critical care.

**Stephanie Pullin (DVM '13)** received the Blanch D. Hayes Award, given to a fourth-year student who demonstrates excellence in the care and treatment of feline patients and who has an exemplary “cage-side manner.”

**Ashley Ballew (DVM '13)** received the Kaytee Avian and Special Species Excellence Award, given to a senior student who has demonstrated excellence in the field of companion bird and non-domestic avian medicine, surgery and management.

**Jake Tripp (DVM '13)** was awarded the John Morton Award for Humane Animal Care, which recognizes a senior student in small animal medicine demonstrating the most concern for the humane treatment of animals in the hospital.

**Robert Gooden (DVM '13)** was awarded the Outstanding Senior Oncology Student Scholarship, presented to a senior student who has demonstrated exemplary proficiency in oncology.

**Adrienne Zercher Stringham (DVM '13)** was awarded the Rafter Memorial Scholarship, for demonstrating proficiency in oncology and compassion for both patient and client; and the Veterinary Cancer Society Student Award for Proficiency in Clinical Oncology, presented to a senior student demonstrating superior aptitude in the diagnosis, treatment, and general care of companion animals affected by malignant disease.

**Elizabeth Antley, Nicole Balsone, Emily Falls, Rudy Rivas, Kasey Stopp, Sarah Warmington and Travis White, all members of the Class of 2013,** were presented with Certificates of Merit for Proficiency in Small Animal Medicine and Surgery, for demonstrating exceptional proficiency in this area.

## Congratulations!

The following clinical residents recently completed their residencies at our College, and passed their specialty boards:

**Dr. Mitchell Kaye** — a Diplomate of the American College of Veterinary Internal Medicine, in Oncology

**Dr. Cortenay Freeman** — a Diplomate of the American College of Veterinary Internal Medicine, in Neurology

**Dr. Rachel Mathias** — a Diplomate of the American College of Veterinary Internal Medicine, in Ophthalmology

**Dr. Danielle Babski** — a Diplomate of the American College of Veterinary Emergency and Critical Care

**Dr. Sherisse Sakals** — a Diplomate of the American College of Veterinary Surgeons

**Dr. Erin McConachie** — a Diplomate of the American College of Veterinary Internal Medicine, in Large Animal Medicine

**Dr. Wesley Lee** — a Diplomate of the American College of Veterinary Surgeons, in Large Animal Surgery

**Dr. Eli Cohen** — a Diplomate of the American College of Veterinary Radiology

**Dr. Donna Almondi** — a Diplomate of the American College of Veterinary Radiology

**Dr. Alexandra Moesta** — a Diplomate of the American College of Veterinary Behaviorists

**Dr. Mami Irimajiri** — a Diplomate of the American College of Veterinary Behaviorists

**Dr. Bala Manickam** — a Diplomate of the American College of Veterinary Pathologists, in Anatomic Pathology

# FacultyNews

Four UGA CVM faculty members were awarded Outstanding Teaching Awards at the 2013 UGA Faculty Recognition Banquet in April. The award recipients were **Simon Platt, BVM&S, MRCVS, DACVIM (Neurology), DECVN**, a professor of neurology and neurosurgery; **Marc Kent, DVM, DACVIM (Internal Medicine; Neurology)**, an associate professor of neurology and neurosurgery; **Ira G. Roth, (DVM '86)**, director of the UGA Community Practice Clinic; and, **James N. Moore, DVM, PhD**, a professor of large animal medicine.



Roth

Five CVM faculty members were recognized by veterinary students for their contributions to the students' education during this past academic year: **Cherlyn Roberts (DVM '82)**, a senior lecturer in anatomy, by the Class of 2016; **Corrie Brown, DVM PhD, DACVP**, a professor of anatomic pathology, by the Class of 2015; **Marc Kent, DVM DACVIM (Internal Medicine; Neurology)**, an associate professor of neurology and neurosurgery, by the Class of 2014; **Benjamin Brainard, VMD, DACVA, DACVECC**, an associate professor of emergency and critical care medicine, by the Class of 2013; **Sherry Sanderson, DVM, PhD, DACVIM, DACVN**, an associate professor of physiology and pharmacology, was awarded the Zoetis Distinguished Veterinary Teacher Award, an 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.



Brainard

**Holly Moore Brown, (DVM '01, PhD '10), and Ajay Sharma, BVSc&AH, MVSc, DVM, DAVCR**, have been selected to participate in the 2013-2014 UGA Teaching Academy Fellows Program, an early career mentoring program. Dr. Brown is an instructor of clinical pathology; Dr. Sharma is an assistant professor of diagnostic imaging.

**Donald Harn, MA, PhD**, a professor of infectious diseases and a Georgia Research Alliance Distinguished Investigator, received the Zoetis Award for Excellence in Research. Examples of Harn's accomplishments include possible therapies for psoriasis, autoimmune encephalomyelitis and diabetes, as well as the prevention of human schistosomiasis through the vaccination of animal reservoirs.

**Kelsey Hart, DVM, (PhD '10), DACVIM (Large Animal)**, an assistant professor of large animal medicine, received the Clinical Research Award for her work in understanding the interactions between the immune and endocrine systems during critical illness in foals and also the role of equine metabolism in general. Hart is currently working with multiple treatment centers to evaluate a low-dose hydrocortisone treatment regimen for septic foals, research that may lead to better understanding and treatment of critical illness-related cortisol insufficiency, or CIRCI, in septic people. **Hart** also received the David Tyler Award for Advances in Teaching.

The John M. Bowen Award for Excellence in Animal/Biomedical Research was awarded to **Kaori Sakamoto, MLS, DVM, MS, PhD, DACVP**, for her work in understanding the mechanisms associated with manipulation of the innate immune response to pathogens in vertebrates. Her primary research emphasis is in the study of macrophages. Sakamoto is an assistant professor of anatomic pathology.



Sakamoto



Quandt

The Outstanding Hospital Service Award was presented to **Jane Quandt, DVM, MS, DACVAA, DACVECC (Anesthesia and ECC)**, an associate professor of anesthesiology, for providing exceptional service to faculty, staff and students in both the large and small animal departments, as well as exceptional patient care to all patients.

The Charles Dobbins Award for Excellence in Service was awarded to **Elizabeth Howerth, DVM, PhD, DACVP**, a professor of anatomic pathology, for her service to the College and to her profession. Howerth's expertise and interest in diseases of exotic animals were instrumental in the formation of the UGA Zoo and Exotic Animal Pathology Service, a service that provides pathology support to Zoo Atlanta and other zoological parks. Howerth also heads her department's surgical pathology service, manages the residency program in anatomic pathology, and is an active member of the American College of Veterinary Pathologists.

**Uriel Blas-Machado, DVM, PhD, DACVP**, an associate professor of anatomic pathology, received the Outstanding Laboratory Service Award for his efforts to expand the services offered by the Athens Veterinary Diagnostic Laboratory to include marine mammals and laboratory animals.

**Ira G. Roth, (DVM '86)**, director of the UGA Community Practice Clinic, was inducted into the Phi Zeta Veterinary Honor Society.

**Sonia Hernandez, DVM PhD, DACZM**, was awarded the Warnell Faculty Award for Outstanding Teaching. Hernandez was also the recipient of the 2013 Western Veterinary Conference's Avian and Exotics Continuing Educator of the Year. Hernandez is an assistant professor of wildlife disease ecology; she is jointly appointed to the Warnell School of Forestry and Natural Resources, and the Southeastern Cooperative Wildlife Disease Study at the CVM.



*Hernandez*

**Corrie Brown, DVM, PhD, DACVP**, a professor of anatomic pathology, was selected by the American Veterinary Medical Association's Committee on International Veterinary Affairs as the winner of the 2013 American Veterinary Medicine Association's XIIth International Veterinary Congress Prize.

**Molly Shepard, DVM**, a clinical instructor of anesthesia, is a Diplomate of the American College of Veterinary Anesthesia and Analgesia.

**Allison Haley, DVM**, an assistant professor of neurology and neurosurgery, is a Diplomate of the American College of Veterinary Internal Medicine (Neurology).



*Haley*

**Brenton Credille, (DVM '08)**, an assistant professor of beef production, is a Diplomate of the American College of Veterinary Internal Medicine (Large Animal Medicine).

The CVM received three of 26 grants awarded throughout the University by the Office of the Vice President for Instruction:

- **Allison Haley, DVM, MRCVS, DACVIM (Neurology); Simon Platt, BVM&S, MRCVS, DACVIM (Neurology), DECVN; and Marc Kent, DVM, DACVIM (Internal Medicine & Neurology):** "Development of an Internet Based, Interactive Canine Neurology Teaching Model"
- **Kelsey A. Hart, DVM, (PhD '10), DACVIM (Large Animal Medicine); James N. Moore, DVM, PhD, DACVS (Large Animal); Robert M. Gogal, DVM; Ira G. Roth, (DVM '86); and Sun Joo (Grace) Ahn (Advertising/Public Relations), of the Grady College of Journalism:** "Interactive Tools for Enhancing Instruction of Veterinary Diagnostic Skills"
- **Mary Hondalus, DVM, PhD; Sreekumari Rajeev, BVSC, PhD, DACVM; Brad Gilleland and Chris Herron, of the CVM's Educational Resources Center:** "Incorporation of Computer Animated and Interactive Laboratory Learning Modules and Clinical Case Workup for Enhancement of Veterinary Student Engagement and Retention of Veterinary Microbiology"



Photo by Henry Moore Jr. WSU/BSU

## Budsberg Awarded Washington State University Distinguished Alumnus Award

**Steven C. Budsberg** (pictured above, right), an alumnus of Washington State University ('80 BS, '83 DVM, '83 MS) and faculty member at the UGA CVM, was awarded the Washington State University College of Veterinary Medicine's Distinguished Veterinary Alumnus Award. The award is given to honor distinguished graduates for veterinary excellence in teaching and research.

Budsberg is a professor of orthopedic surgery and Director of Clinical Research for the UGA College of Veterinary Medicine. He enhances knowledge within the veterinary community through research, teaching residents and veterinary students, mentoring of young faculty, and supporting clinical research. His research has had a major impact on the understanding of osteoarthritis, gait mechanics and orthopedics. He is also a leader in the study of use of NSAIDs (non-steroidal anti-inflammatory drugs) in pain management. He established an internationally-recognized research laboratory in musculoskeletal research, and is the recipient of more than \$5 million in research funding.

## Dr. Doris Miller awarded prestigious Barnard Hill Award

**Doris Miller** (BS '73, DVM '76, MS '79, PhD '81), a professor of veterinary pathology and associate director of state government relations for the Athens Veterinary Diagnostic Laboratory (AVDL) at the UGA College of Veterinary Medicine, was awarded the Walter Barnard Hill Award for Distinguished Achievement in University Public Service and Outreach. The award was given for

recognition of her outstanding contributions to the improvement of the quality of life in Georgia or elsewhere.

Miller joined the CVM in 1981. During her 19 years as head of the AVDL, she helped introduce new technologies that lowered the turnaround time for some test results from up to three weeks to up to three days, and thereby significantly lowered rates for morbidity and mortality in herds on Georgia farms. She oversaw the integration of the CVM's and AVDL's necropsy services, which eliminated redundancies and significantly enhanced the number of teaching cases available for training students. Under her leadership, the AVDL became designated as one of only six core laboratories in the USDA National Animal Health Laboratory Network which works to respond to animal health emergencies, bioterrorism events, and emerging and foreign animal diseases.

Miller is also a recognized leader in the field of veterinary diagnostic and forensic pathology, and provides her expertise to local veterinarians and law enforcement officers in their efforts to prosecute cases of animal cruelty; she receives no compensation for this work.

In 1984, she established the CVM's Human-Animal Bond Pet Visitation Program, which has expanded beyond visitations to nursing homes to also include visitations to school children and youth organizations. Miller has assisted many of our CVM graduates in establishing similar programs in their own communities. She also has had success in working with the Georgia General Assembly in advancing legislation that improved animal health, animal welfare, veterinary practice, the UGA College of Veterinary Medicine, and other key mission areas. She has also exerted tenacious support for the construction of the new Veterinary Medical Learning Center, thereby continuing her legacy of public service and outreach.



Pictured from left: Jennifer Frum, Vice President for UGA Public Service and Outreach; Doris Miller; UGA CVM Dean Sheila W. Allen; outgoing UGA President Michael F. Adams.

## Remembering Dr. Hollett

Dr. Bruce Hollett (DVM '72), a professor in the UGA CVM Department of Large Animal Medicine, died Tuesday, April 23, 2013, after a battle with cancer. Known as a loyal and personable large animal veterinarian specializing in animal reproduction, Hollett left private practice to become the equine veterinarian for the University of Georgia Cooperative Extension Service in 1989. He joined the CVM faculty, specializing in theriogenology, in 1991.

Hollett was known for cultivating a loyal cadre of clients through the UGA Veterinary Teaching Hospital, including the Uga mascots. The Seiler family, who own the Uga line, even named one bulldog for Hollett: "Big Bad Bruce" was Uga VIII, and served for part of the 2010 football season. Hollett served as the Director of Continuing Education for the CVM for 22 years, always ready with a cheerful greeting at the conference door. Within the College, he was known as a leader, and served as Chief of Staff for Field Services, and Associate Dean for Public Service and Outreach. He was much admired by his colleagues for his willingness to serve, for his humble nature, and for his collegiality.

A true gentleman in every sense of the word, his positive outlook, compassionate nature, and friendly demeanor were enjoyed by all who knew him. The College is currently working to endow a fellowship in his memory. **For more information about the Hollett Fellowship Fund, contact [give2vet@uga.edu](mailto:give2vet@uga.edu) or 706.542.1807.**



## New Faculty

**Molly Shepard, DVM, DACVAA, clinical assistant professor of anesthesia; Large Animal Medicine**

**Kathryn Seabaugh, DVM, MS, DACVS, clinical assistant professor of equine ambulatory and sports medicine; Large Animal Medicine**

**Jarred M. Williams, MS, DVM, DACVS, clinical assistant professor of emergency medicine; Large Animal Medicine**

**Michele Barletta, DVM, MS, PhD, DACVAA, assistant professor of anesthesia; Large Animal Medicine**

**Monique Silva de Franca, DVM, PhD, DACPV, assistant professor of avian pathology; Population Health (PDRC)**

**Amanda Erickson Coleman, DVM, DACVIM (Cardiology), assistant professor of cardiology; Small Animal Medicine and Surgery**

## Don't miss the Dean's Tailgate!



Join us before the  
LSU game  
**September 28**  
3 hours  
before kickoff



## College of Veterinary Medicine Alumni Association

### MEMBERS OF THE EXECUTIVE BOARD

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Rebecca Dixon (DVM '02)  
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*Greetings from your Alumni Association!*

*H*ello fellow Alumni!

I hope you are enjoying the season! The UGA College of Veterinary Medicine has been busy. The 50th Annual Veterinary Conference & Alumni Weekend, held in March, was a huge success. If you do not attend the annual conference on a regular basis, you are missing out on a great opportunity to reconnect with Athens, the University, the College, and your colleagues. Please plan to join us next year, March 28-29, for this great annual event.

Building continues on the new Veterinary Medical Learning Center (VMLC). With our continued support, this facility will enhance the CVM's prestige, and become the benchmark for other colleges. This new center of learning will become a source of pride for the entire University System of Georgia. You may follow the VMLC's construction progress on the CVM's website at [www.vet.uga.edu/VMLC](http://www.vet.uga.edu/VMLC). Please consider making a donation to help the CVM complete its vision for this project.

Late summer and fall offer us more opportunities to reconnect. I invite you to join us for "Hawaii Dawg-O" on Aug. 3. This event raises money for the G.R.A.C.E. Fund and other dog-related charities. This year's event will be at The Foundry Park Inn in Athens, and will feature music from The Swinging Medallions.

And don't forget to join us for the Dean's Tailgate party, on September 28, just before the UGA vs. LSU football game. There's nothing like Athens in the fall!

YOUR Alumni Association wishes each of you good health and prosperity! I look forward to seeing you at an event this year!

Sincerely,

*R. Flynn Nance*

DVM, MS  
President, Class of 1983

 FOLLOW THE CVM AND ALUMNI ASSOCIATION'S CURRENT ACTIVITIES!

- [www.vet.uga.edu](http://www.vet.uga.edu)
- [www.facebook.com/UGACVM](https://www.facebook.com/UGACVM)
- [twitter.com/ugavetmed](https://twitter.com/ugavetmed)

## Alumni Association recognizes three colleagues at Annual Conference

Three alumni from the University of Georgia College of Veterinary Medicine were recognized 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 50<sup>th</sup> Annual Veterinary Conference and Alumni Weekend, held in Athens.

**Adam C. Eichelberger (DVM '03)**, of Aiken, S.C., was recognized with the **Young Achiever Award for 2013**. Eichelberger joined Clemson University in October 2010 as an extension/field veterinarian for their Livestock Poultry Health division and the South Carolina State Veterinarian's Office; his emphasis is on equine and dairy cattle, and regulatory issues. He is also the current interim director for Clemson's Animal Health Programs. Eichelberger, and his team, work directly with the state veterinarian to protect, educate and regulate the livestock and poultry industries of South Carolina. He is also an adjunct professor of animal and veterinary science, a trained foreign animal disease diagnostician, a board member for the South Carolina Horsemen's Council, and a member of the board of directors for the South Carolina Association of Veterinarians. Eichelberger is board-certified by the American College of Theriogenologists.



Adam Eichelberger (DVM '03), right, received the Young Achiever Award. He is pictured with Veterinary Alumni Association President Flynn Nance (DVM '83). Photo by Sue Myers Smith.

**John E. Hayes (DVM '63)**, of Ruckersville, Va., was recognized with a **Distinguished Alumnus Award**. Hayes is a well-known mixed animal



John Hayes (DVM '63), right, received the Distinguished Alumnus Award. He is pictured with Veterinary Alumni Association President Flynn Nance (DVM '83). Photo by Sue Myers Smith.

practitioner from the Virginia-Maryland region. He opened Squire Veterinary Clinic in 1966, which for years was known as the largest solo practice in Maryland. After selling Squire, he opened, grew, and later sold a second successful practice. Throughout his career, Hayes has provided low-cost or no-cost veterinary care to animals whose owners could not otherwise afford care for their pets. He has also been extremely active in shelter medicine, and has worked to raise the standard of care provided at shelters in his region. In 2007, he helped open the Madison-Green Humane Society's low-cost spay/neuter clinic, where he still works weekly and remains otherwise on-call—all at no charge. He also mentors professional colleagues, as well as students who want to become veterinarians. Hayes was instrumental in launching a foundation to provide scholarships and loans to veterinary students. In addition, he is active in his local community. Weekly, for the last seven years, he has lent his voice to the Recording for the Blind and Dyslexic Program in Albemarle County, Va.



Susan Fubini (DVM '80) received the Distinguished Alumna Award. Photo courtesy of Susan Fubini.

**Susan Lawson Fubini (DVM '80)**, of Ithaca, N.Y., received the **Distinguished Alumna Award**. Fubini is a professor of and section chief for large animal surgery at the Cornell University College of Veterinary Medicine. She joined Cornell's faculty in 1983, following the completion of her large animal surgery residency at the university. Her gift for teaching and service

was recognized almost immediately, as the Class of 1983 awarded her the Outstanding House Staff Award. Seven years later, her teaching efforts were recognized with the Norden Distinguished Teacher of the Year Award. An accomplished writer and researcher, Fubini has co-authored the leading farm animal surgery text, authored or

co-authored nine book chapters, and been lead-author or co-author on 79 published studies. On dozens of occasions, she has accepted invitations to share her expertise at regional, state, national or international conferences. She has served as a reviewer to multiple veterinary journals. And, she has been an active member, serving on multiple committees, of the American College of Veterinary Surgeons.

*The Alumni Association of the College of Veterinary Medicine presents awards annually to alumni based on contributions to animal and human health-related public service; contributions to the local community, state or nation; professional service; involvement in veterinary educational research and/or service; involvement in veterinary associations at the local, state, or national level; and contributions to the College's alumni association. Young Achiever Award nominees are selected from alumni who have graduated in the last nine, 10 or 11 years. The 2013 awards were presented at the college's annual conference, on March 23.*



## Send In Your Nominations Today!

Award nominations due by October 1, 2013

Help us identify members of our alumni community who should be recognized for their contributions to our profession!

Send us your nominations for the Alumni Association's "Young Achiever Award" and its highest honor, the "Distinguished Alumnus Award." In two pages or less, describe your nominee's contributions in one or more of the following areas:

- Animal and human health-related public service
- Contributions to the local community, state, or nation
- Professional service
- Involvement in veterinary educational research and/or service
- Involvement in veterinary associations at the local, state, or national level
- Contributions to the College's Alumni Association
- Young Achiever nominees must come from the classes of 2003, 2004 or 2005

Send the completed form and include background information such as a CV and a letter explaining their accomplishments. You may nominate more than one person. Additional forms are available on our website at [vet.uga.edu/alumni](http://vet.uga.edu/alumni)

### Questions?

Phone: 706.542.7049 • Fax: 706.583.0242 • E-mail: [vetalums@uga.edu](mailto:vetalums@uga.edu)

**My nominee for the 2014 (circle one)**  
Distinguished Alumnus / Young Achiever Award

Name of Nominee

Address of Nominee

Phone number

**So we can inform you of your nominee's status**

Your name

Your mailing address

Your email

Your phone number

Please send this form and background information to:

**Director of Alumni Relations**  
**UGA College of Veterinary Medicine**  
**Athens, GA 30602-7371**

**Nominations without background information will not be considered.**

## Eggleston and Walton Awarded Fraternity Awards



Eggleston

**Randall (Randy) Eggleston, DVM**, received the **A.M. Mills Award** for 2013 from the Lambda Chapter of Alpha Psi. The fraternity's members selected Eggleston because they found him to be an exceptional teacher and friend who is advancing the welfare of the veterinary profession.

Eggleston came to the University of Georgia College of Veterinary Medicine Department of Large Animal Medicine as a clinical intern in July 1995, shortly after completing his DVM at Kansas State University.

He has remained at Georgia in advancing positions and became a diplomate of the American College of Veterinary Surgeons in 2003; since 2009, he has served as Chief of Staff of the UGA Large Animal Hospital. In the past 14 years, he has trained 58 interns, nine residents, and has taught hundreds of veterinary students in large animal medicine and surgery.

**Ed Walton (DVM '76)** received the **2013 Dr. Fred C. Davison Award for Distinguished Service**. The

award was established in 1986 by the Eta Chapter of the Omega Tau Sigma Veterinary Fraternity in recognition of Davison's many contributions to the University of Georgia and the veterinary profession. The award recognizes faculty for their sustained public service and leadership role in their community, the University, and the fraternity.



Walton

Walton received the award in recognition of his continuous exemplary public service and leadership to his community, church, fraternity and Georgia. Aside from his love for the Georgia Bulldogs, he has been a man committed to his family, his community and profession.



## Alumni Sing Song at 50th Reunion

At their 50th reunion in March, members of the CVM Class of 1963 and their wives shared a song they called "Vet School Days." Roberta Ramsey, wife of class member Jim Ramsey, penned the words during the class's third year in veterinary school. The words are sung to the tune "Memories are Made of This," the most popular version of which was sung by Dean Martin and reached No. 1 on the Billboard chart for six weeks in 1956. Those who sung the tune at the 2013 class reunion, pictured left to right, are: Sandy Williams, Bill Williams, Roberta Ramsay at the podium, Jim Ramsay, Byron Verdin, Victor Puckett, Dot Puckett, Ed Phillips, Eloise Verdin and John Hayes. Below are the words to their song:

### Vet School Days

Take one registration day  
Add the fees that he must pay.  
Some books, some tools  
More fees, more rules.  
Vet School days are made of this.

Don't forget those hour exams  
Pre-fabs full of study jams.  
More work, less play  
More fees, less pay.  
Vet School days are made of this.  
Then comes the summer days  
When he's so far away  
Inspecting chickens, making dough.  
Christmas is here and past  
Clinics are here at last.  
Just one more year to go.

Graduation day is here  
State boards start to give us fear.  
Where to, What'll we do?  
We're going to miss you.  
Vet School days are made of this.

## From Athens to Atlanta to Africa

Alumna's career path led her from practicing small animal medicine to protecting public health

By Jessica Luton



Photo provided by the U.S. Centers for Disease Control and Prevention.

Nina Marano (DVM '84; pictured above) remembers her time at the UGA College of Veterinary Medicine quite well. She lives in Kenya now, and as the director for the U.S. Centers for Disease Control and Prevention's Refugee Health Program for Africa, she helps ensure that refugees and immigrants from Africa who are seeking new lives in the United States are as healthy as possible, and will be well-connected to healthcare services when they arrive in the U.S.

Her work with the CDC helps prevent the spread of diseases across international borders through a public health perspective that requires a shared responsibility between the public sector, the private sector, and the individual. This shared responsibility begins at home with

hand washing.

The program is vital to promoting the health of the newest immigrants to America. "Increases in population mobility," she said, "and the portion of the U.S. population that are immigrants, refugees, and children of immigrants, as well as the globalization of travel and trade, are important contributing factors to the emergence and spread of communicable diseases including tuberculosis, influenza, measles, polio, dengue fever, and cholera."

But even from halfway across the world, Marano remembers the seed that was planted early on in her career as a UGA CVM student.

### From Herd Health to Public Health

Marano didn't always envision herself in this type of career. She always thought she'd be a small animal practitioner. But an education at the UGA CVM in infectious diseases helped root within her a desire for a different type of career.

"Veterinarians are trained to deal with herd health and focus on preventive medicine which makes them uniquely prepared to deal with public health challenges," she said. "Remember that 60 percent of pathogens that infect humans are zoonotic in origin, and of emerging infectious diseases, 75 percent are zoonotic. My UGA CVM training in the basic sciences, anatomy, clinical pathology, principles of vaccination, and zoonotic diseases was essential for my transition to the world of public health. I can remember my UGA CVM senior year experience of being on equine medicine block at the height of colic season. I must have stayed in the large animal barn around-the-clock for six weeks."

Her interest in population health piqued during her time at UGA and was further realized during her first few years as a veterinarian in Atlanta when she worked for Dr. Andy Smith (DVM '83) at the Powers Ferry Animal Hospital in Atlanta—where she continued to work part-time until she left for her new position in Africa.

"I was thrilled to be accepted to veterinary school and pictured myself as a small animal clinician," she said. "After graduation from the CVM, I never thought I'd be working outside of a small animal clinical setting, but I paid attention to what I enjoyed most about practicing veterinary medicine, which was counseling clients about zoonotic disease prevention. Once I realized that, I began

to explore the opportunities for a career in public health.”

She visited the CDC and spoke to veterinarians who worked in the CDC Rickettsial Zoonoses Branch to learn about what they did. She visited Emory University and spoke to professors at the Emory University Rollins School of Public Health. And she visited the UGA CVM to talk with one of her favorite professors, Craig E. Greene (now retired from the College), about her decision to pursue a career in public health.

“Dr. Greene encouraged my dreams by getting me involved in a joint CVM-CDC project to evaluate sera collected from shelter cats for *Bartonella* species which include the agent that causes Cat Scratch Disease in humans,” she said. Two Emory University professors and CDC employees—Eugene Gangarosa, an international expert on waterborne diseases, and Joe McDade, who led the team that discovered the bacteria responsible for Legionnaires’ disease—helped cement her decision to pursue a career in public health, she said.

### Growing a Public Health Career

Marano earned a master’s in public health at Emory in 1998 and began working as an epidemiologist in the CDC Foodborne and Diarrheal Diseases Branch, monitoring antimicrobial resistance patterns of *Salmonella* isolates. She then moved to the Bacterial Special Pathogens Branch to lead a study of the effectiveness and safety of anthrax vaccine.

From 2004 to 2006, she helped the CDC forge new partnerships with the veterinary medical community, serving as the CDC’s veterinary public health liaison. Her work resulted in collaborations with the World Organization for Animal Health, the National Wildlife Health Center and the development of a CDC-sponsored research program on influenza at the human-animal interface.

And yet, despite an already full breadth of accomplishments to speak of early on in her public health career, she met someone that would change the trajectory of the path ahead—in a big way.

“In June 2006, I met Dr. Marty Cetron, the Director of the CDC Division of Global Migration and Quarantine (DGMQ). Since that time I’ve been fortunate to work under his inspirational leadership in almost every unit of the Division, first as the Branch Chief for the Travelers’ Health and Animal Importation Branch,” she said. “In July 2009, I became the Branch Chief for the Quarantine and Border Health Services Branch where I worked on national policy, regulations, and research to mitigate translocation of pathogens and other health risks via travel and transportation.”

During that time, the staff of the Quarantine Branch responded to events including 2009 Influenza A H1N1, earthquake and cholera in Haiti, and nuclear radiation leakage in Japan.

### A Blooming Opportunity

DGMQ has three international field stations—in Nairobi, Kenya; Bangkok, Thailand; and Mexico City—that focus on immigrant, refugee and border health issues. When an opening for the director of the Nairobi field station was announced in 2012, Marano applied for the opportunity to work for DGMQ on immigrant and refugee health in Africa.

“Public health and veterinary medicine are similar in that its practitioners are championing to protect the health of the most vulnerable populations who can’t necessarily speak up for themselves,” she said.

Seeing the results of work in public health can be difficult, she said, because most projects take years to accomplish and are team-based, not just individual efforts. However, in the course of her career thus far, Marano is proud to have contributed to efforts to make the anthrax vaccine safer, bring the worlds of human health and animal health closer together, and to promote the health of refugees who are indeed among the world’s most vulnerable populations.

For students who’d like to follow in her footsteps in an international setting, it’s important to remember to be a good ambassador for your organization and country.

“Remember that you are a visitor in someone else’s country and that respect for the country’s culture is very important. Being patient, while maintaining your sense of humor and your work-life balance, are also important contributing factors to a positive experience in living overseas,” shared Marano.

## FOR MORE INFORMATION

Find out more about what CDC DGMQ does to protect the health of travelers, refugees, and immigrants at: [www.cdc.gov/nceid/dgmq](http://www.cdc.gov/nceid/dgmq)

For DVM students who want to gain international experience in veterinary medicine, the CVM offers an interdisciplinary Certificate in International Veterinary Medicine. For more information, visit [www.vet.uga.edu/academic/international-program/](http://www.vet.uga.edu/academic/international-program/)



The arbor at the Habitat park site. Photo by Chris McDowell.

## Snyder Barn Lives on in New Projects

By Sarah Freeman

While there are bound to be some sentimental thoughts from UGA CVM alumni about the demolition of the large animal Snyder Barn, all should be comforted by the fact that many parts of the barn were salvaged and reused to benefit other building projects around the University campus and the surrounding community. The Snyder Barn, which stood near the corner of College Station and Barnett Shoals roads, was demolished early January 2013 to make way for the new UGA Veterinary Medical Learning Center (VMLC).

“A majority of the building was either recycled or reused,” says Chris McDowell, program coordinator of the Material Reuse Program, a department within the UGA College of Environment and Design that reclaims materials from demolition projects and uses them for future landscape projects.

According to McDowell, the metal exterior was recycled, while almost all of the wood was salvaged for reuse in building projects. Even the surrounding fencing was reclaimed. He estimates that approximately 70,000 pounds of barn materials and fencing was reclaimed, and that only about 10 percent of the building, including

contents like fiberglass and insulation foam, was not reused.

Projects that have benefited or will benefit in the near future from the wood from the Snyder Barn include, but are not limited to:

- Community space for Casa de Amistad, a project coordinated with the Athens Land Trust and the UGA Latin American and Caribbean Studies Institute to construct container gardens in select Athens neighborhoods;
- Construction of a bird blind at Panola State Park, a project designed by a UGA student;
- A pavilion built for compost at the Athens-Clarke County Recycling Center;
- Nature walk edging for Hill Chapel Baptist Church, located in Athens;
- Construction materials for a new park coordinated through Habitat for Humanity and LABash 2013, a student-run Landscape Architecture conference held at UGA this year; the park used wood from the barn to construct an arbor.

McDowell estimates that, in total, the materials from the Snyder Barn will be used in more than a dozen projects.

In addition to projects sponsored by the Material Reuse Program, several parts of the barn were moved for reuse in other CVM-owned facilities, according to Joel Bacon, head design engineer for the College of Veterinary Medicine. Bacon coordinated the demolition of the Snyder Barn, along with colleagues Michael Midler and Jon Casey. Items that included stall doors, pasture gating and fence, a grain silo, and feeders were moved to Rose Creek, a CVM farm in Oconee County.

The program McDowell coordinates is important for its economic impact, as well.

“For instance, a 6-inch-by-6-inch post taken from the barn will bring in between \$30 and \$50,” according to McDowell. “I took 20 out of the building. The metal is valued between \$3,000 and \$4,000. You shouldn’t throw away items that have value. It just makes sense.”

McDowell says if an organization can save this money in raw costs, it is money that can go into programming and labor.

Two other advantages to the reuse project, according to Bacon, are the money saved from demolishing the barn the traditional way and having the parts hauled away, and the credit the new VMLC will earn toward its quest for a LEED certification.

According to Bacon, the money that was saved from hiring a demolition crew will go back into the construction budget, saving more than \$40,000. Also, as the VMLC is built, efforts are being made to certify the building for LEED standards, and the fact that parts of the demolished barn are being re-used in the local community will contribute credits toward the certification.

## FOR MORE INFORMATION

For more information, including pictures of the Snyder Barn demolition and reuse project, please visit:  
[www.thematerialreuseprogram.com](http://www.thematerialreuseprogram.com)



**Above:** Horticulture students build a gate using 2x4s and wire from the Snyder Barn. **Below:** Casa de Amistad communal space designed by UGA CED students using 2x6s from old horse corrals at the Snyder Barn. Photos by Chris McDowell.





Photo courtesy of The News/Kingstree, S.C.; by Michaele Duke.

**Walter C. Cottingham (DVM '61; pictured above, left)** received the Williamsburg Home Town Chamber Lifetime Achievement Award. Dr. Cottingham is a native of Williamsburg County, S.C.

**James David Loughridge (DVM '78)** was selected as the 2012 Veterinarian of the Year by the Georgia Cattlemen's Association.



Ball

**Barry A. Ball (DVM '81), PhD, DACT**, was selected as a 2012 recipient of the American College of Theriogenologists' "Theriogenologist of the Year" award, sponsored by Boehringer Ingelheim Vetmedica, Inc.

## Obituaries:

**Paul Freer Sr. (DVM '58)**; 88; Mount Airy, N.C.; died Mar. 31, 2012. • **James Robert Hundley (DVM '56)**; 85; Heathsville, Va.; died May 18, 2012. • **Gerald Vance McCranie (DVM '52)**; 93; Newton, N.C.; died June 16, 2012. • **George E. Gibson (DVM '67)**; 72; Stone Mountain, Ga.; died July 3, 2012. • **Albert K. Robinson (DVM '54)**; 89; Waycross, Ga.; died Aug. 2, 2012. • **Kenneth Martin Waldrop (DVM '71)**; 66; Albany, Ga.; died Aug. 30, 2012. • **Ann McInnes English (DVM '90; MS '90)**; 63; Deltona, Fla.; died Sept. 8, 2012. • **Clifton Keith Thigpen (DVM '63)**; 77; Vidalia, Ga.; died Sept. 11, 2012. • **Hugh Vining Hendricks (DVM '64)**; 73; Woodland, Ga.; died Sept. 12, 2012. • **Jolly Herschel Rogers (DVM '56)**; 80; Florala, Ala.; died Sept. 14, 2012. • **Karl K. Dockery Sr. (DVM '53)**; 83; Douglas, Ga.; died Oct. 7, 2012. • **Donald C. Ford (DVM '55)**; 83; Forest Park, Ga.; died Oct. 17, 2012. • **Harry Windell Taylor (DVM '66)**; 77; Tallahassee, Fla., and Pelham, Ga.; died Nov. 9, 2012. • **Charles C. Shackleton (DVM '54)**; 86; Chapin, S.C.; died Nov. 11, 2012. • **John Deale Hall Jr. (DVM '72)**; 65; Annapolis, Md.; died Nov. 30, 2012. • **James Curtis Branch Jr. (DVM '54)**; 82; Tifton, Ga.; died Dec. 18, 2012. • **Susan Virginia Gibson (DVM '78)**; 61; Greensboro, N.C.; died Dec. 28, 2012. • **Dr. Robert J. Orrell Sr. (DVM '61)**; 80; Virginia Beach, Va.; died Dec. 29, 2012. • **Howard Archie Hurley (DVM '62)**; 79; Newnan, Ga.; died Dec. 31, 2012. • **Thurston Joe Shirley Jr. (DVM '58)**; 79; Anderson, S.C.; died Jan. 2, 2013. • **William O. May Jr. (DVM '63)**; 74; Moultrie, Ga.; died Jan. 6, 2013. • **Claude Glenn Wilkes (DVM '52)**; 90; Jefferson, Ga.; died Jan. 26, 2013. • **Harold Eugene Stinson (DVM '53)**; 89; Winston-Salem, N.C.; died Jan. 29, 2013. • **Jack Roles Palmer (DVM '50)**; 88; Athens, Ga.; died Mar. 4, 2013. • **Richard E. Doran, DVM (LA internship '84; LA surgery residency '87)**; 59; Kintnersville, Pa.; died April 20, 2013. • **Robert Bruce Hollett (DVM '72)**; 66; Athens, Ga.; died April 23, 2013. See page 34 for more about Dr. Hollett.

## Tornado Relief for Oklahoma's Pets

**Above:** The Athens Pet Food Bank, based at the UGA College of Veterinary Medicine, participated in a food drive coordinated by the Gwinnett County Animal Shelter to benefit pets that, along with their owners, were impacted by an EF5 tornado that struck Moore, Okla., on May 20.

**Below:** Janet Martin, DVM, and Alan Power (DVM 2014) loaded the collected items into a car, and transported them to Gwinnett County for shipping. The entire food drive yielded 17 tons of food and other pet supplies, which were shipped from Gwinnett County to Moore, Okla., on two tractor-trailers. The Athens Pet Food Bank partners with local shelters and community organizations to provide pet food and supplies to low-income residents who own pets. Martin is one of two faculty advisers to the group, which Power helped found in 2012. For more information about the Athens Pet Food Bank, or to make a donation, visit [www.vet.uga.edu/petfoodbank](http://www.vet.uga.edu/petfoodbank)

Photos by Shanda Crowe.



## We want to know what you're up to!

Your classmates want to know what's happening in your life. Drop us a line. Please include your current contact information, including your phone number and email, to help us keep our alumni database up to date.

Email Marti Brick:  
[vetalums@uga.edu](mailto:vetalums@uga.edu)  
Fax: 706.583.0242

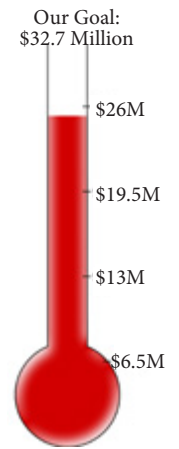
## Save the Date!! Annual Hawaii Dawg-O

August 3, 2013

Foundry Park Inn and Spa  
featuring  
The Swinging Medallions

This year's hosts:  
UGA Athletic Director Greg McGarity  
and his wife, Sheryl McGarity

For more information, contact 706-769-0146  
Sponsored by the Grace Memorial Foundation



## UGA Veterinary Medical Learning Center: Construction Begins New Chapter for UGA CVM

What was recently an open field with grazing horses and a barn for off-site instruction will soon serve a much greater purpose—one that will have a meaningful impact on thousands of animals each year, and that also will serve the greater good for both animal and human medicine.

Construction on the new Veterinary Medical Learning Center (VMLC) campus started in early March and will encompass nearly 300,000 square feet over several different buildings including:

- The Veterinary Teaching Hospital, which will house small animal service areas, clinical pathology, diagnostic imaging for small and large animals, and all large animal service areas including separate barns for equine colic patients, ICU, food animals and outpatients
- Veterinary Academic Building with classrooms, an auditorium, and seminar/dining space
- Covered outdoor equine lameness arena

- Theriogenology and Ambulatory Services building
- Large Animal Isolation

The international architecture firm of Perkins+Will designed the building, which is projected to cost \$97.7 million. Of this, \$65 million was funded by the state, with the remaining coming from private and corporate contributions. The CVM is still raising money, including funds to purchase equipment and furnishings for the VMLC.

### FOR MORE INFORMATION

To donate, contact the CVM's Development or Giving Office at 706.542.1807 or [give2vet@uga.edu](mailto:give2vet@uga.edu) or donate online at [vet.uga.edu/vmlc](http://vet.uga.edu/vmlc)



## “BRICK BY BRICK”

The Curtis family (Andrew, DVM 2010, second from the right) shares their joys and memories through the UGA CVM “Step by Step, Brick by Brick” program. Celebrating Andrew’s graduation, remembering beloved family pets, and thanking grandparents are all wonderful reasons to purchase a brick or horseshoe that supports the College of Veterinary Medicine! Funds raised through the “Step by Step, Brick by Brick” program are used toward the building of the Veterinary Medical Learning Center.



# Why I give: Beth Lee

Roswell resident Beth Lee, owner of Atlanta Saddlery, a retail tack store in Alpharetta, has an apparent love of horses. Since the 1980s, she has facilitated the Bolshoi Benefit Horse Show, with the sole purpose of providing funds to colic research at the UGA College of Veterinary Medicine.

“Each year, we have been able to send the proceeds of the horse show to the colic research fund, to be used for whatever the need might be,” she said.

Her late husband, Steve Lee (DVM '78), was already involved with fundraising for the CVM when they married in 1987, through a benefit gala that he started, “For the Love of a Horse.” Since the 1980s, Beth has also been making her contribution towards causes and fundraising for the UGA CVM.

“I had been involved with the horse show and Steve had been involved with the ‘For the Love of a Horse’ event, all because of the common need for more research into the number one killer of horses,” she said. “At the time it seemed like the ‘cancer’ for horses, the one thing that touched more horses and their owners than any other issue. Regardless of breed or discipline all horses are vulnerable.”

Donating to the CVM was one of the best ways to make an impact on something she cared about.

“There was a great team of veterinarians at the CVM when the initial donation was made to establish the ‘Bolshoi Colic Research Fund.’ It started with a woman who lost her horse ‘Bolshoi’ to colic,” she said. “She made the first donation that established the program. We have felt it was the most important way we could contribute towards the understanding and treatment of a condition that affects so many horses and their owners.”

Imparting knowledge to others about the importance of giving isn't quite her style. Leading by example is a far better way to encourage others to donate to causes that they are passionate about.

“Because donating is such a personal experience, it really isn't something that I discuss with others,” she said. “I do have three children, and by example, they have picked up some of the joys of giving by participating in donating ‘shares’ of animals provided by the Heifer Project in honor of someone, instead of gifts to their teachers and friends. We often receive ‘honor cards’ from people who donate

to Habitat for Humanity and other great causes which gives them the experience of how that feels to be part of something bigger than oneself”

Beyond monetary contributions, donating time by volunteering to help organize events has proven to be just as much, if not more, fulfilling.

“The giving that we have done is really a collection of contributions through the events,” she said. “Our contribution is as much the time and energy to organize the event as it is the funds. I guess that is a way of helping with giving that multiplies the amount one could contribute, by involving others in the cause.”

## FOR MORE INFORMATION

If you would like to make a gift to the UGA College of Veterinary Medicine, contact our Office of External Affairs at 706.542.1807 or [give2vet@uga.edu](mailto:give2vet@uga.edu)



Photo courtesy of Beth Lee.



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### Dates to remember:

August 3	Hawaii Dawg-O
September 25	Vet School for a Day
September 28	Dean's Tailgate (LSU game)
March 28-29, 2014	51st Annual Veterinary Conference & Alumni Weekend

### Continuing Education Courses:

CE dates and topics are subject to change.

Questions about CE? Contact Melissa Kilpatrick at [vetmedce@uga.edu](mailto:vetmedce@uga.edu) or 706.542.1451, or online at [www.vet.uga.edu/ce](http://www.vet.uga.edu/ce)

October 3-4	Equine Encore
October 5-6	Small Animal Surgery
October 19-20	Internal Medicine
November 17	Veterinary Dentistry
	Veterinary Anesthesia
December 7-8	Exotic Endoscopy
	Outpatient Medicine
December 14-15	Advanced Laparoscopy

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