

floridaveterinarian

THE UNIVERSITY OF FLORIDA COLLEGE OF VETERINARY MEDICINE MAGAZINE

UPCOMING EVENTS

April 5-8

Florida Veterinary Medical
Association Conference
Alumni Reception

April 21

Annual UF College of Veterinary
Medicine Open House
10 a.m. to 4 p.m.

April 28

Dean's Circle of Excellence Regional
Event, Miami

May 11

Sophomore Professional Coating
Ceremony

May 26

Commencement

June 9

Referring Veterinarian
Appreciation Day
Dean's Circle Reception

July 13-17

American Veterinary Medical
Association Conference
Alumni Reception

Oct. 18-21

Florida Association of Equine
Practitioners Symposium
Alumni Reception

Nov. 3-7

American College of Veterinary
Pathology Conference
Alumni Reception

Dec. 1-5

American Association of Equine
Practitioners Conference
Alumni Reception

ANSWERS IN THE DEEP

CLINICAL AND RESEARCH TRAINING IN
AQUATIC ANIMAL HEALTH



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Dean's Letter



James W. Lloyd
Professor and Dean
UF College of Veterinary Medicine

Greetings!
I hope your 2018 is off to a great start! It's hard to believe we're already heading toward spring, but as that's the season for renewal and fresh growth, the timing seems entirely appropriate. Sometimes I'm amazed at how much can happen here at the UFCVM, even within a few short months. Here are just a few updates from across the college.

Leadership:

We previously announced the hiring of Dr. Juan Samper as our new associate dean for academic and student affairs. Dr. Samper is now fully on board and we're grateful to have him here. In addition, in December we announced the hiring of Dr. Julie Moore as incoming chair of our department of infectious diseases and immunology, effective mid-May. Dr. Moore is currently associate vice president for research at the University of Georgia and professor in the department of infectious diseases and UGA's Center for Tropical and Emerging Global Diseases. She has been a faculty member at UGA since 1999. We are very pleased to welcome her to our team.

In other leadership changes, we have launched a national search for our next associate dean for research and graduate studies due to the pending retirement of Dr. Ammon Peck, who has served in that role since 2012. Adding strength to this critical part of our mission, effective Jan. 1, I have also appointed Dr. Jorge Hernandez as interim director of graduate education and Dr. Rowan Milner as interim director of clinical and translational research. Each will lead development of a vision and strategy to help propel the college further toward our goal of achieving preeminence in their respective areas, and together they will work hand-in-hand with our new associate dean once hired.

Dr. Rowan Milner, who has capably led our department of small animal clinical sciences as chair since 2011, will be stepping down from that position effective July 1, and the college has initiated a national search to fill the SACS chair position. As the UFCVM Hill's Professor of

Oncology and a recognized expert in medical oncology, Dr. Milner will continue working with the UF Veterinary Hospitals' oncology service after stepping down as chair, along with his new administrative responsibilities mentioned above. In addition, he will continue to pursue his own active interests in translational research.

Finally, and with very mixed emotions, we announced last fall that Dr. Carlos Risco will be leaving his position as large animal clinical sciences department chair to become dean of the School of Veterinary Medicine at Oklahoma State University. Dr. Risco, who also happens to be a member of the college's Charter Class, has been a UFCVM faculty member for 27 years and LACS chair since 2012. He is now off to Oklahoma and we wish him and his wife, Omi, the very best in their exciting new endeavor. I have appointed Dr. Chris Sanchez, also a UFCVM alumnus, as interim chair of LACS, pending a national search.

Research:

Continuing the success of last year, in which the college increased its extramural funding by 76 percent, our faculty once again significantly increased its extramural research award level, this time by nearly 20 percent to over \$22.6M. Importantly, our faculty took the lead on two large collaborative multi-college, multi-institutional and multimillion-dollar grants, one in neuro-respiration, funded by the National Institutes of Health, and the other in vector-borne diseases, funded by the Centers for Disease Control and Prevention.

Education:

As of December 2017, 445 students were enrolled in the college's fully-accredited D.V.M. program and 766 (58 traditional and 708 online students) were pursuing graduate degrees. In addition, the college currently offers advanced clinical training to 59 residents, 12 interns and one fellow through the UF Veterinary Hospitals. The college's new Clinical Skills Teaching Laboratory, which celebrated its two-year anniversary in August, recently received the top design-build award in the education category in a statewide competition sponsored by a leading design-build group.

Patient Care:

The UF Veterinary Hospitals made significant progress in many of the goals articulated in the past two years through our strategic planning process. These goals include enhancing the hospital's reputation in specialty services, improving its operational model, enhancing communication to referring veterinarians, maximizing student learning opportunities and investing in the staff, house officers and faculty. The college continues to expand the clinical trials program and is actively pursuing accreditation of its diagnostic laboratories through the American Association of Veterinary Laboratory Diagnosticians.

The Night in the Swamp outreach program, which provides regional veterinary medical associations with continuing education over dinner, continues to thrive. Since the program's inception three years ago, we have held 45 events at 22 VMAs in Florida, greatly increasing our college's visibility and providing a needed service to the veterinary medical community.

Overall hospital caseload continues to grow. Clinical service net revenue for the UFVH grew by 13.7 percent in FY 2017. Our caseload consisted of 36,616 in-hospital patients, including large and small animals, and in addition, 36,227 farm animals.

As you can tell, we've been busy, but we're proud of what we've accomplished and grateful to see the fruits of everyone's labor coming to pass. It feels so appropriate to celebrate the coming of spring.

Go Gators!

James W. Lloyd, D.V.M., Ph.D.
Professor and Dean
UF College of Veterinary Medicine

Katelyn Sheppard Takes the

ROAD LESS TRAVELED

in Food Animal Medicine

Story by Linda Homewood

Photos by Jesse S. Jones

Katelyn Sheppard ('18), started college with an interest in biology and chemistry, thinking she might become a teacher. Somewhere along the way to earning her bachelor's degree in animal science at the University of Florida, things changed when she discovered her inner cowgirl.

Her undergraduate studies began in Central Florida, where most people typically think of Florida oranges, tourists and theme parks. Sheppard, however, spent her days riding along with a large animal veterinarian who traveled around

Florida ranches to conduct physical therapy. It was this experience, she said, that changed her plans and she set course to the University of Florida College of Veterinary Medicine.

Sheppard received several scholarships that broadened her educational experience and she decided to focus on a smaller niche area of veterinary medicine that offered a specialization with additional training. Though she describes herself as a suburban girl, Sheppard discovered a passion for working with livestock. She felt a certificate



“
**I LOVED WORKING WITH RANCHERS.
 THEY ARE THE HARDEST WORKING
 PEOPLE I’VE EVER MET.**
 ”

— Katelyn Sheppard

in food animal medicine from UF would offer her a competitive edge in the world of cattle ranching.

The Florida Beef Council in 2013 reported nearly \$500 million in revenue from approximately 15,000 beef cattle producers in the state, making food animal science a major economy in Florida.

In addition to food animal medicine, the UF College of Veterinary Medicine also offers certificate options that provide unique veterinary specializations in aquatic animal health, business management and shelter medicine.

Beginning with the first year of studies, each certificate program has specific requirements and is recognized at graduation. According to Sheppard, the food animal medicine certificate program

includes 26 wet lab credits, participation in an externship and a research project. She also has attended additional food animal classes in her junior and senior years.

“Because our college was actually created from a department of veterinary science in the UF College of Agricultural and Life Sciences, our very roots are in service to livestock and agriculture,” said the college’s dean, James W. Lloyd, D.V.M., Ph.D. “Our certificate program in food animal veterinary medicine continues that legacy, and is one of the leading programs of its kind in the world.”

Since 2015, Sheppard received several externship scholarships, which pairs students with a veterinarian across the country. Grants like these took her to

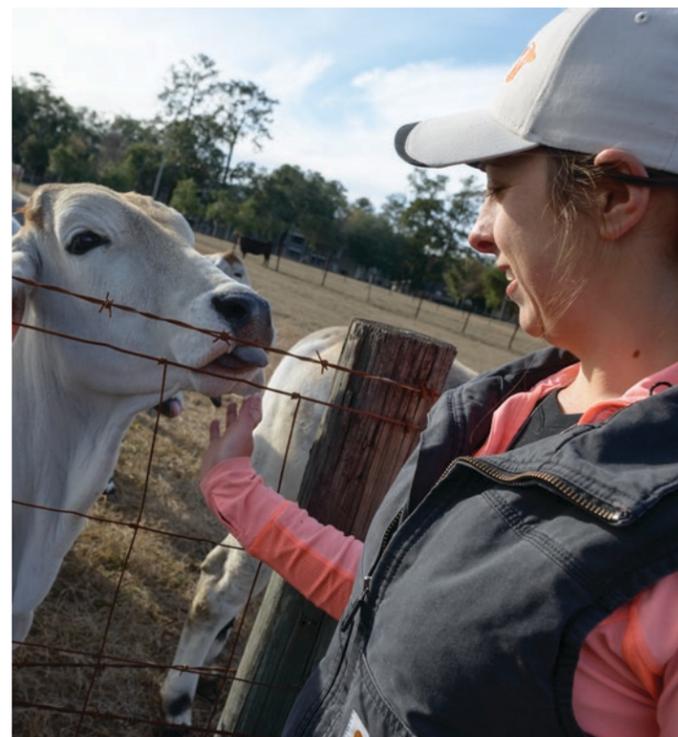
very large cattle ranches in Western Nebraska and Colorado.

“Those were priceless experiences,” said Sheppard. “I was working on a 70,000-head feed yard and there is just nothing like that in the southeast. I loved working with ranchers. They are the hardest working people I’ve ever met.”

The business side of ranching especially interests Sheppard, who said she would have chosen the certificate courses as electives even if she wasn’t in the program because of her love of working with ranches. For example, one certificate course was in beef cow management, which required her to research a ranch to update its business management protocols and then present it in class.

RIGHT: Young Brahman cattle approach onlookers at the UF/IFAS Beef Teaching Unit in Gainesville.

BELOW: Fourth-year UF veterinary medical student Katelyn Sheppard greets a young Brahman steer and chats with Dr. Owen Rae, chief of the college’s Food Animal Reproduction and Medicine Service, during a recent visit to the UF/IFAS Beef Teaching Unit in Gainesville.





ABOVE: Fourth-year UF veterinary medical student Katelyn Sheppard walks alongside a group of Angus feeder calves at the UF Beef Teaching Unit in Gainesville.

“I am the closest thing to a cowboy in my class,” Sheppard joked. “I love Florida and Florida ranching with all my heart. The Midwest just offers a different kind of cattle medicine.”

The Florida CattleWomen Association also provided a \$1,000 tuition scholarship to Sheppard, which she was very grateful to receive to help with the cost of her education.

Sarah Childs, a past president for the association said the grant is designated for a female student in veterinary medicine whose studies are specific to

large animal science with professional potential in beef cattle production and marketing. They also look for students who demonstrate leadership and scholarship.

Founded in 1961 as the Florida CowBelles Inc., the organization is committed to educating people regarding facts and misconceptions about the beef industry, including its environmental and animal welfare practices.

Ranking 12th in the nation, herd sizes raised by Florida ranchers can range from several hundred to 20,000 head of

cattle according to Childs, who currently heads the association’s governance committee.

“Katelyn’s experience is a great example of how scholarship funds can impact a student’s career path,” said Patricia Wlasuk, advancement director of scholarship initiatives for the college. “We are grateful for the annual scholarship support from The Florida CattleWomen. As longtime supporters of our veterinary medical students, each year they play an integral part in encouraging students who are interested

in large animal medicine.”

According to Wlasuk, 15 percent of the available scholarships for students at the college have criteria that are specific to large animal, equine or food animal medicine. Eighteen scholarship funds will provide approximately \$30,000 in support for students during the 2017-2018 academic year.

Although Sheppard’s career plan is to work on a large ranch primarily treating cows and calves, she sees an added advantage to treating horses on the ranch as well, and has been training to

work with both.

“Most veterinarians tend to specialize in one or the other but not both,” she said.

Of the 114 students in her class, the majority focus on companion animal practice, Sheppard said. With plans to graduate in May, she feels well-prepared for her career on the “road less traveled.”

Wherever that road may take her.

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MORE THAN ONE WAY TO GIVE

Dr. Alan Weldon has a Passion
for his Profession

Story by Linda Homewood

A

lan Weldon, D.V.M. ('86), a native Gator, grew up in East Gainesville, selling cold drinks during football games and dashing to the beach whenever the surf was up. He never thought about becoming a doctor of veterinary medicine.

His family didn't have a lot of money and his high school was "not the best," but his first mentor was his dad, who motivated his brother and him by allowing them to skip school whenever the surf was up so long as they maintained their National Honor Society status, Weldon said.

After graduating high school, Weldon found part-time work with local veterinarians to put himself through college. The instruction and mentorship he received gave him the encouragement and confidence to study animal science as an undergraduate student. As he continued to learn more about

large animals, Weldon knew he wanted to study veterinary medicine at the University of Florida. There, he met his wife, Beth Van Cleve-Weldon, D.V.M. ('86), who came to Florida after graduating from Princeton University. She soon changed his small-town perspective.

"I never thought of the world outside of Gainesville," said Weldon. "My vision of how big the world was, got a lot bigger after meeting Beth."

His first job after graduation set the pace for what he still considers to be the world's best profession. Along the way, he learned even more — including the importance of giving back.

Weldon worked his first few years for a horse breeder in Ocala. Each year, he spent the first half of the year learning everything he could about breeding thoroughbreds. Then, he traveled with his employer to the other side of the globe for the breeding season in western Australia. Beth visited him in Australia, where he proposed, and they were



Dr. Alan Weldon is shown during a recent visit to the UF College of Veterinary Medicine. This still shot was taken from a video focusing on teaching and learning at the college that he participated in.

“

It makes your old
diploma look that
much better.”

— Alan Weldon, D.V.M.
Class of '86

married back in the U.S. at Cumberland Island. In the years to follow, the couple forged a love of family and veterinary medicine, with extreme adventures around the world.

While in high school, it was Weldon's life-long interest in sports and athletics that first led him to working with horses. His attention began to turn to the athletic aspects of sports injuries and medicine for horses, which closely paralleled human sports medicine. With his wife's support, Weldon decided on a two-year residency in equine internal medicine at Cornell University, where they relocated. Beth took a position at a small animal practice and Alan immersed himself in internal medicine.

"I found that my greatest interest was in helping sick patients. I enjoyed working on those really difficult cases," Weldon said.

After his residency, Weldon became board certified as an equine internal medicine

specialist. Moving back to Florida, the couple settled in Jacksonville, where Weldon opened his practice, Jacksonville Equine Associates, while Van Cleve-Weldon began working for a local small animal practice. They also started their family and have raised five children who know just how big the world is, sharing the family travels.

As members of the Dean's Circle of Excellence, the couple joined Dean James W. Lloyd, D.V.M., Ph.D., last year on a tour of the college's new Clinical Skills Lab, part of a recent three-story addition to the main academic building.

"The technology available to veterinary students today is staggering compared to what we had as students," Weldon said. "I would recommend that every graduate go back to the college to see these amazing changes."

The dean's tour showcased emerging technologies, such as the SynDaver, a synthetic



Dr. Alan Weldon, '86, was an early participant in UF's Practice-Based Equine Clerkship program, which allows UF veterinary medical students to gain hands-on experience at an equine practice during a two-week rotation.

reading, practicing skills and accompanying him to horse farms as he makes patient rounds.

UF veterinary medical students graduate from the college with far more knowledge than when he was a student, said Weldon. His focus is to prepare students for practice by teaching them to apply the patient exam information in a thought process called differential diagnosis.

"I want them to see it as an exploded diagram of possibilities, and come up with three or four options based on the symptoms they see," said Weldon. "Once they do that, it will lead them to thinking about which diagnostic tests would be needed for

each scenario."

Although the couple have academic ties to Cornell and Princeton universities, they feel a strong commitment to the UF College of Veterinary Medicine and The Gator Nation.

"My heart is with the University of Florida," Weldon said. "If Florida is going to be the tip of the spear, among the best universities in the United States — and I think it is — we need to support the education and advancements happening here."

While the state of Florida supports the university and the teaching hospital, it is the donations from alumni and others that provide the extra funds and unique teaching tools that make the UF College of Veterinary Medicine something special, Weldon said.

"I'd encourage all of our alumni to get more involved," he said. "It makes your old diploma look that much better."

model of a dog cadaver that realistically matches the bones, organs and tissues of a real dog. They also visited an exam room that models an actual animal hospital and uses cameras to record students as they practice communication skills with clients. The upper floors of the building are filled by research scientists in veterinary medicine. Each year in April, the college hosts a community-wide open house, where the public can visit its facilities, including the small and large animal hospitals.

Weldon also gives back to the college as an early leader for a practice-based program that prepares students who will soon find themselves practicing veterinary medicine, offering one-on-one experience in a variety of areas of veterinary practice. Several times a year, as part of UF's Practice-Based Equine Clerkship, Weldon mentors a junior or senior veterinary medical student during a two-week rotation. Just as he once learned from practicing veterinarians, students learn by



New client simulation room named for Lap of Love

Drs. Dani McVety ('09) and Mary Gardner ('08) stand with Dean Jim Lloyd following the dedication of a new client simulation room inside the college's new clinical skills lab. McVety and Gardner are the cofounders of Lap of Love Veterinary Hospice, and the room was named in honor of their contributions to the college.



CLINICAL SKILLS LAB WINS STATEWIDE AWARD

Story by Sarah Carey

The UF College of Veterinary Medicine's Clinical Skills Laboratory building addition received the top overall state award in the education category of the Florida Chapter of the Design-Build Institute's annual awards competition.

ABOVE: The new Clinical Skills Laboratory addition includes teaching and research space on separate floors. The laboratory provides a variety of rooms and learning stations for students to hone their clinical skills.

The award was presented during the Institute's annual conference Oct. 12.

The competition evaluates design and building quality, safety, cost, sustainability, teaming performance and the project's success from development to procurement to execution, according to the competition's call for entries.

"This project was an example of design-build at its best and it wasn't because everything went smoothly and without a hitch," said David Wood, a project manager with UF's Planning, Design and Construction Division. "There were many challenges related to the ongoing operation of the college and issues with laboratory equipment, as an example. It was the way the team worked together and committed to the client's needs that that made this complex project a success."

The \$4.8 million, three-story addition was designed and built by locally based Oelrich Construction, Walker Architects, Affiliated Engineers and Structural Engineers Group. It includes an immersive teaching laboratory, infectious diseases/pathology research laboratory and a mechanical penthouse. Integrated sustainability concepts include reduced energy consumption

through energy-efficient lighting and mechanical systems, sourcing of regional and low-impact construction materials with recycled content, and providing outdoor views to over 90 percent of the office/clinic spaces.

Completed in August 2015, the lab is equipped with advanced simulation technologies used to teach veterinary students and faculty best practices for techniques such as tying sutures, inserting IV catheters, drawing blood samples and identifying parasites. The additional research and mechanical space was completed later that year.

In April 2017, the space received a LEED gold certification from the U.S. Green Building Council, which rates building sustainability on categories such as indoor environmental air quality, design innovation and energy efficiency.

Conceived as part of UF's Preeminence initiatives, the three-story Clinical Skills Laboratory addition reflects the university's commitment to pioneering the next generation of veterinary medicine education, research and clinical treatment.

ANSWERS IN THE DEEP

CLINICAL AND RESEARCH TRAINING IN AQUATIC ANIMAL HEALTH

Story by Sarah Carey

ALISSA DEMING, D.V.M. ('12), COULD SWIM BEFORE SHE COULD WALK, and always had a fascination with the ocean. Growing up in South Florida, she surfed and scuba-dived, but also witnessed significant declines in the reefs, fish populations and sea turtles in her own backyard.

Those observations, coupled with the realization of how environmental health impacts animal as well as human health fueled Deming's passion to pursue a career in aquatic animal medicine during veterinary school at University of Florida and beyond.

This summer, Deming will complete a unique Ph.D. program at UF that has enabled her to combine scientific and clinical skill sets honed on the country's East and West Coasts to advance knowledge of a common cancer in sea lions. Her work has drawn the attention of national news

outlets, including National Geographic, which ran an article featuring Deming and her research with The Marine Mammal Center in California in 2016.

"I always knew I wanted to be a veterinarian, but didn't realize I could incorporate my love for aquatic animals with my love of medicine until I was working on my master's degree, studying fibropapilloma virus in sea turtles in the Indian River Lagoon," said Deming, who completed her master's at Florida Atlantic University in 2008 with a focus on stress protein and anti-apoptotic protein expression in a virally induced cancer in sea turtles.

"I have always had a strong interest in how viruses can infect and then hijack cells, resulting, on occasion, in cancer," she said. "Something people don't often realize is that 20 percent of cancers are associated with viral infections, and

there are probably many that we are not aware of yet."

Some examples in people are Human Papilloma Virus-associated cervical cancer, and several herpesvirus-associated cancers, such as Kaposi's sarcoma, several types of lymphomas and nasopharyngeal tumors, Deming said.

"Studying these virally induced cancers in people has proven to be challenging, but that is where studying herpesvirus-associated cervical cancer in sea lions can provide a valuable comparative model, allowing us to better understand how viruses induce cancer in a more real-world setting," she said.

Soon after finishing her master's, Deming entered the professional D.V.M. program at UF, through which she completed her certificate in Aquatic Animal Health. After graduating from veterinary school, Deming completed an aquatic



Photo courtesy of The Marine Mammal Center



Photo courtesy of Florida Fish and Wildlife Commission

ABOVE:

Basking California sea lions and Northern elephant seals on San Miguel Island are observed during fieldwork conducted by Dr. Katie Prager, a researcher in Dr. James Lloyd-Smith's group at UCLA, as part of a project on sea lion-Leptospira pathogen dynamics and in collaboration with The Marine Mammal Center and NOAA National Marine Mammal Laboratory.

This photo was taken as part of field research conducted under NMFS Research Permit 16087-2 issued to the National Marine Mammal Laboratory, Alaska Fisheries Science Center, and funded by the National Science Foundation (OCE-1335657), the U.S. Department of Defense (SERDP RC01-020/RC-2635) and the National Marine Fisheries Service John H. Prescott Marine Mammal Rescue Assistance Grant Program.

LEFT:

Dr. Alissa Deming supports a manatee calf in the water as Jody Palmer, director of conservation at the Brevard Zoo, administers supplemental oxygen while the calf's mother receives a health check-up during a rescue.

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PROBABLY MANY
THAT WE ARE NOT
AWARE OF YET.”**

— Dr. Alissa Deming



Photo courtesy of The Marine Mammal Center

A Northern elephant seal pup curls up to his protective mother on San Miguel Island, California. This photo was taken as part of field research conducted under NMFS Research Permit 16087-2 issued to the National Marine Mammal Laboratory, Alaska Fisheries Science Center.

animal veterinary specialty internship at SeaWorld and the National Marine Mammal Foundation/Navy Marine Mammal Program, where she served as clinical veterinarian for marine mammal, avian, reptile, teleost and elasmobranch species.

At the end of her internship, she began discussing the possibility of performing sea lion cancer research with The Marine Mammal Center.

“I had seen cases of cancer during a veterinary externship at TMMC and had several cases of wild sea lions with cancer as a clinician at SeaWorld’s rescue and rehabilitation program,” Deming said. “Dr. Frances Gulland, the senior scientist at TMMC, had been a mentor of mine, and we had always discussed combining my molecular background and interest in oncogenic herpesviruses to figuring out the role of Otarine Herpesvirus1, or OtHV1, in sea lion urogenital carcinoma.”

Deming was awarded the center’s Geoffrey Hughes Research Fellowship, which is dedicated to training

researchers in the field of marine mammal medicine. That fellowship, combined with support from the UF College of Veterinary Medicine’s graduate studies office and additional funding from the college’s Aquatic Animal Health program, enabled her to enter the Ph.D. program with a fully funded project.

“As a veterinarian, it is a huge financial sacrifice to pursue a Ph.D., as a Ph.D. stipend is significantly less than the earning potential of a practicing veterinarian,” Deming said. “In a time where there is a need for veterinarians who are formally trained in research, expediting this process and providing veterinarians who wish to pursue Ph.D.s with appropriate funding is very important to attract potential candidates to a program.”

Deming’s Ph.D. program is aimed at determining the role of OtHV1 in the development of urogenital carcinoma in California sea lions. First described in 1979, this cancer has been a persistent cause of stranding and death in sea lions along the Western Coast of the U.S. The cancer starts in the genital tract

and aggressively metastasizes to all of the major body organs — “everywhere, really,” Deming said.

“Lots of research has been done to try to establish the cause of this common cancer in sea lions,” she said. “Findings point to multiple factors, ranging from contaminants in the sea lions’ prey, immune suppression, genetic predisposition and this virus I’m studying.”

Although herpesvirus has consistently been found in animals with this cancer, researchers have not been certain whether the virus was causing the cancer or if it was just an incidental finding. Deming’s Ph.D. focus has been to fully sequence the herpesvirus genome and determine if the herpesvirus had genes known to be associated with causing cancer that had been identified in other known oncogenic herpesviruses.

“I elected to do my research at UF because Dr. Jim Wellehan, an associate professor of zoological medicine and microbiology at the college, has a vast background in viral sequence and the equipment necessary to do this



Dr. Alissa Deming administers an inhalant anesthetic to a 150-pound male Guadalupe fur seal during an international collaboration between Mexican and U.S. researchers on Guadalupe Island, Mexico. Activities were performed under National Commission of Protected Natural Areas, Mexico permit # SGPA/DGVS/00091/17.

work in his lab,” she said. “Also, UF is home to the Cancer Genomic Research Institute, providing me with cutting-edge equipment as well as collaborators, like Dr. Rolf Renne, who studies human herpesviruses associated with cancer, to help direct me in my work. Having these resources and collaborators has allowed me to take this work to the next level.”

Through her program, Deming has spent about a third of her time as a clinical veterinarian for TMMC in Sausalito, providing care for seals and sea lions at the rehabilitation hospital. She also assists in stranding response and necropsies for cetaceans (dolphins) and large whales, and has provided veterinary support for various field projects.

At UF, Deming also provides veterinary support to the new Marine Animal

Rescue Network, under the guidance of Mike Walsh, D.V.M., a clinical assistant professor with the college’s Aquatic Animal Health program.

“Establishing a stranding response network is a challenging task to undertake, and Dr. Walsh, Laurie Adler and Mackenzie Russell have done an excellent job with setting up the program thus far,” Deming said. “This program will not only provide additional coverage for marine mammal strandings, community outreach and education, it will also afford an opportunity for UFCVM graduate students and staff to get involved with stranding response, which is something no other vet school offers.”

An average day for Deming could range from working in Wellehan’s molecular

lab at UF to spending time on the computer performing bioinformatics to spending a month on an island in the middle of the Pacific providing veterinary support for field projects.

“I was very lucky that my mentors supported my continued work as a clinical veterinarian during my Ph.D.,” Deming said. “This ensured that I would keep and improve my clinical skills at the same time as I was developing my research skills in the lab.”

Performing clinical work in conjunction with her Ph.D. has also kept Deming plugged into the health of the animals she was doing research on, she said.

“Spending my time between Florida and California throughout my Ph.D. provided me with a better understanding of all aspects of my research project and allowed me to really appreciate the time and significant effort that goes into collecting samples for research projects in a working rehabilitation hospital,” she said.

Deming said her time in the professional D.V.M. program enabled her to build a network of mentors within the college, and the Aquatic Animal Health program has offered resources that no other university could provide. In addition to Walsh, Deming said Drs. Iske Larkin and Nicole Stacy had been integral in her professional development in the aquatics field.

Walsh said Deming’s ability to bring aquatic research and clinical medicine together will allow her to train future Ph.D. students and veterinary medical students.

“Whoever hires her after she completes her Ph.D. will have someone capable of building a great program as well as push the ceiling on marine species information that will help facilities and the wild populations,” Walsh said.

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Photo courtesy of John Haven

UF PLAYS KEY ROLE IN HURRICANE IRMA RELIEF EFFORT

Story by Sarah Carey

As Hurricane Irma approached Florida the first week in September, different groups within the University of Florida College of Veterinary Medicine rallied to provide assistance to pet owners, veterinarians and animals of many species throughout the state.

Responses began with preparations prior to the storm, and continued during and after it with administration, faculty, staff and students involved in various aspects of the collective effort.

“I’m so proud of the way in which our college actively participated in providing assistance to so many groups and animals affected by Hurricane Irma,” said the college’s dean, James W. Lloyd, D.V.M., Ph.D.

“We were able to provide invaluable help to veterinarians and others in the veterinary medical profession who were adversely impacted by this storm, as well as to anxious pet owners in our own community and those areas more directly hit,” Lloyd added.

The UF Veterinary Hospital provided continual 24/7 emergency services before, during and immediately after Hurricane Irma to pets, horses and

wildlife, serving as a valuable patient care resource in light of closures of nearly every other veterinary specialty and emergency hospital in the state. College officials said that Sept. 11, the day Irma swept through North Central Florida, was one of the busiest 24-hour periods in the history of the Small Animal Hospital’s intensive care unit.

In addition, the UF Veterinary Emergency Treatment Service, the

▲ Members of the National Guard assisted the UF VETS team in rescuing a group of horses from high water near High Springs in the aftermath of Hurricane Irma.



“

It is truly gratifying to see the efforts of everyone who has trained and planned over the years come together so well under such trying circumstances.”

— John Haven
UF VETS Team Director

LEFT:
UF VETS team member Rose Worobec, a UF veterinary medical student, helps assess a dog brought to a mobile clinic set up by the UF VETS team in Key West in the aftermath of Hurricane Irma.

OPPOSITE:
UF VETS team members Sara Klatzkow and Rose Worobec, UF veterinary medical students, monitor a dog brought to the team's mobile clinic in Key West.

college's disaster response and technical rescue team — which deploys at the request of the Florida Department of Agriculture and Consumer Services or area agencies and works closely with the Florida Veterinary Medical Association — carried out several different missions relating to the storm.

As Hurricane Irma approached on Sept. 9, the UF VETS team traveled to Bushnell and picked up 100 dog crates for delivery to Alachua County Animal Services' operations to support pet-friendly shelters in the area. The team also investigated complaints of abandoned horses at Florida Horse Park in Ocala and provided an assessment of the situation.

After the hurricane came through, the team coordinated an ambitious rescue of five horses stranded in floodwaters in High Springs. This rescue involved multiple state agencies and the National

Guard. Once extricated from the flooded area, the horses were taken to the UF Large Animal Hospital, where they were monitored.

The UF VETS team made its way south soon after the storm, with one unit stopping in the Kissimmee area to assist in fact-finding missions and help area agencies document and meet various needs.

Then the group spent almost a full week in the Florida Keys, providing patient care and situational assessments relating to animals and veterinary medical practices damaged by the storm. The team worked with the FVMA and other groups, including the Society for the Prevention of Cruelty to Animals, local businesses and veterinary clinics in Key West to provide assistance as needed.

“Our patients included dogs that had been attacked by neighboring dogs, a diabetic dog whose insulin supply was running low, several dermatology cases

that were exacerbated by the heat and stress from the storm, and even a dog that had found and ingested spilled rat poison as a result of a cabinet that fell over during the storm,” said Brandi Phillips, a UF VETS team member.

“Our students, along with our two veterinarian team members, Dr. Larry Garcia and Dr. May-Li Cuypers, saw more than a dozen patients each day that we were there,” Phillips said. “Members of the community, including local veterinarians doing home repairs and waiting for power to turn back on to their clinics, were extremely grateful for the UF VETS team's support.”

Shelters and rescue groups in Florida and out of state benefited from the expertise of UF's Shelter Medicine group, which helped support the Alachua County Humane Society's efforts to move animals out of shelters in harm's way. Additionally, the shelter medicine

team and associated volunteers assisted in distributing donated vaccines and medications for 800 animals to the Humane Society for animals the group was evacuating from rural shelters and delivered supplies to shelters in Taylor and Suwanee counties so they could care for animals arriving after the storm. The UF group also helped arrange animal relocation transports to Chicago, Atlanta and South Carolina.

At the request of Florida's State Animal Response Coalition, this team worked through difficult communications networks to contact each of Florida's 155 animal shelters to ensure they were connected with their county's emergency operations centers and getting the help they needed. Shelter medicine faculty also provided information via social media and blog posts to assist sheltering and rescue groups accepting displaced animals.

Members of the UF Marine Animal Rescue team assisted with three separate calls to rescue several displaced manatees found in different bodies of water. A lone manatee was rescued from a canal in Bayport and six manatees from a pond in Melbourne. The rescues took place in collaboration with several agencies, including the Florida Fish and Wildlife Conservation Commission, the Clearwater Marine Aquarium, Sea World, the Brevard County Zoo and local law enforcement.

Michael Walsh, D.V.M., an assistant professor with the program, also assisted in an interagency manatee rescue facilitated by Atlantis in Paradise Island, Bahamas, on Sept. 23. The wild manatee had been found in high seas and was thought to have been lost at sea and starving for an extended period then further displaced from his home range due to Hurricane Irma. After his

assessment and treatment, the manatee was in critical condition and was rehydrated and force-fed for weeks. He became a ravenous eater and over the next four months put on 400 pounds. He was released with a satellite tag to a nearby island where other manatees were found on Jan. 11, and is being monitored by the Bahamas Marine Mammal Research Organization.

“As the founder of the college disaster response efforts, it is truly gratifying to see the efforts of everyone who has trained and planned over the years come together so well under such trying circumstances,” said John Haven, the college's executive director and UF VETS team director.

“Some of our people deployed before even their own homes were completely resituated, working for the Greater Gator Good.”

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UF SCIENTIST STUDIES UNIQUE RECEPTOR'S RELATIONSHIP TO IMMUNE SYSTEM DISEASE

Story by Sarah Carey
Photos by Paul Privette

Dr. Liang Zhou joined the college's faculty in 2015 through the UF preeminence initiative. He studies the role of a unique protein molecule and its relationship to immune system disease.

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This work ... may ultimately lead to the identification of new therapeutic targets for human inflammatory bowel disease, or IDB, or colon cancer.”

LIANG ZHOU, M.D., Ph.D.

As a researcher seeking to understand more about how the body regulates immune responses, Liang Zhou, M.D., Ph.D., focuses on a receptor that is best known for detecting environmental contaminants inside the body, such as the dioxin that poisoned former Ukrainian president Victor Yushchenko in 2004.

Yushchenko survived the incident, which drew international attention after he fell mysteriously ill and developed disfiguring lesions on his face, as well as other symptoms.

“This receptor was originally only known for its effects in mediating environmental toxins and is commonly referred to as ‘dioxin receptor,’” said Zhou, an associate professor in the University of Florida College of Veterinary Medicine’s department of infectious diseases and immunology, who joined the faculty in 2015 through the university’s preeminence initiative. “It has been studied for a long time in the toxicology and pharmacology fields.”

The receptor, a protein molecule officially known as aryl hydrocarbon receptor, or AHR, has some unique aspects that have not been widely explored scientifically. For example, it is well-conserved over time across many different species, including nematodes, or worms, Zhou said.

“This means it should not have evolved to only detect man-made pollutants, as it appeared even before man appeared on

the planet,” he said. “We are interested in the receptor’s physiological function and how it responds to other stimuli, such as dietary compounds.”

Over the years, Zhou has investigated AHR from many angles, including its effects on immune cell genes. Previously published reports note the molecule that stimulates AHR activity can be found in vegetables such as broccoli, cauliflower and cabbage.

“AHR expression can be found not only in humans, but also in other organisms, including farm or pet animals, so understanding its role in humans and in animal models of disease will benefit veterinary medicine,” he said. “Animals are exposed to environmental stimuli such as pollutants just like we are, and suffer from similar diseases.”

His most recent paper, published in Cell Reports in November, reports that AHR preferentially marks and promotes

Dr. Liang Zhou hopes his work will one day lead to the development of therapies for the treatment of human inflammatory bowel disease or colon cancer, and for similar diseases in animals.



regulatory T-cells — a subtype of white blood cell that plays a key role in regulating immunity — in the gut. Zhou and his colleagues say their findings show that AHR is important for the suppression of gut inflammation in a mouse model of colitis.

“This work has implications for understanding how to modulate intestinal immune responses in different disease settings, and may ultimately lead to the identification of new therapeutic targets for human inflammatory bowel disease, or IDB, or colon cancer,” Zhou said, adding that he hoped one day therapies might be developed for animals with similar diseases as well.

Zhou was lead author on the paper, which also included contributions from researchers at the University of California, San Francisco, and Northwestern University, as well as from scientists working in his lab at UF and collaboratively within his department.

Like much of basic science, investi-

gating the body’s response to disease at the intracellular, molecular, level is complex, but rewarding when relationships between disease types and cell function can be identified, said Zhou, who prior to joining UF’s faculty served as an associate professor with tenure at Northwestern.

Zhou said he enjoys being at UF and especially appreciates the College of Veterinary Medicine’s culture and atmosphere, which he says supports good science in various biomedical areas to achieve preeminence.

“I believe our research fits the One Health mission that our college advocates for,” he said, alluding to the integrative effort of multiple disciplines working locally, nationally and globally to attain optimal health for people, animals and the environment.

“I also hope our research will eventually benefit both animal and human patient health,” Zhou said.

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NEW SHELTER MEDICINE CLERKSHIP UNDERWAY AT MIAMI-DADE ANIMAL SERVICES

Two third-year UF College of Veterinary Medicine clinical students participated in the inaugural block of the new Shelter Animal Sterilization and Population Management Clerkship Oct. 9-20. The clerkship is housed at Miami-Dade Animal Services in Miami.

Since then, nearly a dozen UF veterinary medical students have participated in the program, and a significant number of stray or homeless animals have been evaluated, treated and sterilized.

Students in the clerkship get the opportunity to evaluate and treat approximately 70 sick and injured stray animals and sterilize approximately 25 homeless animals over each two-week period.

The new program, approved last year, is a unique collaboration between the college and the Miami-Dade County Commission. The hands-on immersion experience in one of the largest municipal animal shelters in the country will provide students with unique opportunities to enhance their clinical and surgical skills, help needy animals and come away with a better understanding of the issues facing large community shelter operations.

“During the clerkship, each student gets the opportunity to perform a variety of procedures when an animal arrives at the shelter with conditions that require such intervention,” said Larry Garcia, D.V.M., the college’s interim faculty coordinator for the course. Garcia



Dr. Larry Garcia looks on as UF veterinary medical students Yenny Ramirez Lee and Rebecca Diaz perform a procedure on a dog, while participating in the new shelter medicine clerkship at Miami-Dade Animal Services.

supervised the first groups of students before Dr. Simone Guerios assumed the role of course coordinator in January. Garcia added that examples of procedures performed so far by UF veterinary medical students have included limb amputations, enucleation and entropion, or eyelid, repair.

The students are also able to help many incoming animals with minor injuries such as lacerations, which are commonly seen in animals arriving at the shelter, Garcia said. They spend time with the herd health/population managing veterinarian on site to understand shelter animal population management. In addition, the students spend time in the infectious disease isolation area to evaluate isolated animals for improvement and determine the next best steps to aid in recovery and preparation for sterilization and adoption.

“Understanding and recognition of infectious disease signs and symptoms is key to maintaining a healthy population and preventing disease outbreaks,”

Garcia said. “This is very valuable to students preparing for both shelter and general practice.”

The students are stationed in the intake/receiving area so they can observe the process of animal surrender by citizens and the state of animals entering the shelter, and perform intake examinations and processing. These are the foundation steps in pathway planning, maximizing live release and decreasing length of stay for sheltered animals, he added.

During their clerkship, the students were introduced to the veterinary forensics program housed in the shelter, an area that has continued to draw a lot of interest.

“This clerkship is a great experience with many opportunities for student development, while enhancing the shelter’s lifesaving capacity. I am confident that the clerkship will be in high demand,” Garcia said.

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Honors & Awards



Director of advancement and alumni affairs named

Katie Boudreau has been named senior director of advancement and alumni affairs at the UF College of Veterinary Medicine.

Boudreau joined the college in 2015 as director of advancement for Maddie's Shelter Medicine Program, becoming the first advancement professional in the country hired specifically to raise funds for shelter medicine. Thanks to her efforts, more than \$3.5 million has been raised to benefit the Maddie's program and the college's Veterinary Community Outreach program.

Previously, Boudreau served for two years as director of development for UF's George A. Smathers Libraries. Her additional experience includes more than 10 years of work at UF in various capacities — as patient advocate/community liaison for the Byrne Orphan Disease Lab; as clinical coordinator for the department of vascular surgery; and as director of medical alumni affairs and also associate director of development for the College of Medicine.

She has served as interim director of the college's advancement team for six months, following the retirement of Karen Legato from the position last summer.



Faculty member to lead national group

Margo Macpherson, D.V.M., a professor and reproduction specialist at the UF College of Veterinary Medicine, was installed as president of the American Association of Equine Practitioners on Nov. 20 during the group's annual meeting in San Antonio, Texas.

A clinician scientist, Macpherson has dedicated her professional career to combining veterinary medicine and research. She is primarily interested in conditions that affect pregnancy, including twin pregnancy and placentitis. Work from her laboratory has helped direct treatment choices for mares with placentitis by providing information about efficacy of commonly used antimicrobial and anti-inflammatory treatments.

Macpherson served a previous term on the AAEP's board of directors from 2011-2014. She was a long-standing member of the Educational Programs Committee and made significant contributions to student programming. She also served on the Nominating and Reproduction committees and a Reproduction anchor for the Kester News Hour at the AAEP Annual Convention from 2006-2010.



Bauck wins fellowship for equine studies

Anje Bauck, D.V.M., a graduate student and former large animal surgery resident at the UF College of Veterinary Medicine, has been awarded a prestigious fellowship from a national equine group.

Bauck received the American Association of Equine Practitioners Foundation Past Presidents' and EQUUS Foundation Research Fellow award on Nov. 19 during the AAEP's annual meeting in San Antonio. Bauck is pursuing her Ph.D. under the mentorship of David Freeman, M.V.B., Ph.D.

Founded and funded by past presidents of the organization to provide financial support to equine-oriented scholars, the award consists of \$5,000 and a travel stipend.

Bauck's research focus is colic and gastrointestinal physiology, an area she began studying during her residency. Her work explores the physiology of the equine large colon as it relates to clinical disease. Colic and related gastrointestinal diseases are regarded as major health concerns and leading causes of death in horses.



National group honors Tinga for research

Selena Tinga, D.V.M., a former small animal surgery resident and Ph.D. student at the UF College of Veterinary Medicine, received the award for best clinical research presentation at the annual meeting of the American College of Veterinary Surgeons Surgical Summit meeting, held Oct. 10-14 in Indianapolis.

The ACVS Foundation presents the award each year during the meeting, along with others for posters and publications, to honor outstanding surgical residents-in-training. Tinga's presentation involved research from her graduate studies focusing on cranial cruciate ligament disease, or CCL, in dogs.

Under the mentorship of UF faculty members Stan Kim, BV.Sc, Dan Lewis, D.V.M., Scott Banks, Ph.D., and others, Tinga has been researching motion in the knee joint of dogs affected by CCL.

A common condition in dogs, CCL results in joint instability and leads to the development of painful osteoarthritis and meniscal damage.



Professor receives leadership award from shelter group

Julie Levy, D.V.M., Ph.D., a professor of shelter medicine at the UF College of Veterinary Medicine, has received the 2017 Avanzino Leadership Award from Maddie's Fund.

Maddie's Fund, a national family foundation established by Dave and Cheryl Duffield, has supported the college's shelter medicine program with more than \$11 million in grants since its inception in 2008. The award was presented to Levy for her outstanding leadership and significant achievements in saving animal lives.

Named for Rich Avanzino, the father of the no-kill movement and Maddie's Fund president from 1999 to 2015, the award honors outstanding leadership in the animal welfare community. Presented along with a \$25,000 grant to a nonprofit or government organization designated by the recipient, the honor is bestowed for demonstrating significant achievement in lifesaving, showing the courage to look beyond the status quo and making bold decisions to improve the lives of dogs and cats, and being a champion of the no-kill movement.



Moore appointed department chair

Julie Moore, Ph.D., a malaria expert who is currently an administrator and faculty member at the University of Georgia, has been named chair of the UF College of Veterinary Medicine's department of infectious diseases and immunology.

Moore is associate vice president for research at UGA, where she also is a professor in the department of infectious diseases and the university's Center for Tropical and Emerging Global Diseases. A member of UGA's faculty since 1999, Moore also serves as director of the university's Post-baccalaureate Training in Infectious Diseases Research Program.

She has amassed numerous awards for innovations in teaching/learning as well as for research excellence and recently completed a one-year fellowship in the UGA Women's Leadership Fellows Program. Her primary research focus is host/parasite interactions and pathogenesis in malaria, with a particular emphasis on malaria during pregnancy and the placenta.

Moore received her doctorate from the University of Connecticut Health Center with a concentration in immunology, molecular biology and biochemistry, and her bachelor's degree from St. Lawrence University with a combined major in biology and physics.