By Rob Warren

Some of the most difficult cases in all of veterinary medicine are in the neurology/neurosurgery field. As neurological disorders can affect the entire body, veterinary neurologists and neurosurgeons not only find themselves working with various parts of the animal (brain, spine, muscles, nerves), but other veterinary specialty services as well. Thankfully for patients of the UC Davis Veterinary Medical Teaching Hospital, a team approach to cases is applied.

With one of the leading neurology and neurosurgery services of any veterinary hospital, the VMTH has five board-certified faculty neurologists, four resident veterinarians training to be neurology specialists, three highly-trained technicians and a designated referral coordinator. The service has recently increased its appointment availabilities, and the hospital has upgraded its MRI equipment and hours, now offering 24/7 MRI service with around-the-clock, on-call specialists.

The Neurology/Neurosurgery Service provides diagnostic testing, medical care, and surgery for dogs and cats, as well as a consultation service for horses, livestock, exotic species and laboratory animals. The service also provides 24-hour emergency care for animals with immediate neurological and neurosurgical needs. The service works co-operatively with other specialty services within the VMTH (i.e. emergency medicine and critical care, radiology, anesthesia, cardiology, oncology, internal medicine, surgery and ophthalmology). This team approach allows animals with neurological problems to receive state-of-the-art care throughout their hospital stay.

Beyond standard treatment protocol, the VMTH Neurology/Neurosurgery Service also offers treatment through newly-discovered studies and clinical trials. If an animal is eligible to participate, these novel treatments could not only benefit the animal, but also the health care of other animals in the future. Two current highlights of the service include a study on Dachshunds that will launch patient applications in January, and a brain tumor clinical trial that has provided funded treatment for enrolled dogs.

Dr. Beverly Sturges, DVM, DACVIM, is heading up a pilot study focusing on the effects of stem cell therapy on Dachshunds with disc disease and spinal cord injuries. The study is expected to begin recruitment in early 2014. Information on enrolling dogs in this study will be available soon on the UC Davis Veterinary Center for Clinical Trials’ website: www.vetmed.ucdavis.edu/clinicaltrials.

The brain tumor clinical trial is being led by Dr. Peter Dickinson, BVSc, PhD, DACVIM. The trial focuses on brain tumors—specifically gliomas—in brachycephalic dogs. Dr. Dickinson’s novel approach to treating the tumor involves injecting a retroviral replicating vector into the tumor to fight the cancer (see image), as well as standard treatment including surgery and radiation therapy. Ten dogs have been treated as part of the study. Dr. Dickinson is encouraged with the results, and invites veterinarians and owners of other potential candidates to discover more details and contact information at www.vetmed.ucdavis.edu/clinicaltrials/current_trials/by_service/neurology.cfm.

As veterinary medicine is an ever-evolving science, UC Davis hopes these studies and clinical trials may someday become standard practice for both dogs and humans to successfully treat neurological disorders and diseases.