

the NEWS FROM THE UNIVERSITY OF FLORIDA • COLLEGE OF VETERINARY MEDICINE
veterinary
page

UF veterinarians treat life-threatening vascular infection in horses

BY SARAH CAREY

Two horses at risk for life-threatening bleeding caused by an uncommon infection of the internal carotid artery were successfully treated recently by University of Florida veterinarians who used cutting-edge technology to resolve the problem faster and less invasively than traditional surgery would allow.

“The problem both of these horses had involved a disease called guttural pouch mycosis, or a fungal infection in the guttural pouch,” said Herb Maisenbacher, V.M.D., an assistant clinical professor of cardiology at UF’s Veterinary Medical Center. “The infection can eat its way through the tissues in the back of the throat, potentially rupturing the arteries.”

Typical symptoms include bleeding from the nose, Maisenbacher said.

UF veterinarians treated the first horse in October 2008, and the second in May.

“One horse’s red blood cell count was actually dropping because of the bleeding,” he said. “The other had just one nose bleed. The owners knew they needed to do something before it became life threatening.”

Lynne Kimball-Davis of Wellington recalled the late October morning during which she went to feed her horse, a Dutch Warmblood named Upper Class, and discovered him in his stall bleeding profusely from the nose.

“It looked like he had been massacred,” she said.

Kimball-Davis rushed her horse to Palm Beach Equine Clinic, where veterinarians determined a referral to UF was necessary.

“He was stabilized for two days and then Sunday morning, we got him up to Dr. (David) Freeman,” Kimball-Davis said.

She added that Upper Class returned home after about a week at UF, and has made steady progress since then.

“I’m getting ready to show him in the fall again,” she said. “Everyone has told me he’s perfectly fine now and not to give his problem a second thought.”

Freeman, an equine surgeon, collaborated with Maisenbacher’s cardiology team to treat both cases. In each case, a device known as a vascular plug was inserted to occlude the at-risk artery. Before that, surgeons access the carotid artery through a small incision in the neck and use a contrast agent to find the damaged vessels before blocking them off.

“The affected area is difficult to approach surgically, but it’s been done before,” Maisenbacher said. “Another approach has been to place multiple metallic coils inside the vessel to block the flow of blood. What made our approach unique is that we were able to make the procedure go more smoothly by using newer devices to achieve the same result.”

Freeman, who has used all the various techniques to treat vascular occlusion in horses with hemorrhage from guttural pouch mycosis, favors the new approach.

“The minimally invasive introduction of nitinol plugs seems the best to me,” he said. “It’s also a nice example of teamwork between the small and large animal hospitals that allows us to make use of leading edge technologies that benefit many species.”

Maisenbacher said the vascular plugs are made for use in human medicine, and are believed to have only been used at Purdue University’s veterinary school to treat guttural pouch mycosis in horses. Because of the success UF has had in treating dogs with the devices, Maisenbacher felt a similar result might be achieved in horses.

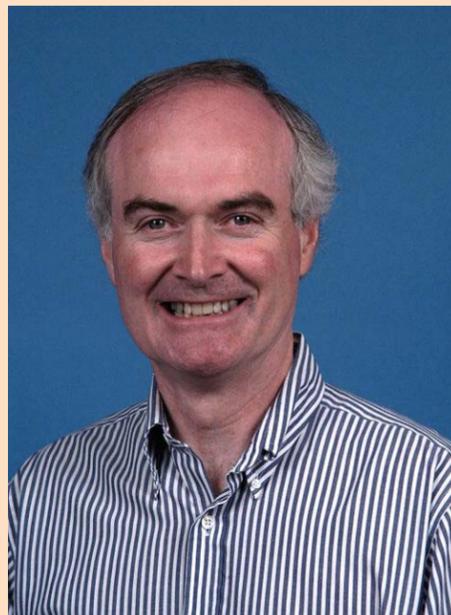
“Once the animals wake up from anesthesia, they are almost back to their normal selves,” he said. “The other advantage is that the devices offer the ability to access vessels that by traditional methods are very difficult to get to. Plus, there really is no other medical treatment for this condition.”

The procedure takes between two and three hours, he added.

Anyone seeking more information about UF’s Veterinary Medical Center and treatments currently available for pets and horses should call (352) 392-2213 or visit www.vetmed.ufl.edu.



Lynne Kimball-Davis rides her Dutch Warmblood, Upper Class. The horse received successful treatment at UF’s Veterinary Medical Center to treat a vascular infection.



Dr. David Freeman



Dr. Herb Maisenbacher

Morris Animal Foundation honors two UF veterinary students for research

BY SARAH CAREY

Two University of Florida veterinary students were among 11 veterinary students nationwide who were honored in Morris Animal Foundation's annual research competition for projects that improve the lives of companion animals and wildlife.

Courtney Varney, a senior student, received second place in the equine division and was awarded \$2,500. Santiago Diaz, a junior student, received third place in the wildlife category and \$1,500.

Thirty veterinary students whose projects were funded through the foundation's Veterinary Student Scholars program participated in the competition. Members of the foundation's scientific advisory boards judged the competition.

Varney's project examined the cardiovascular effects of N-butylscopolammonium bromide (Buscopan), a drug used to treat colic in horses. She performed her project during her summer vacation in the veterinary college's Island Whirl Equine Colic Research Laboratory under guidance and supervision from Alison Morton, D.V.M., an assistant professor of equine surgery.

Diaz's project examined the use of elephant-specific monoclonal antibodies and recombinant antigens of *Mycobacterium tuberculosis* to improve an enzyme-linked immunosorbent assay, or ELISA test, to identify elephants infected with this disease-causing microorganism. His project was performed under the supervision of Ramiro Isaza, D. V. M., an assistant professor and zoological medicine service chief at the University of Florida.



From left to right are Santiago Diaz, CVM class of '11; Tobie McPhail, director of scientific programs and advancement for Morris Animal Foundation; Allen Byrne, Veterinary Student Scholars Program coordinator for Morris Animal Foundation; and Courtney Varney, class of 2010.

"The future of veterinary medicine depends on these outstanding students and their fellow classmates," said Patricia N.

Olson, D.V.M., Ph.D., the foundation's president and CEO. "By giving students the opportunity to work on MAF-funded projects

while they are in veterinary school, we hope to encourage them to consider a career in animal health research."

CVM professor receives Distinguished Veterinary Parasitologist Award



Ellis Greiner, Ph.D., a professor in the University of Florida College of Veterinary Medicine's department of infectious diseases and pathology, has received the American

Association of Veterinary Parasitologists' Distinguished Veterinary Parasitologist Award.

The award consists of a plaque and \$1,500 and was presented during the AAVP's annual meeting, held Aug. 9-14 in Calgary, Canada.

The award is made to honor the outstanding contributions of an AAVP member to the advancement of veterinary parasitology. Recipients are nominated by association members and the winner is selected by their awards committee.

Greiner has served on UF's veterinary faculty for more than 30 years. His research has involved reptiles, birds, livestock, domestic pets, animals, but most has turned to the parasites of sea turtles and marine mammals. Earlier in his career at UF, he worked extensively with bluetongue, a viral disease affecting sheep and cattle, and with a devastating neurological disease that affects horses, known as equine protozoal myeloencephalitis, or EPM, caused by a parasite known as *Sarcocystis neurona*.

Greiner chaired the UF Committee on Committees and the veterinary college's Academic Advancement Committee. He recently served on the UF Student Conduct Code Committee and is now on the same committee for the Health Science Center. He is in his third year on the UF Senate Steering Committee.



Dr. Ellis Greiner, center, is shown with Dr. Andrew Peregrine, left, chairman of the AAVP Awards Committee, and Dr. Doug Carithers, right, of Merial. Merial funds the award Greiner received.

Burrows honored by Royal College of Veterinary Surgeons

Colin Burrows, B.Vet.Med., Ph.D., chairman of the University of Florida College of Veterinary Medicine's department of small animal clinical sciences, has been named an honorary fellow of the Royal College of Veterinary Surgeons.

Burrows, who also serves as chief of staff of UF's small animal hospital, is a board-certified veterinary internist, specializing in the study of canine and feline gastrointestinal, hepatic and pancreatic disease. His research focuses on canine gastrointestinal motility in health and disease, and on the relationship between diet and gastrointestinal disease.

He has delivered continuing education presentations in more than 50 countries and is an honorary member of both the Austrian and Russian Small Animal Veterinary Associations. Burrows also serves as executive director of the North American Veterinary Conference, one of the world's largest veterinary conferences.

In addition to his work with NAVC, Burrows has helped develop programs for other world-class continuing education programs, including the World Small Animal Veterinary Association. He has helped to encourage such programs in Eastern Europe and in economically challenged countries such as Bosnia and Herzegovina and Peru.

Among his many awards are the WSAVA's Award for Service to the Profession in 2006 and the AVMA's 2008 International Veterinary Congress Prize for his contributions to international veterinary medicine.



Dr. Colin Burrows, chairman of the UF College of Veterinary Medicine's department of small animal clinical sciences, is shown with Jill Nute, then-president of the Royal College of Veterinary Surgeons, in July during the RCVS's annual meeting in London. (Photo courtesy of RCVS)

Shelter veterinarians, volunteers, directors and staffers all should benefit from planned presentations at upcoming Maddie's Shelter Medicine Conference

Shelter veterinarians, directors, technicians and volunteers will be exposed to the latest knowledge and learn new tools for success during a University of Florida-sponsored conference Oct. 23-24 at Paramount Plaza Hotel in Gainesville

Organized by the Maddie's Shelter Medicine Program at UF, the 2009 Shelter Medicine Conference will feature experts from the UF College of Veterinary Medicine and elsewhere sharing information about a variety of cutting-edge topics, including the use of veterinary forensic science to fight animal cruelty, how to improve the outcomes of impounded animals by controlling infectious diseases in the shelter and strategies for ending the use of euthanasia for population control.

Presentations will also be given on feline upper respiratory infection, managing disease outbreaks and understanding how to deal with ringworm and dermatologic disease.

"New this year will be a day-long seminar presented by Maddie's Fund and featuring some of the nation's top animal welfare leaders addressing ways to help your organization achieve its lifesaving goals," said Julie Levy, D.V.M., the college's Maddie's Shelter Medicine Professor and program director. That seminar will address creating a pet evaluation matrix and building a thriving foster care program.

Continuing education credits will be available. Only 200 slots are available, so early registration is encouraged.

For more information about speakers, topics and presentation schedule, go to <http://conferences.dce.ufl.edu/sheltermedicine/>. For specific assistance with registration, contact Cathy Gentilman at 352-392-1701, ext. 238. For questions relating to content, contact Rachel Michaud at 352-273-8660.

Maddie's Fund, The Pet Rescue Foundation, (www.maddiesfund.org) is a family foundation funded by Workday and PeopleSoft Founder Dave Duffield and his wife, Cheryl. Maddie's Fund is helping to create a no-kill nation where all healthy and treatable shelter dogs and cats



The Pet Rescue Foundation



are guaranteed a loving home. Maddie's Fund invests its resources in building community collaborations where animal welfare organizations come together to develop successful models of lifesaving; in veterinary colleges to help shelter medicine become part of the veterinary curriculum; in private practice veterinarians to encourage greater participation in the animal welfare cause; and in the implementation of national strategies to collect and report shelter statistics. Maddie's Fund is named after the family's beloved Miniature Schnauzer who passed away in 1997.

The Veterinary Page is the UF College of Veterinary Medicine's internal e-newsletter. Story ideas are welcome and should be e-mailed to Sarah Carey, editor, at careysk@vetmed.ufl.edu

The UF College of Veterinary Medicine is sitting in the splash zone

BY LAURA MIZE

Though located a few hours from the coast, the college's Marine Mammal Program has become a hub for research and teaching of marine mammal medicine, as well as offering clinical diagnostics and treatment of marine mammals in the wild and at various zoological parks.

The program started in 2000 when a state grant focusing on manatee research made funding possible. The manatee remains a central focus, but the program has since expanded to include dolphins, sea lions, seals and whales. The Marine Mammal Program is part of UF's Aquatic Animal Health Program, which serves Florida's aquaculture and fisheries-related industries.

When a 21-year former Sea World of Florida veterinarian arrived in 2006, the Marine Mammal Program took off. Mike Walsh, D.V.M., assistant director of the Aquatic Animal Health Program, brought knowledge of a wide variety of animals—and a desire to teach.

"If I can give (the students) the information that I've learned," Walsh said, "they'll start off better, quicker, faster and accumulate more information so that by the time they retire, they should be further up on our knowledge base. Hopefully each generation can improve on that."

Veterinary students have the opportunity to learn about marine mammals while earning their degrees, an opportunity unavailable at most other veterinary colleges.

The SeaVet clinical course, required to obtain Aquatic Animal Health certification, gives students the opportunity to explore what it would be like to work as a marine animal veterinarian. In one week during the summer, experienced veterinarians from places like Sea World of Florida and Disney World — as well as the UF staff — share their knowledge. This June, students also participated in a hands-on manatee lab and swam with dolphins.

Because the UF veterinary school has the only dedicated marine mammal program worldwide, many experts work together within the college, said Hendrik Nollens, Ph.D., a clinical assistant professor.

"There is a structure for and an interest in marine animal work here that draws in people like me, and it actually brings us together," Nollens said.

Nollens, who completed his graduate studies in UF's Marine Mammal Program, specializes in dolphin, seal and sea lion medicine and coordinates research with the U.S. Navy Marine Mammal Program in San Diego, Calif., and at UF. He works alongside a sea turtle researcher at the Marine Animal Disease Laboratory, known to its researchers as the MAD Lab, testing samples to discover and learn more about diseases of marine animals.

Although Gainesville is inland and may seem like an odd place for the program to be based, UF's structure and central location make the program stronger.

"If we were located on the coast, that would be helpful in terms of proximity," Walsh said. "But it wouldn't give us the right framework for actually bringing along the next generation of health researchers for wild populations. So it's actually a natural fit."

To expand, the program has partnered with several organizations, including the Florida Fish and Wildlife Conservation Commission and the U.S. Geological Services. For example, the FWC handled the recent entanglement of a right whale on the east coast, but UF faculty had the drug knowledge to properly sedate the large animal so workers could free it.

A biologist at USGS, Robert Bonde's expertise of the biological, environmental and behavioral concerns for manatees pairs perfectly with the Marine Mammal Program's knowledge of individual manatee health. Groups like USGS give UF the opportunity for contact with marine mammals.

UF also has its own presence on the ocean at the Whitney Lab for Marine Bioscience. Located on St. Augustine Beach, the lab is known for its marine animal research for translation to possible human health benefits.

Director Peter Anderson was one of the founders of the UF Marine Mammal Program. He hopes the program will expand at Whitney, when a marine animal health facility opens there. Walsh hopes to grow the program, too, to include more conservation efforts, to continue to expand the SeaVet course, and to reach out to other organizations.

His partner at USGS noted the importance of UF Marine Mammal Program's mission.

"It's not just because we want to be better doctors, and we want to protect manatees, and we want to be able to treat them better," Bonde said. "We want to help those animals through troubled times."

Rapid response capability is key to UF rescue team efforts



Members of the UF Aquatic Animal Health team assisted in placing this stranded pseudorca whale into a stretcher and carrying out to a Coast Guard boat, which then transported the mammal to deeper waters and released it.

When Dr. Mike Walsh and others from UF's Aquatic Animal Health Program were asked in June to assist the local Coast Guard in rescuing two stranded whales on Florida's west coast, they quickly realized that one of the creatures was already dead and threw their efforts into saving the remaining whale.

Although it's still not clear whether the group succeeded, the Yankeetown rescue attempt is just one recent example of how UF's AAH team is able to rally quickly intercede in crisis situations – a timely response often the difference between life and death.

"We were taken in a rain storm to the animals about a mile and a half from shore," Walsh said. "The tide had gone out and one whale was already dead and had been attacked by sharks. The second animal, which was about 15 feet long and approximately 1,500 pounds, was laying on its side in about three feet of water, very close to giving up."

UF's team examined the animal and provided supportive therapy, including antibiotics, medications including calcium and the vitamin selenium for complications from stranding. Team members also took blood samples for later analysis.

"Since the animal was showing fairly normal heart and respiratory rate and we were unable to get a consult from the National Marine Fisheries Service, we decided to place the whale in a stretcher. We then carried it with the Coast Guard about 500 feet, through knee-deep mud, to the deeper channel."

The whale was then strapped to the side of the Coast Guard boat and transported further toward the waters until darkness fell, at which time the animal was released.

"It swam strongly, but we were unable to tell if it swam out to sea," Walsh said.

Poor weather and darkness kept rescuers from recovering the body of the dead whale, and a second crew did not find either animal on the following day. Four days later, the dead whale's body was found, but subsequent analysis by UF team members Jennifer McGee and Dr. Kenneth Conley failed to pinpoint a cause of death.

"We still hope the second whale we transported out to sea is still out there," Walsh said.

Other UF team members included Dr. James Bailey, Dr. Jenny Meegan, graduate students Meghan Bills, Allison Gopaul, and Bob Bonde from the USGS, and junior veterinary student Michael West.