

Clinical Research Update



January
2016

Bigger, Better, Furrrier

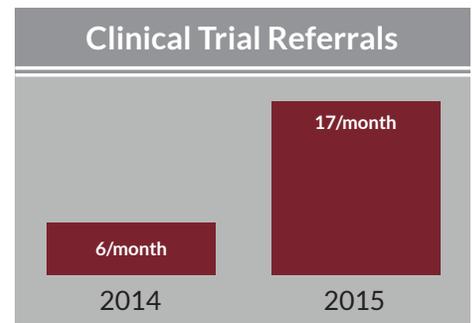
2015 was a year of explosive growth for the Veterinary Clinical Research Office. The Office was established in January 2014 to catalyze our long-standing efforts to advance scientific knowledge by offering cutting-edge therapies to our pets.

We're now offering more trials than ever, with studies for dogs, cats, and horses, in a variety of disciplines including oncology, neurology, internal medicine, and surgery.

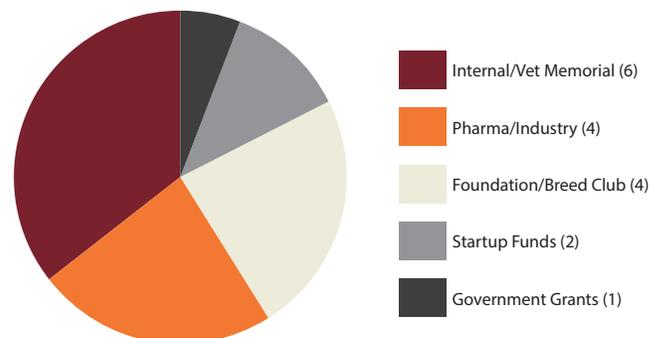
Our Collaborative Research Network has also come of age this year, enabling research partnerships between specialists in private practice and college faculty (see page 2). One of these research partnerships, which seeks to determine whether modifying the treatment of hyperthyroid cats can improve clinical outcomes, grew out of a Veterinary Memorial Fund supported project. That fund, described on page 3, celebrated its 30th anniversary in 2015 and continues to form a crucial part of our clinical research program.

A brand new source of funding for clinical research was inaugurated in 2015 with the installation of the Veterinary Research Donor Wall at the Veterinary Teaching Hospital. This initiative has already raised over \$70,000 to support a new research endowment at the college (see page 4).

We are so grateful for the active participation of the hundreds of owners, donors, researchers, and referring veterinarians who have supported our efforts. None of these achievements would be possible without you.



Ongoing Trial Funding Sources



Working with veterinary patients and their owners, the college's Veterinary Clinical Research Office facilitates clinical trials and translational research studies that advance human and animal health.

Networking for Better Health

As our Collaborative Research Network enters its second year, we're beginning to see exciting projects emerge from the partnerships we've created. The network, which brings together specialty practices with advanced services such as 24-hour emergency care, on-site diagnostics, and on-site cross-sectional imaging, provides a mechanism for college researchers to team up with clinicians in private practice.

Welcome to the New Age: Radioactive Iodine

David Panciera, one of our internal medicine specialists, has long had an interest in the treatment of cats with hyperthyroidism. Cats with this disease, which causes weight loss and GI symptoms, can often be effectively treated using radioactive iodine. However, this treatment has a high rate of side effects. Using funding from the Veterinary Memorial Fund, Panciera is now exploring whether a new way of treating these cats using a technique called scintigraphy to modify the dose of radioactive iodine each cat receives can reduce side effects and improve outcomes. When Collaborative Research Network partner Tina Conway, an internal medicine specialist at VCA Veterinary Referral Associates in Gaithersburg, Maryland, heard about the study, she realized that Panciera's research interests aligned with her own. The two are now collaborating with other researchers on a larger project to identify better ways to treat hyperthyroid cats.

Using Big Data to Help Dogs with Enlarged Hearts

Another Collaborative Research Network success story can be seen in the partnership between vet college cardiologist Michele Borgarelli and the cardiologists at Chesapeake Veterinary Cardiology Associates (CVCA), a specialty cardiac practice that operates out of our network partners' offices. Borgarelli has established the first canine mitral valve disease registry—a powerful database that will allow researchers to understand this disease, which accounts for more than three-quarters of heart disease in dogs. CVCA cardiologist and college alum, Bill Tyrrell, has been instrumental in contributing information to build the database.

"CVCA's huge caseload has allowed us to expand the database much more quickly than we could have done using only cases from our hospital," Borgarelli said. "These additional cases will make an important difference in the power and significance of the data we generate."

2015-16 Veterinary Memorial Fund Awards

Lead Investigator	Purpose	Proposal Amount
Kurt Zimmerman	To determine whether a blood test called an immunosignature can provide a non-invasive way to diagnose different brain diseases (for example, MUE versus brain tumor) in dogs	\$19,826
David Panciera	To see if a new method for determining radioiodine dosage in cats with thyroid disease is better than an existing treatment that uses standardized doses	\$19,420
João Soares	To compare how different doses of the pain-relieving drug fentanyl affect anesthetic requirements and heart and lung function in dogs who are given the anesthesia drug isoflurane	\$32,052
John Rossmeis	To determine a safe and effective dose of modified Newcastle virus for the treatment of dogs with a type of brain tumor called a meningioma	\$19,817
Jennifer Barrett	To validate a technique for treating injury to the deep digital flexor tendon within a horse's hoof using open MRI guidance	\$9,160

Memorial Fund Boosts Research

When Libby Whitley of Lovingston, Virginia, found Rosie, a Walker coonhound, limping along the side of the highway, she made an instant connection. “Unlike many hounds that started life as hunting dogs, Rosie never roamed far, but was content to patrol ‘her’ nearby valley,” Whitley said. “She lived a good, long life until cancer and other maladies took her away from us. We will always miss her loving, indomitable spirit.”

To memorialize this special dog and the bond she shared with her owner, Rosie’s veterinarian, Al Henry of Peaks View Animal Hospital in Lynchburg, Virginia, made a contribution to the Veterinary Memorial Fund on behalf of Rosie and her family.

This gift, along with others over the years, funds life-enhancing research at the college. Supported projects help develop knowledge, improve procedures, and perfect techniques in areas such as hyperthyroidism in cats, chemotherapy, wound healing, and equine laminitis. Mark Finkler, owner of the Roanoke Animal Hospital and longtime contributor to the fund, emphasized how contributing can help pet owners and families during the grieving process. “By contributing to this fund on behalf of a client’s cherished pet, I know that I’m helping to transform a profound loss into a meaningful legacy,” he said.

Shawna Klahn, assistant professor of oncology in the Department of Small Animal Clinical Sciences, said she hopes that legacy is readily apparent in her Veterinary Memorial Fund-funded project, which has the potential to benefit dogs with cancer.

“We are in the middle of a clinical trial to find the appropriate dosage of a human chemotherapy drug, oxaliplatin, in dogs with cancer,” Klahn said. “The overall goal is to expand the arsenal of anti-cancer agents that veterinarians can use in treating their canine patients.”

The clinical trial began last year and is still enrolling dogs with solid tumors of all types. According to Klahn, early results have shown that the chemotherapy drug is well tolerated by dogs. Researchers must first determine appropriate dosage of the drug before determining its effectiveness at fighting cancer.

Many of the Veterinary Memorial Fund grants provide funding for projects that can have a near-term impact on patient care. For example, Noah Pavlisko, assistant professor of veterinary anesthesiology, and his colleagues used an \$18,000 grant to develop a better way to monitor oxygen delivery to critically-ill veterinary patients. They used near-infrared spectroscopy — a new, non-invasive technology that provides real time assessment of oxygen delivery — to better understand oxygen tissue saturation in dogs under general anesthesia.

Portions of this study have been presented at scientific meetings and published in *The Journal of Veterinary Research* and *Veterinary Anesthesia and Analgesia*. The researchers are working to apply the technology to improve patient outcomes.

Established in partnership with the Virginia Veterinary Medical Association and the Maryland Veterinary Medical Association, the Veterinary Memorial Fund has raised almost \$1.5 million for more than 100 research projects.



The legacy of Rosie, a Walker coonhound rescued by Libby Whitley, lives on through a donation to the Veterinary Memorial Fund.

Donor Wall

This fall, the college installed the Veterinary Research Donor Wall near the small animal entrance to the Veterinary Teaching Hospital to recognize specially designated contributions of \$2,500 and above to the college's clinical research efforts.

During an event in November, the college presented plaques to inaugural donors in attendance, including representatives from the Pender Pet Caring Foundation, Nestle Purina, Roanoke Animal Hospital, and Zoetis.

Amy LeBlanc, director of the Comparative Oncology Program at the Center for Cancer Research at the National Institutes of Health's National Cancer Institute, provided a keynote presentation at the event. A veterinary oncologist by training, LeBlanc served as director of translational research at the University of Tennessee's College of Veterinary Medicine and Graduate School of Medicine prior to her NIH appointment.



The college has an active clinical research program which aims to discover new and better methods of prevention, diagnosis, and treatment that will improve the quality of life for current and future patients. Gifts to the donor wall are earmarked to create a brand-new endowment supporting these research efforts.

Veterinary Clinical Research Office

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Donate

Animals need help from people like you, who want every pet to live a long, healthy life. Finding ways we can work together to make that happen is our "pet project!"

If you're interested in making a gift to support clinical research, please get in touch with Mindy Quigley in the Veterinary Clinical Research Office or visit:

vetmed.vt.edu/clinical-trials

Together, we can improve companion animal health, for today and tomorrow.

Find us on the web:

vetmed.vt.edu/clinical-trials/



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