Newfoundland Club of America Charitable Trust Annual Report 2019

## YOUR GIFT Their future



The mission of the Newfoundland Club of America Charitable Trust is to secure donations, to manage and distribute research grants to study health issues affecting Newfoundlands, to provide necessary monetary aid for Newfoundland rescue assistance, to award educational scholarships to junior Newfoundland fanciers, and to provide general education involving the care, raising, health, nutrition, training, disease, research, breeding, judging and exhibiting the Newfoundland breed.

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Clyde E. Dunphy, DVM, NCA Charitable Trust, CTMB Chairman

When we see someone we haven't seen for a while we invariably ask "what have you been up to or what have you been doing?" Our response is usually "not much or same old routine," as our daily or monthly work can sometimes seem mundane. I am reminded of a quote by NCAA Women's Basketball National Champion Coach, Pat Summitt, when she said "It's harder to stay on top than to make the climb." I sometimes feel like that when I look at the NCA Charitable Trust. How can we keep up our great work of the last 22 years and continue to grow the Trust?

The answer to that question is another question, Who is the NCA Charitable Trust? The NCA CT is YOU, our many DONORS. Thanks to you, we on the Charitable Trust Management Board and the Trustee, the NCA Board of Directors, are able to continue our work of managing the assets of the Trust and fulfilling our Mission of Rescue, Newfoundland Health Research, Junior Scholarship and Education.

A year has passed since I last communicated directly with each of you. Writing this annual report about the NCA Charitable Trust gives me an opportunity to look back on the activities and accomplishments of the last 12 months. January began with a rescue effort consisting of eight Newfoundlands affectionately called "the Central Illinois 8." With 3 regional clubs, South Central, North Central and River King Newfoundland Clubs working together to improve the health of these dogs and finding them forever homes. Spring arrived with "the North Dakota 6" another group surrendered from a puppy mill, all were in good shape but needed veterinary care before placement. Rescue work continues throughout the year and with some regional clubs stepping away from rescue our network of regional volunteers and the resources of the NCA Trust Rescue Committee become increasingly important. Our ever-increasing requests for grants to regional clubs to pay for needed veterinary care continues to grow annually. Please see the Rescue report included in this annual report.

Supporting research to benefit the health of Newfoundland Dogs is a major responsibility of the Trust. Newfoundland Health Challenge is responsible for raising funds to fund Health research through fundraising at the National Specialty, donations from generous NCA Regional Clubs, bequests and individual donors such as you.

Where do we spend our funds? In 2019, the NCA CT funded 3 major studies in partnership with the Morris Animal Foundation for \$10,000 each. These research grants are studying a new drug to treat hemangiosarcoma, a new methodology to deliver treatment of osteosarcoma and a new and relevant

target in the treatment of osteoarthritis pain in the dog. This year an SAS study by Dr. Josh Stern at U-C Davis will be completely funded by the Trust at a cost of \$64,410. This research into SAS is looking at target genes for both genetic testing and treatment of SAS.

NCA Junior members are the future of the Newfoundland Fancy and an annual \$3,000 Scholarship is available to help support their education. If you know an NCA Junior member working with their Newfoundland, encourage them to apply for this scholarship. The NCA Charitable Trust has awarded 24 junior Scholarships totaling \$30,500 in college tuition.

The fourth pillar of the NCA Charitable Trust is Education of the Fancy and the Public regarding the Newfoundland. In 2019, the Trust sponsored the NCA Health and Education Committee Educational Seminar on Ophthalmology in Newfoundlands at the 2019 National Specialty at a cost of \$1,171. The seminar was well attended, very informative and educational for those in attendance.

How are we able to continually grow the Trust with expanded services, ever increasing rescue expenses and the cost of health research? The answer is simply: "With Your Help!"

"How can I help?" The best way to help the NCA Charitable Trust is through a cash donation or a monthly recurring credit card donation, any amount helps. Also, you can make a donation from your IRA to the Trust as we are a 501C3 and the RMD from your IRA qualifies as a Qualified Charitable Donation and may be transferred directly to the Trust and is not subject to income tax.

Other ways to help are: by volunteering to join our network of rescue volunteers to help dogs in need, supporting the education of Newfoundland owners and especially those new to the fancy and spread the word about the work we do in the Charitable Trust. Including the Trust in your estate planning is very beneficial to us as well. If you want to donate Newfoundland memorabilia or collectibles, please consider auctioning those items and donating the proceeds to the Trust.

As we begin a new decade, I am very optimistic about the future of the Trust, confident about our present state of the Trust both financially and with the important work we are accomplishing daily. However, we cannot rest on our past accomplishments! We must continue to make the climb to greater heights for the sake of future generations of our Newfoundland companions and their owners.

Thank You for Your support of the Newfoundland Club of America Charitable Trust!

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Clyde E. Dunphy, DVM, NCA Charitable Trust, CTMB Chairman

## 2019 AKC Canine Health Foundation National Parent Club Health Conference

John Cornell, NCA President, and Clyde Dunphy DVM, NCA Charitable Trust Chairman, attended the 12th Bi-annual health conference in Saint Louis Missouri this past August. Twenty-Five research papers were presented over the two and a half day meeting.

The first AKC CHF Health conference was held in 1997 and the NCA and the NCA Charitable Trust have been present from the beginning. The Trust has funded 52 Research Grants since 1997 with the Trust's share of \$ 361,060 resulting in 25 published peer reviewed papers.

Dr. Diane Brown, CEO and CSO, welcomed the registrants and highlighted the last two years of work. \$4.64 Million dollars for new canine research grants have been awarded in



23 research program areas. Three new research initiatives were launched including tick-borne disease and hemangiosarcoma with the NCA CT supporting both, also included was the area of epilepsy. In 2019, 38 new grants have been awarded totaling \$2.5 million.

One measure of the impact of a foundation's work is the number of peer-reviewed scientific publications from funded research that are then read and cited by others. CHF-funded researchers have published more than 760 scientific articles. which have been cited more than 26,000 times by other authors in peer-reviewed journals. The NCA Charitable Trust's support of CHF research funded grants is resulting in substantial and measurable outcomes for the health of our canine companions and their people.

Dr. Josh Stern presented a Research paper on "Cardiac Disease in Purebred Dogs- Genetics and Beyond". The presentation included his ongoing research with SAS in Rottweilers, Bull Mastiffs, Golden Retrievers and Newfoundlands. His research indicates that SAS is an Autosomal Dominant trait in Newfoundlands and an Autosomal Recessive in the other three breeds. His SAS research continues with whole genome sequencing with the some promising target genes for both genetic testing and possible treatment.

Research papers included topics on the latest research in leptospirosis, hemangiosarcoma, lymphoma, intestinal disease, breed diversity, tick-borne disease and others. We will share published articles as they become available both through e-notes and on the NCA Charities website.

The NCA Charitable Trust has partnered with the CHF from the beginning and we were recognized as a Distinguished Research Partner with the CHF. You, our Donors, through your donations make this all possible. John and Clyde made many contacts within the research and purebred dog community and look forward to sharing the information with you in the future.



### **RESEARCH PROGRESS REPORT SUMMARY**

Grant 02388-MOU: Genetic Markers for Familial Subvalvular Aortic Stenosis in Newfoundlands

Principal Investigator:Joshua Stern, DVM, PhDResearch Institution:University of California, DavisGrant Amount:\$58,949Start Date:9/1/2017End Date: 2/29/2020Progress Report:End-Year 2Report Due:8/31/2019Report Received: 9/19/2019

#### **Original Project Description:**

Subvalvular Aortic Stenosis (SAS) is a heart defect characterized by a fibrous ridge located below the aortic valve. Affected dogs are at risk of developing heart valve infections, congestive heart failure or sudden death. Severely affected dogs have an average lifespan of 19 months. A previous study identified a single gene mutation associated with a cohort of Newfoundland dogs with SAS, however this mutation does not explain all SAS in the breed and requires further evaluation. Studying this disease in Newfoundlands has the potential to identify causative genetic mutations and develop a reliable genetic test for this condition to further aid breeders to reduce the prevalence of this condition. The investigators will study pattern of inheritance and use the most modern genetic techniques to identify the genetic cause of SAS in Newfoundlands, further expanding our understanding of this disease in dogs. Funding for the research is provided through the collaborative efforts and generosity of the Newfoundland Club of America Charitable Trust. The AKC Canine Health Foundation supports the funding of this effort and will oversee grant administration and scientific progress reports.

#### **Publications:**

Ontiveros, E. S., Fousse, S. L., Crofton, A. E., Hodge, T. E., Gunther-Harrington, C. T., Visser, L. C., & Stern, J. A. (2019). Congenital Cardiac Outflow Tract Abnormalities in Dogs: Prevalence and Pattern of Inheritance From 2008 to 2017. Frontiers in Veterinary Science, 6. https://doi.org/10.3389/fvets.2019.00052

#### **Presentations:**

Stern, J. (September, 2019). Cardiac Disease of Purebred Dogs - Genetics & Beyond. Presentation at the 2019 National Parent Club Canine Health Conference, St. Louis, MO

#### Report to Grant Sponsor from Investigator:

Subvalvular aortic stenosis (SAS) is one of the most common inherited heart problems reported in the Newfoundland breed. This disease is characterized by the presence of a ridge or ring of fibrous tissue located below the aortic valve that results in an increase of aortic outflow velocity (AoV). Dr. Stern has continued to rigorously phenotype Newfoundland samples via echocardiogram and is continuing to collect new samples to be utilized for Sequenom variant prioritization. We also completed a prevalence manuscript and determined that the prevalence of SAS in Newfoundlands at the UC Davis Veterinary Teaching Hospital is 4.46%. The first phase of this study is to perform a genome-wide association study analysis which is now complete. We have also selected and submitted six affected and six control Newfoundland samples for whole-genome sequencing. Whole-genome sequencing bioinformatics analysis is 90% complete. We are currently working on adding our WGS Newfoundland samples to a larger cohort of WGS canine samples from Dr. Stern's Laboratory to increase our power to detect variants that are common in the dog population and not associated with SAS in Newfoundlands. We also started to analyze the available Newfoundland VCF data to identify any variants that segregate with the disease population. The top 100 variants identified will be submitted for Sequenom for variant prioritization.

# **FINAL REPORT**

MORRIS ANIMAL FOUNDATION

## Looking for New Targeted Therapies for Osteosarcoma

Dr. Deanna D. Dailey, Colorado State University, D15CA-316

## RESULTS: Researchers Find Potential Target to Improve Response to Chemotherapy in Dogs with Osteosarcoma

Osteosarcoma is the most common bone cancer diagnosed in dogs. Despite improvements in chemotherapy protocols, average survival times have plateaued, with greater than 80% of dogs succumbing to the disease within two years despite aggressive treatment.

Morris Animal Foundation-funded researchers at Colorado State University tackled this problem by studying fibroblast growth factors FGF and FGFR; cell surface molecules implicated in tumor growth. Recent studies show the FGF signaling pathway often is abnormally activated in a variety of human tumors. The Colorado team wanted to determine if these receptors also could play a role in the progression of osteosarcoma in dogs and their potential as targets for future cancer therapy.

The team found FGF/FGFR are present in higher numbers on osteosarcoma cells compared with normal cells. They also found evidence that one type of cell surface molecule in this family, FGFR2, might contribute to chemotherapy resistance. However, the researchers also noted that changes in pathways downstream from these receptors might affect the efficacy of blocking these receptors as part of treatment.

This study helped expand our understanding of abnormally activated FGF signaling pathways in canine osteosarcoma and helped identify a potential target to improve response to chemotherapy. Findings will help inform future studies toward the development of new targeted therapies for dogs with these highly aggressive tumors.

### Visit to Morris Animal Foundation June 19-20, 2019

As a long-time supporter of the Morris Animal Foundation, each year a member of the Charitable Trust Management Board is invited to attend the annual meeting during which research proposals are evaluated by the Scientific Advisory Board. There are at most half a dozen visitors (like the CTMB) invited, they join a meeting of about 35 people that includes Morris's staff, Board members, the Science Advisory Board members and half a dozen students who are invited to present the results of their research projects. It is a two day meeting, on the first day Morris arranged a tour of the of the College of Veterinary Medicine and Biomedical Sciences, Colorado State University, which is in Fort Collins, about an hour north of the MAF in Denver.

Upon arrival at CSU, I had a chance to meet one on one with Dr. Brian Scansen to discuss his cardiac research, including a research project idea on SAS. His summary is that there are two current areas of research on SAS:

1. Genetic – this has been around a long time, but now with gene sequencing being affordable it is actually becoming a reality. Dr Stern is the primary person for this, and Brian said that he has identified a second marker recently (Dr. Stern confirmed this the following day.)

2. Therapeutic – treatment of affected animals with medication and/or surgery. This is Dr. Scansen's area of expertise. His innovative proposal is to perform a broad study by enlisting a nationwide network of the veterinary cardiologists who screen puppies for SAS. These veterinarians would enroll the individual dogs, set up the initial distribution of medication, and perform the clinical tests and observations while the dogs remained in their "pet homes." While drug therapies (primarily the beta blocker atenolol) are used in dogs with SAS, there has never actually been a large enough study to evaluate the effectiveness of this treatment, or the outcomes for affected dogs. This type of study would be very valuable for Newfoundland breeders and owners; however, there are probably not enough affected Newfs to do a good study, and since other breeds also are affected by SAS, they would be included in the study to make sure it produced meaningful results. Scansen is optimistic that surgery will become a realistic treatment for SAS, however it is most successful when performed on adult dogs, so the beta blocker is essential to maintain the dog while it grows whether or not the surgical option is chosen.





Exterior and atrium of the new TMI Building occupancy began in December 2018

7

Dr. Scansen has also done several valve replacements in dogs and feels that this may offer an innovative, and improved, way to treat SAS. (The article https://www.tctmd.com/news/rovers-regurgitation-veterinarian-cardiolo-gist-teamwork-could-speed-device-innovation-training describes one of his valve replacements.) Although dogs with SAS do not have a defective aortic valve, the annular ring is so close to the valve that any intervention on the ring (whether with a stent or balloon angioplasty) is likely to cause scar tissue to grow that will impair the valve. His thought is that replacing the valve and adjoining artery will also repair the SAS defect. And Newfoundlands are a great candidate dog because they can use human sized valves, which are already being manufactured. He is trying to convince a device maker that this would offer them an attractive new market for an existing product.

The day at CSU included tours of its brand new Translational Medicine Institute (the "TMI") where they do parallel research on humans and animals for the benefit of both. After lunch presentations by a number of researchers, we spent the afternoon at the Veterinary Teaching Hospital. I've attached some photos of the state of the art facilities. They include a \$3 million cardiac catheterization lab (similar cost figures were tossed out for other facilities), high performance MRI's (we saw a dog being examined for the effectiveness of cannabidiol on dogs for pain treatment after surgery); arthroscopy labs; and surgical suites equipped with multiple cameras and data capture equipment so that surgeries can be broadcast to veterinary schools around the world.



Equine surgical theater, includes computer monitors, cameras, lights, microphones, etc. Next door is the exam room set up for arthroscopy (black box on the floor)

There was a provocative finding given by Wayne Jensen DVM from the Golden Retriever Lifetime study (funded by Morris). Obesity is now a major cause of health problems (joints and metabolic) in adult/senior dogs. It is also seen much more in dogs spayed and neutered at a young age. Could that surgery wait until dogs are older and dog owners be responsible for their pets reproductive activity instead?

The lunchtime presentations included one on promising developments in treatment of osteosarcoma with different drugs (new to use in dogs, but well established in humans) based on genetic sensitivity testing to determine optimal drug combinations. Amputation remains the initial standard of care; with metastasis to the lungs being the life limiting course of the disease; typical post-surgical survival is less than 1 year. In this study 40% of tumors were resistant to both drugs, but of those that were not 18% of the dogs survived longer than one year.

I was particularly interest in the CSU Veterinary teaching hospital's "Gait lab" – a pressure sensitive pad that dogs are walked over and the pressure that is put on individual limbs is measured. This is used both for diagnostic purposes and for studies. For example, they are looking at the impact of TPLO surgery on weight bearing and rate of re-building muscle after surgery.



Classroom with video monitors and 2-way live streaming. Teaching lab with 12 stations for surgical training. This example was given of how the teaching lab will be used: 12 students could work on the same surgery at the same time (possibly using body parts from cadavers, such as a leg). An experienced observer would both give pointers and record video of each student to show best, and worst, practices.



Presentation/classroom with 360 degree screen and virtual reality set up.

The hospital used to (pre-2008) treat about 16,000 animals a year, mostly with "specialty" referrals. In 2008 their funding (mostly from the state of Colorado) was cut back severely and to raise money and keep the Vet School open they have grown to 42,000 patients/year. This means they offer much more in the way of conventional veterinary services, which has both provided the revenue they needed and filled a gap in the educational experience of students. There are 600 employees, including the students.

This trip offered me the chance to learn much more about the Morris Animal Foundation. There are apparently a lot of new faces, with many staff members hired in the past few years. There is a very energetic atmosphere with a real optimism about what can be done to improve the lives of animals with veterinary research. In addition to small animals, Morris sponsors research on large animals (mostly horses and farm animals) and wildlife (which includes zoo animals).

MAF's President and CEO, Tiffany Grunert noted that the level of interest and support from the NCA is out of proportion (in a good way) with the prevalence of the breed and thus the NCA is seen as a leader among breed clubs.

Grunert hopes that the NCA can serve as an example to encourage increased participation by other breed clubs. MAF does not sponsor breed-specific research (except for certain genetic studies) preferring to highlight the areas of similarity of all dogs based on health, genetics, and diseases. Morris is already supporting a world-wide canine genome project.

On the second day I sat in and listened to the discussions of the Scientific Advisory Board as they evaluated about 40 research proposals; they had already evaluated 40 others the day before. (While observers are welcome, the identity and information on specific proposals is confidential, so no details are provided). These are the members of the SAB:

Chair: Jody Gookin DVM, MS, DACVIM (SAIM), North Carolina State University Expertise: Gastroenterology and Infectious Disease Joshua Stern DVM, PhD, DACVIM (Cardiology) University of California/Davis Expertise: Cardiology, Genetics Linda Kidd DVM, PhD, DACVIM (SAIM) Western University of Health Sciences Expertise: Vector-borne and Immune-mediated Diseases Ned Patterson DVM, PhD, DACVIM (SAIM) University of Minnesota Expertise: Endocrinology, Medical Neurology and Genetics Carlos Souza DVM, MS, DACVIM (Oncology), DACVS University of Florida Expertise: Surgical Oncology Jan Suchodolski MedVet, DrVetMed, PhD, AGAF, DACVM Texas A&M University Expertise: Gastroenterology, Microbiome Lauren Trepanier DVM, PhD, DACVIM, DACVCP University of Wisconsin-Madison Expertise: Pharmacogenetics and Clinical Pharmacology Barbara Davis VMD, PhD, DACVP Innogenics Expertise: Pathology, Genomics, Oncology Joshua Daniels DVM, PhD, DACVM (Bacteriology/Mycology) Colorado State University Expertise: Diagnostic Microbiology

The proposed projects included \$10,000 grant requests for 'pilot projects' to be done by a student under the supervision of a research veterinarian, "first award" proposals from researchers who had not previously had a funded study (\$20k to \$100k); and "established investigator" proposals (\$25,000 to \$350,000; most were between \$100-\$150,000. There was one breed specific proposal for Dobermans, for which MAF has restricted funds. About 90% of the proposals were for dogs (the rest were cats).

These were the subject areas – numbers approximate: Cancer (26), Infectious Disease (11), Cardiovascular (7), Musculoskeletal (6), Neurology (4), Genetics (3), Pharmacology (3), Urinary System (3); Behavior (2), Ophthalmology (2), Endocrine/Metabolic (2), General Health (1), Hematology (1), Pathology (1), Dermatology (1), Respiratory (1).

Chris Plum, NCA Charitable Trust Management Board

## 2019 National Rescue Network Report



With the help of hundreds of dedicated Rescue workers, adopters and donors, nearly 1,600 Newfoundlands have received care since NCA Newfoundland Rescue was established in 1983.

In 2019, donations, fundraising projects, bequests, investment gains and placement fees sustained the NCA Rescue Fund to provide veterinary care for 59 Newfoundlands.

Eight grants were sent to regional clubs to subsidize extraordinary veterinary care and two grants were awarded to help owners facing unusual veterinary costs.

The NCA Charities website and other sources generate inquiries for referrals to regional clubs' Rescue Services or NCA Rescue. Owners are counseled about options for surrendering to Rescue, contacting the breeder for possible return, placing Newfoundlands directly into new homes and, on rare occasions they are advised to euthanize due to unreliable aggressive behavior.

The NCA Charitable Trust Management Board meets monthly to review NCA Rescue grants and investment strategies to maximize the NCA Rescue Fund.

The AKC Stud Book records in whose hands rests our breed. Each month a report is sent to the NCA Board to identify

NCA and non-NCA breeders currently producing Newfoundlands.

We are so grateful for your support in 2019 and we ask for your continued support in 2020.

Please contact us about the NCA Rescue program and its results. There is more Rescue work to be done and foster care, potential adopters and donations are always needed.

Mary L. Price, Chair



## 2019 Newfoundland Health Challenge Report

#### "The future belongs to those who prepare for it today." Malcom X

Each year I contemplate how far the Health Challenge has come since 1996 and what the future holds. Since inception, we've raised well over \$700,000.00, funded 66 research grants, for a total of \$694.000.00 How does this happen, through you - the donor. The amount of a donation isn't what is important, it is the individual who makes the donation. Each donor not only makes a difference to the Health Challenge but more importantly to the health of our breed, and thus the future of our breed.

The Health Challenge is charged to raise funds for scientific research. The peer reviewed research is funded based upon the health issues that directly impact the New-



foundland.

#### One important

means to track current health concerns is the Newfoundland Health Survey which will be updated and released again in spring 2020. Please complete a health survey for each of your Newfs when it is available.

The Stolen Heartbeats campaign is an ongoing effort to raise funds for SAS research. SAS has been a documented problem in our breed for over 50 years, today 4.5% of the Newfoundland breed is affected by SAS whereas it is only .8% in the general dog population. That is huge.

For those of you attending the 2020 National Specialty, please remember to stop by the ringside Health Challenge Auctions on Wednesday and Thursday.

"Change is the law of life. And those who look only to the past or present are certain to miss the future." John F. Kennedy

Mary Jane Spackman, Chair





Additional Administrative Expenses	
Education	\$21
Endowment	\$11
Scholarship	\$21
Trust Management	\$6,888*
Legal	\$1,620
Forelimb Anomaly Group	\$302
Total	\$8,862

\* Trust Management Administrative Costs are covered by a grant from the Newfoundland Club of America, Inc.

# Thank you for your generous support of Newfoundland Dogs.

Donations to the NCA Charitable Trust are gratefully accepted and will be acknowledged in Newf Tide or will remain anonymous. Donations to the NCA Charitable Trust 501(c) (3) Fed. ID 06-1500326 are income tax deductible. Donations may be eligible for corporate matching gifts programs. Please contact your employer or pension provider for more information.





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Friends of No	ewfs (You!):
Donation For:	NCA National Rescue Network
	NCA Newfoundland Health Challenge
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	Junior Scholarship Fund
	Newfoundland Education Fund
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	Please send completed form along with your check to: NCA Charitable Trust
	1004 State Rd 78. Mt Horeb WI 53572
	To donate via credit card please visit:

www.ncacharities.org/donate.html



### NCA Charitable Trust

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Supplement to Newf Tide

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