



**DOBERMAN
PINSCHER**
— HEALTH FOUNDATION —



Doberman Pinscher Health Foundation Winter 2022

President's Message

Welcome to the Winter 2022 Newsletter.

As we approach the end of the year and look back at our accomplishments we are thrilled and humbled at the support we have received.

2022 saw several large donations that were highlighted in our last newsletter. It also allowed our foundation to offer the largest grant opportunities in the history of this organization.

On behalf of the DPHF Board of Directors, I would like to take this opportunity to thank you for your ongoing support and send our best wishes to all of you for a happy and healthy holiday season.

Grant Updates

Dr. Andrea Pires dos Santos – Purdue University

“MicroRNA-based profile for the prognosis of diffuse large B-cell lymphoma”

Lymphoma therapy response study

Lymphomas are a type of cancer of the blood cells called lymphocytes. The most common type of lymphoma in dogs is called Diffuse Large B-cell Lymphoma (DLBCL), which affects the lymph nodes of dogs and can spread to the body. Although Dobermans, German shepherds, Golden retrievers, Newfoundland, Cocker Spaniels, and Rottweilers have an increased risk of developing DLBCL, their responses to the standard treatment vary dramatically. Some dogs will become unresponsive to treatment during disease, and their cancer will be uncontrolled, ultimately leading to death. Even with successful treatment, nearly all dogs with DLBCL will eventually relapse and need an alternative therapeutic plan.

Purdue University researcher Dr. Andrea Pires dos Santos and her collaborators found initial evidence that a class of molecules called microRNAs can predict how the dog will respond to

treatment. These are small molecules composed of genetic material responsible for regulating genes in health and disease; the expression of microRNAs can be detected in the laboratory and compared between different conditions.

Dr. Santos' laboratory used next-generation sequencing and bioinformatics to identify 15 candidate microRNA markers to be tested in archived biopsy samples of dogs with DLBCL that underwent the standard CHOP therapy and have either achieved partial or complete recovery.

The microRNAs can be built into a test to predict DLBCL response to therapy. This test will be designed to evaluate the tumor at the time the dogs receive a diagnosis of DLBCL, to help veterinarians stratify patients' response to treatment, and to plan for adequate personalized treatment; this is vital for making informed decisions and opting for alternative therapies to increase the chances of the patient's survival.

A detailed Scientific report with the preliminary results of the study is available for review upon [request](#)

Dr. Penny Regier - University of Florida

"Assessing gastrointestinal viability in canine patients with vascular compromise with real-time near-infrared fluorescence (NIRF) quantification "

Bloat Study Using Near Infrared Fluorescence Technology

We are excited to announce that we have collected data from 20 GDV cases, completing the total number of proposed GDV cases needed for this study! We are currently enrolling healthy canine patients undergoing elective procedures, not related to the gastrointestinal tract, and using these cases to obtain our control data. We currently have half of the control cases out of the original 20 we planned. We need this control data to determine quantitative near-infrared parameters of healthy gastrointestinal tissue, in order to draw conclusions on the GDV data we have collected.

Preliminary data from our study is showing that NIRF is helping to further define non-viable stomach tissue and has altered the surgeon's decision for resection of stomach tissue in a few of our GDV cases, which has validated the use of NIRF to improve patient outcome and success with GDV surgery. Continued data collection in the control population will refine establishment of "normal" NIRF fluorescence parameters that may be of utility in future intraoperative NIRF studies.

Dr. Ryan Fries - University of Illinois

"The Role of Myocardial Fibrosis in Dilated Cardiomyopathy"

You might remember this study which is attempting to find a non-invasive way to determine the fibrosis (scarring) of the heart from previous newsletters.

In our spring newsletter we reported that the control animal data had been collected and six of the desired 30 dogs who have been diagnosed with cardiomyopathy had been enrolled in the study.

It is believed that COVID-19 has slowed down their research. They are now up to eleven dogs who have been diagnosed with cardiomyopathy with several more scheduled for evaluation.

They are now willing to explore what effect having only 20 dogs in the study would have on the findings, but they still need more dogs to get there and they would prefer to have 30 dogs in the study.

The dogs currently enrolled are from throughout the Midwest and as far away as Georgia. The DPHF wants to thank those who have already volunteered their dogs to help with this important

research.

If you live in the Midwest or nearby areas and would like to be involved in this study, you are encouraged to reach out to [Dr. Ryan Fries](#)

Dr. Chris J. Martyniuk & Amara Estrada - University of Florida

Genome Editing in Induced Pluripotent Stem Technology (iPSC)-derived Doberman Pinscher Cardiomyocytes

Cardiomyopathy gene editing research

Induced Pluripotent Stem cells (iPSC) are stem cells that are reprogrammed into different cell types. iPSCs have the same properties as embryonic cells, so they self-renew and can differentiate in the body. This research is developing iPSC's for genome editing studies in cardiomyocytes, which are the cells that control the contraction of the heart.

Fibroblasts, a common cell found in connective tissues, can be used as a precursor for iPSC-derived cardiomyocytes. These cells can be used to understand the underlying pathophysiology of heart failure in canines.

Researchers have successfully characterized the fibroblast lineage for a gene called Pyruvate Dehydrogenase Kinase 4 or PDK4. This gene regulates metabolism of heart cells. This project aims to correct the defective gene using methods in gene editing, leading to improved heart function. The team has successfully tested some candidate "gene editors" for their efficiency and will test these candidates in Doberman fibroblast cells that contain the defective PDK4 mutation. Ultimately, these candidates, if successful, will be used to edit iPSCs-derived cardiomyocytes.

The team has secured additional funding from the American College of Veterinary Internal Medicine (ACVIM) and the Morris Animal Foundation. Funding from multiple supporters ensure significant momentum for continuing the research and developing gene therapy for all canine breeds suffering from heart disease

Non DPHF Funded Research

The DPHF is extremely proud of the research we have funded, but we are also aware the researchers we have partnered with are not the only ones conducting important research that could result in significant breakthroughs in Doberman health.

Part of the DPHF mission is to promote education on issues pertaining to Doberman genetic health concerns. To further that portion of our mission we are starting a new feature of our newsletter that highlights current research that we feel is of interest to our members.

Dr. Nicola Mason - University of Pennsylvania

Hemangiosarcoma Study

Hemangiosarcoma is a particularly devastating form of cancer that often goes unnoticed until an undiagnosed tumor ruptures, causing an acute bleed, usually on the spleen. The prognosis for a dog suffering from Hemangiosarcoma is poor with a life expectancy of 6 months if an aggressive treatment including removing the spleen is successful.

This study is to examine the effects of a PI3K inhibitor in the growth and spread of metastatic splenic hemangiosarcoma in hopes of extending the projected life expectancy for dogs that are able to be treated.

You can learn more about this study [here](#).

The Disappearing Doberman Project

Dr Molly McCue and Ashlee Claggett are working on a new study at the University of Minnesota. The goal of the project is to follow 1,000 or more Dobermans throughout their lifetimes to see how environmental and genetic factors play a role in the onset of a disease.

The project began with funding from the UMN College of Veterinary Medicine and they hope to start enrolling dogs soon.

To learn more about this project and how you can help, contact them [here](#).

Dog Aging Project

This project is a non-profit, academic research study funded by the National Institute on Aging and includes supplemental funding from AKC Canine Health Foundation.

The project team will follow tens of thousands of companion dogs for ten years in order to identify factors that maximize healthy longevity and help future generations of dogs. Dogs of all ages are welcome, but the research team can learn most from dogs who are enrolled as puppies.

You can nominate your dogs to participate in this study [here](#)

DPHF 2022 Donations

We hope you are as excited as we are about the preliminary results and progress from all of the research we have funded.

Their success is reflective of your continued support.

Remember, December is your last chance to [donate](#) and receive the IRS deduction for the 2022 tax year.

We hope that you consider supporting us when you make your year-end charitable giving contributions.

DPHF Store

The holiday season is upon us and the DPHF has your back with new merchandise for the hard to shop for Doberman lover in your life.

Annual DPHF Calendar

The DPHF is pleased to announce that we are once again offering our popular calendar for sale. We were thrilled with the quality of the photos that were submitted this year.

This year's calendar contains new health tips including information on some of the most common health issues facing the Doberman and tips on early detection and testing.

Calendars are available to order on our website [here](#) for \$19.95



DPHF Collapsible Travel Bowls

The DPHF launched our collapsible travel bowls at this year's DPCA National. These 7-inch bowls are the perfect size for use at dog shows or on the road.



We have a limited supply left priced at \$8 and can be ordered [here](#)

Buy one for yourself or as a great stocking stuffer for a dog enthusiast in your life!

DPHF First Aid Kits

The DPHF has a limited number of our popular first aid kits available. Don't let the size of this first aid kit fool you, it is packed with the equipment you will need for a minor emergency with your dog, and in a size that makes it convenient for your car or show bag.



The kits are available for \$35 [here](#).

DPHF Logo Items

The DPHF has partnered with Studio 134 to provide embroidered merchandise. This merchandise will feature our logo as well as other unique Doberman designs.



You can order the DPHF merchandise [here](#)

Or from the DPHF Online [store](#)

DPHF Collars

The DPHF would like to thank Collarati Collars for selecting DPHF in their "Collars for Causes" program.

The DPHF collar is a 1.5" printed biothane collar, with buckle hardware. It is available in blue with white printing or brown with black printing.



Biothane is a fantastic product that has the feel of leather, but is easier to clean and maintain.

With the two color choices available, Dobermans of any color have an option to look great, and show their support for veterinary research! You can find the collars [here](#)



We hope you have found this issue of the DPHF Newsletter informative and wish you all the best this holiday season.

If you have questions or ideas for information that you would like to see in our newsletter, please let us [know!](#)

Remember, none of this is possible without the generous support of our donors!

Sincerely,

DPHF Board of Directors:

James Barron

Jenn Cannerelli

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