AMERICAN KENNEL CLUB®
CANINE HEALTH FOUNDATION®

GRANT PORTFOLIO

2024-2025

Advancing the health of all dogs through knowledge & discovery


AMERICAN KENNEL CLUB®
CANINE HEALTH
FOUNDATION®

Dear friends,

At the AKC Canine Health Foundation, science and compassion come together to create something we all believe in - a healthier future for dogs. I'm proud to share the 2025 Grant Portfolio with you, a powerful portrait of our mission in action.

Our review process is highly competitive, ensuring each study we fund exemplifies the highest standards of scientific excellence and is poised to make a lasting impact on canine health.

We are also investing in the next generation of canine health leaders by expanding our focus on promising young scientists through Rising Researcher and Early Career Investigator grants.

As you explore this portfolio, I hope you'll see the breadth, depth, and promise of the work we support. Thank you - for your passion, your trust, and your commitment to a healthier tomorrow for all dogs.

Warmly,

Stephanie Montgomery, DVM, PhD, DACVP
CEO, AKC Canine Health Foundation

Introduction

Welcome to the AKC Canine Health Foundation's (CHF) active Grant Portfolio, which reflects the grants active as of May 31, 2025. Whether you are discovering our work for the first time or have been a long-time supporter, we hope you find inspiration in the science we champion on behalf of all dogs.

Founded in 1995, CHF is the only non-profit organization dedicated exclusively to funding scientific research that advances canine health. Our mission is to improve the health of all dogs through knowledge and discovery. It guides every investment we make.

This portfolio is a reflection of that mission in action. It highlights the critical program areas where we are making strategic, science-driven investments to create meaningful impact. Each section begins with a snapshot of cumulative progress, including grant volume, funding invested, and peer-reviewed publications, demonstrating the long-term value of the knowledge we support.

Legend

The symbols used throughout the book are designed to help engage and guide your experience. They reflect the following:


Dog breeds more commonly affected


The health issue that we want to solve


Potential impact of a particular study


Insight, or advice for dog owners

Funded after January 1st, 2025


Acorn Grant


Early Career Investigator-led research


Rising Researcher-led research

Research Program Areas

PROGRAM OVERVIEW

Behavior

The study of canine behavior examines how dogs act and respond to their environment. This knowledge can impact health by revealing how dogs learn, communicate, and react to different situations.

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10 Grants
Awarded

$587K
Funded

22
Papers Published

Siberian Husky

03408

Development of a Pain Related Dog Emotion and Cognitive Test Battery

Background

Osteoarthritis is a common cause of chronic pain in dogs, leading to impaired mobility and decreased quality of life. In humans, in addition to physical limitations, persistent osteoarthritis pain is known to cause affective, or emotional, and cognitive deficits that worsen the pain experience. Despite the similarities in physical signs, the impact of chronic pain on affect and cognition in dogs has not been evaluated, leaving a critical gap in understanding and clinical care.

Scientific Premise

This study develops the Dog Pain-Related Emotion and Cognition Test Battery, a standardized tool to assess how chronic pain affects dogs cognitively and emotionally. By designing new tasks and integrating them with validated cognitive and emotional assessments, researchers aim to reliably measure the negative emotional and cognitive effects of pain in dogs with osteoarthritis . This tool will provide new methods to evaluate treatments and improve the quality of life for dogs with chronic pain.

Canine Health Issue

We lack tools to measure how chronic osteoarthritis pain impacts a dog's cognitive and emotional function.

Potential Impact

This study could lead to more comprehensive therapies that address both physical and emotional aspects of chronic pain.

Owner Insight

Consult your veterinarian on ways to support the overall well-being of your dog with osteoarthritis.

GRANT FACTS

Behavior

Principal Investigator

Maggie Creamer, PhD
North Carolina State University

Total Grant Award

$163,570

Grant Period

9/1/2025 - 8/31/2027

Breeds Most Impacted

Labrador Retrievers, Golden Retrievers, German Shepherd Dogs, and other large or senior dogs.

PROGRAM OVERVIEW
Blood Disorders

Blood disorders affect the body's ability to clot, carry oxygen, or fight infection. From inherited bleeding diseases to immune-mediated anemias, these disorders often require urgent, specialized care.

24 Grants
Awarded

$634,546
Funded

17
Papers Published

Old English Sheepdog

02988

Plasminogen-Activator Inhibitor-1 (PAI-1) and Impaired Fibrinolysis in Immune-Mediated Hemolytic Anemia

Background
Immune-mediated hemolytic anemia (IMHA) is a life-threatening blood disorder in which a dog's immune system destroys its red blood cells, causing severe anemia. Treatment usuallly involves immunosuppressive drugs, but dogs with IMHA face a higher risk of blood clots. Normally, clots are broken down by fibrinolysis, but this process may be impaired in IMHA due to elevated levels of a blood protein called PAI-1 (plasminogen activator inhibitor-1). When PAI-1 is too high, clots can persist and restrict blood flow to vital organs.

Scientific Premise
Recently, research found that dogs with IMHA had much higher levels of a PAI-1 precursor. This study builds on that finding by measuring active PAI-1 protein levels and testing whether a drug that blocks PAI-1 can improve clot breakdown. The goal is to improve IMHA treatment by reducing life-threatening clots.

Canine Health Issue
IMHA is a life-threatetning condition that destroys red blood cells, causing anemia and dangerous blood clots.

Potential Impact
This research could improve survival and quality of life by reducing harmful blood clots in dogs with IMHA.

Owner Insight
IMHA can quickly become life-threatening, so watch for signs of abnormal clotting, such as swelling, limping, or difficulty breathing.

GRANT FACTS
Blood Disorders

Principal Investigator
Tracy Stokol, BVSC, PhD, DACVP
Cornell University

Total Grant Award
$121,701

Grant Period
1/1/2022 - 6/30/2025

Breeds Most Impacted
Any dog, but it is seen more frequently in Cocker Spaniels, Poodles, Old English Sheepdogs, and certain terrier breeds.

PROGRAM OVERVIEW

Bone Cancer

Bone cancer, or osteosarcoma, is an aggressive, painful cancer that is most common in large-breed dogs. It often forms in the limbs and requires amputation and chemotherapy, and even then, survival is limited.

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45 Grants
Awarded

$2.93 Million
Funded

35
Papers Published

Greyhound

03400-A

Foundational Studies for Translating FGFR Inhibition in Canine Osteosarcoma

Background
Osteosarcoma is the most common primary bone cancer in dogs, especially affecting large and giant breeds such as Rottweilers, Great Danes, and Irish Wolfhounds. Standard palliative radiation therapy is often used to relieve pain but carries significant risks, including skin damage and bone fractures. A promising innovation, FLASH radiation therapy, delivers radiation at ultra-high dose rates, potentially minimizing harm to healthy tissue while maintaining the same level of tumor control as conventional radiation.

Scientific Premise
This study is the first in dogs determine the highest safe doses FLASH as compared to conventional radiation. The results could reshape pain management and improve quality of life for dogs with osteosarcoma.

Canine Health Issue
Current radiation options for osteosarcoma offer pain relief but carry high risk of side effects.

Potential Impact
FLASH may offer safer, equally effective pain management for dogs with bone cancer.

Owner Insight
Ask your veterinarian about clinical trials for new radiation therapies in osteosarcoma.

GRANT FACTS
Bone Cancer

Principal Investigator
Nathaniel Van Asselt, DVM
University of Wisconsin-Madison

Total Grant Award
$19,440

Grant Period
2/1/2025 - 1/31/2027

Breeds Most Impacted
Rottweilers, Great Danes, Irish Wolfhounds, and Greyhounds are among the most affected breeds.

GRANT FACTS
Bone Cancer

Principal Investigator
Marcella Massimini, PhD
University of Teramo

Total Grant Award
$165,593

Grant Period
10/1/2024 - 9/30/2027

Breeds Most Impacted
Large and giant breed dogs, like Great Danes, Newfoundlands and Irish Wolfhounds, are most affected.

03293

Foundational Studies for Translating FGFR Inhibition in Canine Osteosarcoma

Background
Osteosarcoma is an aggressive bone cancer in dogs that spreads throughout the body and has limited treatment options. In human oncology, new drugs that target cell surface signaling proteins, like fibroblast growth factor receptors (FGFRs), which control cell growth, are showing promise. These treatments aren't yet available for dogs.

Scientific Premise
This study looks at how changes in fibroblast growth factor receptor genes affect the growth and spread of osteosarcoma cells in dogs, and how the tumor's environment plays a role. Researchers believe certain fibroblast growth factor receptor variants drive cancer growth. By building a lab model of the cancer and identifying variants, the model can be used to test targeted treatments, with the goal of bringing personalized cancer therapies to dogs.

Canine Health Issue
Bone cancer in dogs spreads quickly, and it is the metastatic cancer that reduces their lifespan.

Potential Impact
Based on successful human therapies, identifying genetic changes in bone cancer cells could lead to new treatments that slow bone cancer spread in dogs.

Owner Insight
If your dog is diagnosed, ask your vet about clinical trials or emerging treatments that may offer more targeted treatment options.

03266-A

Development of a Novel Diagnostic Test for Canine Osteosarcoma Using Raman Spectroscopy

Background

Osteosarcoma is the most common bone cancer in dogs, especially in large breeds. Despite decades of research, even with treatment, most dogs survive less than two years because the cancer spreads quickly. A promising new diagnostic blood test, called Raman spectroscopy, could detect the disease earlier by identifying subtle biochemical changes caused by tumors.

Scientific Premise

This study investigates whether Raman spectroscopy can identify a distinct molecular "fingerprint" of osteosarcoma in blood samples, enabling earlier, more accurate detection and monitoring through machine learning models. If successful, it could help diagnose cancer sooner and track its return with the hopes of improving survival for dogs with bone cancer.

Canine Health Issue

Most dogs with osteosarcoma are diagnosed only after the cancer has spread.

Potential Impact

A fast, low-cost blood test could transform early detection with hopes of improving survival.

Owner Insight

If you have a large-breed dog, ask your vet about early screening options for bone cancer.

GRANT FACTS

Bone Cancer

Principal Investigator

Terza Brostoff, DVM, PhD, DACVM
University of California, Davis

Total Grant Award

$20,000

Grant Period

4/1/2024 - 9/30/2025

Breeds Most Impacted

Large and giant breed dogs, like Great Danes, Newfoundlands, and Irish Wolfhounds, are most affected.

GRANT FACTS
Bone Cancer

Principal Investigator
Courtney Schott, DVM, PhD, DACVP
University of Guelph

Total Grant Award
$53,125

Grant Period
10/1/2024 - 9/30/2026

Breeds Most Impacted
Rottweilers, Greyhounds, Great Danes.

03285
Osteosarcoma Metastasis-Initiating Cells

Background
Osteosarcoma is the most common bone cancer in dogs, and its deadliest feature is its tendency to metastasize, spreading to distant organs like the lungs. Despite aggressive treatment, survival remains poor and treatment methods have not changed significantly in over 30 years.

Scientific Premise
In this study, researchers will compare standard osteosarcoma cell lines to specialized versions that behave similarly to how cancer spreads in the body. By analyzing their behavior under stress and examining their gene expression profiles, the aim is to identify the biological drivers of metastasis. Understanding what causes osteosarcoma to spread will help develop better treatments and improve the lives of dogs with this devastating cancer.

Canine Health Issue
Most dogs with osteosarcoma die from metastasis, yet the mechanisms enabling tumor spread remain unclear.

Potential Impact
Understanding how osteosarcoma cells metastasize could lead to therapies that prevent spread and improve survival.

Owner Insight
If your dog is diagnosed with osteosarcoma, early detection of metastasis and supportive care may influence outcomes.

03262

Dual Energy Computed Tomography and Bone Resorption Markers in Dogs with Appendicular Osteosarcoma Treated with Stereotactic Body Radiation Therapy

Background

Osteosarcoma is the most common bone cancer in dogs, traditionally treated with limb amputation and chemotherapy. However, not all dogs are candidates for amputation, prompting interest in limb-sparing alternatives like stereotactic body radiation therapy, which targets tumor cells while preserving the limb.

Scientific Premise

Stereotactic body radiation therapy shows promise in controlling primary tumors, but increases the risk of bone fractures. This study uses dual-energy CT scans to measure bone mineral density before and after treatment to better assess fracture risk. Researchers will also evaluate bone breakdown markers to correlate biochemical changes with bone mineral density and treatment response. The goal is to better predict and monitor fracture risk and understand how the bone responds to treatment.

Canine Health Issue

Stereotactic body radiation therapy helps control bone tumor growth but has an increased risk of bone fracture.

Potential Impact

Improved risk assessment and monitoring could make stereotactic body radiation therapy safer for dogs with bone cancer.

Owner Insight

A your veterinarian whether your dog is a candidate for limb-sparing treatment options for bone cancer.

GRANT FACTS

Bone Cancer

Principal Investigator

Tiffany Martin, DVM, MS, DACVR
Colorado State University

Total Grant Award

$97,194

Grant Period

9/1/2024 - 8/31/2026

Breeds Most Impacted

Large breed dogs, like Greyhounds, Great Danes, Newfoundlands, and Irish Wolfhounds, are most affected.

GRANT FACTS
Bone Cancer

Principal Investigator
Geoffrey Wood, DVM, PhD, DVSc
University of Guelph

Total Grant Award
$16,195

Grant Period
1/1/2023 - 12/31/2024

Breeds Most Impacted
Large and giant breed dogs, like Rottweilers, Great Danes, Greyhounds, and Irish Wolfhounds.

03095-A

Cell-Specific Expression of MicroRNAs in Primary and Metastatic Canine Osteosarcoma

Background
Osteosarcoma is a highly aggressive bone cancer most commonly seen in large-breed dogs. Despite limb amputation and chemotherapy, the average survival time is less than one year, with most dogs dying from metastatic spread to the lungs. With few advancements in early detection or treatment over the past 30 years, there is an urgent need for new diagnostic and therapeutic strategies.

Scientific Premise
Small molecules called microRNAs help regulate how cells function. These molecules are detectable in blood, tumors, and other fluids and can provide critical information about cancer presence, prognosis, and response to therapy. Researchers have identified microRNAs in dogs with osteosarcoma that differ from those in healthy dogs and appear to correlate with survival. This study aims to determine which cells produce specific microRNAs using advanced microscopy, providing insights that could lead to earlier detection, more accurate prognosis, and development of targeted therapies.

Canine Health Issue
Osteosarcoma remains deadly because we lack tools to detect or treat metastasis effectively.

Potential Impact
Identifying the origins and roles of microRNAs could improve diagnosis, prognosis, and therapy.

Owner Insight
Watch for unexplained lameness or swelling in your dog's limbs and seek veterinary evaluation promptly.

03032-MOU

Early Detection of Canine Osteosarcoma

Background
Osteosarcoma, the most common primary bone cancer in dogs, affects an estimated 8,000 to 50,000 dogs annually in the U.S., primarily affecting large and giant breeds. Despite treatment, long-term survival remains poor, and side effects can be significant.

Scientific Premise
Researchers believe that finding bone cancer early, before it spreads, offers the best chance to reduce mortality and improve outcomes. This study focuses on high-risk breeds and aims to develop a blood test as the first step in a larger plan for early detection of osteosarcoma.

This research is made possible by the generosity of the Golden Retriever Foundation®, Great Dane Club of America Charitable Trust, Irish Setter Club of America Foundation, Irish Wolfhound Foundation and Irish Wolfhound Club of America, Leonberger Health Foundation International, and Rottweiler Health Foundation.

Canine Health Issue
Most osteosarcoma cases are detected late, when treatment is less effective and survival outcomes are poor.

Potential Impact
A validated blood test could enable early detection and pave the way for preventive strategies in at-risk dogs.

Owner Insight
If you have a large-breed dog, ask your veterinarian about screening options for bone cancer.

GRANT FACTS
Bone Cancer

Principal Investigator
Jaime Modiano, VMD, PhD
University of Minnesota

Total Grant Award
$497,470

This is funded by the Clubs listed, with CHF administering the grant to support scientific progress and high quality research.

Grant Period
4/1/2022 - 3/31/2025

Breeds Most Impacted
Irish Wolfhounds, Rottweilers, Great Danes, Golden Retrievers, Irish Setters, and Leonbergers.


Photo: Mark Atwater

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Heroes for Dogs.
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Celebrating 30 years of life-changing canine health research made possible through the generous support of our donors, partners, investigators, and team.

Thank You.

02782

Genetic Contribution to Early-Onset Osteosarcoma

Background
Osteosarcoma is a deadly bone cancer that is common in large and giant breeds. In Irish Wolfhounds, it is responsible for ~20% of deaths in the breed, with many dogs being diagnosed before 5 years of age. This high rate and early onset suggest a strong genetic component that warrants investigation.

Scientific Premise
This study uses advanced DNA sequencing to identify genetic variants associated with early-onset osteosarcoma in Irish Wolfhounds. The goal is to develop a genetic screening tool to support breeders and reduce the number of dogs affected by this cancer.

Canine Health Issue
Early-onset osteosarcoma causes significant premature mortality in Irish Wolfhounds.

Potential Impact
A validated genetic test could reduce osteosarcoma through informed breeding and be adapted for other high-risk breeds.

Owner Insight
Talk to your breeder or vet about genetic screening for osteosarcoma.

GRANT FACTS
Bone Cancer

Principal Investigator
Susannah Sample, DVM, MS, PhD, DACVS
University of Wisconsin-Madison

Total Grant Award
$161,718

Grant Period
3/1/2020 - 2/28/2025

Breeds Most Impacted
Irish Wolfhounds, Rottweilers, Great Danes, and Greyhounds.

PROGRAM OVERVIEW
Digestive Health

Canine digestive disorders can range from mild to life-threatening. Inflammatory bowel disease, bloat (GDV), and exocrine pancreatic insufficiency are a few examples of the challenges dogs may have that alter their ability to process and absorb nutrients.

42 Grants
Awarded

$2.38 Million
Funded

45
Papers Published

Great Dane

03124

Synbiotic-IgY Modulates MicroRNA Expression and Microbiota in Dogs with Chronic Enteropathy

Background
Chronic intestinal disease is a common cause of persistent diarrhea, vomiting, and weight loss in dogs. Research has shown that imbalances in the gut microbiome are linked to intestinal inflammation. Probiotics—live microbial cultures—are believed to help restore microbial balance, but the exact mechanisms by which they improve gut health remain unclear.

Scientific Premise
This study examines whether probiotics benefit dogs by modulating microRNAs, small molecules that regulate inflammation and the immune system. Researchers are examining how probiotics change both these molecules and the mix of bacteria in the gut. The results could explain how probiotics protect dogs from ongoing digestive problems. Findings will provide critical insight into how probiotics help prevent or manage chronic gastrointestinal disease.

Canine Health Issue
Chronic gastrointestinal disease in dogs is challenging to manage and often recurs.

Potential Impact
This research could lead to a more targeted, effective approach to probiotic therapies.

Owner Insight
Ask your vet if a probiotic supplement is appropriate for your dog's digestive health.

GRANT FACTS
Digestive Health

Principal Investigator
Albert Jergens, DVM, MS, PhD, DACVIM
Iowa State University

Total Grant Award
$57,352

Grant Period
2/1/2023 - 1/31/2026

Breeds Most Impacted
German Shepherd Dogs, Boxers, Soft-Coated Wheaten Terriers.

GRANT FACTS
Digestive Health

Principal Investigator
Sharon Kuzi, DVM, DECVIM-CA
The Hebrew University of Jerusalem

Total Grant Award
$82,863

Grant Period
10/1/2023 - 9/30/2026

Breeds Most Impacted
This condition impacts dogs, more common in middle-aged, overweight dogs.

03158

The Associations between Circulating Saturated and Unsaturated Fatty Acids and the Fecal Microbiome and Metabolome with the Development and Severity of Canine Acute Pancreatitis

Background
Pancreatitis occurs when the pancreas becomes inflamed because its digestive enzymes activate prematurely and begin damaging the organ. Acute pancreatitis is common in dogs and can quickly become life-threatening. While obesity and elevated serum fatty acids (hyperlipidemia) are known risk factors, other factors likely influence the disease's onset and severity.

Scientific Premise
The composition of serum fatty acids, gut microbiome, and fecal metabolites may contribute to both the development and severity of acute pancreatitis in dogs. This study examines how these factors differ in dogs with and without acute pancreatitis. Findings could uncover new pathways involved in pancreatitis and lead to better ways to prevent and treat the disease.

Canine Health Issue
Acute pancreatitis remains unpredictable and potentially fatal in dogs.

Potential Impact
Understanding how fats in the blood and gut bacteria may trigger sudden pancreatic inflammation can lead to new approaches for prevention and treatment.

Owner Insight
Maintain your dog at a healthy weight and avoid high-fat foods.

03140

Efficacy and Tolerability of Gelatin Tannate (Tasectan®) in Canine Parvovirus-Infected Dogs

Background
Canine parvovirus is a serious disease in young dogs that damages the intestine and can be life-threatening. Although early supportive care can save most dogs, treatment typically requires long hospital stays and is expensive, especially for high-risk breeds like Doberman Pinschers, Rottweilers, and English Springer Spaniels. Despite advances in veterinary medicine, current treatments remain largely supportive and unchanged.

Scientific Premise
This study investigates whether adding an inexpensive over-the-counter product, gelatin tannate (Tasectan), to standard parvovirus treatment can help protect the gut, shorten recovery times, and improve survival.

Canine Health Issue
Current parvovirus treatment is effective but costly and inaccessible for many.

Potential Impact
Gelatin tannate could offer a safe and affordable way to improve parvovirus therapy and reduce recovery time.

Owner Insight
Ensure your puppy receives timely vaccinations to prevent parvovirus infection.

GRANT FACTS
Digestive Health

Principal Investigator
Ran Nivy, DVM, DECVIM-CA
The Hebrew University of Jerusalem

Total Grant Award
$21,637

Grant Period
2/1/2023 - 7/31/2025

Breeds Most Impacted
Puppies of any breed, and more common in Doberman Pinschers, Rottweilers, English Springer Spaniels.

PROGRAM OVERVIEW
Epilepsy

Epilepsy is one of the most common neurological conditions in dogs, marked by recurring seizures that can vary widely in severity and frequency. While it is often manageable, it can have a major impact on the quality of life for both dogs and their caregivers.

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49 Grants
Awarded

$3.31 Million
Funded

31
Papers Published

Border Collie

03439-MOU NEW 2025

Molecular Genetic Basis of Epilepsy in Standard Schnauzers

Background
Epilepsy is a serious neurological disorder of recurrent seizures and affects quality of life. In a recent health survey of Standard Schnauzers, epilepsy was reported in approximately 1.3% of the population, significantly higher than in many other breeds. Clinical evidence from evaluated cases suggests the disease is inherited as a recessive X-linked trait, meaning it can silently pass through generations before manifesting in male offspring.

Scientific Premise
Researchers aim to identify the precise genetic variant responsible for epilepsy in Standard Schnauzers using advanced DNA sequencing technologies. Once identified, this variant can be developed into a screening test to help breeders avoid producing affected puppies and assist veterinarians in tailoring treatment strategies. The long-term goal is to reduce the prevalence of epilepsy in the breed and improve the quality of life for affected dogs and their families.

Canine Health Issue
There is a higher rate of epilepsy in Standard Schnauzers than other breeds and there is no breed-specific genetic test.

Potential Impact
Discovering the genetics of epilepsy will enable screening and informed breeding to reduce epilepsy in Standard Schnauzers.

Owner Insight
Support responsible breeders by learning about the lineage's clinical history and genetic health screenings.

GRANT FACTS
Epilepsy

Principal Investigator
Martin Katz, PhD
University of Missouri

Total Grant Award
$31,280

This research is funded by the Duffee Standard Schnauzer Epilepsy Fund and the Standard Schnauzer Club of America, with CHF administering the grant to support scientific progress and high quality research.

Grant Period
8/1/2025 - 7/31/2026

Breeds Most Impacted
Standard Schnauzers.

GRANT FACTS
Epilepsy

Principal Investigator
Karen Muñana, DVM, MS, DACVIM
North Carolina State University

Total Grant Award
$13,886

This research is funded by the Health & Rescue Foundation of the Petit Basset Griffon Vendéen Club of America., with CHF administering the grant to support scientific progress and high quality research.

Grant Period
2/1/2025 - 7/31/2026

Breeds Most Impacted
Petit Basset Griffon Vendéen (PBGV).

03401-MOU NEW 2025

Clinical Characteristics and Heritability of Idiopathic Epilepsy in the Petit Basset Griffon Vendéen

Background
Epilepsy is the most common chronic neurological disorder in dogs. Idiopathic epilepsy—recurrent seizures with no identifiable cause but a presumed genetic basis—accounts for over half of cases. The Petit Basset Griffon Vendéen (PBGV) appears particularly affected, with one study estimating a prevalence of 8.9%. However, this figure did not distinguish between inherited and non-inherited forms of epilepsy, leaving important questions unanswered.

Scientific Premise
This study aims to clarify the prevalence, clinical features, and heritable nature of epilepsy in North American PBGVs. Investigators will distribute surveys via email and social media to current and former PBGV owners, followed by detailed questionnaires and medical record reviews for dogs with a seizure history. DNA samples will also be collected to support future genetic studies, with the long-term goal of developing a genetic screening tool for inherited epilepsy in PBGVs.

Canine Health Issue
The heritable form of epilepsy in PBGVs is not well defined.

Potential Impact
Establishing a genetic basis could enable screening and better infromation for breeders to reduce epilepsy in the breed.

Owner Insight
If your PBGV has experienced seizures, consider contributing to this study by submitting a survey and DNA sample.

03255-MOU

Clinical Characteristics and Heritability of Idiopathic Epilepsy in the Otterhound Breed: A Survey-Based Study

Background
Epilepsy is the most common chronic neurological disorder in dogs, with over half of cases classified as idiopathic epilepsy—recurrent seizures without an identifiable cause, often linked to genetics. Although idiopathic epilepsy is believed to be a significant health concern in Otterhounds, no published studies have confirmed its prevalence or characteristics in this breed.

Scientific Premise
The lack of breed-specific data hinders effective diagnosis, treatment, and future genetic research in Otterhounds with epilepsy. This study assesses the prevalence, clinical signs, and heritability of epilepsy in Otterhounds. Results will support improved veterinary management and lay the foundation for identifying genetic markers to aid in diagnosis and breeding strategies.

Canine Health Issue
Idiopathic epilepsy in Otterhounds is poorly understood and undocumented.

Potential Impact
Findings could lead to genetic testing, early intervention, and improved outcomes.

Owner Insight
If your Otterhound experiences seizures, consult your vet about breed-specific management options.

GRANT FACTS
Epilepsy

Principal Investigator
Karen Muñana, DVM, MS, DACVIM
North Carolina State University

Total Grant Award
$6,140

This research is funded by the Otterhound Club of America, Inc., with CHF administering the grant to support scientific progress and high quality research.

Grant Period
5/1/2024 - 4/30/2025

Breeds Most Impacted
Otterhounds.

GRANT FACTS
Epilepsy

Principal Investigator
Kari Foss, DVM, MS, DACVIM
University of Illinois

Total Grant Award
$54,252

Grant Period
8/1/2024 - 7/31/2026

Breeds Most Impacted
Any dog can experience a seizure including Border Collies, Labrador Retrievers, Belgian Tervurens.

03248

The Application of Magnetic Resonance Elastography in the Assessment of Dogs with Idiopathic Epilepsy

Background
Epilepsy is one of the most common neurologic disorders in dogs. Diagnosing idiopathic epilepsy typically involves advanced imaging, such as magnetic resonance imaging (MRI), to rule out structural causes like tumors or inflammation. While MRI is highly effective at detecting visible abnormalities, it cannot capture microscopic or cellular-level changes in brain tissue.

Scientific Premise
Magnetic resonance elastography (MRE) is a novel imaging technique that non-invasively measures tissue stiffness, offering a way to detect subtle neurologic changes that conventional MRI may miss. This study evaluates the feasibility of using MRE to identify regions of altered brain elasticity in dogs with epilepsy. By mapping these changes, researchers hope to better understand the disease and help develop more targeted and effective treatments.

Canine Health Issue
Conventional MRI misses microscopic brain changes linked to epilepsy.

Potential Impact
MRE is a new imaging method that may enable earlier diagnosis and more targeted therapies for dogs with epilepsy.

Owner Insight
Ask your vet about advanced imaging options if your dog has seizures.

03243-A

Comparison of Clorazepate and Levetiracetam as Pulse Therapy for the In-Home Management of Cluster Seizures in Dogs with Idiopathic Epilepsy: A Pilot Study

Background

Idiopathic epilepsy is the most common long-term brain disorder in dogs. About half of the dogs with this condition have cluster seizures—two or more seizures within a 24-hour period—which are dangerous and considered a medical emergency because they carry a high risk of serious complications or even death.

Scientific Premise

At-home emergency treatments are often used to manage cluster seizures in dogs, but there's little research to show which approaches work best. This study compares two oral treatment options for dogs with idiopathic epilepsy to see which is more effective. The results will help guide veterinary care and support future research aimed at improving seizure control and survival.

Canine Health Issue

There is insufficient evidence guiding at-home treatment for cluster seizures in epileptic dogs.

Potential Impact

Results may improve emergency care and reduce seizure-related deaths.

Owner Insight

If your dog experiences cluster seizures, keep emergency medication on hand and follow your vet's recommendations.

GRANT FACTS

Epilepsy

Principal Investigator
Karen Muñana, DVM, MS, DACVIM
North Carolina State University

Total Grant Award
$19,848

Grant Period
4/1/2024 - 3/31/2026

Breeds Most Impacted
Border Collies, Labrador Retrievers, Australian Shepherds.

GRANT FACTS
Epilepsy

Principal Investigator
Thomas Parmentier, DVM, PhD
Université de Montréal

Total Grant Award
$100,287

Grant Period
8/1/2022 - 7/31/2026

Breeds Most Impacted
Border Collies, Australian Shepherds, Beagles.

03039

Prognostic Biomarkers for the Development of Drug Resistance in Dogs with Idiopathic Epilepsy

Background
Idiopathic epilepsy is the leading cause of seizures in dogs, affecting an estimated 650,000–6 million dogs across the U.S., Canada, and Germany. While many dogs respond to anti-seizure medications, about 30% develop drug-resistant epilepsy that requires multiple drugs and can lead to serious side effects and reduced quality of life for both dogs and their caregivers.

Scientific Premise
This study aims to identify dogs likely to develop drug-resistant epilepsy earlier by using a combination of clinical signs, blood markers called microRNAs, and brain activity patterns as detected by electroencephalography (EEG). The goal is to build a model that helps vets predict which dogs are at risk for drug resistance so treatments can be more personalized and effective.

Canine Health Issue
Drug resistance in epilepsy is unpredictable and worsens treatment outcomes.

Potential Impact
Early detection could allow personalized care and improved quality of life.

Owner Insight
If seizures persist despite treatment, ask your vet about advanced diagnostics.

02931

Assessment of Frequency of Seizures and Anti-seizure Drug (ASD) Efficacy by Electroencephalography (EEG) for Dogs with Epilepsy

Background

Epilepsy is the most common brain disorder in dogs and can arise from various underlying causes. Accurate diagnosis and seizure classification are critical, since it affects treatment decisions, the dog's quality of life, and even survival. Right now, veterinarians mostly rely on what owners report about seizures, which isn't always reliable.

Scientific Premise

In human medicine, doctors use electroencephalography (EEG) to confirm and classify seizures, but this tool isn't commonly used for dogs. This study uses EEG to examine under-reporting of seizures in dogs and evaluate the effectiveness of anti-seizure drugs for different seizure types. The goal is to improve epilepsy care by improving diagnosis accuracy and tailoring treatments to each individual dog.

Canine Health Issue

Inaccurate seizure diagnosis delays optimal therapy in dogs.

Potential Impact

Objective seizure classification could lead to better treatment outcomes.

Owner Insight

Record your dog's seizures and share detailed observations with your vet.

GRANT FACTS

Epilepsy

Principal Investigator

Fiona James, DVM, MSc, DVSc, DACVIM
University of Guelph

Total Grant Award

$83,318

Grant Period

9/1/2021 - 8/31/2026

Breeds Most Impacted

Pugs, Boxers, and Border Collies are among the breeds that more commonly experience seizures, though any dog can be affected.

GRANT FACTS
Epilepsy

Principal Investigator
Stephanie McGrath, DVM, MS
Colorado State University

Total Grant Award
$107,995

Grant Period
5/1/2021 - 9/30/2025

Breeds Most Impacted
Border Collies, Australian Shepherds, Beagles.

02930

Dose Finding Study of Cannabidiol in Dogs with Idiopathic Epilepsy

Background
Idiopathic epilepsy affects up to 5% of dogs and can be a challenging condition for both pets and their caregivers. About one-third of these dogs don't respond well to standard anti-seizure medications, highlighting the urgent need for alternative or adjunctive therapies.

Scientific Premise
Cannabidiol (CBD) has shown promise in helping reduce seizures, but more research is needed to find the optimal dose and understand how well it works in dogs. This study will test the safety and effectiveness of oral CBD used alongside regular anti-seizure medications in dogs that continue to have at least two seizures per month. The goal is to improve seizure control and quality of life, and the findings may also benefit human epilepsy research.

Canine Health Issue
Many dogs with epilepsy suffer from uncontrolled seizures despite treatment.

Potential Impact
CBD could offer a well-tolerated, effective option for managing refractory epilepsy when used with standard medication.

Owner Insight
If your dog's seizures are not well controlled with standard medication, ask your vet about adding emerging therapies like CBD.

When Seizures Strike, Science Helps Turn the Tide

CHF-funded research brings hope to dogs with epilepsy—and the families who love them.

Cluster seizures hit fast and hard. For dogs like Gronk, even daily meds weren't enough - until he joined a CHF-funded clinical trial led by Dr. Karen Muñana at NC State. The study compares two common rescue meds to learn which works best in real life—giving families the power to manage seizures at home, with confidence. "*Being part of this study gave us hope,*" said Gronk's owner. "*It felt like we were taking action, not just for Gronk, but for all dogs like him.*"

Now Gronk is back to bounding through water and chasing joy - proof that research changes lives.

Gronk

HELP US TURN THE TIDE ON CANINE EPILEPSY. DONATE TODAY

Photo: Mark Atwater

PROGRAM OVERVIEW
Eye Health

From inherited vision loss to painful corneal ulcers, eye conditions can affect dogs of all ages. Some breeds are prone to serious issues like progressive retinal atrophy and glaucoma, which can cause partial or total blindness.

69 Grants
Awarded

$3 Million
Funded

48
Papers Published


Cocker Spaniel

03402-MOU

NEW 2025

Molecular Genetic Basis of Glaucoma in Bouvier des Flandres Dogs

Background

Hereditary glaucoma is a devastating eye disease in Bouviers des Flandres, leading to elevated intraocular pressure, chronic pain, and eventual blindness. In many cases, the only option for relief is surgical removal of the eye (enucleation). This inherited condition typically develops in middle-aged dogs and progresses rapidly, severely impacting quality of life. While glaucoma can affect multiple breeds, Bouviers are especially vulnerable due to a likely genetic predisposition.

Scientific Premise

This study aims to identify the genetics of hereditary glaucoma in Bouviers. By examining the genomes of affected and unaffected dogs, researchers hope to pinpoint the causal variant. This could enable a simple genetic test to guide breeding and early diagnosis.

Canine Health Issue

Hereditary glaucoma causes irreversible pain and blindness in Bouviers and there currently is no current breed-specific genetic test.

Potential Impact

A genetic test could help eliminate the disease through informed breeding and allow earlier, vision-sparing treatment.

Owner Insight

Have your Bouvier's eyes examined regularly by a veterinary ophthalmologist, especially if there's a family history of glaucoma.

GRANT FACTS

Eye Health

Principal Investigator

Martin Katz, PhD
University of Missouri

Total Grant Award

$15,980

This research is funded by the Bouvier Health Foundation., with CHF administering the grant to support scientific progress and high quality research.

Grant Period

6/1/2025 - 5/31/2026

Breeds Most Impacted

Bouviers des Flandres is the primary breed impacted by this form of hereditary glaucoma.

GRANT FACTS
Eye Health

Principal Investigator
Sara Thomasy, DVM, PhD, DACVO
University of California, Davis

Total Grant Award
$207,303

Grant Period
6/1/2024 - 5/31/2026

Breeds Most Impacted
Boston Terriers, Chihuahuas, and Dachshunds.

03189

Efficacy and Safety of Ripasudil and Nicotinamide for Canine Corneal Endothelial Dystrophy

Background
Corneal endothelial dystrophy is a progressive eye disease in aging dogs that leads to vision loss due to swelling of the cornea as endothelial cells die. Severe cases can result in painful ulcers, infection, or eye removal. Unlike humans, where corneal transplants are common for a similar disease, dogs rarely receive transplants due to donor limitations and risk of graft rejection. New medical treatments are urgently needed to slow disease progression and preserve vision.

Scientific Premise
Researchers have shown that drugs called ROCK inhibitors like ripasudil can slow disease in some dogs. This study proposes combining ripasudil with nicotinamide, an antioxidant that supports mitochondrial health, to enhance treatment and improve outcomes for more patients. If it works, it could help people with a similar condition.

Canine Health Issue
Current medical treatments are insufficient to help all dogs with corneal endothelial dystrophy.

Potential Impact
A combined therapy could delay disease and reduce the need for surgery or eye removal.

Owner Insight
In aging dogs, watch for signs of cloudy, blue eyes, vision problems, or rubbing the eye.

02959

Genetic Basis of Non-HSF4 Hereditary Cataracts in a Family of Miniature American Shepherds

Background
Hereditary cataracts are a major cause of canine blindness and affect nearly 100 breeds. Currently, only two genetic tests—both targeting the HSF4 gene—are available and explain cataracts in only a few breeds. Even within those breeds, these tests don't capture all affected dogs.

Scientific Premise
Miniature American Shepherds, a breed derived from Australian Shepherds, are showing a rapidly progressing, adult-onset form of hereditary cataracts not explained by existing genetic tests. Researchers have collected DNA from a family with multiple affected dogs and are using whole-genome sequencing to identify new cataract-associated variants. Validation in additional dogs will also estimate how common it is in the Miniature American Shepherds and possibly in Australian Shepherds.

Canine Health Issue
Current genetic tests do not account for all hereditary cataracts in affected breeds.

Potential Impact
A new test could help reduce disease frequency through informed breeding.

Owner Insight
Early eye exams can detect cataracts before vision loss becomes severe.

GRANT FACTS
Eye Health

Principal Investigator
Kari Ekenstedt, DVM, PhD
Purdue University

Total Grant Award
$31,434

Grant Period
10/1/2021 - 9/30/2025

Breeds Most Impacted
Miniature American Shepherds, Australian Shepherds.

PROGRAM OVERVIEW

General Cancer

Cancer is the leading cause of death in dogs and its incidence increases with age. From skin tumors to internal malignancies, canine cancers take many forms and often demand intensive, and sometimes costly, treatment

151 Grants
Awarded

$8.8 Million
Funded

165
Papers Published

Golden Retriever

03403

Characterization and Prognostic Evaluation of Infiltrative Immune Cells in Canine Soft Tissue Sarcomas

Background
Soft tissue sarcomas (STS) are among the most common cancers in dogs, and surgical removal is the primary treatment. However, incomplete removal often leads to tumor regrowth and additional treatments, causing distress for both dogs and owners. For advanced or metastatic cases, effective therapies are lacking. In humans, the types of immune cells in tumors, especially macrophages, both predict outcomes and guide treatment, but little is known about the immune landscape of canine soft tissue sarcomas.

Scientific Premise
Early findings show that macrophages are a predominant immune cell in canine soft tissue sarcomas. This study analyzes immune cell populations present in these tumors and assesses whether the presence of immunosuppressive macrophages predicts disease progression or recurrence. Researchers expect at least half of canine soft tissue sarcomas will be dominated by immunosuppressive macrophages, and that will correlate with worse outcomes.

Canine Health Issue
There are no established immune-based prognostic markers or targeted treatments for canine soft tissue sarcoma.

Potential Impact
Identification of prognostic biomarkers and immune targets could guide novel personalized therapies and improve outcomes.

Owner Insight
If your dog is diagnosed with a soft tissue sarcoma, ask your veterinarian about surgical margins and follow-up treatment options.

GRANT FACTS
General Cancer

Principal Investigator
Hunter Piegols, DVM
The Ohio State University

Total Grant Award
$157,884

Grant Period
6/1/2025 - 3/31/2029

Breeds Most Impacted
Golden Retrievers, Labrador Retrievers, and Doberman Pinschers are among the breeds frequently diagnosed.

GRANT FACTS
General Cancer

Principal Investigator
Enni Markkanen, Dr. med. vet., Dr. sc. nat.
University of Zurich

Total Grant Award
$376,942

Grant Period
2/1/2025 - 7/31/2028

Breeds Most Impacted
All breeds, more common in Golden Retrievers, Labrador Retrievers, and Boxers.

03373 NEW 2025

Deciphering the STS-landscape – Combining Spatially Defined Transcriptomics with Clinical Outcome Data to Improve Diagnosis and Therapy of Canine Soft-Tissue Sarcoma

Background
Soft tissue sarcomas (STS) are common cancers in dogs, affecting all breeds and occurring across body locations. Unlike in humans, where over 100 molecular subtypes guide classification and treatment, canine soft tissue sarcomas are classified by how they look under a microscope—an approach that oversimplifies diagnosis and limits treatment options. Even with surgery, up to 30% of dogs die from soft tissue sarcoma, underscoring the need for improved classification and treatment.

Scientific Premise
This study aims to revolutionize soft tissue sarcoma diagnosis and therapy in dogs by identifying distinct molecular subtypes using laser-capture microdissection and RNA sequencing, paving the way for more accurate diagnoses and targeted therapies based on molecular features of the tumors.

Canine Health Issue
Current diagnostic methods do not distinguish between biologically distinct soft tissue sarcoma subtypes in dogs.

Potential Impact
More accurate diagnoses would allow for subtype-specific treatments that could improve survival outcomes.

Owner Insight
Ask your veterinarian about biopsy and histopathology options before pursuing treatment for soft tissue sarcomas.

03368 NEW 2025

Advancing Canine Health: Liquid Biopsy for Early Relapse Detection and Improved Treatment of Mast Cell Tumors

Background

Mast cell tumor is the most common malignant skin tumor in dogs, accounting for 16–21% of all skin tumors. While any breed can be affected, purebreds like Boxers and Boston Terriers are at increased risk. Surgery remains the primary treatment, and toceranib phosphate (Palladia) offers benefits for inoperable or aggressive tumors. However, many dogs develop treatment resistance within months, and current tools fail to detect this until relapse and spread occurs, often too late for effective intervention.

Scientific Premise

Liquid biopsy using next-generation sequencing (NGS) offers a minimally invasive way to track tumor burden using tumor markers like cfDNA and exosomes found in the blood. While early studies suggest potential, its clinical value for canine mast cell tumors is not yet established. This study aims to fill that gap, offering a new approach to monitor mast cell tumors and improve both care and quality of life for affected dogs.

Canine Health Issue

There is no early, noninvasive method to detect treatment resistance or disease progression in canine mast cell tumors.

Potential Impact

Liquid biopsy could transform monitoring, improve outcomes, and inform more timely treatment.

Owner Insight

Ask your vet if there is molecular testing for your dog's tumor type.

GRANT FACTS

General Cancer

Principal Investigator

Paulo Vilar Saavedra, DVM, MS
University of Florida

Total Grant Award

$239,030

Grant Period

2/1/2025 - 7/31/2027

Breeds Most Impacted

All breeds, more common in Golden Retrievers, Labrador Retrievers, and Boxers.

GRANT FACTS
General Cancer

Principal Investigator
Hiroyuki Mochizuki, BVMS, PhD, DACVP
University of Tennessee

Total Grant Award
$19,999

Grant Period
10/1/2024 - 9/30/2025

Breeds Most Impacted
All breeds, especially: Golden Retrievers, Boxers, German Shepherd Dogs, Bernese Mountain Dogs, Labrador Retrievers.

03307-A

Vanishing Y: Unraveling Loss of the Y Chromosome in Canine Solid Cancers

Background
In human medicine, loss of the Y chromosome (LOY) in males is linked to cancer development and severity. Recent research has identified LOY in dogs with blood cancers, where it is associated with more aggressive disease.

Scientific Premise
This study investigates whether LOY also occurs in other common canine cancers and how it impacts the function of Y chromosome genes in tumors. Researchers will develop precise DNA-based tools to detect LOY and measure Y-linked gene activity across ten non-blood cancer types in dogs. Understanding LOY in canine cancers could improve cancer diagnosis and treatment and to support comparative oncology research that benefits both animals and humans.

Canine Health Issue
Loss of the Y chromosome may contribute to cancer progression in dogs beyond blood-based cancers.

Potential Impact
This research could lead to novel diagnostic and therapeutic targets and support comparative oncology efforts across species.

Owner Insight
Regular exams, especially in aging dogs, can catch cancer early.

03305-A

TRAF3 as a Novel Prognostic Biomarker in Canine Tumor-Associated Macrophages

Background

Macrophages are immune cells that help protect the body by fighting off infections and clearing out abnormal cells, including early cancer cells. However, once a tumor forms, it can trick macrophages into helping it grow and evade the immune system. These "tumor-supporting" macrophages are the most common immune cells found in tumors and are a key focus in a type of cancer treatment called immunotherapy.

Scientific Premise

In people, scientists can detect differences betwen macrophages that fight cancer and those that help it, and clinical trials are testing ways to re-train the harmful ones. In dogs, however, it's been harder to make this distinction. A newly identified marker, TRAF3, may help identify tumor-supporting macrophages in dogs. This project aims to validate TRAF3 as a marker of tumor-supporting macrophages, paving the way for targeted cancer treatments in dogs and potential insights for human care.

Canine Health Issue

Tumors can manipulate macrophages to support cancer growth and evade the immune system.

Potential Impact

Validating TRAF3 as a marker could enable targeted cancer treatments for dogs.

Owner Insight

Your dog's immune system plays an important role in the fight against cancer.

GRANT FACTS

General Cancer

Principal Investigator

Rachel Brady, DVM, DACVIM
Colorado State University

Total Grant Award

$19,674

Grant Period

10/1/2024 - 9/30/2025

Breeds Most Impacted

All dogs.

GRANT FACTS
General Cancer

Principal Investigator
Timothy Fan, DVM, PhD, DACVIM
University of Illinois

Total Grant Award
$206,273

Grant Period
10/1/2024 - 9/30/2027

Breeds Most Impacted
Scottish Terriers, West Highland White Terriers, Shetland Sheepdogs, Beagles.

03283

Investigating the Immune and Cytoreductive Activities of Gilvetmab Alone and in Combination with Indoleamine 2,3-Dioxygenase Inhibition in Canine Urothelial Carcinoma

Background
Bladder cancer, specifically urothelial carcinoma, is a painful and ultimately fatal disease in dogs, often leading to obstruction of urination. Standard treatments such as pain relief, anti-inflammatory medication, and chemotherapy, offer temporary relief but do not halt disease progression. Novel, more effective therapies are urgently needed.

Scientific Premise
This study evaluates the effectiveness of Gilvetmab, an anti-PD-1 immune checkpoint inhibitor, alone and in combination with epacadostat, an immune-enhancing drug. Researchers believe that these treatments will boost the dog's immune response against bladder cancer, improving tumor control and reducing cancer burden.

Canine Health Issue
Current therapies for canine bladder cancer are limited and fail to significantly extend quality or duration of life.

Potential Impact
This research could pave the way for more effective immunotherapy options for bladder cancer in dogs, improving both survival and quality of life.

Owner Insight
If your dog is diagnosed with bladder cancer, ask about clinical trials exploring immunotherapy.

03282

Artificial Intelligence-Based Image Analysis of Lymph Node Mast Cell Burden in Canine Cutaneous Mast Cell

Background
Mast cell tumors are among the most common and potentially aggressive cancers in dogs. They can recur and spread to other parts of the body, especially the lymph nodes, and lead to death. Evaluating lymph nodes for metastasis is a routine part of the clinical workup, but current methods could be improved to more accurately predict outcomes.

Scientific Premise
This study uses deep-learning digital image analysis to examine lymph nodes from dogs with cutaneous mast cell tumors, aiming to identify microscopic features linked to disease progression and risk of death

Canine Health Issue
Veterinarians could use improved tools to predict outcomes in dogs with mast cell tumors based on lymph node analysis.

Potential Impact
This research could enhance diagnostic accuracy and improve treatment decisions, leading to better outcomes for dogs with mast cell cancer.

Owner Insight
Ask your veterinarian whether lymph node evaluation can provide valuable insight into your dog's mast cell tumor prognosis.

GRANT FACTS
General Cancer

Principal Investigator
Ryan Jennings, DVM, PhD, DACVP
The Ohio State University

Total Grant Award
$89,316

Grant Period
10/1/2024 - 9/30/2026

Breeds Most Impacted
Any dog, but more commonly Boxers, Boston Terriers, Labrador Retrievers, Golden Retrievers, and Pugs.

GRANT FACTS
General Cancer

Principal Investigator
Valentina Stevenson, DVM, PhD
University of Florida

Total Grant Award
$19,999

Grant Period
5/1/2024 - 10/31/2025

Breeds Most Impacted
Cocker Spaniels, Golden Retrievers, Scottish Terriers.

03261-A

Mechanisms of Immunotolerance in Canine Oral Melanoma: An Opportunity for Comparative Approaches

Background
Canine oral melanoma is an aggressive cancer that shares key biological and clinical features with human mucosal melanoma, including rapid progression, resistance to conventional therapies, and a poor prognosis. Because of these similarities, it is valuable for learning about both canine and human disease.

Scientific Premise
A major driver of disease severity is the tumor's ability to suppress the immune system, allowing unchecked growth and spread. Melanoma cells can overproduce a protein called PD-L1, which binds to a receptor called PD-1 on T cells, blocking the immune response and allowing for tumor spread. This study aims to classify canine melanomas based on their immune-modulating activity and metastatic potential to better understand how tumors evade the immune response.

Canine Health Issue
Oral melanomas in dogs are highly malignant and difficult to treat, in part due to immune system suppression.

Potential Impact
This research could identify new therapeutic targets to improve outcomes for both dogs and humans with aggressive melanoma.

Owner Insight
Early diagnosis and referral to a specialist can improve treatment outcomes for oral tumors.

03228

Identification of Tumor-Specific Proteins for Targeted Therapy in Solid and Disseminated Histiocytic Sarcoma

Background

Canine histiocytic sarcoma is a highly aggressive cancer seen in several breeds, with strong predisposition in Bernese Mountain Dogs and Flat-Coated Retrievers. Currently available therapies do not provide lasting tumor control, and new approaches are urgently needed to improve outcomes for affected patients.

Scientific Premise

To improve treatment, researchers need a deeper understanding of the proteins that drive this cancer. This study uses laser capture microdissection and proteomics to precisely analyze tumor tissue and compare it to nearby healthy tissue to examine the molecular pathways involved in cancer development.

Canine Health Issue

There is an urgent need for effective, targeted therapies for histiocytic sarcoma, but limited understanding of the disease at the protein level hinders progress.

Potential Impact

Identifying tumor-specific proteins and pathways could reveal new targets for future therapies, improving survival and quality of life.

Owner Insight

If your dog is a predisposed breed, watch for enlarged lymph nodes, lameness, or lethargy.

GRANT FACTS
General Cancer

Principal Investigator

Enni Markkanen, Dr. med. vet., Dr. sc. nat.
University of Zurich

Total Grant Award

$92,089

Grant Period

2/1/2024 - 1/31/2026

Breeds Most Impacted

Bernese Mountain Dogs, Flat-Coated Retrievers, Rottweilers, Golden Retrievers.

GRANT FACTS
General Cancer

Principal Investigator
Benoît Hedan, DVM, PhD; CNRS
University of Rennes

Total Grant Award
$97,956

Grant Period
2/1/2024 - 1/31/2026

Breeds Most Impacted
Bernese Mountain Dogs, Flat-Coated Retrievers, Rottweilers, Golden Retrievers.

03195

Early Genetic Markers of Histiocytic Sarcoma for Faster Diagnosis and More Effective Treatment

Background
Histiocytic sarcoma is a highly aggressive cancer seen at elevated rates in purebred dogs such as retrievers, Bernese Mountain Dogs, and Rottweilers. Diagnosing this disease is difficult, especially in the absence of visible tumors or without advanced diagnostic testing.

Scientific Premise
Through prior CHF-funded research (Grant #02446), investigators identified recurrent PTPN11 mutations linked to the spread of histiocytic sarcoma. These findings led to the development of a blood test that can detect the disease an average of 7.3 months before clinical symptoms appear. Researchers are now identifying other and earlier somatic mutations and testing whether they can be used to detect histiocytic sarcoma before clinical signs appear.

Canine Health Issue
Current methods for diagnosing histiocytic sarcoma often miss early-stage disease, delaying treatment.

Potential Impact
Earlier, more accurate diagnosis of histiocytic sarcoma may enable timely, more effective treatment.

Owner Insight
If your dog's breed is at high risk, discuss early screening options with your veterinarian.

03186-A

Comparison of Genomic Mutation Status between Primary Site and Metastatic Lymph Node in Canine Oral Malignant Melanoma

Background
Oral malignant melanoma is the most common oral cancer in dogs. It is locally invasive and has a high rate of metastasis to organs like lymph nodes, lungs, and the brain. Once metastasized, treatment options are limited and outcomes are poor.

Scientific Premise
While about 50% of human melanomas have known mutations that can be treated with targeted therapies, canine oral melanomas lack these same mutations. This study explores the genetic differences between primary oral tumors and their metastases to identify novel, canine-specific therapeutic targets.

Canine Health Issue
Current treatments for advanced canine oral melanoma are limited and often ineffective once the disease has spread.

Potential Impact
Identifying new mutations may open the door to precision medicine and improved survival for dogs with metastatic oral melanoma.

Owner Insight
Early detection and staging are key—have any unusual mouth masses evaluated promptly.

GRANT FACTS
General Cancer

Principal Investigator
Yoshimi Iwaki, DVM, MS, DACVIM
University of Missouri

Total Grant Award
$19,926

Grant Period
2/1/2024 - 7/31/2025

Breeds Most Impacted
Cocker Spaniels, Golden Retrievers, Poodles, Dachshunds.

GRANT FACTS
General Cancer

Principal Investigator
Shaying Zhao, PhD
University of Georgia

Total Grant Award
$82,232

Grant Period
3/1/2023 - 2/28/2025

Breeds Most Impacted
Primarily English Cocker Spaniels.

03103

Identification of Genetic Mutations in Anal Sac Carcinoma Development in English Cocker Spaniels, Part II – Validation

Background
English Cocker Spaniels are over seven times more likely to develop anal sac carcinoma than other breeds, suggesting a strong genetic predisposition.

Scientific Premise
Prior CHF-funded studies, including whole genome and RNA sequencing, identified three potential germline mutations—PRPF3 R277C, ABCF3 K616N, and a PKD2-COIL gene fusion—linked to anal sac carcinoma in this breed. Transcriptomic analysis also revealed unique gene expression patterns, including downregulation of cancer-related pathways (e.g., MYC) and an increase in endothelial and CD4 T cells. Researchers are now expanding the genetic analysis using large-scale sequencing data and *in silico* modeling to see if specific genetic changes cause tumor growth.

Canine Health Issue
The genetic causes of anal sac carcinoma in English Cocker Spaniels remain unconfirmed, limiting development of targeted diagnostics or therapies.

Potential Impact
This research will validate key genetic mutations and provide a foundation for future strategies in prediction, prevention, and treatment of this cancer.

Owner Insight
Early detection is critical! Consult your vet if you notice swelling near the anus or signs of scooting.

03009

Evaluating Accuracy for Identification of Sentinel Lymph Nodes in Dogs with Cutaneous MCT: A Comparison

Background

Mast cell tumors are the most common skin cancer in dogs and frequently spread to nearby lymph nodes. Identifying whether cancer has metastasized is critical for determining prognosis and treatment strategy. Dogs live longer when cancerous lymph nodes are removed along with the primary tumor.

Scientific Premise

This study evaluates the use of near-infrared fluorescence (NIRF) imaging, a technique validated in human oncology, to accurately identify lymph nodes most likely to contain metastatic cells from skin-based mast cell tumors in dogs. Researchers are comparing lymph nodes identified by the imaging systems with those traditionally sampled by veterinarians. They are also examining the lymph nodes via two sampling methods, cytology and histopathology. This study will improve understanding of mast cell tumors and determine whether NIRF imaging is effective in identifying affected lymph nodes.

Canine Health Issue

Identifying which lymph nodes have mast cell tumor spread remains a clinical challenge, yet is key to guiding treatment decisions.

Potential Impact

Successful validation of this technology could improve cancer staging and survival outcomes for dogs with mast cell tumors.

Owner Insight

Ask your veterinarian if lymph node mapping is appropriate when planning surgery for mast cell tumors.

GRANT FACTS

General Cancer

Principal Investigator

Judith Bertran Trepat, DVM, MS, MRCVS, DACVS and Natalie Worden, DVM, MS
University of Florida

Total Grant Award

$53,981

Grant Period

3/1/2022 - 6/30/2025

Breeds Most Impacted

Boxers, Boston Terriers, Labrador Retrievers, and Golden Retrievers.

PROGRAM OVERVIEW

General Health & Wellness

From common health issues to chronic conditions that impact both longevity and quality of life, this category covers everything from routine care to the prevention, diagnosis, and treatment of disease.

118 Grants
Awarded

$5.46 Million
Funded

141
Papers Published

Cavalier King Charles Spaniel

03417-A

Assessment of the Impact of Pre-Treatment with Anti-Emetic Therapy on the Incidence of Gastroesophageal Reflux in Dogs Undergoing Anesthesia for Orthopedic Surgery as Assessed by Esophageal pH Monitoring and Gastric Volume Assessment

Background

Gastroesophageal reflux, where stomach contents flow into the esophagus, can occur during anesthesia in dogs and may lead to serious complications, like pneumonia or esophageal tissue damage. In humans, nausea and vomiting after anesthesia are common, so anti-nausea drugs are routinely used. Similarly, maropitant is often given to dogs before anesthesia to prevent vomiting, but its effect on gastroesophageal reflux is unclear.

Scientific Premise

Some evidence suggests dogs that vomit after sedation may be less likely to develop gastroesophageal reflux. This study tests whether giving maropitant before sedation increases the risk of gastroesophageal reflux due to stomach volume content. Dogs will be randomly assigned to different treatment times, and researchers will track gastroesophageal reflux with an esophageal probe and stomach function with ultrasound.

Canine Health Issue

Administering maropitant before anesthesia may unintentionally increase risk of gastroesophageal reflux.

Potential Impact

Results will guide evidence-based anesthesia protocols to reduce complications related to gastroesophageal reflux.

Owner Insight

Ask your veterinarian about the timing of anti-nausea medications before anesthesia.

GRANT FACTS

General Health & Wellness

Principal Investigator

Emily Wheeler, DVM
Tufts University

Total Grant Award

$21,158

Grant Period

6/1/2025 - 5/31/2026

Breeds Most Impacted

Affects all breeds undergoing anesthesia, especially brachycephalic and deep-chested breeds like the Pug and Greyhound, respectively.

GRANT FACTS
General Health & Wellness

Principal Investigator
Cynthia Otto, DVM, PhD, DACVECC, DACVSMR
University of Pennsylvania

Total Grant Award
$90,951

Grant Period
5/1/2025 - 4/30/2026

Breeds Most Impacted
Sporting and working breeds, such as: Labrador Retrievers, Belgian Malinois, German Shepherd Dogs.

03391 NEW 2025

Water-Based Cooling Strategies for Dogs Experiencing Exercise-Induced Hyperthermia

Background
Working dogs, like detection and search-and-rescue dogs, face a high risk of heat stress and heat stroke from intense activity. Quick cooling is vital to avoid serious harm or death. While water-based cooling is known to be effective, it's unclear which methods work best in real-world situations, and questions remain about which methods are safest, easiest to use, and most effective in field settings.

Scientific Premise
This study evaluates four practical water-based cooling methods—partial body immersion, voluntary head immersion, monitored water consumption, and water-soaked head towel—at two temperatures (72°F and 59°F) compared to no cooling. Researchers will measure how quickly each method cools the dog, how well the dog recovers, safety, and the dog's willingness to comply.

Canine Health Issue
There is limited evidence guiding best practices for field treatment of canine heat stress.

Potential Impact
This will identify a safe, effective, practical method for cooling overheated working dogs in the field.

Owner Insight
Always carry cool water and know safe, field-ready cooling methods when working with active dogs.

03265-A

Improving Safety by Utilizing a Hypotensive Prediction Index (HPI) Computer to Predict Hypotension in Dogs Undergoing General Anesthesia

Background

Low blood pressure, or hypotension, defined as a mean arterial pressure below 65 mmHg, is a common and serious issue during surgery in both humans and dogs. In people, it increases the risk of kidney problems, cardiac events, longer hospital stays, and even death. Similar risks are seen in dogs, making prevention of intraoperative hypotension essential to improving anesthetic outcomes.

Scientific Premise

In human medicine, tools like the Acumen IQ and HemoSphere monitor can predict low blood pressure 5–15 minutes before it happens, helping doctors prevent it. This study investigates whether the same technology can be utilized to predict and manage low blood pressure in dogs undergoing anesthesia during surgery.

Canine Health Issue

Perioperative hypotension significantly increases risks during and after surgery.

Potential Impact

Early prediction or low blood pressure could lead to safer anesthesia and better surgery survival rates.

Owner Insight

Consult your veterinarian about the risks of anesthesia during surgery.

GRANT FACTS

General Health & Wellness

Principal Investigator

Hisashi Sakata, BVM, PhD, DACVAA
Colorado State University

Total Grant Award

$16,848

Grant Period

5/1/2024 - 4/30/2026

Breeds Most Impacted

Greyhounds, Boxers, Great Danes.

GRANT FACTS
General Health & Wellness

Principal Investigator
Mirja Nolff, PD DMV, DEBVS
University of Zurich

Total Grant Award
$127,440

Grant Period
8/1/2024 - 7/31/2026

Breeds Most Impacted
All dogs receiving gastrointestinal surgeries.

03237

Impact of Perioperative Antibiotic Prophylaxis on the Intestinal Microbiome in Selected Surgical Procedures

Background
Overusing antibiotics is a major concern because it contributes to the rise of multi-drug resistant bacteria, which the World Health Organization calls an urgent global health threat. In veterinary medicine, antibiotics are often given to dogs before surgery to prevent infection, even when there's no sign of one. However, this practice isn't strongly supported by evidence, can cause side effects, may harm gut bacteria, and contribute to antimicrobial resistance.

Scientific Premise
This study looks at how giving antibiotics before surgery alters gut health in dogs having spay or gastrointestinal surgeries. The results will help veterinarians make more informed choices about when antibiotics are truly needed.

Canine Health Issue
Unnecessary antibiotic use may lead to resistant infections and lasting damage to the gut.

Potential Impact
Findings will guide evidence-based decisions about antibiotic use in routine veterinary surgeries.

Owner Insight
Ask your vet if antibiotics are truly necessary for your dog's surgery to prevent infection.

03178-A

Effect of a Canine Systematic Exercise Program on the Dimensions of the Lumbar Paraspinal Musculature and Performance Assessment Scores in Healthy Dogs

Background

Canine athletes are at greater risk of injury, particularly if they have not participated in a conditioning program. Core strength plays a vital role in injury prevention, and research in working dogs shows that core conditioning can build lower back muscles, improve balance between sides, and reduce pain.

Scientific Premise

A structured core exercise program may help build muscle and improve fitness, even in pets that don't participate in sports, which could help prevent injuries and improve fitness. This study evaluates how a systematic core conditioning program affects non-sporting pet dogs. Researchers will use CT scans to measure core muscles and track changes in athletic performance through standardized plank and sprint tests before and after the program.

Canine Health Issue

Dogs often begin sports without proper conditioning, increasing injury risk.

Potential Impact

An evidence-based core conditioning could become a strategy to prevent injury in athletes and keep all dogs active.

Owner Insight

Conditioning your dog before starting in sports can improve safety and boost performance.

GRANT FACTS

General Health & Wellness

Principal Investigator

Cynthia Otto, DVM, PhD, DACVECC, DACVSMR
University of Pennsylvania

Total Grant Award

$19,999

Grant Period

10/1/2023 - 9/30/2025

Breeds Most Impacted

Impacts all dogs, especially any entering sports, like Labrador Retrievers, Border Collies, and Belgian Malinois.

GRANT FACTS
General Health & Wellness

Principal Investigator
Jacquelyn Evans, PhD
Cornell University

Total Grant Award
$113,914

Grant Period
10/1/2023 - 9/30/2025

Breeds Most Impacted
Boxers, English Bulldogs, Great Danes.

03172

Identification of Genetic Risk Factors for Gingival Enlargement in Boxers

Background
Gingival enlargement is a painful condition where the gums grow excessively, leading to tooth loss, difficulty eating, and painful mouth sores. Surgery is the main treatment, but recovery can be difficult. In dogs, the condition occurs most frequently and severely in Boxers, suggesting a strong genetic predisposition.

Scientific Premise
The genetics of gingival enlargement are poorly understood, and since it usually appears later in life a dog's life, it is difficult to prevent through selective breeding alone. This study aims to identify genetic risk variants through a genome-wide association study and investigate dysregulated genes and pathways in affected gum tissue using transcriptome analysis. The findings could lead to a genetic test to guide breeding decisions and support the development of better treatments.

Canine Health Issue
Gingival enlargement is painful and difficult to predict, so it's hard to prevent through breeding.

Potential Impact
Genetic insights may enable early diagnosis, targeted treatments, and disease prevention.

Owner Insight
Regular dental exams are critical, especially for high-risk breeds.

03114

Pain Catastrophizing: A Clinically-Relevant Phenomenon in Dogs?

Background

In the U.S., an estimated 68 million veterinary visits each year are negatively impacted by fear-related behavior in dogs, affecting both care and canine welfare. A dog's characteristics explain less than 7% of this fear, suggesting other influences play a larger role. In human and pediatric medicine, pain catastrophizing, or a cognitive and emotional response toward actual or anticipated pain, has been linked to higher pain intensity, anxiety, and poor outcomes, especially when reinforced by caregivers.

Scientific Premise

The research team hypothesizes that pain catastrophizing may help explain why many dogs experience fear at the vet. They also believe that this response in dogs is linked to how their owners react to pain, similar to what is seen in human pediatric care. This study measures pain catastrophizing in dogs and assesses the role of owner perception. The findings could revolutionize behavioral health and pain management, improving outcomes for surgical recovery and chronic pain.

Canine Health Issue

Fear and mismanaged pain worsen veterinary care and recovery.

Potential Impact

A better understanding of how fear and stress affect a dog's pain will improve care.

Owner Insight

Your own stress and concern can influence your dog's pain experience, so stay calm and reassuring.

GRANT FACTS

General Health & Wellness

Principal Investigator

Margaret Gruen, DVM, PhD
North Carolina State University

Total Grant Award

$109,129

Grant Period

8/1/2023 - 7/31/2025

Breeds Most Impacted

Impacts all breeds, particularly those prone to anxiety: Chihuahuas, Border Collies, German Shepherds.

GRANT FACTS
General Health & Wellness

Principal Investigator
Jenessa Winston, DVM, PhD, DACVIM
The Ohio State University

Total Grant Award
$113,129

Grant Period
6/1/2020 - 9/30/2025

Breeds Most Impacted
Impacts all dog breeds, especially: Labrador Retrievers, Beagles, Dachshunds.

02723

Scientific and Clinical Assessment of Fecal Microbiota Transplant in Obese Dogs: SLIM Study

Background
Obesity is a growing problem in pets that leads to serious health issues, like metabolic dysfunction, hormonal imbalances, and inflammation, leading to reduced quality of life. Emerging evidence suggests that the gut microbiota, the community of microorganisms in the intestines, plays a significant role in the development and persistence of obesity.

Scientific Premise
Modifying the gut microbiota through fecal microbiota transplantation may offer a novel, adjunctive approach to managing obesity in dogs. This study evaluates the effectiveness of fecal microbiota transplantation, transferring feces from healthy, lean donor dogs into obese dogs, as a supplement to dietary weight-loss programs. The researchers aim to determine whether fecal microbiota transplantation will enhance weight loss, improve metabolic function, and support overall health more effectively than a diet alone.

Canine Health Issue
Canine obesity can be challenging to manage with diet alone.

Potential Impact
Fecal microbiota transplantation is a new tool that could be used in combination with diet to improve weight loss and long-term health.

Owner Insight
Ask your vet about comprehensive obesity management, including gut health.

Driven by Science. Inspired by Dogs.

Every dog deserves a life of health and vitality. At the AKC Canine Health Foundation, our work begins where love meets science, supporting groundbreaking research, fostering collaboration, and fueling discoveries that change lives. Guided by a clear mission, bold vision, and unwavering values, we're stewarding hundreds of active research grants across every major canine health concern - advancing solutions that matter to dogs, their people, and the future of veterinary medicine.

To improve the health of all dogs through knowledge and discovery.

A world where all dogs lead healthy, vibrant lives.

Compassion. We engage with compassion in all that we do, spreading empathy and promoting happy and healthy living.

Rigor. We adopt a rigorous approach to our work, striving to exceed expectations, achieve excellence, and uphold the integrity of our organization and its mission.

Discovery. We are endlessly curious in our pursuit of scientific discoveries that will prevent, treat and cure canine disease for all dogs.

Connection. We believe that we are all interconnected, and by working together, we can enhance the lives of dogs and people around the world.

Character. We maintain the highest standards of integrity, authenticity, and transparency in all that we do, reflecting the character of the organization properly.

Join us in advancing canine health. Explore our active research and be part of the discovery at akcchf.org.

PROGRAM OVERVIEW
Heart Health

Heart conditions in dogs, such as mitral valve disease and dilated cardiomyopathy, can develop silently and progress quickly. These disorders impair heart function and may lead to heart failure if not detected and managed early.

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83 Grants
Awarded

$3.84 Million
Funded

61
Papers Published

Doberman Pinscher

03280

Exploring the Relationship between Serum Chloride Concentrations and the Renin-Angiotensin-Aldosterone System in Dogs with Congestive Heart Failure

Background

In people and dogs with congestive heart failure, low blood chloride levels are associated with worse outcomes. Low chloride levels may not only signal disease severity, it may also drive disease progression.

Scientific Premise

Chloride is an electrolyte that helps control the renin-angiotensin-aldosterone system (RAAS), hormones that manage the body's salt and water balance. When chloride levels are too low, fluid accumulates in the body. This study investigates whether lower blood chloride levels are associated with higher RAAS hormone levels in dogs with congestive heart failure. This could lead to a new treatment approach of raising chloride levels in dogs with heart failure so that they live longer.

Canine Health Issue

Dogs with congestive heart failure and low blood chloride face poor outcomes.

Potential Impact

Targeting chloride may improve treatment and extend life.

Owner Insight

Low chloride worsens heart failure, so if your dog is diagnosed, ask your vet to check electrolyte levels.

GRANT FACTS

Heart Health

Principal Investigator

Darcy Adin, DVM, DACVIM

University of Florida

Total Grant Award

$43,767

Grant Period

9/1/2024 – 8/31/2026

Breeds Most Impacted

Cavalier King Charles Spaniels, Doberman Pinschers, Boxers are more commonly affected.

GRANT FACTS
Heart Health

Principal Investigator
Darcy Adin, DVM, DACVIM
University of Florida

Total Grant Award
$109,906

Grant Period
4/1/2022 - 9/30/2025

Breeds Most Impacted
Cavalier King Charles Spaniels, Chihuahuas, Dachshunds.

03031

Tolerability and Clinical Efficacy of Oral Potassium Chloride Supplementation for Treatment of Hypochloremia in Canine Congestive Heart Failure

Background
Congestive heart failure is a leading cause of death in older, small-breed dogs. While treatment can improve quality and length of life, most dogs still die from the disease or its complications. In later stages, low blood chloride levels are common and worsen the disease, and the diuretics used to treat heart failure can even further lower chloride levels.

Scientific Premise
Acetazolamide is a diuretic that also helps the body retain chloride, but it is not currently used in the standard treatment of dogs with congestive heart failure. This study investigates whether acetazolamide can increase blood chloride levels in dogs with congestive heart failure. If it proves successful, it could lead to long-term studies on survival and establish a new approach to treating congestive heart failure in dogs.

Canine Health Issue
Most dogs with congestive heart failure eventually succumb to the disease in spite of treatment.

Potential Impact
Restoring blood chloride may slow disease progression and improve outcomes.

Owner Insight
Keeping an eye on electrolyte levels is key during the treatment of congestive heart failure.

03279

Understanding the Immune Landscape of Canine Myxomatous Mitral Valve Disease and the Role of Inflammation in Disease Pathogenesis

Background

Myxomatous mitral valve disease is the most common acquired heart condition in dogs and the leading cause of heart failure, particularly in aging small-breed dogs like Cavalier King Charles Spaniels and Dachshunds. Once heart failure develops, the average survival time is just 11 months. Despite its prevalence, there are few therapies that slow disease progression, largely due to limited understanding of its underlying causes.

Scientific Premise

This study will investigate the immune cells involved in myxomatous mitral valve disease, a very common cause of heart failure in dogs. By understanding how the immune system contributes to disease progression, researchers hope to find new ways to slow down or stop damage to the heart valve.

Canine Health Issue

Current treatments do not stop mitral valve disease from worsening.

Potential Impact

Understanding how mitral valve disease progresses may unlock targeted therapies.

Owner Insight

Yearly check-ups help your vet find and track heart murmurs, a sign of mitral valve disease.

GRANT FACTS
Heart Health

Principal Investigator

Vicky Yang, DVM, PhD, DACVIM
Tufts University

Total Grant Award

$137,135

Grant Period

9/1/2024 – 8/31/2026

Breeds Most Impacted

All dogs, and more severe in Cavalier King Charles Spaniels, Dachshunds, and Miniature Poodles.

GRANT FACTS
Heart Health

Principal Investigator
Ryan Fries, DVM, DACVIM, DECVIM
University of Illinois

Total Grant Award
$67,176

Grant Period
9/1/2024 – 8/31/2026

Breeds Most Impacted
All dogs, and more severe in Cavalier King Charles Spaniels, Dachshunds, and Miniature Poodles.

03274

Multimodal Quantification of Mitral Regurgitation in Dogs with Myxomatous Mitral Valve Disease

Background
Myxomatous mitral valve disease is the most common heart disease in dogs and a leading cause of heart failure, especially in older, small-breed dogs. The disease leads to mitral regurgitation, or valve leakage, and the heart can't pump blood as efficiently. One of the biggest challenges is determining the severity of mitral regurgitation to know when advanced treatments are needed. The usual tool for this, two-dimensional echocardiography, is helpful but has limitations.

Scientific Premise
This study compares heart imaging methods in dogs with myxomatous mitral valve disease, focusing on standard two-dimensional echocardiography and the more advanced, but less widely available technique, cardiac magnetic resonance imaging. The goal is to develop a reliable approach for assessing mitral regurgitation severity and to establish clear clinical guidelines that improve treatment timing and outcomes.

Canine Health Issue
It's challenging to know when dogs with mitral valve disease need advanced intervention.

Potential Impact
Better diagnostic imaging and could lead to improved care and longer lives.

Owner Insight
Ask your vet how often to check your dog's heart function and if any special imaging tests are needed.

03365 NEW 2025

Genetic Risk of Dilated Cardiomyopathy and Channelopathies in Sighthounds

Background
Borzoi and other sighthounds have been reported to die suddenly without warning. In humans, similar deaths are often linked to inherited heart conditions, like dilated cardiomyopathy (DCM), long QT syndrome, and Brugada syndrome, which are diagnosed via characteristic abnormalities in electrocardiograms (ECGs). While dilated cardiomyopathy and arrhythmias have been observed in sighthounds, Brugada syndrome has never been formally diagnosed in dogs.

Scientific Premise
Interestingly, Borzoi ECGs show patterns similar to those seen in human heart disorders. This study uses machine learning to analyze ECGs and look for early signs of long QT syndrome and Brugada syndrome in sighthounds. It will also search for genetic risk factors by comparing 250 sighthounds to more than 10,000 sequenced dogs. The results could improve how we identify at-risk dogs and offer insights into similar human heart conditions.

Canine Health Issue
Some sighthounds, especially Borzoi, suffer sudden death with no clear cause.

Potential Impact
This study may reveal genetic and electrical markers to prevent sudden cardiac death in dogs—and inform human cardiac research.

Owner Insight
If your sighthound faints, seems lethargic, or shows an abnormal heartbeat, seek cardiac evaluation immediately.

GRANT FACTS
Heart Health

Principal Investigator
Brian Davis, PhD
Texas A&M AgriLife Research

Total Grant Award
$209,500

Grant Period
2/1/2025 - 1/31/2028

Breeds Most Impacted
Borzoi, Greyhounds, Irish Wolfhounds, Scottish Deerhounds, and other sighthound breeds.

GRANT FACTS
Heart Health

Principal Investigator
Christopher Martyniuk, PhD
University of Florida

Total Grant Award
$52,634

Grant Period
12/01/2023 – 11/30/2025

Breeds Most Impacted
Doberman Pinschers, Boxers, Great Danes.

03121

Optimizing HITI CRISPR/Cas9 Gene Editing for Treating Defective Pyruvate Dehydrogenase Kinase 4 in Doberman Pinschers

Background
Around 10% of dogs in the U.S. have heart disease, which can progress to fatal heart failure. Doberman Pinschers with a specific form of dilated cardiomyopathy (DCM) linked to the PDK4 gene have especially poor outcomes, surviving less than six months after the onset of congestive heart failure. Current therapies only manage signs, highlighting the urgent need for innovative treatments.

Scientific Premise
Gene editing of the PDK4 gene in Doberman Pinschers can correct the underlying defect and restore healthy heart function, offering a potential cure for genetically driven DCM.

This study aims to apply advanced gene editing techniques to modify PDK4 and improve heart cell function. Success could revolutionize treatment for DCM in Dobermans and inform therapies for other at-risk breeds.

Canine Health Issue
Genetic DCM leads to rapid heart failure and early death in affected dogs.

Potential Impact
Gene editing could offer the first curative treatment for inherited heart disease.

Owner Insight
If your breed is at risk, ask your vet about genetic testing.

"The AKC Canine Health Foundation has been instrumental in supporting clinically important cardiology research in our group. Without AKC Canine Health Foundation funding, we would not have the understanding we do right now about the importance of chloride in heart failure."

~Dr. Darcy Adin

Helping Dogs' Hearts Beat Stronger & Longer

Cardiology research gives dogs the gift of time and quality life.

10% of dogs treated in veterinary clinics have heart disease, and that number jumps to 60–75% in senior dogs.

The most common types include mitral valve disease (75% of cases) and dilated cardiomyopathy, especially in large breeds.

CHF-funded trials led by Dr. Darcy Adin at the University of Florida revealed a critical finding: low chloride levels (hypochloremia) in dogs with congestive heart failure are linked to poorer outcomes. This discovery is reshaping treatment—shifting focus to chloride correction alongside diuretics.

Her team is now testing targeted supplement therapies like acetazolamide to restore chloride balance, reduce diuretic resistance, and improve quality of life for dogs with advanced heart disease.

Every CHF grant moves us closer to breakthroughs in canine heart care. From delaying disease onset to extending good-quality years with family. Together, we're giving dogs more heartbeats and more memories.

You can make a difference today - akcchf.org/donate

AMERICAN KENNEL CLUB CANINE HEALTH FOUNDATION

PROGRAM OVERVIEW
Hemangiosarcoma

Often called a "silent killer," hemangiosarcoma arises from blood vessel cells and can rupture without warning. It is one of the most fatal canine cancers, especially when it affects the spleen or heart.

33 Grants
Awarded

$3.82 Million
Funded

26
Papers Published

Labrador Retriever

03286

Single Nucleus RNA Sequencing of Canine Hemangiosarcoma - A Comparative Study of Splenic, Extra-Splenic, and Metastatic Tumor Profiling for Targeted Therapeutic Development

Background

Hemangiosarcoma is an aggressive cancer of blood vessel lining cells that primarily affects large-breed dogs. It often presents as a medical emergency due to internal bleeding, typically from a ruptured abdominal tumor. Even with surgery and chemotherapy, survival is limited, underscoring the urgent need for better treatment strategies.

Scientific Premise

This study uses single nucleus RNA sequencing, a cutting-edge genomic tool, to analyze gene expression at the individual cell level in hemangiosarcoma tumors. Comparing hemangiosarcoma and healthy cells, researchers aim to get insights into which genes are expressed, at what levels, and how their expression differs.

Canine Health Issue

Current treatment options for hemangiosarcoma are ineffective, with little improvement in survival over decades.

Potential Impact

Identifying tumor-specific markers could lead to targeted therapies that improve survival while minimizing harm to healthy tissue.

Owner Insight

If your large-breed dog shows signs of sudden weakness or abdominal swelling, seek immediate veterinary care.

GRANT FACTS

Hemangiosarcoma

Principal Investigator

Alexandre Le Roux, DVM, MS
Memorial Sloan Kettering Cancer Center

Total Grant Award

$67,731

Grant Period

10/1/2024 - 9/30/2026

Breeds Most Impacted

Large breed dogs, commonly: Golden Retrievers, German Shepherd Dogs, and Labrador Retrievers.

GRANT FACTS
Hemangiosarcoma

Principal Investigator
Cynthia Otto, DVM, PhD, DACVECC, DACVSMR
University of Pennsylvania

Total Grant Award
$73,257

Grant Period
2/1/2024 - 1/31/2026

Breeds Most Impacted
This disease impacts many breeds, commonly: Golden Retrievers, German Shepherd Dogs, and Labrador Retrievers.

03187

Investigating Volatile Organic Compounds as Potential Markers of Canine Hemangiosarcoma by Trained Bio-Detection Dogs

Background
Canine hemangiosarcoma is a highly fatal blood vessel cancer that often escapes detection until it is advanced and internal bleeding occurs. Current detection relies on imaging after hemorrhage, far too late for curative surgery.

Scientific Premise
Dogs possess an extraordinary sense of smell and have proven their ability to detect disease-related volatile organic compounds. Bio-detection dogs already identify scent signatures of several human cancers. This study tests whether hemangiosarcoma produces a unique odor profile that trained bio-detection dogs can recognize, providing proof-of-concept for scent-based screening devices that could become routine in veterinary practice.

Canine Health Issue
Hemangiosarcoma is usually discovered late, leaving few effective treatment options.

Potential Impact
A distinct scent could enable non-invasive early detection technologies.

Owner Insight
Seek immediate veterinary care for sudden collapse, pale gums, difficulty breathing, or unexplained abdominal swelling.

03011

A GD3 Nano-Scaled Liposomal Cancer Vaccine Clinical Trial for Canine Hemangiosarcoma

Background
Hemangiosarcoma is an aggressive cancer of the blood vessel lining that most commonly affects large-breed dogs. It often strikes without warning, causing internal bleeding and collapse in dogs that appear healthy. Most cases are diagnosed only after tumors rupture, leading to advanced disease that limits treatment options.

Scientific Premise
Immunotherapy may offer a new avenue for improved survival. This study will test a cancer vaccine targeting GD3, a molecule expressed on hemangiosarcoma cells. Investigators have successfully used this vaccine in dogs with melanoma and osteosarcoma, other canine cancers that have aggressive behavior and a poor prognosis.

Canine Health Issue
Hemangiosarcoma is rarely caught early and remains largely fatal, with few improvements in survival over the past 30 years.

Potential Impact
If effective, this cancer vaccine could significantly extend survival and provide a much needed therapeutic breakthrough.

Owner Insight
Since hemangiosarcoma progresses rapidly, regular veterinary check-ups and awareness of subtle changes can be crucial.

GRANT FACTS
Hemangiosarcoma

Principal Investigator
Rowan Milner, BVSc, MMedVet, PhD, DECVIM, DACVIM, Keijiro Shiomitsu, DVM, and Sandra Bechtel, DVM, DACVIM
University of Florida

Total Grant Award
$168,550

Grant Period
3/1/2022 - 2/28/2026

Breeds Most Impacted
Impacts dogs of all breeds, especially: Golden Retrievers, German Shepherd Dogs, Labrador Retrievers.

GRANT FACTS
Hemangiosarcoma

Principal Investigator
Timothy Fan, DVM, PhD, DACVIM
University of Illinois

Total Grant Award
$183,694

Grant Period
3/1/2022 - 2/28/2026

Breeds Most Impacted
This condition commonly impacts large-breed dogs like Golden Retrievers, German Shepherd Dogs, and Labrador Retrievers.

03003

Suppression of Extracellular Glutamate Efflux & mGluR1 Signaling to Impede Canine Hemangiosarcoma Cell Growth

Background
Canine splenic hemangiosarcoma is an aggressive, nearly always fatal cancer that often grows undetected until dogs present with life-threatening internal bleeding. Despite emergency surgery and supportive care, most dogs succumb within months due to rapid recurrence or metastasis.

Scientific Premise
While much hemangiosarcoma reseach has focused on chrmotherapy to shrink tumors, survival time remains short. This project takes a different approach by investigating a novel strategy targeting the cancer's metabolic dependence on extracellular glutamate and related signaling pathways. Researchers are looking at whether blocking the release of glutamate can slow cancer growth. If successful, existing FDA-approved drugs could be used as a new way to treat hemangiosarcoma.

Canine Health Issue
Hemangiosarcoma grows rapidly and is usually diagnosed too late for long-term control.

Potential Impact
Targeting the metabolism of cancer cells by using readily available drugs could extend survival and improve quality of life for dogs with hemangiosarcoma.

Owner Insight
Discuss current and emerging treatments for hemangiosarcoma with your veterinarian to determine what is best for your dog.

02946

Towards Curative Outcomes in Canine Hemangiosarcoma

Background

Canine hemangiosarcoma is the most aggressive cancer affecting dogs, particularly older, large-breed dogs. It often presents without warning, and even with surgery and chemotherapy, over 50% of dogs die within six months due to metastasis. Despite decades of research, no major advances in treatment have emerged in over 30 years.

Scientific Premise

This landmark clinical trial, enrolling 400 dogs with splenic hemangiosarcoma, aims to uncover curative treatment strategies. Through a nationwide effort, families can access care outside the 30 Ethos hospitals and contribute to genomic studies with two world-renowned research teams. This collaboration will generate vital data to accelerate drug development and inform future therapies.

Canine Health Issue

Hemangiosarcoma remains nearly universally fatal, with no meaningful treatment advances in decades.

Potential Impact

This study could lead to life-saving treatments and major breakthroughs in canine cancer care.

Owner Insight

Know your breed's risk and ask your vet about early screening options.

GRANT FACTS

Hemangiosarcoma

Principal Investigator

Chand Khanna, DVM, PhD, DACVIM

Ethos Discovery

Total Grant Award

$348,559

Grant Period

11/1/2021 - 10/31/2026

Breeds Most Impacted

Golden Retrievers, Labrador Retrievers, German Shepherd Dogs.

Canine Hemangiosarcoma Strikes Fast. And Kills Faster.

It's one of the deadliest cancers in dogs, and it's almost always invisible until it's too late.

Each year, hemangiosarcoma takes the lives of up to 300,000 dogs in the U.S.

Though it affects all breeds, some are more susceptible than others. Worse, it often strikes with no symptoms until dogs collapse. Even with surgery and chemotherapy, most dogs live only 3 to 6 months.

Fewer than 10% survive one year.

Known as a "silent killer," this aggressive cancer forms in blood vessels and can rupture suddenly, leading to internal bleeding, shock, or death. Families are left devastated, and veterinarians are left with few tools to help.

Thanks to CHF-funded research, that is changing. Scientists are making bold progress toward early detection, genetic insights, and innovative treatments—fighting back against one of the cruelest canine cancers we know.

It's Time to Fuel the Fight Against Hemangiosarcoma.
Look right to see what your support of CHF makes possible.

Rollo's Story Shows Why

From Tragedy to Trampoline... Science Gave Rollo a Second Chance

When 9-year-old AKC Champion Boxer Rollo was diagnosed with deadly hemangiosarcoma, his future looked bleak. But thanks to a CHF-funded clinical trial at Ethos Discovery, Rollo received a personalized treatment plan and a fighting chance.

Led by Dr. Chand Khanna, a leader in veterinary precision oncology, the study is pushing the front lines of canine cancer care—matching treatments to each dog's genetic profile. For Rollo's family, it was the hope they needed.

"That information gave us the confidence to fight for him." said Jenette, Rollo's owner.

One year later, Rollo is still standing strong. Cleared at his latest check-up, he's back to bouncing on the trampoline with his girls - living proof that research saves lives.

Your support fuels the next fight.

Fuel the fight against canine cancer.
www.akcchf.org/fuelthefight

We Fuel the Fight

PROGRAM OVERVIEW
Hormonal Health

Hormone imbalances can cause complex, chronic conditions in dogs. Diseases like diabetes, Addison's, Cushing's, and hypothyroidism affect metabolism, energy, organ function, and more. They often require lifelong management.

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437 Grants
Awarded

$15 Million
Funded

97
Papers Published

Standard Poodle

02945-MOU

Understanding the Genetic Basis of Addison's Disease in Portuguese Water Dogs

Background
Addison's disease is a serious, life-threatening condition in dogs caused by the immune system destroying parts of the adrenal gland. This damage prevents the production of critical hormones needed for metabolism, kidney function, and immune regulation. Affected dogs are at risk of adrenal crisis, a medical emergency.

Scientific Premise
Portuguese Water Dogs are 29 times more likely to develop Addison's disease than other breeds, strongly suggesting a genetic basis. However, no specific genetic variants have yet been identified for the disease in this breed. This study will use state-of-the-art scientific tools to uncover the genetic basis of Addison's disease in Portuguese Water Dogs. These findings will lay the groundwork for a genetic test that can enable early diagnosis, inform breeding decisions, and reduce disease while preserving breed diversity.

Canine Health Issue
Addison's disease is common and can be life-threatening, with some breeds at high risk.

Potential Impact
A breed-specific genetic test could revolutionize early detection and guide breeding to prevent disease.

Owner Insight
Know your breed's risk and monitor for signs like vomiting, lethargy, low appetite, and weakness.

GRANT FACTS
Hormonal Health

Principal Investigator
Steven Friedenberg, DVM, PhD, DACVECC
University of Minnesota

Total Grant Award
$19,634

This research is generously funded by the Portuguese Water Dog Foundation, with CHF administering the grant to support scientific progress and high quality research.

Grant Period
5/1/2021 - 4/30/2025

Breeds Most Impacted
Portuguese Water Dogs, Standard Poodles, Bearded Collies.

GRANT FACTS
Hormonal Health

Principal Investigator
Michelle Kutzler, DVM, PhD, MBA
University of Minnesota

Total Grant Award
$19,364

Grant Period
11/1/2024 – 10/31/2026

Breeds Most Impacted
Doberman Pinschers, Golden Retrievers, Boxers, Airedale Terriers, Miniature Schnauzers.

03387-A

Does Luteinizing Hormone Receptor Activation Interfere with Canine Thyroid Hormone Secretion in Response to Thyroid Stimulating Hormone *In Vitro*?

Background
Hypothyroidism is the most common hormonal condition in dogs. It is a lifelong condition that reduces quality of life, with weight gain, low energy, skin issues, and often occurs with other health issues. Many breeds are more affected, including Airedale Terriers, Doberman Pinschers, Miniature Schnauzers, Pomeranians, Golden Retrievers, Cocker Spaniels, Shetland Sheepdogs, Irish Setters, Dachshunds, Tibetan Terriers, and Boxers. Spayed and neutered dogs are also more likely to develop hypothyroidism, with nearly 30% affected.

Scientific Premise
Spaying and neutering lead to increased levels of luteinizing hormone (LH). Recent research has shown that LH receptors are present in the canine thyroid gland, and overactivation of these receptors may disrupt thyroid function. This study examines the impact of LH on the thyroid and how spaying or neutering may contribute to hypothyroidism in dogs.

Canine Health Issue
Hypothyroidism affects millions of dogs, and is even more common in spayed and neutered dogs.

Potential Impact
Findings will lead to a better undersanding of how spaying and neutering affects the thyroid gland.

Owner Insight
Ask your vet about thyroid screening, especially if your dog is overweight, lethargic, and spayed/neutered.

German Shepherd Dog

PROGRAM OVERVIEW
Infection & Immunity

A dog's immune system protects it from disease, but when it fails or turns on the body itself, the results can be devastating. This category includes everything from infectious diseases to autoimmune disorders like IMHA and lupus.

89 Grants
Awarded

$3.3 Million
Funded

87
Papers Published

GRANT FACTS
Infection & Immunity

Principal Investigator
Michael Lappin, DVM, PhD, DACVIM
University of Florida

Total Grant Award
$74,192

Grant Period
2/1/2025 - 7/31/2026

Breeds Most Impacted
Cocker Spaniels, Miniature Schnauzers, Old English Sheepdogs, and Poodles are among the breeds most commonly affected.

03339 NEW 2025

The Role of Select Enteric Bacteria in Dogs with Immune-Mediated Hemolytic Anemia

Background
Autoimmune diseases occur when a dog's immune system mistakenly attacks its own cells. Immune-mediated hemolytic anemia (IMHA) is a common and often fatal autoimmune condition where red blood cells are destroyed. The exact cause is unknown, but emerging evidence suggests that gut bacteria entering the bloodstream may trigger IMHA. Four candidate bacteria—*Enterococcus gallinarum*, *Prevotella copri*, *Papillibacter cinnamivorans*, and *Novibacillus thermophilus*—have been identified in early studies.

Scientific Premise
Investigators are using advanced techniques, including bulk RNA sequencing and sensitive microbial detection methods, to study gene activity patterns in blood samples from dogs with IMHA. They aim to identify bacterial triggers, map immune responses, and find gene expression patterns linked to survival or complications like blood clots.

Canine Health Issue
IMHA is often fatal, and its cause remains unclear in most cases.

Potential Impact
Findings may lead to new diagnostic tests, personalized treatments, and even vaccine development.

Owner Insight
Feeding a balanced diet, avoiding unnecessary antibiotics, and talking to your vet about gut health may have benefits beyond digestion.

03337

Identification of *Bartonella henselae* Immunodominant Epitopes for Diagnosis and Prevention of Canine Bartonelloses

Background

Bartonella species are gram-negative bacteria that have been associated with multi-systemic diseases in dogs, including endocarditis, myocarditis, hepatitis, hemangiosarcoma, and neurologic conditions. Canine bartonelloses also pose a zoonotic threat, as the bacteria can be transmitted to humans through arthropod vectors, bites, or contact with infected fluids. Despite improvements in testing, current diagnostics lack the sensitivity needed to reliably detect infection in dogs.

Scientific Premise

This study focuses on *Bartonella henselae*, the species most commonly infecting dogs and humans. Researchers are using immunoproteomics to identify B-cell and T-cell epitopes that can serve as the foundation for developing both a sensitive diagnostic test and a vaccine.

Canine Health Issue

Current tests fail to reliably detect *Bartonella* infections.

Potential Impact

This study could lead to a more accurate diagnostic tool and inform vaccine development.

Owner Insight

Protect your dog from fleas and ticks that carry *Bartonella*.

GRANT FACTS

Infection & Immunity

Principal Investigator

Edward Breitschwerdt, DVM, DACVIM

North Carolina State University

Total Grant Award

$105,012

Grant Period

2/1/2025 - 1/31/2027

Breeds Most Impacted

Labrador Retrievers, Golden Retrievers, and German Shepherd Dogs.

GRANT FACTS

Infection & Immunity

Principal Investigator
Cynthia Robveille, DVM, MS, DECVP
University of Florida

Total Grant Award
$75,012

Grant Period
2/1/2025 - 1/31/2027

Breeds Most Impacted
Golden Retrievers, Labrador Retrievers, and German Shepherd Dogs are commonly affected.

03336 NEW 2025

Comparative Investigation of Techniques to Enhance the Visualization of *Bartonella* for Pathological Diagnosis of Bartonellosis in Dogs

Background
Bartonella is a genus of gram-negative bacteria responsible for a wide range of life-threatening inflammatory and neoplastic diseases in dogs and humans. Two species, *Bartonella henselae* and *Bartonella vinsonii* subsp. *berkhoffii,* are most commonly linked to canine illness. Infected dogs may experience single-organ or widespread disease, and early diagnosis is critical for effective treatment and improved outcomes.

Scientific Premise
Current diagnostic techniques, including serology and PCR, often fail to detect *Bartonella* because it is slow-growing and does not remain in the bloodstream all the time. This study uses a new method, RNAscope® In Situ Hybridization, to directly visualize *Bartonella* organisms in tissue samples, offering a major advance in disease detection and understanding.

Canine Health Issue
Current diagnostic tools lack sensitivity, making *Bartonella* difficult to consistently detect in infected dogs.

Potential Impact
Improved diagnostic accuracy could lead to earlier treatment and better disease management.

Owner Insight
Signs of *Bartonella* can vary and be difficult to detect, and some infected dogs may show no signs.

03334 NEW 2025

Antiparasitic Treatment of *Trypanosoma cruzi*-Infected Dogs Across Different Stages of Disease for Clinical Cardiac Improvements - The 100 Dog Study

Background

Chagas disease is a deadly parasitic infection that affects the heart and poses a serious threat to dogs, humans, and other mammals across the southern U.S., Mexico, Central and South America. Transmitted by "kissing bugs," the disease is spreading beyond endemic regions as dogs travel or are rehomed across the U.S. With no vaccine and limited validated treatments, tools to prevent and manage Chagas disease in dogs are urgently needed.

Scientific Premise

Building on eight years of research, investigators are developing a canine Chagas disease scoring system to assess disease severity, which will be an essential tool for evaluating new treatments. Using this scoring system, they will evaluate a modified benznidazole regimen in 100 dogs across different disease stages to learn which dogs respond best.

Canine Health Issue

There is no consistent way to monitor severity of clinical in dogs with Chagas disease.

Potential Impact

This study could transform how Chagas disease treatments are evaluated and contribute to the global One Health initiative.

Owner Insight

Avoid letting dogs sleep outside in areas with known kissing bug activity.

GRANT FACTS

Infection & Immunity

Principal Investigator

Sarah Hamer, MS, PhD, DVM, DACVPM
Texas A&M AgriLife Research

Total Grant Award

$154,815

Grant Period

2/1/2025 - 1/31/2027

Breeds Most Impacted

Working and outdoor breeds in southern states, including German Shepherds Dogs, Labrador Retrievers, and mixed-breed dogs, are commonly affected.

GRANT FACTS

Infection & Immunity

Principal Investigator
Maria Naskou, DVM, PhD
Auburn University

Total Grant Award
$71,199

Grant Period
6/1/2025 - 5/31/2027

Breeds Most Impacted
Breeds prone to skin injuries or pressure sores, such as Labrador Retrievers, Bulldogs, and German Shepherd Dogs.

03315 NEW 2025

Canine Platelet Lysate Against Biofilm Formation

Background
Chronic infected wounds are a common challenge in veterinary care, often complicated by biofilms, or dense bacterial colonies that resist antibiotics and delay healing. These wounds can persist for weeks or months and, in severe cases, require amputation. Traditional antibiotics fail to penetrate biofilms, and rising antimicrobial resistance further limits treatment success. New strategies are needed to prevent biofilm formation and improve wound healing.

Scientific Premise
Researchers have developed a novel biological therapy called platelet lysate, made from canine platelets, which contains natural growth factors and antimicrobial compounds. Preliminary studies show platelet lysate reduces bacterial growth, but its effectiveness varies by formulation. This study will optimize formulations and test their ability, either alone or in combination with conventional antibiotics, to combat biofilm-associated bacteria.

Canine Health Issue
Biofilms make chronic wounds difficult to treat and limit the effectiveness of antibiotics.

Potential Impact
This research could lead to a powerful new treatment for chronic wounds in dogs.

Owner Insight
Keep wounds clean and monitor healing closely; seek veterinary care for non-healing wounds.

03314 NEW 2025

Evaluation of an Immunotherapeutic Bivalent Vaccine in Owned Dogs Naturally Infected with *Trypanosoma cruzi*

Background
Chagas disease, caused by the protozoan *Trypanosoma cruzi*, affects dogs and humans throughout the Americas, including in the U.S. Infected dogs often develop fatal heart disease, and treatment options are limited. In addition to being vulnerable themselves, dogs serve as domestic reservoirs of the parasite, increasing the risk of human infection.

Scientific Premise
Researchers developed a therapeutic vaccine using *T. cruzi* antigens Tc24.C4 and TSA-1.C4 with a TLR4 adjuvant. In a pilot study, the vaccine reduced parasite levels in the blood and slowed the progression of heart disease in infected dogs. This larger study tests the vaccine in naturally-infected dogs by measuring parasite levels, imaging the heart, and examining immune responses, including antibody levels, T-cell activity, and gene expression.

Canine Health Issue
Chagas disease causes fatal heart damage in dogs, with no widely effective treatment available.

Potential Impact
A vaccine could prevent life-threatening heart disease in infected dogs and reduce transmission to humans.

Owner Insight
If you live in or travel to the southern U.S. or Latin America, talk to your vet about Chagas risk and vector control.

GRANT FACTS
Infection & Immunity

Principal Investigator
Julio Cruz-Chan, DVM, PhD
Universidad Autónoma de Yucatán

Total Grant Award
$49,572

Grant Period
2/1/2025 - 1/31/2027

Breeds Most Impacted
Any breed can be infected, but working, outdoor, and shelter dogs in endemic regions are at greatest risk.

GRANT FACTS

Infection & Immunity

Principal Investigator
Aline Rodrigues Hoffmann, DVM, PhD, DACVP
University of Florida

Total Grant Award
$20,000

Grant Period
10/1/2024 - 9/30/2025

Breeds Most Impacted
Labrador Retrievers, Golden Retrievers, German Shepherd Dogs.

03322-A

Whole Genome Sequencing of Three Fungal-Like Organisms, and Development of a Quantitative Real-Time Polymerase Chain Reaction (qPCR) for Oomycosis Diagnosis in Dogs

Background
Pythium insidiosum, Lagenidium giganteum forma caninum, and *Paralagenidium karlingii* are fungal-like organisms that cause life-threatening infections in dogs, from severe skin infections to internal disease. These infections, collectively known as oomycosis, are most common in the Southeastern U.S., particularly in dogs exposed to standing water. Treatment success varies by organism, but current diagnostic tools often lack the accuracy to identify the species.

Scientific Premise
Whole-genome sequencing can identify unique genetic markers across organisms to establish a diagnostic target for rapid molecular diagnostic testing. This study sequences the genomes of three of the key pathogens from archived tissues to develop a reliable, cost-effective diagnostic tool.

Canine Health Issue
Oomycosis is difficult to diagnose accurately, delaying proper treatment.

Potential Impact
Molecular diagnostics could significantly improve survival and treatment outcomes.

Owner Insight
Avoid letting your dog swim in or drink from stagnant water, especially in warm climates.

03313-A

Standardization and Evaluation of the Use of LPG3 Linear Peptides Alone or in Chimera Form for the Serodiagnosis of Canine Visceral Leishmaniasis by ELISA

Background

Canine visceral leishmaniasis is a serious parasitic disease transmitted by sandflies, with dogs serving as a main source of *Leishmania* spp., the intracellular protozoan responsible for disease. Diagnosis is difficult due to vague clinical signs, leading to false negatives that delay treatment and false positives that may result in unnecessary euthanasia.

Scientific Premise

Serological tests are the most widely used diagnostic tool for diagnosing canine visceral leishmaniasis; however, current methods lack optimal accuracy. Recent advances using recombinant *Leishmania* peptides offer the potential of an improved test. This study assesses the effectiveness of utilizing select recombinant peptides to increase the specificity of the test without compromising its sensitivity, providing better performance than currently available serological tests for canine visceral leishmaniasis.

Canine Health Issue

Diagnosing canine visceral leishmaniasis is difficult because of non-specific signs and limited accuracy of current tests.

Potential Impact

This work could lead to the development of an improved diagnostic test for canine visceral leishmaniasis.

Owner Insight

In high-risk areas, protect dogs from sandflies with repellents, treated collars, and indoor shelter at peak biting times.

GRANT FACTS

Infection & Immunity

Principal Investigator

Eduardo de Almeida Marques da Silva, PhD
Federal University of Viçosa

Total Grant Award

$29,592

Grant Period

10/1/2024 - 9/30/2027

Breeds Most Impacted

Labrador Retrievers, Golden Retrievers, German Shepherd Dogs.

GRANT FACTS
Infection & Immunity

Principal Investigator
Emily Rout, DVM, PhD, DACVP
Colorado State University

Total Grant Award
$42,264

Grant Period
8/1/2024 - 7/31/2026

Breeds Most Impacted
English Bulldogs, Boxers, Golden Retrievers.

03257

B cell Subset Analysis Through Spatial Transcriptomics with Application to B cell Disorders

Background
B cells are a critical component of the canine immune system, and abnormalities in these cells can lead to serious diseases, including lymphoma. However, our understanding of normal B cell subsets in dogs remains limited, complicating the study and treatment of B cell-related diseases.

Scientific Premise
Researchers are studying normal B cells from lymph nodes and spleens to understand how they change in different diseases. This study examines B cells in healthy dogs and in three conditions: a harmless increase in B cells in English Bulldogs, a rapidly growing small cell B-cell cancer, and the most common type of dog B-cell cancer, diffuse large B-cell lymphoma. By examining gene expression patterns, researchers aim to find differences between B cell types and identify new therapeutic targets.

Canine Health Issue
Limited knowledge of canine B cells hinders the diagnosis and treatment of B-cell diseases.

Potential Impact
Findings could guide new targeted therapies in canine lymphoma.

Owner Insight
If your dog shows swollen lymph nodes or fatigue, ask your vet about testing for lymphoma.

03235

Prevalence of *Heterobilharzia americana* in Labrador Retrievers in Texas

Background

Heterobilharzia americana is a parasitic infection that causes canine schistosomiasis, a serious and sometimes fatal disease in dogs. Symptoms can range from none to severe liver and intestinal damage. Dogs are infected when the parasite penetrates their skin during contact with contaminated freshwater. Despite its severity, the true number of cases is unknown, even in regions where the parasite is common, making it harder to raise awareness, diagnose early, and prevent infection.

Scientific Premise

A recent case-controlled study found that Labrador Retrievers are disproportionately affected, particularly those with high exposure to freshwater in regions like Texas, where the parasite is endemic. This cross-sectional study evaluates 1,000 dogs in Texas, Labrador Retrievers with high-risk and low-risk lifestyles, and hound breeds with high-risk lifestyles, using targeted fecal testing to detect *Heterobilharzia americana*. Results will help define prevalence and guide future diagnostic and prevention strategies.

Canine Health Issue
Lack of prevalence data hinders recognition of canine schistosomiasis.

Potential Impact
Findings will improve awareness and aid in prevention.

Owner Insight
Avoid allowing your dog to swim in warm, stagnant freshwater in endemic areas.

Breeds Most Impacted
Labrador Retrievers, hound breeds, and other active freshwater-exposed dogs.

GRANT FACTS

Infection & Immunity

Principal Investigator
Kathleen Aicher, DVM, DACVIM
Texas A&M University

Total Grant Award
$70,524

Grant Period
9/1/2024 - 2/28/2026

GRANT FACTS
Infection & Immunity

Principal Investigator
Felix Toka, DVM, PhD
Ross University School of Veterinary Medicine

Total Grant Award
$88,418

Grant Period
4/1/2024 - 3/31/2026

Breeds Most Impacted
Shar-Pei, Bulldogs, Golden Retrievers.

03209

Discovery of Major Antigenic Determinants of Antibody Responses to Colonizing and Infecting Canine *Staphylococcus pseudintermedius*

Background
Staphylococcus pseudintermedius is a common bacterium carried by dogs that can cause skin and soft tissue infections. While many dogs carry it without illness, certain breeds, like the Shar-Pei, are more prone to infection. The growing antibiotic resistance of *S. pseudintermedius* makes these infections increasingly difficult to treat.

Scientific Premise
Understanding how a dog's immune system, particularly its antibody response, distinguishes between harmless colonization and active infection could lead to improved prevention strategies. This study compares the antibody responses of colonized versus infected dogs to identify which components of *S. pseudintermedius* trigger immune activity. Researchers believe that the type of antibodies produced by dogs will be different depending on whether they are simply carrying the bacterium (colonized) or if they have an active infection.

Canine Health Issue
Drug-resistant skin infections from *S. pseudintermedius* are difficult to treat and increasingly common.

Potential Impact
Results may support development of a vaccine to protect at-risk dogs.

Owner Insight
If your dog has recurring skin issues, ask your vet about bacterial testing.

03169-T NEW 2025

Characterization of Hookworm Resistance in Dogs with a Novel Diagnostic Test for Early Intervention

Background
The hookworm is the most common intestinal parasite in dogs in the U.S. It can cause serious illness or even death in dogs of all ages and can also infect humans, leading to a painful skin condition called cutaneous larval migrans. Monthly deworming is essential, but many medications that worked well 20–30 years ago are now less effective due to drug-resistant hookworms.

Scientific Premise
Currently, diagnosing drug resistance of hookworm parasite requires a lab test that takes 14 days. This project aims to develop a new test that delivers results in under a day, helping veterinarians quickly determine whether a treatment will be effective. It will also provide valuable data on how widespread hookworm resistance is in different areas of the U.S., improving treatment decisions and outcomes for infected dogs.

Canine Health Issue
Drug-resistant hookworms are on the rise, and current diagnostic tools are too slow for timely clinical decisions.

Potential Impact
Rapid diagnosis means faster, more effective treatment and reduced spread of resistant parasites.

Owner Insight
Keep dogs on a regular deworming schedule and pick up stool promptly.

GRANT FACTS
Infection & Immunity

Principal Investigator
Jeba Jesudoss Chelladurai, BVSc, PhD
Auburn University

Total Grant Award
$27,959

Grant Period
7/1/2025 - 6/30/2026

Breeds Most Impacted
All breeds and mixed-breed dogs are susceptible.

GRANT FACTS
Infection & Immunity

Principal Investigator
Jennifer Reinhart, DVM, PhD, DACVIM
University of Illinois

Total Grant Award
$31,500

Grant Period
6/1/2023 - 5/31/2025

Breeds Most Impacted
Labrador Retrievers, Golden Retrievers, Coonhounds.

03147

Improving Treatment of Canine Blastomycosis through Therapeutic Drug Monitoring

Background
Blastomycosis is a serious fungal infection in dogs, especially seen in the Midwest. Itraconazole is the primary treatment. While generally effective, the amount of the drug in the blood can vary widely. If levels are too low, the infection may not clear; if too high, harmful side effects can occur.

Scientific Premise
Therapeutic drug monitoring, measuring blood drug levels to guide dosing, can optimize treatment. While therapeutic drug monitoring is available for itraconazole in dogs, it isn't consistently used because there is no established protocol for how often it should be performed. This study aims to determine whether itraconazole levels remain stable after reaching the ideal concentration, or if regular monitoring is necessary. Results will guide best practices for therapeutic drug monitoring, improving treatment outcomes, reducing side effects, and minimizing unnecessary costs and blood draws.

Canine Health Issue
Inconsistent itraconazole levels hinder effective and safe treatment of blastomycosis.

Potential Impact
A clear therapeutic drug monitoring protocol will improve treatment accuracy and patient care.

Owner Insight
Ask your vet whether drug monitoring is appropriate during antifungal treatment.

03090

Leishmaniasis in Imported Dogs

Background

Importation of dogs into North America is increasing, bringing with it the risk of introducing infectious diseases not previously common in the region. One such disease is canine leishmaniasis, caused by *Leishmania* spp. parasites, which can lead to severe illness and poor clinical outcomes. Veterinarians are reporting an increasing number of cases, yet little is known about its current prevalence and transmission risk in imported dogs.

Scientific Premise

Understanding the prevalence, risk factors, clinical presentation, and transmission potential of *Leishmania* spp. parasites in imported dogs is essential for managing these new risks. This study aims to assess infection rates, identify lifestyle and medical risk factors, describe clinical signs, and evaluate the potential for local transmission. The results will provide a clear picture of *Leishmania* infection in imported dogs, inform safe importation practices, and guide education for veterinarians and dog owners.

Canine Health Issue

Imported dogs may introduce *Leishmania* spp., posing health risks to local dog populations.

Potential Impact

Findings will inform safer import practices and improve disease recognition and prevention.

Owner Insight

If adopting an imported dog, consult your vet about infectious disease screening.

GRANT FACTS

Infection & Immunity

Principal Investigator

Katie Clow, DVM, PhD
University of Guelph

Total Grant Award

$47,938

Grant Period

2/1/2023 - 1/31/2026

Breeds Most Impacted

Any commonly imported breeds, like Greyhounds, mixed breeds, and stray dogs.

PROGRAM OVERVIEW

Kidney & Bladder Health

The urinary system is essential to waste elimination and fluid balance. Kidney failure, bladder stones, and genetic conditions like renal dysplasia are all serious concerns that can impact dogs from puppyhood to old age.

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42 Grants
Awarded

$1.74 Million
Funded

87
Papers Published

Shih Tzu

03410-A

Short Chain Fatty Acids and Calcium Oxalate Urolithiasis in Dogs

Background
Urolithiasis, or urinary stones, is a painful and costly condition in dogs. Calcium oxalate stones are common and cannot be dissolved with diet or medication, often requiring surgical removal. Unfortunately, up to 50% of dogs develop new stones within one to two years. Early research suggests short-chain fatty acids made by gut bacteria from dietary fiber may lower stone risk by affecting urinary calcium and oxalate. However, these mechanisms remain unstudied in dogs.

Scientific Premise
This pilot study will compare short-chain fatty acid levels and short-chain fatty acid-producing bacteria in dogs with and without stones, and also examine the relationship between short-chain fatty acids and urinary stone risk markers.

Canine Health Issue
Calcium oxalate stones are painful, costly, and highly recurrent, with limited prevention options.

Potential Impact
This research could lead to dietary strategies that prevent calcium oxalate stones in dogs.

Owner Insight
Ask your veterinarian about high-fiber diets or prebiotics to help manage urinary stones.

GRANT FACTS
Kidney & Bladder Health

Principal Investigator
Emily Coffey, DVM, PhD
University of Minnesota

Total Grant Award
$13,468

Grant Period
7/1/2025 - 6/30/2027

Breeds Most Impacted
Miniature Schnauzers, Bichon Frises, Shih Tzu, Lhasa Apsos, and Yorkshire Terriers are especially prone.

GRANT FACTS

Kidney & Bladder Health

Principal Investigator

Mary Nabity, DVM, PhD and
Jessica Hokamp, DVM, PhD, DACVP
Texas A&M University

Total Grant Award

$19,634

This research is generously funded by the American Shetland Sheepdog Association, with CHF administering the grant to support scientific progress and high quality research.

Grant Period

9/1/2024 - 8/31/2026

Breeds Most Impacted

Shetland Sheepdogs.

03281-MOU

Kidney Disease in Shetland Sheepdogs

Background

Chronic kidney disease (CKD) is a common, progressive condition in dogs, with certain breeds showing increased risk. Shetland Sheepdogs (Shelties) appear to be overrepresented in CKD cases, especially those developing signs before five years of age, suggesting a potential hereditary component. Many of these young Shelties show evidence of malformed kidneys, though a definitive link between kidney maldevelopment and CKD in this breed has not been established.

Scientific Premise

Understanding the characteristics of CKD in affected Shelties is a critical first step toward uncovering potential genetic causes and developing breed-specific diagnostic or preventive tools. This study aims to characterize renal disease in Shelties with suspected kidney maldevelopment. Future research will include genetic analysis of banked DNA to identify mutations linked to inherited kidney defects.

Canine Health Issue

Early-onset CKD in Shelties is poorly understood and may be inherited.

Potential Impact

Findings could lead to genetic screening and earlier diagnosis.

Owner Insight

If you have a Sheltie, ask your vet about early kidney function testing.

03106

Clinical Validation of Urinary miR-126 as a Marker of Immune Complex- Mediated Glomerulonephritis in Dogs

Background

Chronic kidney disease is a major cause of illness and death in dogs, often resulting from glomerular disease. Immune-complex glomerulonephritis accounts for approximately 50% of dogs undergoing kidney biopsy for suspected glomerular disease. Treatment differs significantly from other forms, as immune-complex glomerulonephritis typically requires immunosuppressive therapy, which can be harmful if mistakenly used in dogs without an immune-mediated condition.

Scientific Premise

Currently, a kidney biopsy is the only way to diagnose immune-complex glomerulonephritis. Preliminary data suggest that urinary microRNA-126 (miR-126), a gene expression regulator, may serve as a noninvasive biomarker to distinguish immune-complex glomerulonephritis from other glomerular diseases. This study aims to validate the diagnostic accuracy of urinary miR-126 for detecting immune-complex glomerulonephritis. If successful, it would provide a safe and non-invasive alternative to biopsy.

Canine Health Issue

Immune-complex glomerulonephritis requires a kidney biopsy for diagnosis.

Potential Impact

A urinary biomarker could enable early, targeted therapy without invasive testing.

Owner Insight

Ask your vet about urine testing if your dog has signs of kidney disease.

GRANT FACTS

Kidney & Bladder Health

Principal Investigator
Mary Nabity, DVM, PhD
Texas A&M AgriLife Research

Total Grant Award
$109,788

Grant Period
6/1/2023 - 5/31/2025

Breeds Most Impacted
Soft Coated Wheaten Terriers, Bernese Mountain Dogs, Labrador Retrievers.

Mighty Discoveries Begin with Acorns

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Acorn Grants from the AKC Canine Health Foundation fund early-stage studies that spark breakthroughs in canine health. For clinician-scientists like Dr. Jody Gookin, these seed grants are the launchpad for transformational discoveries.

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Dr. Jody Gookin,
CHF-funded Investigator

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02807-MOU-T

Characterization of Renal Disease in Greyhound Dogs

Background

Kidney disease is a common health issue in dogs, with certain breeds showing higher susceptibility. Greyhounds, in particular, appear to be predisposed to proteinuric kidney diseases, a type of kidney disease characterized by the leakage of protein into the urine. The types, causes, and genetic basis of renal disease in this breed are poorly understood.

Scientific Premise

Preliminary data suggest that kidney disease in Greyhounds arises from multiple causes, including primary glomerular disease and glomerular damage linked to hypertension. This study prospectively collects samples to identify Greyhounds with kidney disease, determine which are proteinuric, and localize the origin of protein loss. Advanced diagnostic techniques will be used to accurately characterize the type of renal injury, and DNA will be banked to explore potential genetic causes.

Canine Health Issue

Kidney disease in Greyhounds is poorly defined and potentially hereditary.

Potential Impact

Results may enable earlier diagnosis, targeted treatment, and future genetic testing.

Owner Insight

Greyhound owners should request routine screening for protein in the urine.

GRANT FACTS

Kidney & Bladder Health

Principal Investigator

Jessica Hokamp, DVM, PhD, DACVP
Texas A&M AgriLife Research

Total Grant Award

$32,727

This research is funded by the Greyhound Club of America, Inc., with CHF administering the grant to support scientific progress and high quality research.

Grant Period

6/1/2023 - 5/31/2025

Breeds Most Impacted

Greyhounds.

PROGRAM OVERVIEW
Liver Health

The liver is responsible for digestion, metabolism, and detoxification, and works with the gallbladder to store and release bile. Liver diseases, whether genetic, infectious, or immune-mediated, can be silent at first, but can progress to life-threatening liver failure.

42 Grants
Awarded

$1.27 Million
Funded

15
Papers Published

Bedlington Terrier

03367 NEW 2025

How Genetics, Environmental Exposures, and the Enteric Nervous System Influence Gallbladder Mucocele Formation in Dogs

Background
Gallbladder mucocele is the most common gallbladder disease in dogs and occurs most often in purebred breeds. It involves the accumulation of thick mucus in the gallbladder, which blocks the flow of bile and can lead to the gallbladder rupturing. Despite surgical removal, up to 17% of affected dogs do not survive. Gaining a clearer understanding of what causes this disease is essential to preventing such serious outcomes

Scientific Premise
Building on prior research, this study investigates whether gallbladder mucoele arises from exposure, via bile, to environmental contaminants that damage the gallbladder's neuronal network in genetically predisposed dogs. Researchers will: 1) perform a genome-wide association study in Shetland Sheepdogs (the breed at highest risk), 2) identify contaminants in gallbladder tissue using mass spectrometry, and 3) use 3D imaging to assess early nerve damage.

Canine Health Issue
Despite being the leading gallbladder disease in dogs, the cause of gallbladder mucocele remains unknown.

Potential Impact
This research may enable targeted prevention and inform early treatment strategies for at-risk dogs.

Owner Insight
Early detection and regular screening in predisposed breeds can be lifesaving.

GRANT FACTS
Liver Health

Principal Investigator
Jody Gookin, DVM, PhD, DACVIM
North Carolina State University

Total Grant Award
$149,525

Grant Period
2/1/2025 - 1/31/2027

Breeds Most Impacted
Shetland Sheepdogs, Cocker Spaniels, Miniature Schnauzers.

GRANT FACTS
Liver Health

Principal Investigator
Jody Gookin, DVM, PhD, DACVIM
North Carolina State University

Total Grant Award
$37,172

Grant Period
2/1/2023 - 1/31/2026

Breeds Most Impacted
Shetland Sheepdogs, Cocker Spaniels, Miniature Schnauzers.

03143

Causative Role of Xenobiotic Exposures in Canine Gallbladder Mucocele Formation

Background
Gallbladder mucoceles occur when the gallbladder fills with thick, sticky mucus that does not flow properly and can lead to rupture, making it a serious, life-threatening condition. Even with advanced surgical care, up to 17% of affected dogs do not survive. Thousands of cases have been reported, yet the cause of this disease remains unknown, and there are no reliable methods to predict, prevent, or reverse its development.

Scientific Premise
The long-term goal of this work is to identify what causes gallbladder mucoceles to form in dogs. Early findings suggest a specific xenobiotic chemical compound may disrupt gallbladder function by blocking normal fluid secretion and causing excess mucus production in cells that line the gallbladder, changes seen in mucocele formation. This study tests whether the identified compound triggers these changes in canine cells. Confirming this link would be a major breakthrough in discovering what causes gallbladder mucocele in dogs.

Canine Health Issue
Mucocele formation remains unpredictable, untreatable, and often fatal.

Potential Impact
Discovering what causes gallbladder mucoceles to form could lead to prevention, early detection, and non-surgical treatment.

Owner Insight
Report episodes of vomiting, lethargy, or abdominal pain to your vet immediately.

02544

Medical Resolution of Gallbladder Mucocele Formation in Dogs

Background
Gallbladder mucocele is a serious condition in dogs in which thick mucus builds up in the gallbladder and obstructs normal bile flow, which can lead to gallbladder rupture. Certain breeds, like Shetland Sheepdogs, Border Terriers, Cocker Spaniels, Schnauzers, Pomeranians, Bichon Frises, Chihuahuas, Pugs, and Beagles, are at increased risk. The only curative treatment is gallbladder removal surgery, which carries a high cost and a 27% postoperative mortality rate.

Scientific Premise
Recent CHF-funded research (Grant #01986) found that dogs with gallbladder mucocele often lack key dietary compounds essential for healthy metabolism and gallbladder function. These deficiencies may lead to abnormal mucus secretion. This study tests whether supplementing these essential compounds can help the gallbladder work normally again and reverse mucocele formation. If successful, this approach could offer a safe, effective alternative to surgery.

Canine Health Issue
Current treatment for gallbladder mucoceles is invasive and risky.

Potential Impact
Nutritional therapy may offer a non-surgical, life-saving option for dogs with gallbladder mucoceles.

Owner Insight
If your dog is a high-risk breed, discuss early screening with your vet.

GRANT FACTS
Liver Health

Principal Investigator
Jody Gookin, DVM, PhD, DACVIM
North Carolina State University

Total Grant Award
$222,333

Grant Period
10/1/2019 - 9/30/2025

Breeds Most Impacted
Shetland Sheepdogs, Border Terriers, Cocker Spaniels, Miniature Schnauzers, Pomeranians.

GRANT FACTS
Liver Health

Principal Investigator
Cynthia Leveille-Webster, DVM, DACVIM
Tufts University

Total Grant Award
$16,052

Grant Period
2/1/2022 - 1/31/2026

Breeds Most Impacted
Shetland Sheepdogs, Cocker Spaniels, Miniature Schnauzers, Pomeranians, Border Terriers.

03030-A

Evaluation of Serum C-Reactive Protein as a Noninvasive Biomarker of Inflammation and Disease Severity in Dogs with Gallbladder Mucocele

Background
Over the past 20 years, gallbladder mucocele has become a common liver disorder in dogs. It involves the buildup of thick bile in the gallbladder, preventing regular emptying of bile into the intestine. This can lead to gallbladder wall damage, rupture, and life-threatening inflammation requiring emergency surgery, which has a 20–40% mortality rate.

Scientific Premise
While some dogs with gallbladder mucocele formation are medically managed with low-fat diets and bile-promoting drugs, others suddenly decompensate and decline rapidly. Researchers suspect this may be due to inflammation triggering blood clots in the gallbladder wall, leading to tissue death. This study evaluates whether blood levels of C-reactive protein, a marker of inflammation, can be used to predict which dogs living with gallbladder mucocele are likely to decompensate and need surgery.

Canine Health Issue
Veterinarians cannot reliably predict which dogs with gallbladder mucoceles will suddenly worsen.

Potential Impact
A blood test could be used to monitor dogs that have a gallbladder mucocele, enabling earlier, life-saving treatment decisions.

Owner Insight
Monitor at-risk dogs for the sudden onset of vomiting, lethargy, or abdominal pain.

03237

Impact of Perioperative Antibiotic Prophylaxis on the Intestinal Microbiome in Selected Surgical Procedures

Background
The overuse of antibiotics contributes to the rise of multidrug-resistant bacteria, a global health crisis recognized by the World Health Organization. In veterinary medicine, antibiotics are often given prophylactically to dogs undergoing surgery, even in the absence of infection. While intended to prevent complications, this practice is largely unproven, may have unknown side effects, and contributes to antibiotic resistance.

Scientific Premise
Antibiotic use can cause lasting disruptions to the gut microbiome, which may increase disease risk later in life. The long-term impacts of prophylactic antibiotic use in routine veterinary surgeries remain poorly understood. This study will evaluate the effects of antibiotics on gut health in dogs undergoing spay and gastrointestinal procedures, helping to clarify the risks of unnecessary antibiotic exposure.

Canine Health Issue
Antibiotics are often used without clear benefit in surgical cases, risking long-term harm.

Potential Impact
Results could guide safer, evidence-based antibiotic practices for dogs undergoing surgery.

Owner Insight
Talk to your vet about whether antibiotics are truly necessary for your dog's surgery.

GRANT FACTS
Liver Health

Principal Investigator
Mirja Nolff, PD DMV, DEVBS
University of Zurich

Total Grant Award
$127,440

Grant Period
8/1/2024 - 7/31/2026

Breeds Most Impacted
All breeds undergoing surgeries; commonly affected breeds include Labrador Retrievers, Golden Retrievers, and Beagles.

PROGRAM OVERVIEW
Lung & Airway

Breathing supplies oxygen to the whole body and is vital to a dog's overall health. Issues like tracheal collapse, kennel cough, and pneumonia can make respiration difficult and require veterinary care.

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20 Grants
Awarded

$804K
Funded

11
Papers Published

Pug

03413

Targeted Cytokine Analysis to Identify Hyper- and Hypoinflammatory Subphenotypes in Canine ARDS

Background
Acute Respiratory Distress Syndrome (ARDS) is a life-threatening condition caused by severe lung inflammation, often triggered by infection, trauma, or systemic illness. It leads to respiratory failure and has a high mortality rate. Treating ARDS is challenging due to the variability in how it affects each dog and the limited options for treatment, which currently focus on supportive care. In human medicine, researchers have identified two inflammation profiles—hyper-inflammatory and hypo-inflammatory—that help predict outcomes and guide targeted treatments.

Scientific Premise
This study investigates whether similar inflammation phenotypes exist in dogs by measuring blood cytokines, small molecules involved in immune system signaling, in dogs with ARDS. Investigators will then assess whether these profiles correlate with outcomes such as survival or length of recovery.

Canine Health Issue
Treating ARDS is challenging due to its variable effects and limited supportive care options.

Potential Impact
Findings could lead to individualized therapies that improve survival and recovery in dogs with ARDS.

Owner Insight
Seek immediate veterinary care if your dog shows signs of labored breathing or cyanosis (bluish gums or tongue).

GRANT FACTS
Lung & Airway

Principal Investigator
Tereza Stastny, DVM
University of Pennsylvania

Total Grant Award
$31,210

Grant Period
7/1/2024 - 6/30/2025

Breeds Most Impacted
Any breed can be affected, but ARDS is more common in dogs with pre-existing respiratory disease.

GRANT FACTS
Lung & Airway

Principal Investigator
David Needle, DVM, DACVP
University of New Hampshire

Total Grant Award
$308,718

Grant Period
7/1/2024 - 6/30/2025

Breeds Most Impacted
All breeds are at risk, especially those frequently exposed to group settings (kennels, daycares, shelters, dog activities).

03273

Characterizing Potential Novel Canine Infectious Respiratory Disease Pathogens and Respiratory Microbiome Perturbations

Background
In spring 2022, reports of dogs with persistent, treatment-resistant respiratory illness appeared in southern New Hampshire. Despite testing, no known infectious agents were identified. Next-generation DNA sequencing of nasal swabs revealed a potentially novel respiratory pathogen, closely related to a human respiratory microbe. PCR screening confirmed its presence in numerous cases, and further testing showed the pathogen is now widespread in symptomatic dogs across multiple regions.

Scientific Premise
While this emerging pathogen appears strongly linked to respiratory disease, its genetic makeup, biological function, and interactions with the broader respiratory microbiome remain poorly understood. This study fully sequences the genome of the candidate pathogen across the geographic and temporal range of infection and analyzes the respiratory microbiomes of healthy dogs versus those showing signs of illness.

Canine Health Issue
A novel, uncharacterized canine respiratory pathogen has been identified in some dogs with persistent, treatment-resistant respiratory infection.

Potential Impact
Results could lead to new diagnostics, treatments, and preventive strategies for a potentially novel canine respiratory disease.

Owner Insight
If your dog shows prolonged coughing or respiratory signs, seek veterinary care and avoid dog-dense environments.

03048-A

Thoracoscopic-Guided Autologous Blood Injection for Treatment of Primary Spontaneous Pneumothorax

Background
Primary spontaneous pneumothorax is the sudden presence of air in the chest cavity without trauma or obvious cause. Though uncommon, it poses a serious threat to affected dogs and often requires invasive surgical intervention.

Scientific Premise
In human medicine, minimally invasive video-assisted thoracoscopy is preferred over open-chest surgery, and autologous blood injection—injecting a patient's own blood to seal lung leaks—has been successful in treating certain pulmonary conditions. This approach has not been evaluated in dogs for spontaneous pneumothorax. This pilot study will assess the feasibility and effectiveness of thoracoscopic-guided autologous blood injection as a less invasive treatment for primary spontaneous pneumothorax in dogs.

Canine Health Issue
Current treatment is invasive, costly, and high-risk for dogs with primary spontaneous pneumothorax.

Potential Impact
A successful alternative could reduce surgical risk, recovery time, and costs for dogs - and potentially benefit human patients as well.

Owner Insight
Seek immediate veterinary care if your dog shows sudden labored breathing or collapse.

Breeds Most Impacted
Siberian Huskies, Alaskan Malamutes, and large, deep-chested breeds like Doberman Pinschers and Rhodesian Ridgebacks.

GRANT FACTS
Lung & Airway

Principal Investigator
Valery Scharf, DVM, MS, DACVS
North Carolina State University

Total Grant Award
$16,020

Grant Period
8/1/2022 - 7/31/2025

PROGRAM OVERVIEW

Lymphoma

One of the most common cancers in dogs, lymphoma affects the lymph nodes, spleen, and other organs. While some forms respond well to chemotherapy, relapse is common and the disease remains a major health threat.

55 Grants
Awarded

$3.4 Million
Funded

35
Papers Published

Boxer

03300

Probiotic Prevention of GI Hyperpermeability and Metabolome Disturbances in Dogs with Multicentric Lymphoma Undergoing Multi-Drug Chemotherapy

Background

Gastrointestinal toxicity is a common complication in dogs receiving multi-drug chemotherapy for lymphoma, affecting up to 40% of patients. These side effects can lead to treatment delays, dose reductions, or hospitalization, increasing both medical risk and financial burden.

Scientific Premise

One key driver of gastrointestinal toxicity is dysbiosis, an imbalance in the gut bacteria that can damage the intestines, reduce nutrient absorption, increase permeability, and produce harmful metabolic by-products. These effects increase the risk of diarrhea, infection, and sepsis. In humans, probiotics have been shown to reduce chemotherapy-related gastrointestinal symptoms, but their use in canine care is not well explored. This study evaluates whether a commercial probiotic can reduce dysbiosis, improve gut function, and lessen gastrointestinal side effects in dogs receiving chemotherapy.

Canine Health Issue

Gastrointestinal side effects of chemotherapy are common and compromise treatment and quality of life.

Potential Impact

Probiotics may offer a safe, cost-effective way to protect gut health and reduce side effects associated with chemotherapy.

Owner Insight

Discuss probiotic options with your veterinarian before starting chemotherapy.

GRANT FACTS
Lymphoma

Principal Investigator

Maria Jugan, DVM, MS, DACVIM
Kansas State University

Total Grant Award

$167,442

Grant Period

10/1/2024 - 9/30/2027

Breeds Most Impacted

Boxers, Golden Retrievers, Labrador Retrievers.

GRANT FACTS
Lymphoma

Principal Investigator
Nora Springer, DVM, PhD, DACVP
University of Tennessee

Total Grant Award
$94,987

Grant Period
10/1/2024 - 9/30/2025

Breeds Most Impacted
Golden Retrievers, Boxers, Rottweilers.

03294

Formulation of Radiopharmaceutical Cocktails with MIRDcell AI to Treat B-Cell Lymphoma in Dogs

Background
Lymphoma is one of the most common cancers in dogs, comprising 15–25% of all canine cancers and 80% of blood and immune system cancers. Standard treatment with multi-agent chemotherapy extends survival for about a year. Unlike in human medicine, there has been little innovation in canine lymphoma therapy over the past two decades.

Scientific Premise
Radiation is effective against lymphoma, but whole-body external beam radiation is not feasible due to widespread disease and severe side effects. Radiopharmaceuticals offer targeted treatment, but their success is limited by nonuniform delivery caused by varying tumor cell characteristics. This study provides proof-of-concept for AI-generated, patient-specific radiopharmaceutical cocktails that may improve targeting and therapeutic outcomes.

Canine Health Issue
Current lymphoma treatments offer limited survival benefits and have lacked recent innovation.

Potential Impact
Personalized radiopharmaceuticals could revolutionize canine lymphoma therapy.

Owner Insight
Early diagnosis and exploring advanced treatment options can improve outcomes for dogs with lymphoma.

03194

A Blueprint to Develop Next-Generation CAR T-Therapy for Canine Lymphoma

Background
High-grade B-cell lymphoma is a common and aggressive cancer in older dogs, especially in Golden Retrievers and Bernese Mountain Dogs. While standard chemotherapy can provide an initial response, relapse is common, and the disease is typically fatal.

Scientific Premise
In human medicine, CAR T-cell therapy, genetically modifying a patient's T cells to kill cancer, has had remarkable success against B-cell lymphoma. However, treatment resistance often occurs when cancer cells lose the targeted antigen. To address this, next-generation tandem CAR T-cells target two antigens, reducing the chance of escape and improving outcomes. Researchers have demonstrated feasibility and tolerability of CAR T-therapy in dogs and now aim to optimize tandem CAR T-cells and develop tools to monitor their activity and safety.

Canine Health Issue
Standard therapies for canine B-cell lymphoma are not curative.

Potential Impact
Tandem CAR T-cells, which have been a game changer for similar human B-cell lymphoma, could offer a powerful new treatment for dogs.

Owner Insight
Ask your vet about clinical trials if your dog is diagnosed with high grade B-cell lymphoma.

GRANT FACTS
Lymphoma

Principal Investigator
Matthew Atherton, BVSc, PhD, DECVIM
University of Pennsylvania

Total Grant Award
$174,960

Grant Period
2/1/2024 - 1/31/2026

Breeds Most Impacted
Golden Retrievers, Bernese Mountain Dogs, Boxers.

GRANT FACTS
Lymphoma

Principal Investigator
Paul Hess, DVM, PhD, DACVIM
North Carolina State University

Total Grant Award
$96,643

Grant Period
3/1/2022 - 8/31/2025

Breeds Most Impacted
Boxers, Golden Retrievers, Cocker Spaniels.

03007

Chimeric BiTE-Redirected Anti-viral T Cells for Fratricide of Minimal Residual Disease in T-Cell Malignancies

Background
T cells are essential immune cells that protect against infections and cancer. However, when T cells themselves become cancerous, like in certain forms of lymphoma and leukemia, they are notoriously difficult to treat with standard chemotherapy.

Scientific Premise
While immunotherapy has transformed treatment for B-cell cancers, targeting cancerous T cells requires precision to avoid compromising the entire immune system. This study proposes a novel, drug-free agent that redirects healthy T cells to target and eliminate their own rogue cells, recognizing and destroying only the cancerous T-cell subtypes, while preserving overall immune function.

Canine Health Issue
T-cell blood cancers are highly resistant to chemotherapy and difficult to treat without damaging the immune system.

Potential Impact
This novel therapy could safely and selectively eliminate cancerous T cells, offering a new treatment pathway for dogs and people.

Owner Insight
If your dog is diagnosed with T-cell lymphoma or leukemia, ask your vet about emerging immunotherapies.

Newfoundland

PROGRAM OVERVIEW

Muscles, Bones & Joints

Orthopedic and muscular issues are among the most common reasons for pain and mobility loss in dogs. Conditions like hip dysplasia, arthritis, and cruciate ligament disease can impact both quality of life and longevity.

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70 Grants
Awarded

$2.54 Million
Funded

86
Papers Published

GRANT FACTS
Muscles, Bones & Joints

Principal Investigator
Peter Muir, BVSc, MVetClinStud, PhD, DACVS, DECVS, FRCVS
University of Wisconsin-Madison

Total Grant Award
$129,218

Grant Period
9/1/2024 – 8/31/2026

Breeds Most Impacted
Labrador Retrievers, Rottweilers, Newfoundlands, and Boxers.

03227

Genetic Testing for Cruciate Ligament Rupture Using Polygenic Risk Score (PRS) Prediction

Background
Cruciate ligament rupture is one of the most common and costly orthopedic conditions in dogs, causing significant pain, lameness, and reduced quality of life. It is a complex, polygenic, and highly heritable disease affecting numerous popular breeds.

Scientific Premise
Despite the strong genetic basis, no risk score or predictive model currently exists to estimate individual disease risk or guide breeding decisions. This study aims to fill that gap by developing a computational approach to assess genetic risk for cruciate ligament rupture across multiple dog breeds. The researchers are building and validating a polygenic risk score tool to predict cruciate ligament rupture risk, enabling early screening, personalized preventive care, and long-term breed improvement through selective breeding.

Canine Health Issue
Cruciate ligament rupture lacks a reliable tool for predicting genetic risk.

Potential Impact
A validated polygenic risk score tool would enable targeted prevention, informed breeding, and early intervention.

Owner Insight
Maintain a healthy weight and avoid high-impact activities in at-risk dogs.

03076

The Effect of Overweight and Obesity on Adult Stem Cell Function for Regenerative Therapies in Dogs

Background
Osteoarthritis affects up to 18 million dogs in the U.S., causing chronic pain, lameness, and reduced mobility. Traditional treatments often rely on long-term use of non-steroidal anti-inflammatory drugs (NSAIDs), which can carry significant side effects.

Scientific Premise
Regenerative medicine, particularly stem cell therapy using adipose-derived stem cells, offers promising new approaches by targeting the underlying disease process. However, in humans, adipose-derived stem cells from overweight or obese individuals are less effective, raising concerns about their efficacy in similarly affected dogs. This study investigates whether adipose-derived stem cells from overweight or obese dogs are less effective for treating osteoarthritis. Understanding this relationship will help refine best practices for regenerative therapies and improve outcomes for dogs with osteoarthritis.

Canine Health Issue
The effectiveness of regenerative therapy based on stem cells from obese dogs is unknown.

Potential Impact
Improved understanding of the effect of obesity on stem cells will establish best practices for regenerative treatments.

Owner Insight
Maintain a healthy weight in dogs to support joint health and overall wellness.

GRANT FACTS
Muscles, Bones & Joints

Principal Investigator
Nora Springer, DVM, PhD, DACVP
University of Tennessee

Total Grant Award
$44,548

Grant Period
12/1/2022 - 5/31/2025

Breeds Most Impacted
This impacts dogs of all breeds, especially Labrador Retrievers, Golden Retrievers, German Shepherd Dogs, and Rottweilers.

PROGRAM OVERVIEW

Nervous System Health

Neurological conditions in dogs can affect movement, balance, behavior, and quality of life. Disorders such as degenerative myelopathy, intervertebral disc disease, and cerebellar ataxia can make everyday activities a struggle.

91 Grants
Awarded

$4 Million
Funded

109
Papers Published

Dachshund

03440 NEW 2025

Canine Cognitive Dysfunction Syndrome Working Group

Background
Canine Cognitive Dysfunction Syndrome is a common, progressive neurological condition in senior dogs that resembles Alzheimer's disease in humans. It affects memory, behavior, and daily functioning, yet diagnosis remains inconsistent due to a lack of standardized criteria. The Canine Cognitive Dysfunction Syndrome Working Group is developing a white paper to begin defining diagnostic standards for CCDS and age-related cognitive decline in dogs.

Scientific Premise
This first-of-its-kind expert international multidisciplinary panel will review current research and launch collaborative projects focused on improving understanding and harmonizing the diagnosis and treatment of Canine Cognitive Dysfunction Syndrome.

Canine Health Issue
There is no agreed upon standard for diagnosing Canine Cognitive Dysfunction Syndrome, limiting effective treatment and early intervention.

Potential Impact
Establishing diagnostic guidelines will advance research and lead to better and more consistent care for aging dogs.

Owner Insight
If your senior dog seems disoriented, more vocal, or less social, talk to your vet about ways to create a personalized plan.

GRANT FACTS
Nervous System Health

Principal Investigator
Natasha Olby, VetMB, PhD, DACVIM
North Carolina State University

Total Grant Award
$27,083

Grant Period
6/1/2025 - 12/31/2025

Breeds Most Impacted
All breeds, especially dogs over 10-years-old.

GRANT FACTS
Nervous System Health

Principal Investigator
Go Togawa, DVM, MS, PhD, DACVIM
Virginia-Maryland College of Veterinary Medicine

Total Grant Award
$20,654

Grant Period
6/1/2025 - 5/31/2027

Breeds Most Impacted
Dachshunds, French Bulldogs, and Cocker Spaniels are most commonly affected.

03411-A NEW 2025

Prognostic Utility of Preoperative F-Wave Measurements in Paraplegic Dogs with Absent Pain Perception due to Intervertebral Disc Extrusion

Background
F-waves are a specialized electrodiagnostic technique used to assess the integrity of the spinal cord and peripheral nerves. Preliminary studies suggest that post-surgical F-wave parameters can help predict recovery in dogs with thoracolumbar intervertebral disc extrusion, a common cause of severe spinal cord injury. However, it is not known if F-waves measured before surgery can predict outcomes.

Scientific Premise
This study will evaluate whether pre-surgical F-wave measurements can predict recovery in paraplegic dogs lacking pain perception due to thoracolumbar intervertebral disc extrusion. Researchers hypothesize that abnormal F-wave features, such as prolonged duration and increased after-discharge activity, will correlate with poor recovery outcomes.

Canine Health Issue
Veterinarians currently lack reliable tools to predict which dogs with a severe slipped or ruptured disc in the spine will regain the ability to walk.

Potential Impact
This research could improve prognostic accuracy, guide treatment planning, and shape future clinical trials.

Owner Insight
Immediate veterinary care for sudden pain, inability to walk, and paralysis can improve outcomes.

03327-A

Understanding Megaesophagus, A Step Closer to Its Treatment

Background
Megaesophagus is a condition in which the esophagus becomes enlarged and loses its ability to move food to the stomach. As a result, food and water accumulate in the esophagus, increasing the risk of life-threatening aspiration pneumonia. It can affect any breed, and when it develops later in life, the cause is often unknown, making treatment challenging, and outcomes are generally poor.

Scientific Premise
Researchers propose that acquired megaesophagus may result from an autoimmune response, in which the body produces antibodies that attack the esophageal tissues. This study analyzes serum from affected dogs to detect autoantibodies that could be responsible for damaging the esophagus. It also examines the unique structure and nerve supply of the esophageal muscles, which differ from limb muscles and may require targeted therapeutic approaches.

Canine Health Issue
The cause of acquired megaesophagus is often unknown, limiting effective treatment.

Potential Impact
Identifying an autoimmune cause could lead to diagnostic tests and new therapies.

Owner Insight
Feed dogs with megaesophagus upright and monitor for signs of aspiration.

GRANT FACTS
Nervous System Health

Principal Investigator
An Vanhaesebrouck, DVM, CEAV, DECVN, DPhil, MRCVS, EBVS
University of Cambridge

Total Grant Award
$24,540

Grant Period
11/1/2024 - 10/31/2025

Breeds Most Impacted
German Shepherd Dogs, Wire Fox Terriers, Labrador Retrievers.

GRANT FACTS

Nervous System Health

Principal Investigator
Jonathan Fox, BVSc, PhD, DACVP
University of Wyoming

Total Grant Award
$78,171

Grant Period
2/1/2024 - 1/31/2026

03219

Combining Traditional and Multiomic Approaches to Reveal the Cause and Mechanisms of Canine Dysautonomia

Background
Canine dysautonomia is a rare but often fatal disease that primarily affects young dogs in rural regions of the U.S., particularly Missouri, Kansas, Colorado, and Wyoming. The condition causes widespread neurodegeneration in the autonomic nervous system and is strongly linked to environmental exposure to soil. Its cause remains unknown, and treatment options are limited.

Scientific Premise
Researchers hypothesize that a novel neurotoxin-producing soil bacterium—specifically a clostridial strain isolated from feces and environmental samples—is responsible for the disease. This study uses a combination of advanced proteomics and metabolomics techniques, along with traditional microbiological methods, to identify bacteria and elucidate disease mechanisms.

Breeds Most Impacted
Reported across many breeds; especially young dogs in rural settings.

Canine Health Issue
The cause of canine dysautonomia is unknown, making diagnosis and treatment extremely challenging.

Potential Impact
Discovering the cause could lead to effective diagnostics, prevention, and therapies.

Owner Insight
Avoid allowing dogs to dig or ingest soil in high-risk areas, particularly if cases have ever been reported in dogs visiting the land.

03139

Riluzole as a Neuroprotectant in Canine Degenerative Myelopathy

Background
Degenerative myelopathy is an adult-onset spinal cord disease that causes progressive weakness and paralysis in dogs, beginning in the hind limbs and eventually affecting all limbs. The disease closely resembles certain forms of amyotrophic lateral sclerosis (ALS) in humans.

Scientific Premise
A key feature of degenerative myelopathy is the loss of a glutamate transporter in the central nervous system. Glutamate is an excitatory neurotransmitter, and when it builds up, neurons die. The drug riluzole, which reduces glutamate buildup and is FDA-approved for ALS in humans, may offer a therapeutic strategy for slowing the progression of degenerative myelopathy. This study will evaluate the safety and effectiveness of riluzole in dogs with degenerative myelopathy.

Canine Health Issue
No treatments currently exist to slow degenerative myelopathy progression in dogs.

Potential Impact
This study may lead to the first therapeutic intervention for degenerative myelopathy.

Owner Insight
Early diagnosis can help manage clinical signs and improve quality of life.

GRANT FACTS
Nervous System Health

Principal Investigator
Joan Coates, DVM, MS, DACVIM
University of Missouri

Total Grant Award
$205,317

Grant Period
3/1/2023 - 2/28/2026

Breeds Most Impacted
German Shepherd Dogs, Pembroke Welsh Corgis, Boxers, Bernese Mountain Dogs.

GRANT FACTS
Nervous System Health

Principal Investigator
Leigh Anne Clark, PhD
University of Georgia

Total Grant Award
$62,457

Grant Period
10/1/2023 - 9/30/2025

Breeds Most Impacted
Primarily German Shepherd Dogs, but also seen in Great Danes, Irish Setters, and Wire Fox Terriers.

03134-T

Use of a Service Dog Breeding Program to Unravel the Genetics of Congenital Idiopathic Megaesophagus in German Shepherd Dogs

Background
Congenital idiopathic megaesophagus is a serious condition in puppies characterized by an enlarged esophagus and ineffective swallowing. Affected dogs struggle to move food into the stomach, leading to regurgitation, malnutrition, and the risk of aspiration pneumonia. German Shepherd Dogs are the most commonly affected breed.

Scientific Premise
Congenital idiopathic megaesophagus is genetically complex. Previous research identified the MCHR2 gene as a major risk locus in German Shepherd Dogs and showed that female dogs have a protective biological advantage. However, the risk allele is common in unaffected dogs, complicating breeding decisions. This study analyzes sibling pairs from an assistance dog breeding program to identify additional genetic variants linked to congenital idiopathic megaesophagus. Results will enhance current risk assessments and guide breeding strategies that reduce disease incidence.

Canine Health Issue
Congenital idiopathic megaesophagus causes life-threatening complications in puppies, especially German Shepherd Dogs.

Potential Impact
Improved genetic testing and breeding tools to reduce congenital idiopathic megaesophagus.

Owner Insight
Feed affected dogs in an upright position to reduce regurgitation.

02851-A

Development of Regional Anesthesia Techniques to Treat Chronic Painful Conditions of the Stifle and Elbow in Dogs

Background
Osteoarthritis of the knee and elbow is a common cause of chronic pain in dogs, often leading to reduced mobility and diminished quality of life. While NSAIDs are widely used, their long-term use can cause gastrointestinal side effects, frequently resulting in discontinued treatment and poor pain control.

Scientific Premise
Interventional pain medicine offers a promising alternative through targeted nerve blocks, which deliver local anesthetics near nerves responsible for transmitting pain. However, these nerves can be difficult to locate without imaging guidance. This study aims to develop reliable techniques, both blind and ultrasound-guided, for locating and blocking sensory nerves of the knee and elbow. Establishing these methods will lay the groundwork for future clinical trials to evaluate the effectiveness of nerve blocks in managing osteoarthritic pain in dogs.

Canine Health Issue
Chronic joint pain is often poorly managed due to medication side effects.

Potential Impact
A safe, targeted alternative to long-term NSAID use for managing stifle and elbow osteoarthritis.

Owner Insight
Discuss the full spectrum of pain management options with your veterinarian for dogs with chronic pain from osteoarthritis.

GRANT FACTS
Nervous System Health

Principal Investigator
Diego Portela, DVM, PhD, DACVAA
University of Florida

Total Grant Award
$8,527

Grant Period
7/1/2021 - 6/30/2025

Breeds Most Impacted
Impacts dogs of all breeds, especially: Labrador Retrievers, Golden Retrievers, German Shepherd Dogs.

GRANT FACTS

Nervous System Health

Principal Investigator

Nick Jeffery, BVSc, PhD, DECVS, DECVN
Texas A&M AgriLife Research

Total Grant Award

$40,180

Grant Period

3/1/2020 - 2/28/2026

Breeds Most Impacted

Pugs, Maltese, Yorkshire Terriers, Chihuahuas.

02802

Clinical Trial of *Prevotella histicola* Supplementation to Ameliorate Meningoencephalomyelitis of Unknown Origin (MUO)

Background

Meningoencephalomyelitis of unknown origin (MUO)—also referred to as MUE, MUA, or GME—is a group of autoimmune inflammatory diseases that affect the brain and spinal cord. MUO accounts for over 25% of neurologic cases seen by veterinary neurologists and often leads to severe disability or death.

Scientific Premise

Similar to multiple sclerosis in humans, meningoencephalomyelitis of unknown origin involves the immune system attacking the nervous system. Emerging research shows that gut bacteria influence immune regulation. In people with multiple sclerosis and dogs with meningoencephalomyelitis of unknown origin, gut bacteria differ from those in healthy individuals. This study tests whether supplementing dogs with meningoencephalomyelitis of unknown origin with the beneficial bacterium *Prevotella histicola* can reduce disease severity and the need for immunosuppressive drugs.

Canine Health Issue

Current treatments for meningoencephalomyelitis of unknown origin are often ineffective and carry serious side effects.

Potential Impact

A therapy targeting gut bacteria could improve outcomes and reduce drug dependence.

Owner Insight

Prompt evaluation of neurologic signs by your veterinarian is critical.

02790-A

Characterization of the Fecal Microbiome in Dogs with Spinal Cord Injury Secondary to Intervertebral Disc Disease (IVDD)

Background
Intervertebral disc disease is a leading cause of spinal cord injury in dogs, often resulting in pain, mobility loss, and reduced quality of life. Surgery is the standard treatment, relieving spinal cord compression, but the secondary contussive injury can cause progressive spinal cord injury.

Scientific Premise
Emerging studies in humans and mice reveal that spinal cord injury can disrupt gut microbiota, called gut dysbiosis, which in turn worsens spinal cord inflammation. This cycle may also occur in dogs. This study compares the gut microbiome of dogs with intervertebral disc disease-related spinal cord injury to that of healthy dogs, aiming to determine if gut dysbiosis contributes to continued spinal damage.

Canine Health Issue
Intervertebral disc disease-related spinal injuries may worsen due gut dysbiosis worsening inflammation.

Potential Impact
Targeting gut health could improve recovery and outcomes in dogs with intervertebral disc disease.

Owner Insight
Support your dog's recovery with a gut-healthy diet under veterinary guidance.

GRANT FACTS
Nervous System Health

Principal Investigator
Kari Foss, DVM, MS, DACVIM
University of Illinois

Total Grant Award
$14,958

Grant Period
4/1/2020 - 3/31/2026

Breeds Most Impacted
Dachshunds, French Bulldogs, Beagles, Cocker Spaniels, Pekingese.

GRANT FACTS
Nervous System Health

Principal Investigator
Kari Ekenstedt, DVM, PhD
Purdue Univeersity

Total Grant Award
$112,993

Grant Period
4/1/2019 - 9/30/2025

Breeds Most Impacted
Pugs, French Bulldogs, English Bulldogs, Boston Terriers, Basenjis.

02589

Genetic Basis of Canine Spinal Abnormalities

Background
Spinal abnormalities are a common concern in certain dog breeds, particularly those with tightly curled tails such as Pugs, French Bulldogs, English Bulldogs, Boston Terriers, and Basenjis. These abnormalities can lead to pain, mobility issues, and diminished quality of life.

Scientific Premise
This study aims to uncover the genetic basis of spinal deformities by comparing the genomes of affected and unaffected dogs. Researchers are identifying genes and risk alleles associated with spinal abnormalities to improve understanding of the condition. The ultimate goal is to develop genetic tests or risk models to help breeders predict and select for healthier spines, reducing the incidence of spinal disease while preserving breed characteristics.

Canine Health Issue
Spinal abnormalities are more common in certain breeds, yet their genetic basis is poorly understood.

Potential Impact
Developing a genetic test will help future generations of dogs with curly tails have healthier backs.

Owner Insight
Consult your veterinarian to know signs of back pain or diminished mobility.

Nova's Story is Changing the Future of Reproductive Care

Led by Dr. Sari Helena Mölsä, CHF-funded research is tackling pyometra, which is a serious reproductive disease in female dogs. In this study, Dr. Mölsä is working to identify when antibiotics are truly necessary. Through participation in the study Nova, a Greater Swiss Mountain Dog, is helping uncover a safer, more precise approach to treatment. This study could reduce antibiotic overuse and improve outcomes for countless dogs.

CLINICAL PARTICIPANTS

Want to make a difference with your dog? Learn how you can join CHF's Clinical Study Participants Program at:
www.akcchf.org/clinicalparticipants

Nova - Greater Swiss Mountain Dog

PROGRAM OVERVIEW

Reproductive Health

Reproductive health is essential to a dog's well-being and the future of healthy breeds. Issues like pyometra, eclampsia, and prostate disease can affect fertility, safe pregnancies, and long-term health.

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60 Grants
Awarded

$1 Million
Funded

25
Papers Published

Bulldog

02811

Prospective View into the Use of Antimicrobials in Canine Pyometra and Prognostic Risk Factors for Postoperative Infection and Hospitalization

Background

Antimicrobial resistance is a growing global threat to both human and animal health. Responsible use of antibiotics is essential to combat this challenge. Pyometra, a common and potentially life-threatening infection of the uterus, is typically treated with ovariohysterectomy. While antibiotics are routinely prescribed postoperatively, their necessity in uncomplicated cases is unclear.

Scientific Premise

This study investigates whether antibiotics are beneficial after pyometra surgery and aims to identify risk factors for post-surgical infection and prolonged hospitalization. Researchers are comparing bacterial strains and resistance patterns in dogs treated with and without antimicrobials, and evaluating a scoring system to predict postoperative complications.

Canine Health Issue

Antibiotics may be overprescribed for dogs with uncomplicated pyometra due to lack of evidence-based guidelines.

Potential Impact

Findings may reduce unnecessary antibiotic use, improve treatment outcomes, and lower costs.

Owner Insight

Pyometra can be life-threatening.

GRANT FACTS
Reproductive Health

Principal Investigator
Sari Mölsä, DVM, PhD, DECVS
University of Helsinki

Total Grant Award
$49,342

Grant Period
9/1/2020 - 6/30/2025

Breeds Most Impacted

Most common in middle-aged to older intact females, particularly Labrador Retrievers, Bulldogs, Golden Retrievers, and German Shepherd Dogs.

PROGRAM OVERVIEW

Skin & Allergy

Skin and allergic diseases lead to itching, discomfort, and infections, and are among the most common reasons dogs visit the vet. Treating these conditions is key to improving a dog's quality of life.

51 Grants
Awarded

$1.9 Million
Funded

25
Papers Published

West Highland White Terrier

03431 NEW 2025

Genome-Wide Investigation of Alopecia X in Pomeranians

Background

Alopecia X is a progressive skin disorder of symmetrical hair loss in plush-coated dog breeds, especially Pomeranians. Hair thins or disappears from the neck, trunk, thighs, and tail, with intact males most frequently affected. The cause is unknown, and the condition compromises the coat's natural role in temperature regulation and protection from skin injury and infection. Diagnosis relies on ruling out other conditions, making it costly and time-consuming. Treatment responses vary, and neutering may help, but there is no cure.

Scientific Premise

Researchers aim to uncover the genetic basis of alopecia X in male Pomeranians using whole genome sequencing of 200 affected and unaffected dogs. The study explores whether body size and androgen receptor activity contribute to disease risk. Results could lead to a genetic risk assessment tool to inform breeding decisions and improve management of this frustrating condition.

Canine Health Issue

Alopecia X causes progressive, unexplained hair loss in Pomeranians, often with no effective treatment.

Potential Impact

This research could lead to a genetic test to identify dogs at risk and guide breeding away from the disease.

Owner Insight

If your plush-coated dog develops unexplained hair loss, consult your vet early to rule out other conditions and discuss treatments.

GRANT FACTS
Skin & Allergy

Principal Investigator
Tori Rudolph, PhD
University of Georgia

Total Grant Award
$177,109

Grant Period
9/1/2025 - 8/31/2028

Breeds Most Impacted

Most commonly, Pomeranians, as well as Samoyeds, Chow Chows, Keeshonden, and other plush-coated breeds.

GRANT FACTS
Skin & Allergy

Principal Investigator
Ching Yang, DVM, PhD, DACVP
Long Island University

Total Grant Award
$19,999

Grant Period
12/1/2023 - 11/30/2025

Breeds Most Impacted
Bulldogs, Shar-Pei, West Highland White Terriers, Poodles, Boxers, Labrador Retrievers, Golden Retrievers, Cocker Spaniels.

03215-A

Investigation of the role of *Staphylococcus pseudintermedius* Phenol-Soluble Modulins in Canine Pyoderma

Background
Staphylococcus pseudintermedius is a common bacterium that lives on dog skin and is similar to *Staphylococcus aureus*, the main cause of skin infections in humans. It's also the main cause of skin infections in dogs and can sometimes spread to people. This bacterium produces toxins called phenol-soluble modulins, but we don't understand how these toxins affect dogs with skin infections.

Scientific Premise
In humans, phenol-soluble modulins can damage both red and white blood cells, exacerbating infections. This study will explore whether the same is true in dogs, specifically, if *S. pseudintermedius* phenol-soluble modulins destroy cells and trigger inflammation during infection. The project also examines whether dogs with these infections produce antibodies against the toxins. The results could lead to new treatments to prevent or reduce skin infections caused by this bacterium.

Canine Health Issue
Common bacteria found on the skin of dogs produce toxins that could contribute to inflammation and tissue damage when the skin is infected.

Potential Impact
A deeper understanding of common canine skin bacteria could lead to novel therapeutics for skin infections.

Owner Insight
Regular grooming, early attention to itching or redness, and prompt veterinary care can prevent more serious problems.

03166-A

Evaluation of the Effects of Diluted Sodium Hypochlorite on Skin Microbiome in Dogs with Superficial Pyoderma and Atopic Dermatitis: A Single Blinded, Randomized, Controlled Clinical Trial

Background

Dogs with allergies frequently suffer from recurrent skin infections, often requiring repeated antibiotic treatments. This not only has a financial strain on owners, it also raises the risk of antibiotic resistance. In human medicine, diluted bleach baths have shown promise in managing similar conditions. *In vitro* studies suggest bleach has antimicrobial and anti-inflammatory effects in dogs, but its effectiveness in real-world veterinary settings has not been studied.

Scientific Premise

Diluted bleach is as effective as chlorhexidine in treating skin infections in allergic dogs and may help restore healthy skin microflora. This study will evaluate whether diluted bleach can serve as a safe, cost-effective alternative to traditional topical treatments in client-owned dogs with skin infections related to allergies.

Canine Health Issue

Recurrent infections in allergic dogs lead to excessive antibiotic use.

Potential Impact

Bleach therapy could reduce antibiotic dependence and improve skin health.

Owner Insight

Ask your vet about topical alternatives to antibiotics for managing skin issues.

GRANT FACTS

Skin & Allergy

Principal Investigator
Domenico Santoro, DVM, MS, DrSC, PhD
University of Florida

Total Grant Award
$19,996

Grant Period
5/1/2023 - 12/31/2025

Breeds Most Impacted

All breeds are susceptible to skin allergies, especially West Highland White Terriers, Dalmatians, and Boston Terriers.

GRANT FACTS
Skin & Allergy

Principal Investigator
Ana Rostaher, DMV, DECVD
Nina Maria Fischer, DMV, DECVD
University of Zurich

Total Grant Award
$114,048

Grant Period
7/1/2023 - 6/30/2025

Breeds Most Impacted
West Highland White Terriers, Lhasa Apsos, Golden Retrievers, and Scottish Terriers.

03162

Fecal Microbiota Transplantation for Treatment of Canine Atopic Dermatitis

Background
Atopic dermatitis is a common, chronic, and itchy skin disease affecting millions of dogs and people worldwide. Its development is multifactorial, involving immune system dysfunction and imbalances in skin and gut microbiota. In humans, early-life gut microbiota is known to influence the development of allergic conditions like atopic dermatitis.

Scientific Premise
Dogs with atopic dermatitis have a distinct gut microbiota, and restoring balance through fecal microbiota transplantation (FMT) may improve clinical outcomes. In a preliminary study, researchers found that allergic dogs have significantly different gut bacteria than healthy dogs. This study will expand on those findings in a larger group, focusing on West Highland White Terriers, to test whether fecal microbiota transplantation is an effective treatment for canine atopic dermatitis.

Canine Health Issue
Current treatments for canine atopic dermatitis do not address gut microbiota imbalances.

Potential Impact
FMT may offer a novel, effective, and lasting solution for allergic dogs.

Owner Insight
Discuss gut health and probiotics with your veterinarian if your dog has allergies.

American Foxhound

PROGRAM OVERVIEW

Tick-Borne Disease

Ticks transmit diseases that can damage the blood, immune system, and internal organs. Conditions like Lyme disease and ehrlichiosis can be challenging to detect, and even harder to treat.

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16 Grants
Awarded

$1.09 Million
Funded

10
Papers Published

GRANT FACTS
Tick-Borne Disease

Principal Investigator
Amanda Barbosa, BVetMed, PhD

Total Grant Award
$19,990

Grant Period
10/1/2024 - 9/30/2025

Breeds Most Impacted
Impacts all breeds, though the American Fox Hound, Rottweilers, and German Shepherd Dogs are commonly infected in endemic regions.

03321-A

Ehrlichiosis and Hemostasis: Uncovering the Molecular Pathophysiology of Perioperative Bleeding in *Ehrlichia canis*-Positive Dogs through Comparative Transcriptomics

Background
Veterinarians are increasingly reporting life-threatening bleeding during routine spay and neuter surgeries in dogs infected with *Ehrlichia canis*, a widespread tick-borne pathogen. While some infected dogs tolerate surgery well, others experience severe hemorrhage, and the biological reason for this variability remains unknown.

Scientific Premise
This study will utilize transcriptomics, a technique that analyzes gene expression, to compare *E. canis*-infected dogs with and without excessive perioperative bleeding, to identify genetic and molecular differences that influence bleeding risk. This could uncover diagnostic markers and treatments that improve outcomes and prevent deaths in *E. canis*-infected dogs undergoing surgery.

Canine Health Issue
Some dogs infected with *E. canis* suffer unexpected, fatal bleeding during surgery, and the cause is poorly understood.

Potential Impact
This research could lead to diagnostics and treatment strategies to prevent surgical complications and save lives.

Owner Insight
Have your dog tested for tick-borne diseases, especially before elective surgery.

02981

Genome-Wide Identification and Characterization of Peptide Epitopes from *Ehrlichia canis* and *Anaplasma platys* with Potential to be Used as Vaccine Candidates

Background

Ehrlichia canis and *Anaplasma platys* are tick-borne pathogens that cause severe illness in dogs, including fever, lethargy, bleeding disorders, and long-term immune complications. Current diagnostic methods are limited, and there are no vaccines to prevent disease.

Scientific Premise

This study uses a promising genomic strategy called reverse vaccinology to analyze the entire protein composition of both pathogens. Researchers aim to identify candidate molecules for a common vaccine and improved diagnostics targeting both tick-borne pathogens by comparing shared and unique proteins across their genomes.

Canine Health Issue

Tick-borne infections from *E. canis* and *A. platys* lack effective vaccines and are difficult to detect early.

Potential Impact

This research could lead to a dual-purpose vaccine and better diagnostic tools to protect dogs worldwide.

Owner Insight

Use tick preventives year-round and consult your vet about regular disease screening.

GRANT FACTS

Tick-Borne Disease

Principal Investigator
Sreekumari Rajeev, BVSc, PhD
University of Tennessee

Total Grant Award
$100,244

Grant Period
2/1/2022 - 1/31/2025

Breeds Most Impacted

German Shepherd Dogs, Doberman Pinschers, and Labrador Retrievers are commonly affected.

Fueling the Future of Canine Health: Rising Research Talent

At CHF, we know that the future of canine health depends on the next generation of bold, brilliant researchers. That's why we're investing in two powerful new programs that create life-changing opportunities for early-career scientists and life-saving possibilities for dogs.

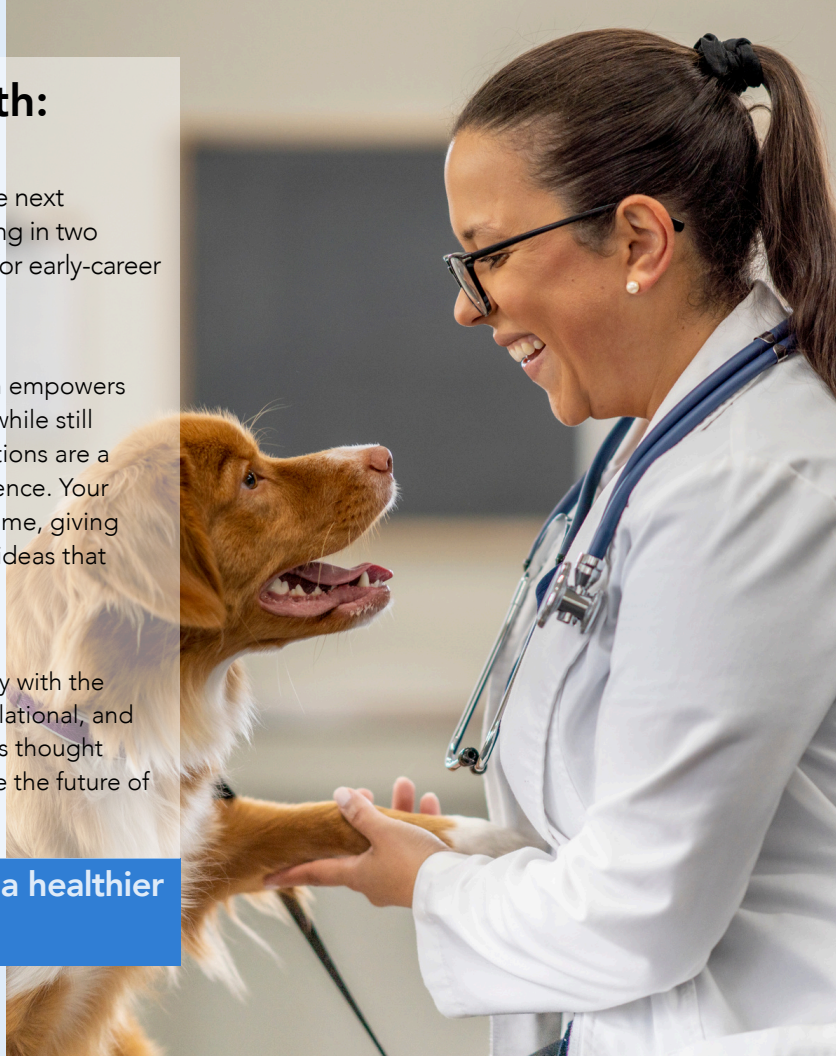
Rising Researcher Awards

Launched in 2024, our Rising Researcher Awards program empowers postgraduates to launch independent scientific projects while still benefiting from expert mentorship. These early investigations are a critical launchpad for tomorrow's leaders in veterinary science. Your support helps train these young researchers at a pivotal time, giving them the resources and support to pursue breakthrough ideas that could transform canine health.

Early-Career Investigator Awards

CHF's Early-Career Investigator Awards provide new faculty with the funding to lead their own innovative studies in basic, translational, and clinical research. These awards help establish rising stars as thought leaders in the field, ensuring their fresh perspectives shape the future of canine medicine for generations to come.

Support these visionary programs and invest in a healthier future for all dogs.



Advancing Therapies that Work in the Real World

At the AKC Canine Health Foundation, we believe that the most meaningful scientific breakthroughs begin with the patient. That's why our Clinician-Scientist Fellowship program invests in veterinarians who bring real-world insight to the research lab, ensuring science stays grounded in the everyday challenges dogs face.

Dr. Nora Springer exemplifies this approach. As a clinical pathologist, her early work in diagnostics, and particularly her experience treating dogs with osteoarthritis, raised urgent questions about how to improve outcomes for canine patients. While pursuing her PhD, she explored how obesity alters the behavior of fat-derived stem cells in human cancer biology. That research laid the groundwork for her current CHF-funded project, which brings her back to her veterinary roots.

Today, Dr. Springer is investigating how a dog's body condition may influence the effectiveness of stem cell therapies for osteoarthritis. Her work bridges clinical practice and translational science—and could shape the future of regenerative medicine for dogs.

Clinician-Scientist Fellowships

A clinician-scientist fellowship is a specialized training program that supports veterinarians in gaining advanced research skills while continuing clinical work. These programs are designed to expose fellows to translational or applied research that improves health outcomes.

31 Grants Awarded • **$372K** Funded • **26** Papers Published

AMERICAN KENNEL CLUB®
CANINE HEALTH FOUNDATION®

03398-E

2025 Clinician-Scientist Fellowship: Developing Early-phenotype Canine CAR T-Cells for Treatment of Solid Cancers, and Improving Function through CRISPR-editing

Meet the 2025 Clinician-Scientist Fellow: Dr. Selvi Jegtheeson

Dr. Jegatheeson is a veterinary oncologist with a research focus on advancing cancer immunotherapy through comparative oncology. She has demonstrated strong research commitment by completing a double MSc (MVS and MVSc clinical) during her medical oncology residency. During her training, she published multiple first-author oncology papers, including in the Journal of Veterinary Internal Medicine and Veterinary Comparative Oncology, and presented clinical and basic science research at national and international conferences such as the Veterinary Cancer Society (VCS) meetings. She has also received several awards for research and science communication, including VCS resident research prizes. Dr. Jegatheeson has led collaborative projects with top research centers in Melbourne and Professor Nicola Mason at the University of Pennsylvania, reflecting her dedication to advancing canine comparative oncology. She has already shown the qualities of an outstanding PhD candidate capable of building a valuable scientific career. Her PhD project will be supported by four supervisors, including three immunologists at Peter MacCallum Cancer Centre and Professor Mason.

PROGRAM OVERVIEW
Clinician-Scientist Fellowships

Fellow
Selvi Jegtheeson, MVS, MVSc
University of Melbourne

Mentor
Paul Neeson, PhD, Sir Peter MacCallum

Total Grant Award
$15,000

Grant Period
1/1/2025 - 12/31/2025

Sponsored by owners, Carolyn and Gary Koch, this fellowship honors the late "Rumble", GCHP Hill Country's Let's Get Ready To Rumble, a champion Pug.

AMERICAN KENNEL CLUB®
CANINE HEALTH
FOUNDATION®

Sports Medicine & Rehabilitation Residency

Thanks to your support, the Canine Sports Medicine & Rehabilitation Residency Program, an initiative of the AKC and AKC Canine Health Foundation, is shaping the future of veterinary care. As demand grows for expert care for athletic, working, and recovering dogs, this program trains veterinary specialists to prevent injury, manage conditions like arthritis, and optimize recovery. Your generosity powers advanced training, groundbreaking research, and a healthier, more active future for all dogs. Together, we're keeping canine athletes strong - and every dog moving with vitality.

2 Grants Awarded **$500K** Funded

Samantha's Calm Before the Storm, CDX, RN, JH | Owned by Beth Grooms

GRANT FACTS
Sports Medicine & Rehabilitation Residency

Institution
Colorado State University

Total Grant Award
$250,000

Grant Period
7/1/2025 - 6/30/2028

Resident
Alexis Heffernan, MS, DVM

03330-E

2025 Colorado State University Canine Sports Medicine & Rehabilitation Residency

Meet the 2025 Sports Medicine Mentor: Lindsay Elam, DVM, MPH, DACVSMR

Colorado State University's Orthopedic Medicine and Mobility service focuses on preventing and treating mobility issues in athletic, working, and aging dogs. From arthritis and neurological conditions to injuries and amputations, the program helps restore mobility, enhance quality of life, and develop preventive care strategies. Residents receive advanced training in diagnosis, treatment, and rehabilitation, while also contributing to clinical trials that explore innovative therapies for musculoskeletal disease.

Dr. Lindsay Elam leads this residency with a passion for helping dogs live active, pain-free lives. A board-certified specialist in canine sports medicine and rehabilitation, she guides residents through hands-on casework, collaborative diagnostics, and clinical research. Under her mentorship, residents gain the skills to become leaders in mobility care, advancing treatment options for dogs everywhere.

The Canine Sports Medicine & Rehabilitation Residency Program is a collaboration between the American Kennel Club (AKC) and AKC Canine Health Foundation (CHF).

03331-E NEW 2025

2025 University of Pennsylvania Canine Sports Medicine & Rehabilitation Residency

Meet the 2025 Sports Medicine Mentor: Cynthia Otto, DVM, PhD, DACVECC, DACVSMR

Offered through the University of Pennsylvania and directed by Dr. Cynthia Otto, this prestigious residency advances the health, performance, and recovery of canine athletes and active companion dogs. Residents train within two distinct arms: at the renowned Penn Vet Working Dog Center, they support working dogs from puppyhood through deployment in service roles; and at the Ryan Veterinary Hospital, they treat performance-related injuries and mobility issues.

The program blends research, clinical practice, and education, preparing residents for board certification in the American College of Veterinary Sports Medicine and Rehabilitation.

Residency Mentor, Dr. Cynthia Otto is a nationally recognized expert in working dog performance, recovery, and resilience. As founder and director of the Penn Vet Working Dog Center, she leads groundbreaking research on detection dogs, conditioning, and injury prevention. Her leadership shapes a residency rooted in science, service, and canine well-being.

The Canine Sports Medicine & Rehabilitation Residency Program is a collaboration between the American Kennel Club (AKC) and AKC Canine Health Foundation (CHF).

GRANT FACTS

Sports Medicine & Rehabilitation Residency

Institution
University of Pennsylvania

Total Grant Award
$244,373

Grant Period
7/15/2025 - 7/14/2028

Resident
Tesa Stone, VMD

AMERICAN KENNEL CLUB®
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Theriogenology Residency

$1.96 Million Funded
18 Grants Awarded
15 Papers Published

When a dog faces a high-risk pregnancy or a struggling pup needs urgent care, a theriogenologist can make a lifesaving difference. But these reproductive specialists are in short supply.

That's why the AKC, AKC Canine Health Foundation, and Theriogenology Foundation created the Small Animal Theriogenology Residency Program, a two to three-year training in advanced reproductive medicine, surgery, neonatology, and genetics.

With up to $150,000 in support per resident, CHF has helped train 12 Board-Certified veterinarians since 2014, ensuring healthier litters and expert care for generations to come.

GRANT FACTS
Theriogenology Residency

Institution
Auburn University

Total Grant Award
$150,000

Grant Period
7/1/2025 - 6/30/2028

Resident
Katelyn Lundquist, DVM

03342-E NEW 2025

2025 Auburn University Small Animal Theriogenology Residency

Meet the 2025 Theriogenology Mentor: Robyn Wilborn, DVM, MS, DACT

The purpose of the companion animal theriogenology residency is to provide comprehensive training in comparative theriogenology, with a focus on small animal reproduction. The goal is to prepare residents for certification as Diplomates of the American College of Theriogenologists. The program balances clinical service, teaching, client outreach, and culminates in a research project on canine reproduction.

This three-year residency program is based at Auburn University's Bailey Small Animal Teaching Hospital, where residents manage cases related to ovulation timing, breeding management, semen cryopreservation, high-risk pregnancies, Cesarean sections, and infertility evaluation. Residents also support managing the Canine Performance Sciences Program, focusing on breeding elite detection dogs. This includes genetic testing, breeding, pregnancy management, and neonatal care.

The Small Animal Theriogenology Residency Program is a collaboration between the American Kennel Club, the AKC Canine Health Foundation, and the Theriogenology Foundation.

03318-E NEW 2025

2025 Virginia Maryland College of Veterinary Medicine Small Animal Theriogenology Residency

Meet the 2025 Theriogenology Mentor: Julie Cecere, DVM, MS, DACT

The Virginia-Maryland Small Animal Theriogenology Residency, led by renowned specialist Dr. Julie Cecere, is a premier training program shaping the next generation of experts in companion animal reproduction and genetics. Over three years, residents gain deep clinical and surgical experience with both large and small animal cases, preparing for board certification through the American College of Theriogenologists and the American Board of Veterinary Practitioners.

Under Dr. Cecere's mentorship, residents also earn a master's degree in theriogenology and clinical genetics, receiving advanced training in genomics, hereditary traits, and breeding strategy. This unique dual focus equips graduates to serve as both theriogenologists and genetic counselors, helping breeders and veterinarians make responsible, science-based decisions that improve the health of future generations. Thanks to programs like this, supported by visionary donors, the field of veterinary reproductive medicine continues to advance—ensuring every breeding plan has the power of science behind it.

The Small Animal Theriogenology Residency Program is a collaboration between the American Kennel Club, the AKC Canine Health Foundation, and the Theriogenology Foundation.

GRANT FACTS
Theriogenology Residency

Institution
Virginia-Maryland Regional College of Veterinary Medicine

Total Grant Award
$150,000

Grant Period
7/1/2025 - 6/30/2028

Resident
Barbara Follet, BVMS

GRANT FACTS
Theriogenology Residency

Institution
The Ohio State University

Total Grant Award
$148,302

Grant Period
7/1/2024 - 6/30/2026

Resident
Joshua Trumble, DVM

03183-E NEW 2025

2024 The Ohio State University Small Animal Theriogenology Residency

Meet the 2024 Theriogenology Mentor: Erin Runcan, DVM, DACT

The small animal Theriogenology residency program provides aspiring theriogenologists with the training, mentorship, and support needed to become advocates for responsible purebred dog ownership and reproduction.

The program emphasizes the importance of breeding to improve the breed while ensuring the health of future generations through responsible practices.

It guides prospective breeders in conducting phenotypic and genetic screening of breeding pairs, with the goal of producing healthy offspring. Upon completing the residency, candidates will be equipped with the knowledge and skills necessary to pass the American of Theriogenologists board examination and serve as experts in the reproductive health of companion animals.

The Small Animal Theriogenology Residency Program is a collaboration between the American Kennel Club, the AKC Canine Health Foundation, and the Theriogenology Foundation.

03182-E NEW 2025

2024 Colorado State University Small Animal Theriogenology Residency

Meet the 2024 Theriogenology Mentor: Fiona Hollinshead, BVSc, MACVSc, PhD, DACT

The Colorado State University Companion Animal Theriogenology Residency focuses on canine reproduction, emphasizing heritability, genetic counseling, and innovative reproductive technologies. Throughout the three-year residency, residents develop expertise in companion animal reproduction and clinical genetics. They rotate through various services such as community practice, imaging, and surgery, while also gaining comparative training in equine and livestock reproduction. This approach not only fulfills the American College of Theriogenologists board but also enhances the residents' understanding across species. The residency includes formal training in genomics, inheritance patterns, and phenotypic trait management, with clinical applications in the Colorado State University Veterinary Teaching Hospital's breeding cases. Residents participate in health clinics at AKC-sanctioned dog shows, offering breed-specific counseling and testing. They also gain unique experience in large-scale working dog breeding programs, learning genetic selection and breeding value estimation. Upon completion of the residency program, candidates have successfully attained a Master's degree and be eligible to take the certifying examination with the American College of Theriogenology.

The Small Animal Theriogenology Residency Program is a collaboration between the American Kennel Club, the AKC Canine Health Foundation, and the Theriogenology Foundation.

GRANT FACTS
Theriogenology Residency

Institution
Colorado State University

Total Grant Award
$150,000

Grant Period
7/1/2024 - 6/30/2028

Resident
Emma Ahern, DVM

GRANT FACTS
Theriogenology Residency

Institution
Virginia-Maryland Regional College of Veterinary Medicine

Total Grant Award
$125,000

Grant Period
7/1/2023 - 6/30/2026

Resident
Gabriela Carneiro de Sousa, MV (DVM equivalent)

03078-E

2023 Virginia Maryland College of Veterinary Medicine Small Animal Theriogenology Residency

Meet the 2023 Theriogenology Resident: Gabriela Carneiro de Sousa, MV

This residency program develops veterinarians with exceptional skills, preparing them to excel in small animal private practice or academia, serving as both theriogenologists and genetic counselors for small animal reproductive clients. Graduates are eligible for certification by both the American College of Theriogenologists (ACT) and the American Board of Veterinary Practitioners (ABVP).

Dr. Sousa earned her veterinary degree from the Federal University of Goiás in Brazil. She completed an animal reproduction residency and is set to earn a master's degree in animal biotechnology at São Paulo StateUniversity, also in Brazil. She has completed theriogenology externships in Brazil and the United States. Dr. Sousa is passionate about reproductive medicine and surgery and wants to be a professor and continue to do research to share and enhance our knowledge in small animal theriogenology.

The Small Animal Theriogenology Residency Program is a collaboration between the American Kennel Club, the AKC Canine Health Foundation, and the Theriogenology Foundation.

02972-E

2022 Auburn University Small Animal Theriogenology Residency

Meet the 2022 Theriogenology Resident: Dr. Lily Lewis, DVM

Dr. Lily Lewis is the Auburn University Small Animal Theriogenology Small Animal Theriogenology Resident. This three-year residency program is based at Auburn University's Bailey Small Animal Teaching Hospital, where residents manage cases related to ovulation timing, breeding management, semen cryopreservation, high-risk pregnancies, Cesarean sections, and infertility evaluation. Residents also support managing the Canine Performance Sciences Program, focusing on breeding elite detection dogs. This includes genetic testing, breeding, pregnancy management, and neonatal care.

Dr. Lewis completed her veterinary degree at the University of Illinois at Urbana-Champaign after receiving a Bachelor of Science degree in Veterinary Business Management from Virginia Tech. She completed a small animal rotating internship at Nashville Veterinary Specialists. She is passionate about understanding the many factors that contribute to female infertility/subfertility.

The Small Animal Theriogenology Residency Program is a collaboration between the American Kennel Club, the AKC Canine Health Foundation, and the Theriogenology Foundation.

GRANT FACTS
Theriogenology Residency

Mentor
Robyn Wilbourn, DVM, MS, DACT

Institution
Auburn University

Total Grant Award
$108,000

Grant Period
7/1/2022 - 6/30/2025

Give Your Way. Help Dogs Every Day.

Whether you love to rally a team, give quietly, run for a cause, or leave a legacy - there's a way to support canine health that fits you. Your passion and generosity fuel the breakthroughs that help dogs live longer, healthier lives. However you give, **you make a difference**.

Monthly Giving. Becoming a monthly donor is an easy way to make a lasting impact. Any amount, every month, helps dogs live longer, healthier lives. *akcchf.org/donate*

Pave the Future for Canine Health. Order a custom engraved brick on the Walk of Champions or Path of Honor at the Purina Event Center with proceeds supporting canine health research. *akcchf.org/pavetheway*

Planned Giving. Become a member of the CHF Heritage Society and leave a legacy that will help dogs live longer, healthier lives by making a planned gift to CHF. *akcchf.org/heritagesociety*

Breed Club Sponsorship. Breed clubs can make a powerful impact by sponsoring research that protects and advances the long-term health of their beloved breeds. To learn more talk to us: *chfgrants@akcchf.org*

WISHD

WISHD. Women Investing in Science for Healthy Dogs is an exclusive network of visionary women advancing canine health through science, purpose, and community. If you enjoy working alongside other powerful women and value action, connection, and impact, we invite you to learn more by emailing *fleming@akcchf.org*

fundRACERS

FundRACERS are a passionate community of dog-loving athletes who dedicate their races to a cause. With each event they raise vital funds and awareness for canine health research. Every mile run, swam or biked - every finish line crossed, and story shared is for the love of dogs. To join, email *paige@akcchf.org*

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A World Unleashed!

Science ensures dogs a vibrant, active future. Your gift fuels the breakthroughs that make it happen.

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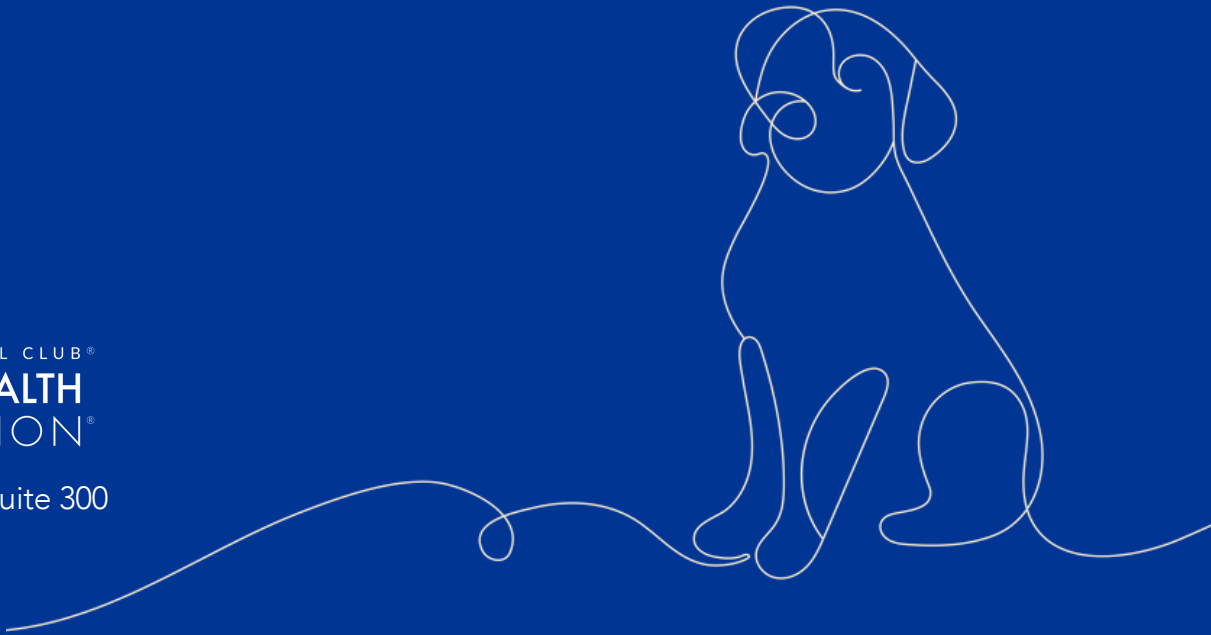
akcchf.org/fueldogsinmotion



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