As this recent video spotlighting some of the research at the University of Minnesota College of Veterinary Medicine suggests, our people are our strength. Their passion, collaborative spirit, and commitment to improving animal and human health propel our research enterprise in evermore innovative directions as we look toward meeting the challenges of the future. Our faculty are leaders in areas from fundamental discovery to applied clinical research, enabled by the world-class resources of the University of Minnesota.

For example, Dr. Eva Furrow, featured in the video, codirects our Minnesota Urolith Center. Established in 1981, the Urolith Center is the largest urinary stone analysis center in the world, with a database of over 2 million veterinary samples (from more than 100 species) containing epidemiologic data identifying risk factors for urolithiasis. In addition to the invaluable clinical and educational services the Center offers, this vast data repository enables researchers to explore questions about why stones form—information that can be used to advance therapy for veterinary patients and has a translational impact on our understanding of human stone diseases as well.

Dr. Furrow, who is also a member of the College’s Canine Genetics Lab, is currently using Urolith Center data to explore genetic risk factors associated with calcium oxalate stones, which are common, painful, and costly in dogs, cats, and humans alike—and are highly hereditary. Her work on stone disease in dogs has led to the discovery of several genetic mutations that greatly increase the risk for stone formation. Understanding how these mutations work can also reveal pathways by which environmental and behavioral risk factors promote stone formation and ultimately inspire new ideas for stone preventatives.

Dr. Furrow’s work, like that of many other researchers, is supported by our College’s Clinical Investigation Center (CIC). The CIC develops and facilitates clinical trials and translational research studies through the provision of clinical expertise, facilities, technical staff, and overall study coordination. For example, Casey Johnson, assistant professor of medical imaging, is partnering with the CIC on research to advance the understanding and clinical management of intervertebral disc disease (IVDD). Affecting up to 60% of some breeds, IVDD is a spine disorder in dogs that can result in chronic pain, paralysis, incontinence, and even death. Johnson’s research, initially funded through an internal seed grant, uses MRI to better understand the relationships between the health of the intervertebral discs, vertebral bodies, and spinal cord with the aims of improving diagnosis and risk assessment and evaluating pathogenesis and treatment efficacy. His research has the potential to transform our approach to IVDD in dogs—in addition to the significant translational potential for humans, for whom IVDD and associated back pain is a major driver of opioid use disorder.

The Minnesota Urolith Center and the CIC are just 2 of the myriad unique resources that make the University of Minnesota fertile ground for some of the most visionary researchers working in veterinary medicine today.