

AKC CANINE HEALTH FOUNDATION 2023-2024 GRANTS REPORT

HIGHLIGHTS

Grants awarded in 2023 to help prevent, treat and cure canine disease.

PREVIEW OF 2024

What is coming next year in CHF-funded research?

IMPACT

Learn how your investments help dogs live happy and healthy lives.



AMERICAN KENNEL CLUB®
**CANINE HEALTH
FOUNDATION®**
PREVENT TREAT & CURE®

The AKC Canine Health Foundation (CHF) works to improve the health and well-being of all dogs. CHF supports a wide range of research grants in canine health to improve treatments, diagnostic methods, and our understanding of the causes of canine diseases. CHF is dedicated to enhancing the health and well-being of all dogs. The ultimate goal is to prevent, treat and cure these canine diseases.

Through the end of 2023, CHF is on track to award over 30 new research and educational grants, many of which are focused on One Health, a collaborative effort to improve well-being at both ends of the leash. Grants with a One Health focus are marked with an [OH] symbol.

Thanks to the dedicated community of dog owners, breeders, veterinary professionals, and researchers who support the mission. Together, we work to ensure that all dogs enjoy longer and healthier lives.



2023 RESEARCH

To date in 2023, CHF awarded over \$2 million across 13 different research program areas promoting canine health.

8 ACORN GRANTS

Acorn grants enable researchers to explore the first steps of discovery. At \$20,000 or less, Acorn grants invest smaller amounts of money at the early stages of research to help scientists bring their projects to life. These grants seed an idea from its inception, testing the hypothesis and generating the data that will form the basis of a future, more significant proposal.

15 OAK GRANTS

Oak grants are substantial investments in scientific studies and clinical trials that grow an established research project. Oak grants frequently build on the data generated in a previously awarded Acorn grant. This year's funded Oak grants ranged from \$44,076 to \$205,317.

This year, Dr. Shaying Zhao from the University of Georgia received an Oak grant to identify genetic mutations in anal sac carcinoma in English Cocker Spaniels, expanding on a productive 2017 Acorn grant.

6 EDUCATIONAL GRANTS

CHF supports the next generation of canine health researchers and specialists through Clinician-Scientist Fellowships and through the AKC/AKCCHF/TF Small Animal Theriogenology Residency Program. In 2023, grants were awarded to residents and young scientists at top research universities. These programs help cultivate the next generation of experts in canine health and theriogenology, driving progress and innovation in the field.



2023 RESEARCH GRANTS

Anal Sac Carcinoma | 03103

Uncovers genetic changes that predispose English Cocker Spaniels to anal sac carcinoma development, paving the way for future research on prediction, prevention, and treatment.

Glomerulonephritis | 03106

Investigates a new non-invasive method to diagnose chronic kidney disease in dogs using a urine sample. [OH]

Pain Catastrophizing | 03114

Establishes a measure of the cognitive and emotional response to pain in dogs and the owner's influence on the dog's pain perception to improve health outcomes for dogs. [OH]

Dry Eye | 03115

Evaluates the effects of topical treatment with a unique fat molecule to prolong tear film stability in dogs with dry eye. [OH]



Dilated Cardiomyopathy | 03121

Uses the CRISPR gene editing technique to repair heart cell function in Doberman Pinschers with dilated cardiomyopathy. [OH]

Congenital Idiopathic Megaesophagus | 03134

Searches for additional risk factors associated with congenital idiopathic megaesophagus, a complex disease. [OH]

Pathogen Detection | 03137

Develops a next generation sequencing (NGS) panel to detect known neurologic and reproductive pathogens of dogs. [OH]

Degenerative Myelopathy | 03139

Investigates a drug that counteracts glutamate buildup to preserve nerve cells and improve quality of life in dogs with degenerative myelopathy. [OH]

Blastomycosis | 03147

Aims to establish an evidence-based method to determine the optimal medication levels and monitor the treatment for canine blastomycosis, a severe fungal infection. [OH]

Athletic Conditioning | 03179-A

Seeks to establish a benchmark canine sprint test using completion time as a metric that could improve athletic performance, including muscular strength and endurance in dogs.

Atopy | 03162

Investigates fecal microbiota transplantation (FMT) as a treatment for skin allergies (atopic dermatitis) in West Highland White Terriers. [OH]

Semen Health | 03165-A

Investigates the microbiome of canine semen and its association with reproductive health, including low fertility. [OH]

Pyoderma and Atopy | 03166-A

A clinical trial to test if use of a mild bleach treatment can restore normal skin bacteria in dogs with allergies.

Hookworm Resistance | 03169

Develops a new, rapid, non-invasive test for hookworms that also tests for resistance to current treatments at the time of diagnosis. [OH]

Gingival Enlargement | 03172

Examines genetic mutations linked to abnormal tissue growth of the gums and may lead to a genetic test for a disease especially common in the Boxer breed.

Core Conditioning | 03178-A

Evaluates how a structured exercise routine impacts pet dogs with no previous experience in dog sports.

Acute Pancreatitis | 03158

Examines fatty acids blood profiles and the fecal microbiome to provide new insights into acute pancreatitis and targeted therapies. [OH]



Athletic Performance | 03180-A

Develops an app for agility handlers to log their dog's daily activity and exertion as a canine performance training tool.

Regenerative Medicine | 03181-A

Studies canine mesenchymal stromal cells as a way to treat bone and joint diseases in dogs. [OH]

Corneal Endothelial Dystrophy | 03189

A clinical trial testing a new drug combination to slow a degenerative eye disease. [OH]

Heartworm Infection | 03212-A

Develops and validates a DNA test for *Wolbachia*, a bacterium crucial for heartworm survival, as a way to diagnose heartworm infection. [OH]

Pyoderma | 03215-A

Investigates whether specific bacterial-produced toxins play a role in deep skin infections in dogs. [OH]

[OH] – One Health is a collaborative, multisectoral, and transdisciplinary approach with the goal to balance and optimize the health of people, animals, and ecosystems.

New Program!

EARLY CAREER INVESTIGATOR GRANTS

The Early Career Investigator grant program was launched in 2023 with the aim of supporting the translational and clinical research of new canine health scientists.

This program advances the field of veterinary medicine today and invests in developing tomorrow's promising new canine health researchers who are poised to shape the future.



Sign up for CHF news, articles, webinars, and more!



Follow along on social media to get the latest in CHF news, including findings from CHF-supported grants, opportunities to participate in research, and grants to support!



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**Do you have a health concern
within your breed? Are you a
Parent Club member?**

**We have a path to help address
breed-specific diseases!**

Email us at chfgrants@akcCHF.org to learn more.



2023 IN REVIEW

The Impact of Publications

This year, CHF reached the milestone of 1,000 peer-reviewed publications supported by our funded research!

Scientific papers report the results of studies and share findings with the scientific community. The papers must be critically reviewed by a panel of experts in the field to ensure the research is high quality and the findings are valid. This process allows the scientific community to share discoveries and build upon each other's knowledge. This illustrates how CHF funding is essential to advancing the health of dogs!

2023 by the Numbers

44 publications in peer-reviewed scientific journals, reports, webpages and newsletters

24 papers published in top scientific journals*

* with an Impact Factor > than 3

5 articles published in Scientific Reports, ranked the 5th most cited journal globally!

Canine Cancer

Cancer affects over 25% of dogs during their lifetime. Investigating canine cancer is central to CHF's mission, with four dedicated research areas focusing on Lymphoma, Hemangiosarcoma, Osteosarcoma, and General Oncology. In November 2023, CHF convened a panel of canine oncologists to evaluate research proposals and recommend the best investment for canine health impact.

The demands of cancer research are substantial, requiring complex instrumentation, state-of-the-art equipment, laboratory infrastructure, specialized drugs and compounds, and a team of highly skilled researchers and staff. Despite its costs, cancer research yields invaluable insights that benefit our loyal four-legged companions and also contribute to advancements in human cancer therapies, creating a reciprocal benefit for both ends of the leash.

Your sustained support enables scientists to conduct groundbreaking research to detect cancer earlier and administer more effective treatments.

Learn more about the new cancer grants and contribute to our cancer research efforts at www.akcCHF.org/caninecancer



2023 IN REVIEW



Exceptional Achievements!

In 2023, CHF-funded investigators:

- Identified genetics linked to the development of glaucoma in American Cocker Spaniels
- Demonstrated that detection dogs trained to locate kissing bug nests can improve the identification of these insects and decrease the spread of Chagas disease.
- Discovered a link between respiratory disease and sub-clinical gastrointestinal disease in dogs leading to better treatment and outcomes.
- Revealed that breed differences in pain sensitivity do exist and do not match beliefs held by veterinarians.

**Working with
the best, the
brightest, and
the most
promising!**

81 grant applications received to date in 2023!

13 applicants at a Top Five Veterinary Medicine College*

* According to U.S. News and World Report Ranking

30% submissions from international organizations

**More to
come....**

Our final 2023 Request for Proposals supports Neurology & Epilepsy studies and we're excited to fund top-notch studies tackling crucial canine neurological diseases. Stay tuned for the impactful results that will shape the well-being of dogs today and in the future!

2023 CLINICIAN-SCIENTIST FELLOWS

Supporting the next generation of canine health researchers



I ILLINOIS

College of Veterinary Medicine

Dr. Matthew Berry, mentored by Dr. Tim Fan, is exploring the impact of combining a substance that induces cancer cell death with radiation therapy as a potential treatment for various types of cancer in dogs.

This fellowship is generously sponsored in part by the Westie Foundation of America.



Dr. Nolan Chalifoux, under the mentorship of Dr. Reineke, is studying advanced decontamination procedures for emergency treatment of muscle relaxant intoxication in dogs.

This fellowship is generously sponsored by owners Carolyn and Gary Koch along with breeders Kristy and Kevin Ratliff in honor of "Rumble," GCHP Hill Country's Let's Get Ready To Rumble.



Dr. Jennifer Heyward, under the mentorship of Dr. Freya Mowat, is examining why dogs with sudden acquired retinal degeneration syndrome (SARDS) have an increased risk of blood clot formation to develop new diagnostic and treatment strategies for this disease.



Samantha Van Buren, along with mentor Dr. Anita Oberbauer, is investigating how mutations in the MITF gene contribute to white spotting of the haircoat and development of retinal degeneration in the Italian Greyhound.

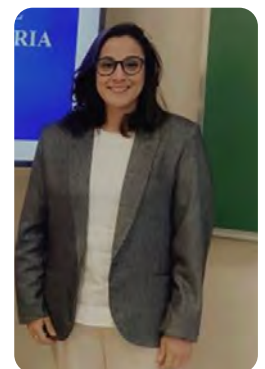
This fellowship is generously sponsored by the Orthopedic Foundation for Animals (OFA).

2023 THERIOGENOLOGY RESIDENCY PROGRAM

Support provided by the the American Kennel Club, the AKC Canine Health Foundation, and the Theriogenology Foundation.

Increasing the number of trained practitioners in companion animal theriogenology and clinical genetics.

Dr. Sousa, a graduate of the Federal University of Goiás in Brazil, completed an animal reproduction residency and theriogenology externship in both Brazil and the United States. With a passion for reproductive medicine and surgery, particularly in the areas of pregnancy and parturition, her future goals include becoming a professor and conducting research to advance our understanding of small animal theriogenology.



Gabriela Carneiro de Sousa, MV

Will this study help the dogs?

by Laura Liscum, PhD,
Chair, CHF Scientific
Review Committee



'Will this study help the dogs?' is the over-arching question that the CHF Scientific Review Committee (SRC) asks when it evaluates a grant application. If the SRC recommends to the CHF Board of Directors that funds be allocated to a study, that means that the Committee has recognized that, if the study is successful, the results stand an excellent chance of improving canine health.

When I first joined the SRC, in 2017, two aspects of the Committee's work amazed me. One was that the SRC was faced with evaluating an enormous range of canine health topics, from cardiac diseases that are found in all breeds to genetic abnormalities that affect very few. We consider tick-borne diseases that are widespread in the US as well parasites that haven't had an impact on the US canine population – yet. Fortunately, CHF also solicits the opinions of external experts in the field who give their opinion on whether the proposed research is worthy; evaluating the proposal's significance to canine health, its team of investigators, and the research plan.

The second aspect that amazed me was the enormous range of expertise on the SRC. There are primary care veterinarians who have deep knowledge of the clinical issues; veterinarians who are board-certified in their area of clinical specialty, with research and clinical trial experience in academic and pharmaceutical settings; physicians and dog breeders who have decades of experience grappling with canine health issues; and research scientists who are familiar with basic science methods.

SRC members are volunteers who signed on for a rather hefty workload of evaluating, on average, 5 applications each month. We start the discussion of each proposal with differing opinions, but almost always come to consensus on which proposals should be recommended to the Board of Directors for funding.

Once grants are funded, then YOU have the opportunity to give us your opinion. Parent clubs and foundations are welcome (and encouraged!) to sponsor grants. This demonstrates to CHF and the grant investigator which areas of research are important to you. All of us at CHF strive to be stewards of your donations by funding the studies with the best chance of helping dogs.

Upcoming in 2024

Unleash Transformation: Explore the Directors' Discovery Fund!

Veterinary medicine is experiencing exceptional growth, fueled by a demand for revolutionary treatments for our beloved dogs. CHF is meeting this urgent need with the Directors' Discovery Fund—a game-changing resource empowering CHF and amplifying our influence across all health initiatives.

The Directors' Discovery Fund transcends its role as a mere financial resource; it's designed as a strategic investment positioning CHF to respond to new canine health challenges as they arise with the most cutting-edge research. The Fund will shape the future of canine health.

Your Impact Matters!

Fuel groundbreaking advancements in canine health and inspire other canine health community members to join us on this journey and be a catalyst for positive change!

Ready to Make a Difference?

Seize the opportunity to be THE INAUGURAL DONOR, igniting the spark of this vital initiative!

Contact chf@akcchf.org to make your donation today.

**2024
AREAS OF
FOCUS**



Each year, CHF welcomes research proposals that address current and emerging needs, shaped by the research and dog enthusiast communities. In 2024, CHF will focus on advancing canine health in areas such as cancer, aging, sports medicine, and more.

Thank you!

Your continued support is truly appreciated.

The AKC Canine Health Foundation is dedicated to advancing the health of all dogs and their owners by funding scientific research and supporting the dissemination of health information to prevent, treat and cure canine disease.



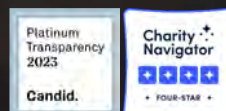
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research
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8051 Arco Corporate Dr. Suite 300 | Raleigh, NC 27617 | (888)-682-9696



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