



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

DISCOVERIES

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

UPDATE FROM THE CEO

Update from the AKC Canine Health Foundation CEO, Dr. Terry T. Warren

Dear Canine Health Supporters:

Thank you for the opportunity to help all dogs and their owners live longer, healthier lives. As you may know, I have decided to retire as CEO and general counsel of the AKC Canine Health Foundation (CHF) this summer. Upon the announcement of my retirement to the board of directors, Dr. A. Duane Butherus stated, "Dr. Warren has served the Foundation with tireless dedication for more than six years. Under her leadership, CHF has grown tremendously—now boasting a portfolio of research and educational programs well over \$40 million. Dr. Warren built strategic partnerships, improved the processes and infrastructure of the Foundation and brought CHF to solid financial ground."

I thank Duane for his kind words and for the wonderful opportunity to advance the CHF mission. Before long, I will be spending much more time with my growing brood of grandchildren (five right now and one on the way!) and hopefully on the golf course. However, I will always be a dog lover and wish the Foundation great success.

Since this announcement, I have heard from many of you expressing your appreciation for the work accomplished in advancing the health of all dogs and have received many well wishes for my future endeavors. Thank you all for your good thoughts. The Foundation will engage a search firm, to be announced in the upcoming weeks, to assist in the recruitment of candidates for the CEO position, and I will be working closely with the Board of Directors to allow for a smooth transition period.

Story continued on page 10

THIS ISSUE AT A GLANCE

Using Science to Reduce Surrenders.....	2
Pet Cancer Awareness Month	3
Champion of Canine Health	3
Hypothyroidism Research Focus	4
Epilepsy Research Initiative	5
New Grants.....	6
New Treatment Targets Cancer Stem Cells	8

New Donor Matching Program

AKC will match donations from new & lapsed individual or business donors in 2014!
(See back for how you can help.)

Owner-Surrenders and Behavior: Uncovering the Science Behind Why Dogs End Up in Shelters

A dog's behavior can quite literally be the difference between life and death. While most responsible dog owners can attest to the benefits of obedience training, exercise and working with their dog, some dogs do not benefit from this type of environment. Instead, they are left alone for long periods of time, crated for much of the day and not given the opportunity to exercise. When dogs are not integrated into a family and given their natural opportunity to play, exercise and be social with their humans, behavior problems can arise.

For some dog owners, behavior problems become overwhelming and they are either unable or unwilling to work with their dog on training issues, or they are unaware of the correlation between negative behaviors and lack of exercise. According to national figures, the majority of owner-surrender-dogs being placed in shelters or with rescue organizations—are due to behavior problems. Recidivism, or re-surrender of dogs to shelters, is similarly linked to behavior problems.

In an effort to reduce owner surrenders, CHF has funded Dr. Clive Wynne, PhD, Arizona State University, for Grant 02085-A: Reducing Animal Shelter Surrender by Enhancing the Human-Animal Bond. Dr. Wynne's study aims to evaluate whether an owner-dog exercise program can decrease return rates of newly adopted dogs by improving the human-animal bond. Dr. Wynne hypothesizes that shared, structured exercise between the new owner and the newly adopted dog will provide a buffer against return by promoting social bonding and attachment to the dog, and will improve the physical and mental health of both parties.

In collaboration with the Arizona Animal Welfare League & SPCA, 180 dog-owner pairs will be randomly assigned to one of two conditions upon adoption of the dog: an exercise program and a control condition. The exercise group participants will receive pedometers and be asked to log their physical activity with their dog. The exercise group participants will also participate in a weekly social event with their dogs in which they will be asked to bring their logged data, hear about the benefits of dog walking, get ideas on ways to exercise with their dogs and receive advice in basic dog training. Return rates of the dogs in both groups will be collected from shelter statistics.

Dr. Wynne predicts that owner-dog pairs that are assigned to the exercise program will have lower return rates and a higher attachment compared to the owner-dog pairs that are assigned to the control condition. Furthermore, he predicts the return rates will correlate with the amount of physical activity as measured by the pedometers.



According to Dr. Bernard Rollins, professor of philosophy at Colorado State University and a member of the Human-Animal Bond Research Initiative (HABRI) central editorial board, "The current proposal is a new and fresh approach to the issue of owner surrender. What is being proposed is that people will bond far more successfully with animals, and be loath to return them to shelters, if persons and their animals jointly participate collaboratively in some activity—in this case, a professionally directed exercise program."

Dr. Rollins also believes that putting science behind owner surrender could have a much broader impact for society: "This is a very creative and new approach to a problem that is highly significant societally. If we learn that co-participation in a regular program of exercise cuts down on relinquishment of animals, we would have a whole new approach, not only to stable homing of animals, but also a way of limiting the obesity plague affecting both humans and animals."

CHF is committed to all aspects of a dog's physical, mental, and social well-being. Studies like Dr. Wynne's are unique and important because they address each of these aspects of canine health. By defining the underlying cause of owner surrenders, and developing tools and educational strategies to mitigate the risk of these surrenders, CHF hopes to reduce unnecessary companion animal euthanasia and make a positive impact on all dogs. 🐾

May is Pet Cancer Awareness Month

Canine cancer is a concern for many pet owners, and research shows it is the number-one killer of older dogs. To help dog owners better understand the treatment options, cutting-edge research and ways to support canine cancer research, CHF kicks off Pet Cancer Awareness Month (PCAM) in May.

During this month-long, public-awareness campaign, CHF will be featuring podcasts, articles and research updates on their website and social media sites. Since 1995, CHF has funded more than \$10 million in canine cancer research. These studies are not only helping our beloved four-legged friends, but they impact human medicine as well. To access resources from previous years' campaigns, as well as this year's campaign, visit CHF's website at: www.akcchf.org/cancer.

"Canine cancer research has been identified by breed clubs and individual donors as a major health concern," said CHF Chief Scientific Officer Dr. Shila Nordone. "With this priority in mind, CHF strives to fund canine cancer research to help veterinarians diagnose cancer earlier and to provide more effective treatments." One such CHF-funded research project aims to provide more effective treatments for dogs with hemangiosarcoma by using targeted toxins designed in such a way that they primarily or only bind to cancerous cells. This type of treatment has been used for several types of human cancers, and it not only reduces side effects associated with conventional treatments, it potentially makes it more difficult for resistance to evolve. Learn more about this exciting treatment on page 8.

To learn more about currently funded canine cancer research, a brief, free webinar is available at www.akcchf.org/news-events/multimedia/video/2014-oncology.html.

Dog owners and dog lovers are encouraged to take part in the Foundation's goal to help raise funds for canine health research through two special honor-and-memorial-gift-programs. The Celebration Wall is an online photo gallery in memory of much-loved dogs. This memorial is a fitting tribute for dogs that have died from cancer or another disease. www.akcchf.org/celebrationwall.

The Heroes for Health Research pages are custom-built personal donation webpages. Pages can be created for

any canine hero—whether it is a dog battling cancer or simply a dog that has been a great companion. Participants are encouraged to invite their families and friends to donate to CHF through their pages. www.akcchf.org/heropages.

Contributions raised through the Celebration Wall and Heroes for Health Research will help CHF advance the health of all dogs by funding sound, scientific research to prevent, treat and cure canine disease.

Champion of Canine Health: Bobby Christiansen

CHF recently awarded Mr. Bobby Christiansen of MB-F with the 2013 President's Award. This award, given annually to a person or organization that has made an exceptional contribution to advancing canine health, is selected by the Foundation's chairman, currently Dr. A. Duane Butherus. Mr. Christiansen was presented with the award during CHF's Charity Cocktail Party fundraiser on Saturday, February 8, 2014, at the Affinia Manhattan, which was held during the festivities leading up to the Westminster Kennel Club dog show.

Mr. Christiansen is president of MB-F, a leading business in producing and managing dog shows for the past 114 years. Through MB-F's Star Dogs program, more than \$125,000 has been donated to CHF to help further canine health research. Star Dogs, begun in 2000 by the late Tom Crowe, allows people entering dog shows to add a \$1 donation to their entry fee. These \$1 donations are then given to CHF to help fund sound, scientific canine health research to prevent, treat and cure canine diseases.



"It is a great honor to receive CHF's President's Award," said Christiansen. "We are very proud of the Star Dogs program and the contributions we have made to CHF. The research they are doing not only benefits dogs, but there is crossover to human medicine as well."

According to CHF Chairman Dr. Butherus, "The longstanding support from Bobby and MB-F has helped CHF spread its mission to help all dogs live longer,

Story continued on page 11

CHF Launches Hypothyroidism Research Focus

What is hypothyroidism?

Hypothyroidism is a condition caused by a deficiency in the hormones produced by the thyroid gland. The most common symptoms of hypothyroidism are weight gain, intolerance to cold, lethargy, skin problems such as hair loss and infections, and reproductive and nervous-system abnormalities.

Thyroid hormones influence most of the dog's body systems, and thyroid deficiency causes a decreased metabolic rate. Decreased metabolic rate can lead to decreased body temperature, weight gain, decreased heart rate and decreased mental function.

Hypothyroidism is the most common endocrine disorder in dogs. All dogs, including mixed breeds, can be affected by hypothyroidism, but some breeds are believed to be predisposed to the condition. The causes of hypothyroidism include inflammation (thyroiditis) or progressive failure (atrophy) of the thyroid glands. In rare cases, thyroid tumors may cause hypothyroidism.

Why focus on hypothyroidism in 2014?

Hypothyroidism research is an unmet need articulated by dog clubs, owners and veterinarians.

Thirty-five breed parent clubs that work with CHF have identified hypothyroidism as a top health concern.



WESTMINSTER POSTER PROCEEDS

CHF is pleased to announce that, as the beneficiary of the proceeds from the Westminster Kennel Club dog show poster sales, \$10,000 has been donated to support canine health research.

"We are grateful to the Westminster Kennel Club for selecting CHF as the recipient of the proceeds from this year's poster sales," said Terry Warren, CHF CEO. "Their donation makes a significant impact on the health of all dogs and will help us continue to fund cutting-edge research now and in the future."

Sponsored by the New York Academy of Art, the winning artwork representing the 138th annual Westminster Kennel Club dog show, "Where the Stars Come Out, 2013", is a pen, ink and watercolor image produced on paper by noted illustrator Chris Duke.

According to the Banfield Pet Hospital State of Pet Health Report, one in every 150 dogs in the United States had hypothyroidism in 2012.

The Orthopedic Foundation for Animals (OFA) also maintains thyroid statistics by breed. These statistics and more information about the OFA thyroid testing procedures can be found at www.offa.org.

We can make a real difference and deliver a tangible outcome for hypothyroidism.

Hypothyroidism remains difficult to diagnose in the dog. It is consensus opinion in the veterinary community that hypothyroidism is over-diagnosed. Effective treatment of clinical symptoms relies on effective diagnostic tools.

AKC Canine Health Foundation 2014 Hypothyroidism Request for Proposals

To make an impact on this health condition, CHF is seeking research proposals for the development of an accurate diagnostic assay for canine hypothyroidism.

Despite a sufficient understanding of the mechanisms underlying acquired canine hypothyroidism, diagnosis of the disease is not straightforward and remains one of the greatest challenges in veterinary medicine. Age, breed and systemic illness all affect thyroid hormone concentrations, and clinical signs of hypothyroidism are often indistinguishable from other diseases. As such, consensus opinion is that hypothyroidism is commonly over-diagnosed in the dog. In an effort to support veterinarians in the evidence-based practice

Story continued on page 10

CHF Launches Epilepsy Research Initiative

What is epilepsy?

Epilepsy is a general term for neurological conditions that cause seizures, and it is among the most common neurological disorders in dogs. Any breed of dog and mixed-breeds can be affected by epilepsy. Epilepsy can be heritable and some breeds are believed to be predisposed to the condition.

Why focus on epilepsy in 2014?

Epilepsy research is an unmet need articulated by dog clubs, owners and veterinarians. The seizure-related syndromes collectively known as epilepsy represent one of the most common neurological disorders in dogs, and as such are a significant concern to CHF and our donors. In response to donor concern, CHF is launching a major, two-phase research effort to better classify the disease, understand the underlying mechanisms that predispose dogs to epilepsy and finally, to introduce new drugs into the canine epilepsy treatment pipeline.

Much more must be done to understand the causes of epilepsy and to develop additional treatment options. It is thought that as many as half of all dogs diagnosed with epilepsy are not able to achieve relief from seizures with the current drug therapies available. The current drug treatment options also carry possible negative side-effects. Epilepsy is often a devastating diagnosis for a dog and his owner.

We must make a significant investment to make real progress in the fight against epilepsy.

Because little is understood about the causes of idiopathic epilepsy, more work must be done to define the underlying molecular mechanisms that cause the disease. The life-altering nature of epilepsy is of foremost concern to CHF and will require a major research effort.

The Request for Proposals is written as a two-phase effort. The recipient(s) will be expected to deliver something demonstrable so that research on epilepsy moves forward in a substantial way. Collaboration among researchers is required to translate results from bench to bedside as rapidly as possible.

To learn more about this RFP, visit www.akcCHF.org/research/application-process.

Story continued on page 10



Top Donor Advised Fund Research Sponsors

Club	Amount of DAF Used to Support Research in 2014
American Belgian Malinois Club	100%
Belgian Sheepdog Club of America	100%
Mastiff Club of America	59%
Great Pyrenees Club of America	32%
Collie Health Foundation	31%
Old English Sheepdog Club of America	27%
Staffordshire Bull Terrier Club of America	27%
Staffordshire Terrier Club of America	27%
Soft Coated Wheaten Terrier Club of America	22%
German Shorthaired Pointer Club of America	15%
Borzoi Club of America	10%

New Grants

New research grants are detailed here. For more information about any of these studies, including ways to provide financial support, visit us at www.akcchf.org.

Behavior Research Program Area

02085-A: Reducing Animal Shelter Surrender by Enhancing the Human-Animal Bond

Principal Investigator: Dr. Clive D.L. Wynne, PhD; Arizona State University

Total Grant Amount: \$12,960

Grant Period: 2/1/2014 – 1/31/2015

Project Abstract: CHF has long admired the tireless work of breed club rescue groups that are committed to finding long-term, committed homes for their dogs. Despite their efforts, the current statistics are overwhelming: seven million dogs are relinquished to shelters every year in the US, and after adoption, nearly 50% of adopted dogs are returned back to the shelter. These returns may be emotionally painful for the owner, but they can be deadly for the dog. In order to reduce owner surrenders, Dr. Clive Wynne aims to evaluate whether an owner-dog exercise program can decrease return rates of newly adopted dogs by improving the human-animal bond. Dr. Wynne hypothesizes that shared structured exercise between the new owner and the newly adopted dog will provide a buffer against return by promoting social bonding and attachment to the dog and improving the physical and mental health of both parties. In collaboration with the Arizona Animal Welfare League & SPCA, 180 dog-owner pairs will be randomly assigned to one of two conditions upon adoption of the dogs: an exercise program and a control condition. The exercise-group participants will receive pedometers and be asked to log their physical activity with their dogs. The exercise group participants will also participate in a weekly social event with their dogs in which they will be asked to bring their logged data, hear about the benefits of dog walking, get ideas on ways to exercise with their dogs and receive advice in basic dog training. Return rates of the dogs in both groups will be collected from shelter statistics. Dr. Wynne predicts that owner-dog pairs that are assigned to the exercise program will have lower return rates and a higher attachment compared to the owner-dog pairs that are assigned to the control condition. Furthermore, he predicts

that the return rates will correlate with the amount of physical activity as measured by the pedometers. The proposed study will be the first step in developing a more thorough understanding of the human-animal bond and its relation to the elimination of owner surrenders at animal shelters.

Cardiology Research Program Area

02086: Defining the Genetic Basis of Myxomatous Mitral Valve Disease

Principal Investigator: Dr. Mark A. Oyama, DVM; University of Pennsylvania

Total Grant Amount: \$43,563

Grant Period: 3/1/2014 – 2/28/2015

Project Abstract: Myxomatous mitral valve disease (MMVD) is a slowly progressive condition in which the mitral valve thickens, resulting in an imperfect seal between the chambers of the heart. This allows blood to “leak” backward into the atrium as the ventricle contracts and leads to impaired cardiac function. Risk of disease increases with age and is most common in small- to medium-sized dogs. Dr. Mark Oyama, working in collaboration with Dr. Kate Meurs, will identify single nucleotide polymorphisms associated with MMVD in the Norfolk Terrier using genome-wide association studies (GWAS). These investigators believe that GWAS will help narrow down the number of possible disease genes, enabling them to identify risk factors that can be used in informed breeding programs and for veterinary cardiologists to better manage clinical cases. It is anticipated that identification of risk factors in the Norfolk Terrier will inform focused gene searches in additional breeds that are similarly at greater risk of developing MMVD.

Immunology and Infectious Disease Research Program Area

02102-A: Stopping Tick Infestation to Prevent Human and Canine Disease

Principal Investigator: Dr. Emma Natalie Ivy Weeks, PhD; University of Florida

Total Grant Amount: \$12,960

Grant Period: 4/1/2014 – 3/31/2015

Project Abstract: The brown dog tick (BDT) is common across the US and is the most widely distributed tick in

New Grants (cont.)

the world. BDTs transmit pathogens that cause canine Ehrlichiosis and Babesiosis as well as other diseases. Consensus opinion is that prevention of these diseases is best accomplished through tick population control. Because the BDT can lay 5000 eggs at one time and complete its entire lifecycle inside our homes, the current challenge facing dog owners is managing tick populations in the face of growing pesticide resistance. Alternatives to traditional pesticide applications are desperately needed.



Dr. Weeks will address this concern by taking advantage of the BDT Achilles' heel: Their predilection for hiding in cracks and crevices. She will evaluate direct application of products to hiding spots to determine if enhanced tick control can be achieved while simultaneously reducing broad environmental exposure to pesticides. Using a novel contact assay, Dr. Weeks will evaluate the effectiveness of a variety of desiccants, botanicals and conventional pesticides. The most effective products will then be tested in a crack-and-crevice assay to simulate a real-world application. The end goal is identification of a tick product that can control ticks in the environment while simultaneously enhancing safety for both dogs and their people.

Oncology—Lymphoma Research Program Area

01949-A: Targeting the Cell's Activation Machinery to Halt Tumor Metastasis in Canine Osteosarcoma

Principal Investigator: Dr. Shay Bracha, DVM, MS; Oregon State University

Total Grant Amount: \$12,960

Grant Period: 4/1/2014 – 9/30/2014

Project Abstract: Osteosarcoma, a type of bone cancer, kills approximately 8,000 dogs per year in the United States. It occurs mostly in large-breed dogs, particularly Saint Bernards, Great Danes, Irish Setters, Doberman Pinschers, Rottweilers, Mastiffs, Golden Retrievers and Greyhounds. Tumors usually arise in the bone of a leg and rapidly spread to vital organs such as the lung. Present therapies are ineffective and there is no cure. Dr. Bracha believes that understanding how osteosarcoma tumors spread and grow will lead to more effective treatments for disease.

Based on our existing knowledge that cancer cells acquire mechanisms of regulatory avoidance that permit their spread and endless growth, Dr. Bracha will focus his research efforts on one main growth-stimulating molecule known as NF- κ B. Dr. Bracha hypothesizes that if this molecule or its receptor becomes dysregulated, they could initiate a perpetual growth signal giving rise to the characteristic, unchecked growth we observe in metastatic cancer. To address this hypothesis, Dr. Bracha will determine: 1) if the signaling molecule is released by the cancer cells, potentially driving tumor growth, and 2) if the receptor is abnormally activated. These data will lead to a better understanding of the cellular activation pathway in osteosarcoma and identify new targets to treat this devastating disease.



Story continued on page 11

New Treatment Goes After Notoriously Tough Cancer Stem Cells

Cancer is not a single disease, and different types of cancers vary significantly in how difficult they are to treat. Some cancers are relatively easy to address with conventional chemotherapy and radiation, whereas others are either non-responsive to such treatments or quickly develop resistance to available options. In the second circumstance, even if initial treatment appears to be successful, a recurrence can be devastating—when the medicines that worked so well the first time fail to have a significant effect.

As such, doctors and scientists are constantly looking for new ways to fight cancer. One such method involves the use of targeted toxins designed in such a way that they primarily bind to cancerous cells. Such specificity not only reduces side effects associated with conventional treatments, it potentially makes it more difficult for resistance to evolve.

One type of targeted toxin that has already been used to safely and effectively treat several kinds of human cancer is known as a bispecific ligand-targeted toxin, or BLT. BLTs contain a toxin linked to two different target molecules, where receptors for both of those targets are usually located on the cancer cell designated for attack. Using two molecular targets at the same time increases the specificity of the poison, making it less likely to go after non-cancerous cells than monospecific toxins, which only contain a single target.

Canine hemangiosarcoma (HSC) is relatively common in companion animals. It is also relatively difficult to treat, as they quickly become resistant to conventional forms of therapy. Because of this, a group of scientists from the University of Minnesota wondered if BLTs might be an effective way of addressing these cancers. With support from CHF, they investigated whether cells derived from HSCs could be killed off by a BLT consisting of a deimmunized *Pseudomonas* exotoxin linked to epidermal growth factor and urokinase.

The results were quite promising. The BLTs were capable of killing not only cells derived from HSCs, but cultured hemangiospheres. Such spheres bear a strong resemblance to cancer stem cells (CSC), which are notoriously difficult to treat. However, even in those more complicated circumstances, the BLTs mounted an effective attack. It took higher concentrations to kill off

the CSCs than the other cells, but the amount of toxin necessary was still within the bounds of safety.

The study, published in the *International Journal of Cancer*, is not only good news for dog owners and dog lovers. Canine HSC is quite similar to a human cancer known as idiopathic angiosarcoma. Not only is idiopathic angiosarcoma aggressive and similarly difficult to treat, it's rare enough to make researching a cure difficult. However, it seems likely that a treatment for canine HSC will also work on the related human cancer, and the canine cancer is common enough that research on it is much easier to advance.

This work was funded by CHF Grant 1131. 🐾



CHF RECEIVES AWARD FOR BEST WEBSITE

The Dog Writers Association of America (DWAA) has awarded CHF's website the top prize in their writing competition's "internet, website, or blog" category for 2013. We are thrilled with this recognition and we hope to continue to use our website to provide helpful information to dog lovers throughout the world.

Using Technology to Track Disease

Scientists studying disease outbreaks in humans sometimes use specialized mapping programs to see if the spread of the illness can be explained by proximity to a common disease source. This type of disease mapping can be an extremely useful tool in controlling outbreaks as well as preventing future clusters of disease. In fact, many scientists consider the field of epidemiology to have begun with just such a study when John Snow, mapping an 1854 cholera outbreak taking place in London, realized most cases were near the Broad Street water pump, lobbied for the removal of the pump handle and stopped the devastating disease in its tracks.

Story continued on page 9

Kudos – Spring 2014

Our gratitude to **Elois Veltman** for her unrestricted donation to help further our mission of funding canine health research!

Great work from the **Collie Health Foundation** for their \$50,000 contribution to their DAF to be used toward several research projects!

Hats off to the **United States Australian Shepherd Foundation** for donating \$6,500 to support three research program areas.

A special thanks to **Milan Lint and Peggy Helming** for donating a portion of the winnings from Best in Show for the AKC/Eukanuba National Championship Best in Show!

Thank you **Cora N. Miller** for your ongoing support and generous donation to help dogs and their owners live longer, healthier lives!

Kudos to the **Health & Rescue Foundation of the PBGV Club of America** for their support of \$7,500 to benefit the Immunology and Infectious Disease, Endocrinology, and Behavior Research Program Areas.

New Club Members (as of 2/28/14)

Orange Coast Rhodesian Ridgeback Club

Spinone Club of America

However, disease mapping is not only a tool for humans. It can also be used to improve the understanding of canine illness. One condition that has been studied this way is leptospirosis. Leptospirosis, which is caused by a waterborne parasite, can infect both dogs and humans. That makes it a research priority, as does its severity in the canine population. Without effective treatment, it can cause serious kidney and liver damage. It can even lead to death.

With help from CHF, researchers from the University of California, Davis have been investigating the spread of leptospirosis in Northern California. Previous research has identified the area as a potential hot spot of disease, and the scientists hope that detailed mapping of cases may make it easier to direct both education and prevention efforts. There is a vaccine for leptospirosis, but it is not a core vaccine in the United States and may not protect against all variations of the pathogen.

In a study published in the April 2013 issue of the *Journal of the American Veterinary Medical Association*, the researchers found that leptospirosis cases seen in Northern California were indeed clustered together geographically. They compared infected dogs with other dogs seen at the same veterinary hospital where the study was being performed, and the leptospirosis cases lived significantly closer to one another than did the control dogs. This allowed the scientists to identify a residential area where dogs were at relatively high risk for leptospirosis—an area where improved vaccination coverage and other preventative efforts might best be focused.



Using geographical information systems to map human and canine disease has been getting easier ever year. Software for performing such analysis has become more affordable and simpler to use, as have many of the options used for mapping locations into such systems. Hopefully, as this technological trend continues, more and more scientists will consider using such tools to track disease. Doing so not only provides important information about the state of human and animal health, but it can also help keep all of us healthier in the future by allowing professionals to focus prevention programs on the highest risk areas. For example, veterinarians in the high-risk zone might also be encouraged to spend more time discussing the risks of drinking from puddles and other standing-water sources with their patients, particularly during an ongoing outbreak.

This work was funded by CHF Grant 1480. 🐾

Update from the CEO

(cont. from page 1)

During this time, we have to keep working hard to identify the best research to advance our mission and to raise the important dollars to fund these research grants. Together, we have advanced canine health research tremendously. Please help us keep up this momentum with an additional gift today. Donate online at www.akcchf.org/donate.

We also need your help to identify new donors. In 2014, the AKC's support of canine health research will come only from matching donations of new and lapsed donors up to \$500,000. Ask your five closest friends to make a donation for the love of their dogs. If you need help in

asking a friend, contact us at chfdonate@akcchf.org for a kit of information to assist you. We can also provide informational materials if you are making a presentation to a club or group. Please let us know. We are happy to help.

Spring is finally here and for many it has been a very hard, enduring winter. It's time to rejuvenate, take your best friend for a long walk, enjoy the warmth of the sun and the smells of the new season! New beginnings are always exciting... the best to all of you, and thank you for helping me advance the health of all dogs! 🐾

CHF Launches Hypothyroidism Research Focus...

(cont. from page 4)

of medicine, CHF is pleased to announce a two phase Request for Proposals (RFP) that seeks to identify a biomarker panel that will lead to the accurate diagnosis of canine hypothyroidism. Proposed biomarker panels can work in conjunction with existing diagnostics or as a standalone novel diagnostic test.

The research funding will be broken into two phases. Phase I will be funded up to \$50,000. Phase II funding will be up to \$150,000, depending on the parameters of the study. The goal of the research funding is to provide the veterinary community with an accurate diagnostic tool for canine hypothyroidism. To learn more about the RFP, including detailed instructions for submission, visit www.akcchf.org/research/application-process.

Once accurate diagnostics are in place, CHF intends to support research that will identify the genetic and/or epigenetic risk factors for the development of hypothyroidism in the dog, with the goal being to empower breeders to make informed breeding decisions within their programs.

Sponsorship levels for the Hypothyroidism Research Focus range from \$2,500 to \$25,000. Benefits vary by sponsorship level, but include research progress reports, listing of support on the CHF website and an opportunity to attend a live webinar featuring the funded researcher. To learn more about the Hypothyroidism Research Focus, including ways to sponsor this important research, visit www.akcchf.org/hypothyroidism. 🐾

CHF Launches Epilepsy Research Initiative...

(cont. from page 5)

The goal of the Epilepsy Research Initiative is to provide dog owners and the veterinary community with improved methods for preventing and treating epilepsy in dogs.

In order to reach this goal, CHF needs significant sponsorship from dog clubs as well as donations from individuals and corporations. Sponsorship levels for the Epilepsy Research Initiative range from \$2,500 to

\$50,000. Benefits vary by sponsorship level, but include research progress reports, listing of support on the CHF website, an opportunity to attend a live webinar featuring the funded researcher, and a reserved table for 10 at CHF's annual Canines & Cocktails in Orlando, FL. To learn more about the Epilepsy Research Initiative, including ways to sponsor this important research, visit www.akcchf.org/epilepsy. 🐾

healthier lives. Not only does the Star Dogs program introduce people new to dog shows to the great work CHF is doing, but it also serves as a corporate model to others, emphasizing the importance of giving back."



In addition to the Star Dogs program, MB-F is a stalwart supporter of the Foundation through public outreach efforts. The company often publicizes Foundation events on their popular infodog.com website and provides other marketing resources as in-kind donations.

Past recipients of CHF's President's Award include Terence Block of Nestlé Purina, Louis Auslander of the International Kennel Club, the Bernese Mountain Dog Club of America and the American Boxer Charitable Foundation. A full list of recipients can be found on the CHF website at www.akcchf.org.

The permanent award, designed by Cavalier King Charles fancier and sculptress Janet York, is on display in the CHF offices in Raleigh, NC. 🐾

Reproductive Conditions and Disease Research Program Area

01840: Health Implications of Early Spay/Neuter on Canine Health

Principal Investigator: Dr. Benjamin L. Hart, DVM, PhD; University of California, Davis

Total Grant Amount: \$146,589

Grant Period: 2/1/2014 – 1/31/2016

Project Abstract: Most dogs in the United States are spayed or neutered, and the default recommendation has been to perform these elective surgeries prior to physical maturity. However, recent data suggest that early spay and neuter may adversely impact the health and well-being of dogs. In preliminary studies funded by CHF, Dr. Ben Hart of the UC Davis College of Veterinary Medicine found that early spay or neuter, prior to 12 months of age, was related to a significant increase in risk in five diseases of concern: hip dysplasia, cranial cruciate ligament tear, lymphosarcoma, hemangiosarcoma, and mast cell tumor.

CHF has now funded the second phase of Dr. Hart's research in which he will expand his work to consider breed differences in vulnerability to joint disorders and risks of various cancers after early or late spay/

neuter. Breeds considered will include: Labrador Retrievers, German Shepherd Dogs and Dachshunds. Rottweilers, Chihuahuas, Standard Poodles and Miniature Poodles will be included if resources and patient data are available. The expectation is that by inclusion of multiple breeds in phase II, Dr. Hart will be able to develop a generalized understanding of the impact of early spay and neuter on disease risk in dogs. This in turn will enable veterinarians and breeders to make data-driven recommendations regarding timing of spay/neuter procedures to reduce the risk of development of multiple devastating diseases. 🐾





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AKC **NEW DONOR MATCHING CHALLENGE**



As we announced last issue, this is an important year: Throughout 2014, the AKC will match donations, up to \$500,000, from new and lapsed donors. That means contributions will go even further to support the critical research that helps us understand and treat diseases that affect dogs (and people). So please, spread the word to people and businesses who share your love of dogs!

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Helping dogs live longer, healthier lives.

*last donation on or before 12/31/2011.