

### Clinical Research

# Pioneering research to advance animal and human health

The bridge from laboratory discoveries to patient care, clinical research enables experts to test new devices, therapies, and treatments to determine if they can be used safely and effectively in animals. Directly applying laboratory findings in clinical settings, Virginia Tech researchers tackle serious, complex health issues and push boundaries to achieve meaningful health outcomes and provide the best possible care for every patient.

This work requires extensive, cross-disciplinary collaboration in cutting-edge facilities. In response, the Veterinary Teaching Hospital in Blacksburg, the Marion duPont Scott Equine Medical Center in Leesburg, and the emerging Animal Cancer Care and Research Center in Roanoke are scaling up to house a growing team of world-class researchers.

Because pets suffer from many of the same conditions and diseases as humans, including cancer and heart disease, your support for discoveries in animal health can lead to better treatments for people.

"Our research is helping to develop new treatments and greater understanding of the most common heart disease in dogs, and this will improve patient care and wellbeing. Studies like these are good for everyone involvedwe learn new things about the disease, the owners benefit from reduced costs, and the pets get access to new treatments."

 Michele Borgarelli, professor of cardiology in the Department of Small Animal Clinical Sciences



#### Clinical research at a glance

- Our research spans a wide range of disciplines. This year, we will be using high-tech methods to rapidly detect viral disease in horses and adapting simple devices to measure glucose levels in diabetic cats.
- Some of our key research partners include the Virginia Tech-Wake Forest School of Biomedical Engineering and Sciences; the Fralin Biomedical Research Institute at VTC; Virginia Tech Carilion School of Medicine; and the School of Medicine at Wake Forest.
- In 2019, more than 250 patients participated in clinical research trials, and we hosted more than 30 funded studies.
- Our recent study exploring owners' perceptions of their cat's quality of life during weight-loss regimens was featured in TV, print, and radio, including a national broadcast of NPR's Weekend Edition.
- Our clinical research involves the study of spontaneous and experimental models of human and animal diseases, investigating everything from the prevalence of heart disease in Cavalier King Charles spaniels to cutting-edge surgical techniques to treat dogs with brain tumors.

#### Clinical research in 2019





Number of clinical trials conducted

\$1.5 million

Total clinical trials funding

### About VA-MD College of Veterinary Medicine

The Virginia-Maryland College of Veterinary Medicine is a leading biomedical teaching and research center and the instate veterinary college for residents of Virginia and Maryland. The college is focused on the development and delivery of a One Health education, integrating multidisciplinary research and educational opportunities that provide health care solutions for animals, people, and communities. Locations include the main campus in Blacksburg, Virginia; the Marion duPont Scott Equine Medical Center in Leesburg, Virginia; the Gudelsky Veterinary Center in College Park, Maryland; and the Animal Cancer Care and Research Center in Roanoke, Virginia. The college offers a four-year, full-time, professional Doctor of Veterinary Medicine program, a graduate degree program in Biomedical and Veterinary Sciences, a master of public health, and a bachelor of science in public health.



## Companions lead the fight against cancer

John Rossmeisl, the Dr. and Mrs. Dorsey Taylor Mahin Professor of Neurology and Neurosurgery, is leading a clinical trial to battle fatal glioblastoma tumors, notoriously difficult to treat in both humans and animals. The study aims to determine the delivery method and safety of a new chemotherapeutic drug in the treatment of dogs and then advance the same treatment methods into human trials within the next several years.

The study's ongoing success is highlighted by the story of Laura Kamienski's Portuguese water dog, Emily, who was diagnosed with a glioma brain tumor and given just 10 weeks to live. More than a year later, Emily's MRI showed no growth of the tumor. "We are just enjoying each day that we have," Kamienski said. "I knew at the start that it's not a cure, but it gave me hope and has given her more time."

Join us.