Having been veterinary founded, as we celebrate our 65th anniversary this year, Morris Animal Foundation remains veterinary focused.

David Haworth, DVM, PhD
President/CEO

Dear Fellow Veterinarians,

A lot has changed in veterinary medicine since Morris Animal Foundation’s founder, Mark Morris Sr., DVM, entered the veterinary scene. In 1928, Dr. Morris took the revolutionary step of opening one of the first hospitals exclusively for treating small companion animals.

At the time, veterinarians spent their days traveling to area farms to see dairy cows and pigs, not pets. Veterinary medicine for companion animals was almost nonexistent as was research into diseases affecting dogs and cats. One of the best sources of new information was pharmaceutical salesmen who provided case histories of new drugs that were proving effective. Clearly, this wasn’t the most efficient way to learn about new treatments.

Dr. Morris noted that veterinarians needed “to work on some means of doing the research ourselves if there ever are to be major breakthroughs in the treatment of small animal ailments.” He did just that when he founded Morris Animal Foundation in 1948.

As we celebrate our 65th anniversary this year, the Foundation remains veterinary focused. We invest millions of dollars each year to improve pain management, surgical techniques, anesthesia protocols and diagnostic imaging for animal patients. Our work is discovering new ways to diagnose, treat and cure diseases affecting cats, dogs, horses and wildlife. This information is then shared with veterinarians, like you, to help you continually improve the excellent care you provide.

In this issue, we provide research updates on treating bladder cancer in dogs and recurring blood clots in cats with heart disease. We tell you more about Dr. Morris’ contributions to veterinary medicine. We also spotlight research at Cornell University, his alma mater.

Veterinary medicine has come so far from where we were as a profession in 1928, evolving into a cutting-edge industry that invests in science that improves the lives of the animals we serve. Yet there is so much left to learn—and Morris Animal Foundation is dedicated to finding solutions to treat current and emerging animal diseases. We envision a future in which stem cells, genomics and tailored medicine will improve the quality of life of all patients and many of today’s worst diseases will be cured.

Investing in the future health of the animals we love,

David Haworth, DVM, PhD
President/CEO

P.S. That’s Bridger with me in the photo above. He recently joined our family and this fall he will join the Golden Retriever Lifetime Study.
A history of giving: a tale of two clinics  

By THOMAS STEVENS

What does a clinic from historic New England have in common with one in Colorado’s mountains? Both are busy, successful and progressive hospitals. Both share the common cause of making life better for animals and their owners. Both are located in beautiful parts of the country.

And both are long-standing veterinary partners with Morris Animal Foundation.

Susan Bloss, DVM, of Cheyenne Mountain Animal Hospital, has been supporting Morris Animal Foundation for more than 25 years. The relationship started after Morris Animal Foundation founder, Mark Morris Sr., DVM, and his son, Mark Morris Jr., DVM, visited her clinic. Dr. Bloss was so impressed with the visit that she decided to participate in the Foundation’s memorial card program.

“We were initially looking for something that would benefit pets like the ones we see in our clinic,” Dr. Bloss explains. “The added benefit, we realized, was how much our clients love the cards they get. We feel good about supporting the Foundation because it’s a great way to convey to clients that we care about their pets.”

More than 2,000 miles northeast of the Rocky Mountains is the home of Crossroads Animal Hospital in Londonderry, New Hampshire. Like their Colorado colleagues, these veterinary professionals are avid supporters of the Foundation’s memorial card program.

Recently, they added the Pet Parent Award cards to their client services. This is a unique program through which clinics can recognize their clients for being outstanding pet parents.

When I visited the clinic last April, Robin Hertel, DVM, told me, “We have been donating to Morris Animal Foundation since the program began. The card programs show our clients how much we have cared and supported them throughout their pets’ lives.”

“The response from clients is heartwarming,” added practice manager Wendy Boyko.

Veterinary clinics vary in size, shape, specialty and practice, but one consistent value is caring for the pets and their owners. Morris Animal Foundation takes pride in helping its veterinary partners strengthen their bond with clients.

The staff at Crossroads Animal Hospital in Londonderry, New Hampshire, is dedicated to supporting science that improves animal health.
Ingenious solutions to nutritional problems  

BY JEAN VORE

Morris Animal Foundation founder, Mark Morris Sr., DVM, had an inquisitive mind that led to some remarkable research discoveries. He opened one of the first companion animal hospitals, complete with a research lab, in the country in 1928. There, he could explore the causes of medical conditions in dogs and cats and help develop new standards of care.

Early on, Dr. Morris applied human medical advances to help other species, and he quickly became a pioneer in diagnostic work. Blood and urine analysis techniques were being used to diagnose diseases in humans, but no comparable tools were available for veterinarians, so he developed them.

In 1932, Dr. Morris presented his research methods at the American Veterinary Medical Association’s convention. He later recalled of the experience: “My methods were entirely new and I was aware that hardly a person in that crowd (over 700 people in attendance) ever had heard about the techniques I was telling them about. I knew that the methods I was proposing were not being taught in any of the veterinary colleges.” Today, blood and urine analysis are invaluable diagnostic tools employed by veterinarians worldwide.

In 1934 Dr. Morris hired his first biochemist to assist him in the lab. An early discovery stemming from this collaboration was that the health of dogs suffering from kidney failure dramatically improved when their diet was changed from the commercial canned and dry dog food products available in the late 1930s to a balanced high-quality protein diet. Unfortunately, once the dogs recovered and returned home, the owners continued to feed their pets the commercial dog food diets and the dogs would soon require medical care again.

To break this cycle, Dr. Morris began manufacturing a take-home diet mixture for dogs diagnosed with kidney failure. It was a huge success, and soon he needed a full-time employee to meet demand. This diet later became the world’s first Prescription Diet for dogs, sold exclusively to licensed veterinarians. Dr. Morris used his initial royalties to establish Morris Animal Foundation, which focuses solely on advancing veterinary medicine.

The first funds granted by the Foundation supported nutrition research. As the Foundation grew, so did its scope. Today, the Foundation invests in science to improve the health of dogs, cats, horses and wildlife. It is also committed to training new veterinary scientists.

In this way, the Foundation keeps Dr. Morris’ research legacy alive and continues its mission of investing in science that advances veterinary medicine.
In the fall of 1925, Morris Animal Foundation founder Mark Morris Sr. travelled 2,000 miles from his home in Brighton, Colorado, to Ithaca, New York, where he was enrolled at the Cornell University College of Veterinary Medicine. He would graduate with a doctorate of veterinary medicine just one year later. From there Dr. Morris Sr. would go on to become a revolutionary pioneer in the field of small companion animal medicine, helping to establish and becoming the first president of the American Animal Hospital Association and serving as president of the American Veterinary Medical Association. His son, Mark L. Morris Jr., would also attend Cornell, in the fall of 1954, and would become one of the industry’s best known experts in animal nutrition.

In 1956, merely eight years after Dr. Morris Sr. established Morris Animal Foundation, the organization funded a reproduction study at Cornell University that examined ovarian changes in dogs, before, during and after pregnancy. Since that initial reproduction study, the Foundation has supported 115 additional animal health–related studies at Cornell University’s College of Veterinary Medicine, addressing diverse topics ranging from wildlife infectious disease to equine genetics to a multitude of canine and feline health issues.

One of only two Ivy League veterinary schools in the country, Cornell has maintained a commitment to quality veterinary instruction for its students, while providing the facilities and opportunities for groundbreaking research in animal health. Cornell students and faculty have successfully sought Morris Animal Foundation funding in order to investigate a myriad of diseases and conditions.

Morris Animal Foundation has also called upon the knowledge and expertise of many Cornell faculty members, with a number of them having served on the Foundation’s small companion animal, large companion animal or wildlife advisory boards. These advisory boards review grant proposals submitted to the Foundation and recommend which should receive funding based on relevance, scientific merit and potential for impact. Board members volunteer about 100 hours each per year and comprise some of the preeminent authorities on various aspects of veterinary medicine.
Ask a cancer expert  By ALLEN BYRNE

Jaime Modiano, DVM, PhD, is a leading specialist in canine cancer research and treatment. He is a professor of comparative oncology, holds the Al and June Perlman Endowed Chair and leads the Modiano Lab at the University of Minnesota’s College of Veterinary Medicine. A frequent recipient of Morris Animal Foundation funding, Dr. Modiano took time to talk to us about his research.

Q. What strides has your team in the Modiano Lab made in understanding canine cancer?

JM: We have shown there are at least three clinically relevant subtypes of lymphoma in dogs and it is important that each should be approached as its own disease.

Our work also revealed that hemangiosarcoma arises from a progenitor cell that is capable of making more than one type of tissue. This seems to allow malignant tumor cells to grow undisturbed by the patient’s immune system. We are collaborating with another team on a clinical trial to test a new drug that targets malignant tumor cells for elimination.

Finally, we have shown there are at least two clinically relevant subtypes of osteosarcoma, and we have defined biochemical pathways that determine which tumors will behave more aggressively. Thus, we can identify which tumors will likely respond to conventional treatment.

Q. Are you seeing any novel approaches to early detection?

JM: There are no reliable “early detection” tests to screen pets for cancer. However, we are working to improve early detection by evaluating new approaches to pinpoint tumors that would be undetectable to the naked eye and to conventional imaging modalities.

Q. What would you say to general practitioners regarding cancer detection and treatment?

JM: We cannot stress enough that consulting with experts in the field is a component of good clinical practice. Many cancer patients can be managed effectively and efficiently in general practice. But for some cancer patients, it is in their best interest to have access to a specialist, or even a team of specialists. The field is moving rapidly, and it is challenging to stay abreast of every new development.

“Cancer will probably never entirely disappear, but in the coming years we will reduce its incidence.”

JAIME MODIANO, DVM, PhD
University of Minnesota
Transitional cell carcinoma (TCC) is the most common malignancy affecting the urinary bladder in dogs. The disease most often affects the trigone region of the bladder, making urinary tract obstruction likely and complete surgical excision difficult at best.

By the time TCC is diagnosed in a dog, it is usually invasive and advanced to the point that local therapies, which are quite successful in people, are often ineffective. Furthermore, even if local disease control can be achieved, the high metastatic rate (about 50 percent) of TCC in dogs necessitates systemic therapy in order to prolong survival.

Various chemotherapy protocols have been evaluated for treatment of TCC of the bladder in dogs. Although a combination of cisplatin and piroxicam has provided the best response rates to date (more than 71 percent measurable responses), drug-induced nephrotoxicity is a frequent and dose-limiting complication.

Funded by Morris Animal Foundation, Carolyn Henry, DVM, and her team at the University of Missouri recently completed a clinical trial to test the ability of a new experimental drug, Tavocept, to reduce the chemotherapy-induced side effects of cisplatin and piroxicam when treating dogs with bladder cancer. In human patients, Tavocept has been shown to prevent or mitigate common and serious toxicities associated with cisplatin chemotherapy.

Although the researchers determined that the combination of cisplatin, tavocept and piroxicam wasn’t superior to current protocols in terms of bladder-tumor response or kidney toxicity, they did discover that the addition of Tavocept to the protocol significantly decreased the time to administer cisplatin. Saline diuresis was reduced from 6½ hours to only 90 minutes.

The results of this study demonstrated that Tavocept can facilitate a more rapid cisplatin-infusion protocol, thus making cisplatin administration more practical in a private clinic setting. With this information, the researchers hope to expand the use of cisplatin against additional tumor types and at higher and more effective doses.

The three-drug protocol used in a Foundation-funded study to treat client-owned dogs with transitional cell carcinoma of the urinary bladder reduced chemotherapy infusion time from 6½ hours to only 90 minutes. Here Dr. Carolyn Henry and her colleague treat clinical trial participant Duff, who lived a year-and-a-half after his diagnosis.

Let new clients find you through our searchable database

Join more than 1,000 veterinarians who have registered for the Canine Lifetime Health Project—and are making it easier for potential clients to find them.

Visit www.CanineLifetimeHealth.org and register as a veterinarian interested in canine health research. Upon registration, you will have the option to include your name in our searchable database. This will help pet owners who are interested in participating in the Golden Retriever Lifetime Study, the first study launched under our Canine Lifetime Health Project, locate you and your clinic.

When registering, just click the box “I will allow my information to be shared with owners who are eligible to apply for a study.” Let owners dedicated to the health and well-being of their dogs find you.
Drug reduces clot recurrence and improves survival

By WINONA BURGESS, DVM, CPA, MBA

Between 200,000 and 600,000 cats each year are at risk for developing arterial thromboembolism (ATE) associated with underlying heart disease. Survival after a blood clot is very low (about 33 percent). Most cats either don’t survive the clotting incident itself or are euthanized afterward because there is no drug shown to be highly effective at preventing a subsequent blood clot.

Aspirin was the first drug used to prevent clot recurrence in cats and it offered some success. The antiplatelet agent clopidogrel (commercially sold as Plavix) has been shown to be more potent than aspirin in human clinical trials, and recently it has been used in cats after an ATE event. However, this drug has yet to be tested in veterinary clinical trials to evaluate its effectiveness.

To address the lack of clinical data, Daniel F. Hogan, DVM, and his research team from Purdue University conducted a clinical trial that compared the effectiveness of clopidogrel with that of aspirin at reducing recurrent ATE in cats with underlying heart disease. Cats that had survived for three months following an ATE event were eligible for enrollment. Each patient was randomly assigned to receive either aspirin or clopidogrel and, if needed, received appropriate therapy for underlying heart disease.

Clopidogrel proved to be a superior treatment option. Data showed that cats that received clopidogrel lived longer and had a median survival time of 346 days compared with a median survival time of 128 days for cats that received aspirin. Clopidogrel-treated cats also had significantly fewer subsequent clotting events. Of the aspirin-treated cats, 75 percent developed further thromboembolisms compared with only 52.7 percent of clopidogrel-treated cats.

Dr. Hogan’s study is the first prospective clinical trial to evaluate antithrombotic therapy for the prevention of recurrent ATE in cats with underlying heart disease. These results provide direct, objective evidence that clopidogrel is more effective than aspirin at preventing subsequent blood clot events in cats that have experienced ATE.

“Results from this study can help reduce the euthanasia rate of cats that have experienced an arterial thromboembolism because there is now a drug that has been proven to help prevent future blood clots.”

DANIEL F. HOGAN, DVM
Purdue University

With Morris Animal Foundation funding, researchers determined that clopidogrel is far more effective than aspirin at preventing blood clots in cats with heart disease.
Did you know?

Morris Animal Foundation also supports wildlife health research? In fact, we are one of the only organizations in the world that does. One new, exciting project explores whether distributing oral sylvatic plague vaccine to prairie dogs has protective effects on other small rodents that live in and around prairie dog colonies.

Unfortunately, sylvatic plague, a disease of wild rodents, occasionally spills over into other animals, including pets. Check out our Morris Animal Foundation–funded wildlife health research at www.MorrisAnimalFoundation.org/wildlifehealth.

SHARE YOUR THOUGHTS
We want to hear from you. Are there medical topics you wish to hear more about, ideas you have for how we can better share information, or health issues you wish we would address? Share your thoughts at vetinfo@MorrisAnimalFoundation.org.