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COLLIE HEALTH FOUNDATION

From the President, Robette Johns
6132 Southfield Lane, Oswego, IL 60543
Phone: 704-219-8277/Email: president@colliehealth.org

I know a great many of us have yards that are covered in snow or ice as I write this, but Spring is around the corner. In the meantime, we have things to look forward to like the Collie Club of America National Specialty in Salt Lake City.

This will be the first time we will be having our dinner and night auction since 2019. We will be having our daily silent auctions again too. We plan to have some of the high-end items for the night auction up on the day table for a couple of days so everyone has a chance to see them. We know the group will be smaller, but the items will be just as exciting as they are every year. Please check out the dinner and auction on page 2. I promise to keep the announcement of new Directors and Officers short, but doesn't everyone want to know who's going to win the President's Trophy?

Our Speaker, Dr. Leigh Anne Clark, will again enlighten the audience with very important information. She will give us an update on the Collie Epilepsy Study we're funding and then spend the rest of her hour on the Merle gene. I know there are still a lot of questions about the "Cryptic Merle" out there.

With fingers crossed, we will be celebrating The Gathering at Sunnybank again this year. Plans are underway and it will be the same weekend as always August 20th and 21st. As soon as we have hotel links and additional information, we will get it out to you.

We have had a lot of donations that have sustained us through the COVID years, but one donor has gone above and beyond to keep the lights on at CHF. Felicia Sternbach of the ColliesFlorida Rescue Inc. has been kind enough to share some of her donations with CHF. I've talked with Felicia in the past and she understands how important it is that health and rescue work together. Thank you again Felicia for helping us continue our work while you continue yours.

While this year at the National will be different for me since I'm judging, I still hope to meet many of you that I don't know, but not until after you show to me! We will need volunteers this year more than most, so please step up if you can help. Even an hour of your time can make a big difference. See you in Salt Lake City.

Robette

Collie Health Foundation, Inc.
2022 Cocktail Hour with Speaker, Dinner and Live Auction
March 31, 2022
6:00 PM - ????

Mountain America Exposition Center
9575 South State Street
Sandy, Utah

It's time again for the Foundation's annual dinner and live auction. This year, we are pleased to have an attendant served buffet dinner. Make it a point to attend a fun-filled informative evening with a chance to buy that one-of-a-kind prized piece of Collie memorabilia or artwork. We never know who has more fun, our auctioneer, Dr. David Hansen, our "Vannas", or the audience! We promise if you come once, you'll join us again and again.

Cocktails Cash Bar – starting at 6:00 PM
Presenter, Dr. Leigh Anne Clark, Clemson University

Dr. Clark will present information on her research project on Epilepsy. She will also present information on the Merle Gene.

DINNER MENU

Cowboy Buffet. \$50

Coffee-rubbed Slow Smoked Brisket with House Barbecue Sauce
Grilled Chicken Breast with Carolina's Mustard Barbecue Sauce
Local Assortment of Smoked Sausages, Fire Roasted Peppers & Onions

Chopped Salas with Iceberg Lettuce, Tomato, Cucumber, Red Onions, Bacon, Scallions & Queso Fresco

Jalapeño Ranch Dressing

Jalapeño Cornbread

Creamy Potato Salad

Black Bean, Roasted Pepper & Grilled Corn Salad

Creamed Corn Casserole

Fruit Cobbler

Warm Bread Pudding with Caramel Sauce

Chocolate Pecan Tart

There will be a Vegetarian/ Vegan Option

Our website www.colliehealth.org will have additional information. **Deadline for reservations is March 21, 2022.** Dinner reservations may be purchased online or by mailing a check payable to CHF to Susan Hernquist:

Collie Health Foundation, Inc: Susan Hernquist
203 Walnut St.
Edinboro, PA 16412 shernquist@gmail.com

For further information: Robette Johns 704-219-8277 president@colliehealth.org



Silent Auction: (Wednesday, Thursday, and Friday daily)

Help is particularly needed to set out auction items and again when the auction closes. We don't need **all** volunteers to stay at the silent auction tables at other times.

- Tuesday – Set up – Sort through boxes, separate night auction items and move night auctions items to holding area, set up for Wednesday morning's silent auction
- Daily –
 - at the end of each day set up the auction items for the next day
 - prepare a bid card for each auction item
 - Collect cards and money at end of each auction
- Friday - Clean up and pack up

Dinner Tickets: (Tuesday, Wednesday, and Thursday)

- Check off and hand out dinner tickets for Thursday night. This can be handled while helping with promotional item sales and membership inquiries.

Promotional Item Sales: (daily starting on Wednesday). Unfortunately our Promotions Chair will not be able to attend this year so we REALLY need help to handle sales!

- Tuesday or first thing Wednesday Morning - Set up – learn about items for sale, pricing and how to keep an inventory
- Learn how to use credit card app for taking payments

Membership: Unfortunately our Membership Chair will not be able to attend this year.

- Membership material will be provided to hand out.
- Help wherever needed with tickets, promotions, and the silent auction

Dinner and Night Auction: (Thursday night)

- Collect dinner tickets at the start of the buffet line
- Vanna's and Spotters
- Provide winning bidders with a "price tag" (card) to take to the cashiers.
- Clean Up!!!!

Please let Pat Jung know if you can volunteer and in which area you'd like to work!

Health Testing Report

Submitted by Isabel Ososki, Assistant Treasurer: assistanttreas@colliehealth.org

Health testing requests among Collie Health Foundation members - 2021 End of Year summary:

Test	2021 Total requested
Optimal Selection	216
DMS	184
PRA-rcd2	100
MDR1 (as separate test via WSU)	20
All tests:	520 total

Additionally, since the launch of the CHF supported CEA/Coloboma study (through the University of Pennsylvania School of Veterinary Medicine) there have been 10 requests for the Optimal Selection Panel specifically for the study application/enrollment. Those 10 requests represent 4 members and 2 non-members. Those who still need the Optimal Selection panel (which provides the CEA test needed) for the study can find the link under both the **Test Your Collie** and **Grants/Samples - Research Samples Needed** sections of the CHF Website. This link, <https://www.colliehealth.org/coloboma-study-enrollment/>, will take anyone wishing to enroll to a test order page. Members will still be able to receive the 15% discount in initial cost. CHF will reimburse the costs incurred to enter this study so remember to keep all receipts (all receipts must be sent together for reimbursement) and send them to the CHF Treasurer at treasurer@colliehealth.org.

Changes in ordering process for DMS and PRA-rcd2 tests*

*NOTE THIS ONLY INVOLVES THESE 2 TESTS.

Optimal Selection test ordering process remains unchanged!

This past winter Wisdom Health approached CHF about improving the ordering process for DMS and PRA-rcd2 tests for members. The rationale for this change is to improve efficiencies and resulting response times for CHF members. Previously all orders for these two tests had to be delivered and hand entered by Wisdom. During COVID especially, this created a significant slowdown as staff worked from home and test orders were only entered once a week. After much collaboration, a new ordering process was instituted on December 15, 2021. All information about ordering these tests can be found at <https://www.colliehealth.org/test-your-collie/> and clicking on the appropriate test on the right-hand menu.

A summary of these changes include:

- CHF members now order these two tests directly from Wisdom Health at <https://breeder.wisdompanel.com/>
- The order is immediately entered electronically at Wisdom Health
- No special link or code is required.
- Members initially pay full price for the tests.
- Upon confirmation of CHF membership, Wisdom Health will refund 15% to the member credit card used to place the order.

- To receive the 15% refund members must
 - Notify the CHF Assistant Treasurer of the order and supply the necessary information by filling out the form on the website (found by clicking either test on the website).
 - A link to the ordering information and the form can be found here:
 - <https://www.collichealth.org/dermatomyositis-dms/> or
 - <https://www.collichealth.org/pra/>

Optimal Selection Panel testing for CHF members will continue to have a 15% discount applied when orders are placed and the link to receive the needed code for that discount is <https://www.collichealth.org/optimal-selection-cgba/>.

I am including another reminder that anyone requesting testing information via the website be sure to add assistanttreas@collichealth.org to your contact or approved address list. This is to ensure return emails arrive to your inbox with test code link information and to prevent responses from going to your junk or spam folder. Be sure to contact me if you haven't received a response: I typically send information within 24-48 hours of the request.

I will be attending the CCA National in Utah so response times may be delayed during the week of March 27 through April 3.

Remember, collie health testing discounts are for CHF members and their rough and smooth collies only. If you know someone who wishes to utilize CHF sponsored testing, encourage them to become CHF members or renew their membership. This is just one of the important benefits of membership! Join or renew at: <https://www.collichealth.org/product/membership/>

Direct any questions on health testing to Isabel Ososki at assistanttreas@collichealth.org



We are Back in Business

Be sure to stop by the CHF Promos Table
at the 2022 National Specialty
to purchase your favorite CHF Items

- Pin Brushes**
- Boar Bristle Brushes**
- Mutt Mats**
- Note Cards**
- Note Pad & Pen Sets**
- Rough & Smooth Mailbox Toppers**



Samples Needed for Coloboma Study

How many beautiful puppies have you placed due to Colobomas? The current *research for a genetic marker for colobomas* is in full swing, BUT additional blood samples from two groups of Collies are still needed.

Group 1: Requirements for the first group are Collies that have had a clinical diagnosis by a registered canine Ophthalmologist of choroidal hypoplasia **CEA only** (no coloboma) and are affected as shown by the genetic CEA DNA test.

Group 2 are Collies that have had a clinical diagnosis by a registered canine Ophthalmologist of choroidal hypoplasia (CEA) **WITH** Coloboma and/or detached retina and are affected as shown by the genetic CEA DNA test.

Each sample must include the sample submission form, your Collie's 5-6 generation pedigree, the certificate of the physical CEA examination by the registered canine ophthalmologist, and results from the genetic CEA DNA test from either Optigen or Wisdom Health.

Your participation in this research will positively impact the quality of life for our Collies not only now but for generations to come. Please ship either UPS or FedEx overnight or next day Monday-Wednesday is preferable. Avoid shipping on Friday or Saturday due to shipping issues.

This link takes you to the actual submission form which includes what is needed and how to ship your samples: https://www.colliehealth.org/wp-content/uploads/2021/07/Eye_Form-Submission-UofPA.pdf

Think of the positive impact this genetic marker will have on our breed:

- Fewer Collies will have colobomas.
- You will have more puppies in each litter from which to make your ultimate show quality selection.
- With a larger number of puppies now able to remain in the gene pool, our breed diversity will increase with greater selection of puppies carrying those coveted virtues we strive to perpetuate.

There is no ultimate cost for you to participate in this crucial research breakthrough. The Collie Health Foundation will reimburse your costs upon receipt of associated expenses related to a genetic CEA test, blood draw, and submission of sample which includes shipping. Please keep all associated receipts and submit them together to: Karen Anderson, P.O Box 1681, Atascadero, CA, 93423, treasurer@colliehealth.org. Participation is anonymous.

You have a great opportunity to be part of this worthy project. Each person can make a difference; we hope you choose to be part of making that difference. We have crushed PRA, let's do the same with Colobomas! On behalf of all Collies, thank you.

Questions? Contact - Patt Caldwell pcaldwel@gmail.com or Pat Jung palary@msn.com



Puppy Weight Growth Study

Maurice H. Vaughan, private investigator; Leigh Anne Clark, Clemson University; and Isabel Alves, University of Lisbon, Portugal
Report on status by Dr. Maurice H. Vaughan Jr.

Aims of the study

The aim of this study is to collect weights from puppies of a variety of small to large dog breeds, ranging from ones close to the ancestral Gray wolf in terms of their DNA genome to more recently “developed” breeds. DNA samples are to be collected, also.

The puppy weights will be used to construct growth curves for each breed, over the first year of growth. The DNA will be used to determine the genotypes for a selection of weighed puppies, so that their growth curves can be compared to the genotypes at about a dozen genes that have been shown to control growth and size in dogs. Growth curves for two Gray wolves and DNA from those wolves have been given to us, which will allow us to compare growth curves of the dog breeds and the genotypes at their growth controlling genes with those of a modern surrogate for the ancestral wolf.

Progress

Finding suitable litters

On the next page is a cladogram – dog family tree - from a 2019 publication from the lab of Dr. M. Ostrander of the US NIH. The root of the tree is an extinct wolf believed to be ancestral to all modern dogs. It is symbolized by the black triangle pointing inwards. The modern Gray wolf is considered the best surrogate today for the ancestor. The trunk of the tree is a black line bent in a circle. Different families of dogs – clades – of differing colors branch off the trunk. This particular cladogram is not state of the art but is close enough to show how the 18 breeds currently enrolled in our study as litters are positioned with regard to breed evolution as well as the wolf ancestor. The solid red arrows indicate breeds for which we are confident we will have data, ie. puppies are being weighed. We lack a representative for the terrier clade in light blue, so we are currently seeking a Yorkshire terrier litter.

We feel the 18 breeds we are working with, together with the Yorkshire Terrier litter being sought, satisfactorily cover the spectrum of size in dogs while also covering the spectrum of breed evolution through time, from the Basenji, whose genome most resembles that of the Gray wolf, to “modern” breeds such as the Golden Retriever and St. Bernard. We anticipate that, as dogs changed under domestication, their characteristic growth curves may have changed, too, as well as the genotypes at their genes controlling growth and size.

The first litters producing useful weight data entered our study late in 2020. As weight data began to come in from them, we realized that we would need to extend the period of weight data collection to a full year. This will not cover the entire time in which large and medium-sized dog breeds put on weight, but data in the literature indicates weight growth past 10 -12 months is slow and linear. We will check this by asking owners of enrolled dogs to give us their weights at 18 months also.

Our goal is to have at least two complete 12 month weight gain records for each breed studied. We have now met that goal for the Golden Retriever, and the data has been sent to Dr. Alves for numerical analysis of the growth curves. Complete 12 month data will be available soon for the Havanese, too, as well as for several other breeds, including Pomeranians and Toy Poodles.

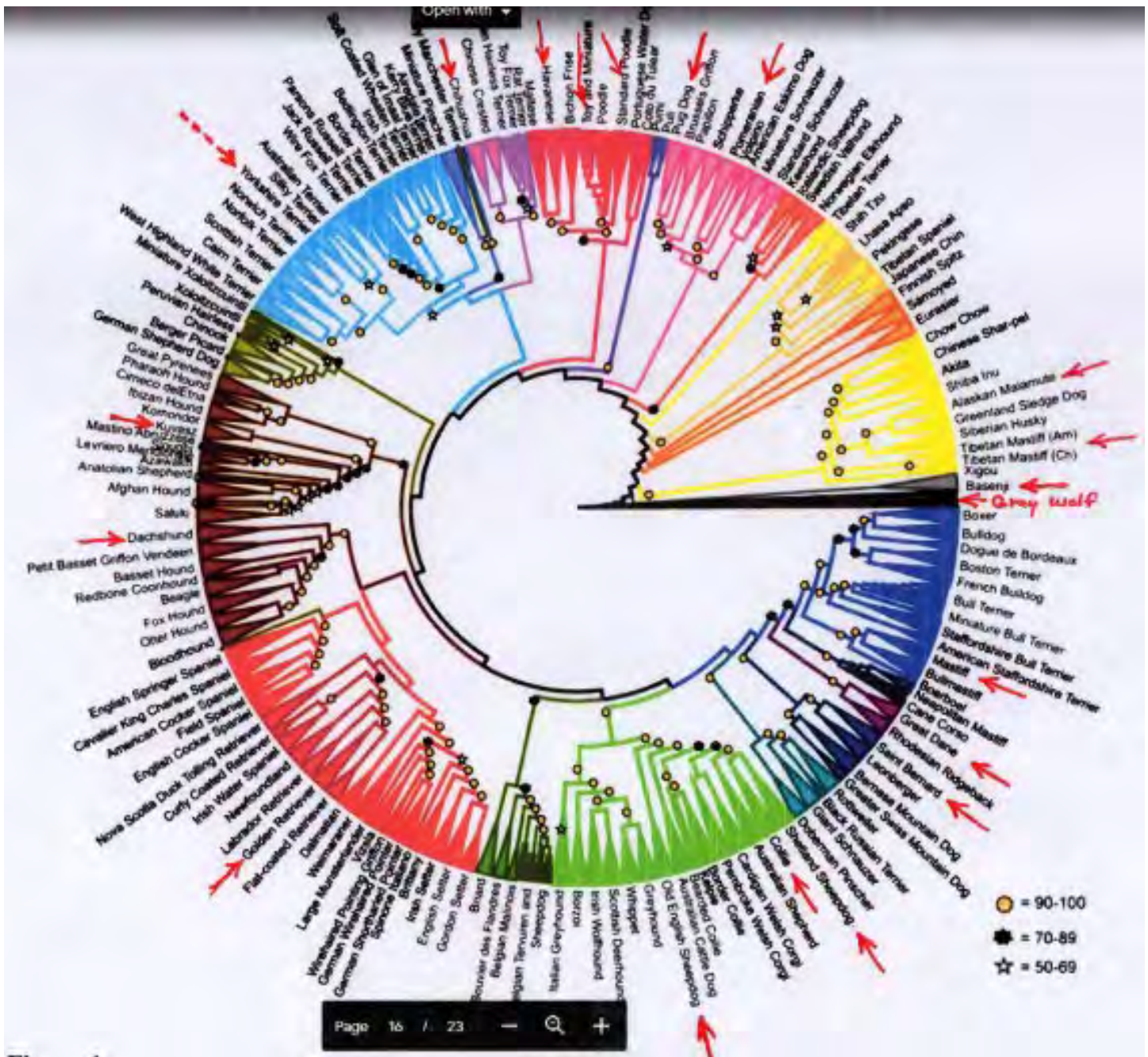
Getting weight data from Collie litters has been difficult. The first litter entered in the study in 2020 was actually a Collie litter, but the person the breeder assigned to weigh the puppies failed to do so. Two other Collie litters were weighed initially, but then their breeders had to drop out because of stress in their life due to the pandemic.

Currently we’re waiting to hear from another Collie breeder who has promised us weight data from a litter born in early May 2021. She sent us DNA samples for three puppies, but we have not gotten weight records from her. Accordingly, arrangements are being made with yet another Collie breeder who has just

had a litter. Two Collie breeders who promised to weigh their litters simply vanished. Other breeds have posed similar problems – not just Collies.

Our intended DNA genotyping firm wants our samples submitted to them in batches of 24. We have received dozens of DNA samples from weighed puppies, but we are not in position yet to know which puppies' DNA should be genotyped. We need to see essentially all the enrolled puppies' weight growth curves before making those decisions. Accordingly, we are waiting to spend the grant money given us by CHF.

A special case that should be mentioned is that of the two Gray wolf weight records and DNA samples that have been given to us by the International Wolf Center. The wolf weight records fully match what we expect for the dog puppies in our study, and their DNA will be genotyped along with our puppy DNA samples. Thus the wolf data will be comparable in all respects with our canine data. Furthermore, the Center got a female Gray wolf puppy in June 2021 and immediately began weighing her for their records - and ours. They have sent us a DNA sample from her, too. This means we will have three different Gray wolf data sets to compare with our dog puppy sets, making comparisons between the wolf and dog weight growth curves and genotypes stronger.



Size classes of enrolled breeds

Toy/small	Medium size	Large/giant
Chihuahua	Golden Retriever	Kuvasz
Pomeranian	Collie	English Mastiff
Toy Poodle	Standard Poodle	Great Dane
Dachshund		Old English Sheepdog
Basenji		Alaskan Malamute
Pug		Tibetan Mastiff
Shetland Sheepdog		St. Bernard
Havanese		
(Yorkie)		

**Collie Health Foundation
Statement of Activities
January through December 2021**

	<u>Jan - Dec '21</u>	<u>Jan - Dec '20</u>
Income		
4000 · Direct Public Support	136,088.20	26,499.42
5200 · Membership Income	41,535.20	39,940.00
5300 · Investment Income	40,647.31	59,414.73
5400 · Revenue from Other Sources	13,185.79	10,013.14
5800 · Special Events Income	6,185.52	7,952.76
6800 · Unrealized Gains and Losses	30,426.72	42,817.88
Total Income	<u>268,068.74</u>	<u>186,637.93</u>
Gross Profit	268,068.74	186,637.93
Expense		
7000 · Grants & Direct Assistance		
7001 · Grants	79,376.60	113,890.79
7050 · Subsidies	324.39	75,495.00
Total 7000 · Grants & Direct Assistance	<u>79,700.99</u>	<u>189,385.79</u>
7500 · Contract Service Exp	38,887.24	17,464.83
8100 · Office	7,320.19	4,925.96
8500 · Other Expense	4,096.33	4,059.36
8600 · Business Expense	3,178.00	1,500.00
99010 · Bank Service Charges	14.05	25.00
Total Expense	<u>133,196.80</u>	<u>217,360.94</u>
Net Income	<u>134,871.94</u>	<u>-30,723.01</u>

No CPA provides assurance on these reports

AKC CHF Parent Club Conference 2021

Excerpts from a report by Nancy Kelso, D.V.M.

The Canine Health Information Center (CHIC) program Status Update

Eddie Dziuk, MBA

The CHIC program, co-sponsored by OFA and AKC CHF, was first implemented in 2001 with 8 pilot breeds. The goal of the program is to provide a consolidated source for canine health test results, and recognize those dogs tested in accordance with a breed specific health testing protocol, as established by the breed's parent club. Over 180 breeds now participate in the program and over 130,000 dogs have earned their CHIC numbers. This conference is an appropriate venue to remind clubs that their requirements are fluid and should be periodically reviewed and updated.

Another key element of the CHIC program is the CHIC DNA repository. The CHIC DNA repository stores canine DNA samples from blood (58%, partnered with U of MO) or buccal swabs (42% partnered with UC Davis) for future health research efforts. The bank has over 30,000 samples representing many different breeds. More than 3,000 samples have been distributed to a variety of research institutions all over the world. While all samples may be of potential use, the majority of the samples represent young, healthy dogs at the time of collection. However, most valuable samples are from affected dogs. **Club members should periodically update the bank with any health updates of significance that may increase the value of a sample and likelihood of its use.** CHIC is now working with AKC to hopefully include CHIC data or numbers on pedigrees.

Immunology, Allergy, Aging and Nutrition

Ebenezer Satyara, PhD

Today, aging and stress are major causes of immune challenges in otherwise healthy animals and humans. Unlike immune deficiency caused by malnutrition, immune deficiencies due to life-stage and stress need a comprehensive strategy and cannot be addressed simply by correcting nutritional problems. Lowered immune status and allergies seen in the aging and following chronic stress is characterized by reduced antigen presenting cell function, increased inflammation resulting in less efficient or altered immune response, leading to increased susceptibility to infections, increase in allergies, autoimmune disease, and cancers. Over 65% of the body's immune cells are present in the gut, making the gut the 'largest immune organ'. Microbiota present in the gut has a fundamental role in the development, education, and function of the overall immune system, and as a result, the immune system has evolved to maintain a symbiotic relationship with these diverse, ever evolving commensal microbiota. Nutrition affords us the opportunity to simultaneously impact both the gut-associated immune system and gut microflora. The receptors of the innate immune system present in the gut are the primary targets of strategies for immunomodulation via diet. Diet interacts with the immune system at multiple levels, starting by providing basic nutrients, moving on to providing higher level of key nutrients such as protein, vitamins and minerals, leading to a more focused modulation of the immune system.

Canine Atopic Dermatitis (CAD) and Food Allergies (FA)

Craig Griffin, DVM DACVD

CAD is a genetic predisposed inflammatory, redness and/or pruritus (itching) of the skin. There are numerous genetics involved, and clinical presentation can vary in different breeds. The disease often includes paws, ears, face, forelegs, axilla, inguinal and perineal area. CAD is the top canine insurance claim and involves 10-15% of all dogs. The classic age of onset is 6 months to three years old. CAD is lifelong and often progressive due to abnormalities in skin; therefore, treatment should never stop.

Diagnosis is made by compatible history, exam, ruling out other causes, intradermal skin testing and serum testing. None of which is perfect, although intradermal testing is considered the gold standard. This can provide information on what allergens can be avoided or immunized against (receiving personalized allergy shots).

If not treated for life, a progression of symptoms can be seen which require changes in treatment, another diet trial, or allergy testing. The chronic case can develop many secondary changes that also greatly contribute to

pathology and clinical symptoms. Most notable is the role of secondary microbial disease and the development of bacterial and yeast infections which can greatly complicate the case.

Pyoderma and the Role of the Microbiome in Atopic Dermatitis

Galia Sheinberg DMV DLACVD

CAD is a common inflammatory and pruritic skin disease that causes frequent visits to the veterinarian where more options are now available to treat the allergic component, but treating the secondary pyoderma (bacterial infection) has remained a challenge. In recent times the role of the skin microbiome and dysbiosis (changes in the skin microbiome) has been recognized. Dysbiosis is seen in the skin in CAD and the gut in IBD. It results in inflammation, decreased variety of bacteria and secondary infection.

Local and Systemic Changes in Lipid Profile as Potential Biomarkers for Canine Atopic Dermatitis

Harm HogenEsch, DVM PhD

Lipids play a critical role in the skin as structural components of the epidermal barrier and as signaling and antimicrobial molecules. CAD is associated with changes in the lipid composition of the skin, but is not clear if these changes precede the onset of dermatitis or occur secondary to dermatitis. Changes in lipid composition may serve as biomarkers to aid in the diagnosis and potential stratification of CAD into subtypes with different therapeutic outcomes, and to assess the response to treatment.

CAD is influenced by genetics (40-50-% heritability, with more seen in terriers and retrievers), environment (more urban than rural), and nutrition. These together alter the microbiome, skin barrier function and immune response.

Atopic Dermatitis- A One Health Approach

Domenico Santoro DVM MS DrSc PhD DECVD DACVD DACVM

Atopic Dermatitis (AD) is a common, relapsing, chronic, pruritic, and inflammatory skin disease affecting 10% of dogs, 20% children and 10% adults worldwide. Because of the strong similarities between human and canine AD, the dog has been recognized as the best animal model for human AD. Furthermore, it has been hypothesized that environmental factors and inheritable epigenetics modifications of both genes and associated proteins play a role in the increased prevalence of AD in both species. In particular, a profound alteration of skin barrier and the host-microbe interaction has been shown in both. Such studies have shown the need of a One health approach for this common disease. In fact, dogs and people share the same environment and same cutaneous microbiome with a potential of transferring beneficial, but also pathogenic, microorganisms between dogs and their owners. The latter aspect is very important considering that bacterial infections are extremely common in atopic dogs and people. In addition, the recurrent presence of skin infections leads the prescription of more antibiotics favoring the increase in antimicrobial resistance in the community. For this reason, an increased number of studies have been focused on a better understanding of bacterial resistance and the testing of new antimicrobials. Because of the role that the environment plays in this highly complex disease and its effects on humans and dogs. AD represents a disease that very well defines One Health approach to medicine.

Tumor-permissive Collagen Signatures in Canine Mammary Gland Tumors: Development of Prognostic Markers and Targeted Therapies for Improved Outcomes

Susan Volk VMD PhD DACVS

Dr. Volk has developed a research program focused on understanding reciprocity between cells and their surrounding extracellular matrix in both regenerative and tumor microenvironments. The success of her program capitalizes on the ability to lead cross-disciplinary collaborative teams capable of efficiently developing novel therapies for surgical and cancer patients, including her patented approach to reengineering the tumor microenvironment.

Precision Medicine in Canine Lymphoma

Nicola Mason BVetMed PhD DACVIM

The clinical response of dogs with lymphoma to multi-agent chemotherapy is highly variable. Although up to 85% of dogs respond initially, some relapse within weeks, while others enjoy remission of two years or more.

The heterogeneity in clinical response is in part explained by the recognition that “lymphoma” is not a signal disease entity but consists of different subtypes that can be characterized on a molecular level by mutations in specific genes. As in human medicine, it follows that different lymphoma subtypes, driven by different molecular mechanisms, may respond better to therapies that are specifically selected to inhibit the driver mechanism within that patient’s tumor. Recent work using sophisticated genetic sequencing tools (NGS: next-generation sequencing) has begun to shed light on the different molecular subtypes of canine B cell lymphoma and specific therapies aimed at targeting patient specific driver genes and pathways are being developed.

Is Cannabidiol the cure for Canine Epilepsy?

Stephanie McGrath, DVM MS DACVIM

Cannabis-based therapies have been used for centuries for various medicinal purposes. They have recently gained publicity as an effective medication for use in human medicine and, as such, awareness is increasing among veterinarians and pet owners. However, there are still many unknowns regarding side effects, pharmacokinetics and efficacy in dogs. Colorado State University have successfully performed tolerability and pharmacokinetic studies assessing cannabidiol (CBD) in healthy dogs. The results of these studies showed that CBD seemed to be well tolerated in dogs and that exposure was dose proportional to blood level. These results provided framework for clinical studies in canine epilepsy. The objective of the clinical trials was to compare CBD with placebo for the treatment for naturally occurring canine idiopathic epilepsy. The studies were double blinded, placebo-controlled, randomized clinical trials using client owned dogs with naturally occurring disease. Idiopathic epilepsy can be a devastating disease in our veterinary patients and, to date, does not have an ideal treatment. If these current and future studies can demonstrate that dogs attain sufficient blood exposure with oral dosing of CBD to be efficacious in treating idiopathic epilepsy, it has the potential to improve the quality of life of this population of dogs, as well as decrease the rate of euthanasia.

Lysosomal Storage Diseases (LSD) in Dogs

Gary Johnson, DVM PhD

LSD are a diverse group of heritable diseases characterized by the accumulation of partially degraded complex biological molecules within a subcellular organelle known as the lysosome. Almost all LSD are inherited as recessive traits and thus inherit a mutant gene from both parents (93% of canine LSD are autosomal recessive). LSD are associated with a wide range of clinical manifestations affecting multiple organs and causing visceral, ocular, hematologic, skeletal and neurologic signs. Various types of human LSD have been attributed to mutations in over 70 different genes. The earliest identified genes that cause LSD encoded enzymes that are directly responsible for degrading complex biological molecules. Enzymatic assays were used to discover the responsible diseases and to diagnose these diseases in individual cases. More recently, genes encoding proteins that lack enzymatic activity but still interfere with lysosomal function have been shown to cause LSD. Most of these genes were discovered by whole-genome sequencing or by related next-generation sequencing technologies. DNA tests are now used to diagnose these diseases in individual cases. LSD have been characterized into subtypes, mostly defined by the biochemical nature of the partially degraded complex biological molecule that accumulate.

Genetic and Therapeutic Explorations on Canine Degenerative Myelopathy (DM)

Joan Coates, DVM MS DACVIM

DM was first described by Averill in 1973 as an insidious, progressive disease-causing loss of coordination and spastic weakness of the pelvic limbs, progressing to the front legs within a year, and ultimately leading to paraplegia and necessitating euthanasia. In 2009, Awano et al. identified the SOD1 mutation which underlies most cases of DM. Since not all SOD1:c118A homozygous develop clinical signs, DM initially appeared to be an autosomal recessive disease with incomplete penetrance. Thus, homozygosity for the mutation is a major risk factor in dogs for developing DM. However, DM has also been histopathologically confirmed in a few heterozygous dogs. The occurrence of DM in a heterozygote seems plausible since most human SOD1 mutations cause dominant amyotrophic lateral sclerosis (ALS: Lou Gehrig’s disease). Nonetheless, the age at onset for many dogs has exceeded the mean life expectancy of dogs indicating that DM has an age related, incomplete penetrant mode of inheritance.

Meningoencephalomyelitis of Unknown Origin in Dogs

Nicholas Jeffery, Johnson McGrath

Meningoencephalomyelitis is the term for inflammation of the brain, spinal cord, and the surrounding membranes (the meninges) and has many different causes. Sometimes caused by an infection but much more commonly, it is caused by inappropriate activation of the immune system, often referred to as meningoencephalomyelitis of unknown origin (MUO), and previously referred to as GME, MUE, MUA.

MUO can cause clinical signs associated with abnormal function of the brain or spinal cord, but seizures, loss of balance and limb coordination are especially common. Some breeds of dog, especially smaller breeds, including Pugs, Dachshunds, Malteses, and Yorkie, appear to be particularly susceptible to MUO, although **any dog can be affected**. The disease often has rapid onset, over a period of several days.

Chagas Cardiomyopathy in Dogs Infected with Trypanosoma cruzi

Ashley Saunders, DVM, DACVIM

The protozoal parasite, Trypanosoma, is transmitted by triatomine insect vectors and causes myocarditis and cardiac morbidity including heart failure and sudden death in humans and dogs. As awareness of Chagas disease grows, testing for T. cruzi has increased particularly in the southern United States, and Central and South America, where the insect vectors are encountered. Risk factors for T. cruzi infection include living in or travel history in an area with the vector, kissing bugs. Infected dogs with travel history or translocation from the south have been diagnosed in northern areas of the United States. Current recommendations regarding screening tests, monitoring, and prognosis in asymptomatic dogs are limited by lack of awareness and knowledge about the natural history of this disease in dogs. A better understanding of the course of disease, particularly the frequency of cardiac abnormalities is crucial to improve care for infected dogs and allow owners to make informed decisions.

Other research presented was more relevant to specific breeds or in one case the hero dogs of 9/11. These presentations included:

- **Environmental Cancer Risks in Dogs and People**
Lauren Trepanier, DVM PhD DACVIM DACVCP
- **An Update on Genetic Evaluation of Labrador Tricuspid Valve Dysplasia and Boxer ARVC**
Kathryn Meurs, DVM, PhD, DACVIM
- **The Role of Echocardiographic Exam in Screening for Myxomatous Mitral Valve Disease in Cavalier King Charles Spaniels**
Michele Borgarelli, DVM, PhD, DECVIM-CA
- **Congenital Heart Disease in Dogs**
Samantha Kovacs, BS DVM PhD Candidate
Mentor Joshua Stern, DVM PhD DACCIM
- **The Life and Times of the Hero Dogs of 9/11**
Cynthia Otto, DVM, PhD, DACVECC, DACVSMR, Keynote speaker and 2021 Asa Mays DVM Award Recipient)

*Many thanks to Collie Health Foundation for supporting my attendance to the virtual 2021 AKC CHF Parent Conference.
Nancy Kelso, D.V.M.*

Nancy's complete report with more detailed information can be viewed on our website at <https://www.colliehealth.org/akc-chf-parent-club-conference-2021/>



Welcome to the Family!

The Collie Health Foundation Welcomes the Following New Members

Bette Aubry St. Stephen, NB Canada	Clarence & Judith Hanson Huron, SD	Loren Love Bristol, WI	Anthony Mock** Acworth, GA
Erica Barnett Snohomish, WA	Anne Hartranft** Scotia, NY	Sherry McCauley Edwall, WA	Jo Leslie Petty Owasso, OK
Gail Bennett Pownal, ME	Gayle Horrell Walnut Cove, NC	Faith McKown** Glenmoore, PA	Tamara Siegfried Sultan, WA
Julie & George Gorveatt Oak Harbor, WA	Sharon Jachen Neptune Beach, FL	Louann Merrill Cedar, MI	Seraphima Smalley Hodgdon, ME
Maryalice Smarsh** Overland Park, KS			

Note: **indicates previous member...**Welcome Back!**
New Members – October 16, 2021 February 15, 2022

Donations in Honor/Celebration/Memory/General Donations October 16, 2021 – February 15, 2022

Donor	In honor/celebration/memory of...
Benevity Community Impact Fund	General Fund
Caterpillar Company Match	General Fund
Collie Club of America	General Fund
Collie Club of America	In Memory of CCA deceased members in 2021
Collie Club of America	General Fund – proceeds from sale of State Baskets
ColliesFlorida Rescue Inc.	General Fund
Cupertino Animal Hospital	In Memory of “Viva” Valley Park Lady of the Lake lovingly owned by John & Kim Strassner
Greater Orange Park Dog Club	In Honor of Lydia Filzen for recognition of AKC titles earned
Hunterdon Hills Collie Club	In Honor of the health of all Collies
Indiana Collie Club	General Fund
Network for Good	General Fund
Antje Alberda	In celebration of Scarlett’s 13 th birthday
Karen & Jeff Anderson	In Memory of Grant Merrill
Karen & Jeff Anderson	In Memory of GCH Sunkist Silver In Your Pocket - “Change” 9/17/2007 - 4/15/2021

Donor continued

Karen & Jeff Anderson

Kim Angelis

Nancy & Bob Anstruther

Jean & Alan Barrett

Sam Bass

Joan Berg

Emily Berkley

Sandra Bishop

Michele & Brian Brane

Willian Brokken

William Brokken

Susan Cahill

Mary Christenson

Jane & Tom Clymer

Peggy Darington

Peggy Darington

Kenneth & Helen Dombeck

Patricia Dosky

Mary Dritas

Dennis & Carol Elliott

Dennis & Carol Elliott

Dennis & Carol Elliott

Dennis & Carol Elliott

Dennis & Carol Elliott

Dennis & Carol Elliott

In honor/celebration/memory of....continued

In Memory of Mary Sadler

In Memory of "Ana" BISS GCH Marko's Ice Princess - lovingly owned by Marie Markovich

In Memory of Am.Can. CH Tallywood Paparazzi RN – "Trek"

In Memory of GCH CH Edenrock Brave Courageous Bold, CGC, "Wyatt" and CH Westwinds Magic Happens, CGC, HIC, "Betsy"

In Memory of Shiloh

In Memory of Sheena, Tigger, Kayla, Murphy, Belle, Roulette, Bo, Bryce & Olivia

In Honor of Mary Hunter's Birthday and to wish her a Merry Christmas

General Fund

In Memory of CH PACH Brainestrom Unforgettable RN, HSAs, OA, OAJ, MXP5, MXPS, PAX, CGC, JHD "Minnie". Our little Princess. We miss You!

In Honor of all the work and dedication Claire Leishman did to save Sunnybank

In Memory of Bonnie Young

In Honor of Jennifer Weiner

In Honor of Cathy Telerico

In Memory Grant Merrill, beloved husband and life helper to his wife, Pati and their children. And in Honor of Grant - he loved the Collie breed with a generous heart and soul. He gave his time and energy to helping the Collie and the CCA members.

In Memory of Grant Merrill

In Memory of Paul Wells

In Memory of Lynn Howells loving husband of Jane Howells

In Memory of Claire Leishman on behalf of her and Kathy George. They both appreciate the legacy Mrs. Leishman left so this is Patricia's birthday gift to Kathy.

General Fund

In Memory of Lora Esch

In Memory of Hal Sundstrom

In Memory of Jacque Bailey

In Memory of Grant Merrill

In Memory of Claire Leishman

In Memory of "Nadia" loved by Trish & Bob Blakely

Donor continued

Denise Erger

Vernon Esch

Yvonne Evans

Bobbie Fairbanks

Bernice Goldstein

Bernice Goldstein

Erin Gorney

Laurie Jeff Greer

Pat Hanson

Anne Hartranft

Kate Hebel

Susan Hebelka

Sandee Hecht

Gail Hetzel

Janet Hitt

Janet Hitt

Linda Hock

Linda Hock

Susan Hopkins

Gayle Horrell

Jane Howells

Jennifer & Dorothy Hull

Marcella Hutchinson

Amy Hyland

In honor/celebration/memory of....continued

In Memory of beloved Collies, "Tory" Springmist Victorian Angel BN, NAP, OJP, NFP, THDN, CGC, and "Riley" Chimera's Prancing Prince Charming CD, RN, OA, OAJ, AXP, OJP, CGC

In Memory of his wife Lora Esch

In emory of GCH Wynhaven's Moon Shadow, BN, RI, HSAds, HSBd, AX, AXJ, OF, NJP, VCX, VX, ROM-P – "Shadow" 2-20-2008 – 8-3-2021

In Memory of Nancy Parker, Pine Cone Collies

In Memory of Galatean Sweet Spot of Gold, UD

In Honor of CH Riverrun Big Blu Crunch Bunch of Gold, UD, RM2, RAE2, TKE, CGC, BN. Special thanks to Riverrun Collies for all my special boys. And Thanks to Galatean for my 1st Obedience Utility titled dog "Blake"

In Memory of her past Collies, Chewy, Gabe, and Apolo

In Memory of Joseph Greer

In Memory of "Riggs" CH Collicove Black Gold CA loved by Gerrie Oliver

General Fund

General Fund

In Memory of Betty White

In Memory of Elena Geldkop

In Memory of SGCH Apple Valley Highland Nobelman – "Baron"

In Memory of Hal Sunstrom

In Memory of Grant Merrill

In Memory of Sweetwater's Dream Sung Love - "Danny" boy

In Honor of Karla Hutchings

In Memory of CH Galatean Riverrun Looking Glass, RI, CGC, ROM

In Memory of Carolina's Amazing Grace

In Honor of my dear friend Brenda Kennedy & her husband Ken & delightful Smoothie "Indie"

In Memory of "Gorgy" CH Edenrock I Like I Love It

In Honor of "Duncan" GCH CH Sylvan Argent Creston's The Highlander BN RE PT FDC NAP NJP BCAT SWE SCME SBME THDA OSD CGCA CGCU TKA ATT & "Summer" Sylvan Creston's Summer Breeze BN RI FDC BCAT THDN OSD CGC TKA ATT lovingly owned by Fred & Mary Ann Campbell

In Memory of Gael Hylights Ripple Effect 10/23/2012-08/19/2021 A life cut too short by cancer

Donor continued

Amy Hyland

Janet & Edward Jeffries

Susan Joslin

Susan Joslin

Susan Joslin

Susan Joslin

Susan Joslin

Jean Kapplemann

Gayle & Don Kaye

Judith Kirkeby

Audrey Koble

Luann Korona & Mark Sachs

Annie Lake

Laura Lane

Kathryn Lawliss

Mary Lenertz

Kate Long & Kathy Conroy

Kate Long & Kathy Conroy

Marie Markovich

Eileen Mason

Pati & Grant Merrill

Mary V. Mieczkowski

Steve & Diane Mierz

Steve & Diane Mierz

Hildegard Morgan

Sharon Myers

Robert Myers

Beth Nemoff

In honor/celebration/memory of....continued

In Memory of CH Blu Ridge Hylights Incandescence 10/27/2008-11/16/2021

General Fund

In Memory of Pat Demery, Lochlane Collies

In Memory of Carole Stanley, Afterhours Collies

In Memory of Charlotte Frazier, Belle Bette Collies

In Memory of Allen Rawitch, Balmoral Collies

In Memory of Sue Fabeck, Myriah Collies

In Honor of Ch Nirvana's Galileo

In Memory of Mary Sadler

In Honor of Collie Health Foundation

In Memory of PACH2 All-Starr's Cooperstown Bound VCD2 CDX RE TDX MXPB2 MJPC T2BP2 CGC TKA WC PADHF VCX - "Cooper Perfect"

General Fund

In Memory of Connor who is still and always will be missed

In Memory of Laney & Cody

In Memory of Marion Lawliss and all the MarKay Collies who have gone over the Rainbow Bridge

In Honor of Finn

In Honor of Tamiami Collies' excellent OFA Hips and Elbows test

In Honor of all of Tamiami Collie's accomplishments in 2021

In Loving Memory of my heart dog MBISS GCH Markos Ice Princess. Forever with me.

In Honor of Allene McKewen

For the donation of the 2021 Christmas Cards. Thank you to Grant ever the supporter of CHF and to you, Pati, our favorite Collie artist.

In Memory of her loving husband Mike Mieczkowski

In Memory of Debbie Franks

In Honor of Finn

In Honor of GCHS Windcrest Blown Away, HT

In Honor all volunteers that serve for the benefit of our wonderful breed and the Collie that continues to enrich our lives

In Memory of his wife Lynn Y. Myers

In Memory of Grant Merrill

Donor continued

Dorothy & Jeffery Newkirk

Stephen & Rhonda Parry

Phillip Pilgram

Kurt Pires

Jeannette & Thomas Poling

Jeannette & Thomas Poling

Joni Primas

Constance & John Quillian

Suzanne Rembiesa

Dana Rodman

Dana Rodman

Carol Roodhouse

John & Lily Russell

Lisa Schmidt

Dorothy & Bob Sencenbaugh

Dorothy & Bob Sencenbaugh

Debbie Sherier

Debbie Sherier

Tonya Sims

Martha Skilton

Robert & Jennifer Sloan

Carol Soranno

Jack Stell

Carol Stone

Leonora Subrizio

Robin Borck Sturgis

In honor/celebration/memory of....continued

In Memory of CH Cambric Celtic Warrior, CH Lisara Magic Potion, Cambric Dark Lady, and Cambric Charmed One

In Memory of Ed Jernigan lover & supporters of all Collies

In Memory of both Bo and Annie, who have gone to the Rainbow Bridge, 2010

In Memory of Betty White

In Memory of Rosepoint New Song, CDX, TDX “Monty”

In Memory of Mary Sadler

In Memory of all of the wonderful Collies who have taught her so much over the years

In Memory of all the wonderful Collies we have had

In Memory of Betty White

In Memory of the Rickenbaughs

In Memory of Carolyn Berger

In Memory of Shaemus, Rory, and Quincy...our previous Collie threesome who have now all passed away.

In Memory of Jacque Bailey

General Fund

In Memory of CH Enchanted Pixie Dust

In Memory of StarChey’s Put A Spell On You

In Memory of Nancy Parker

In Memory of BISS GCH LoriMar Evening Mist (“Eve”)

In Memory of U-ACH, U-CH Wild Wind’s Promise Ewe Keep, RA, HSAs, OA, AXJ, NF, THD, RATO, CGCA, CGCU, TKN – “Miss Ryleigh”

In Memory of CH. Alexy Even Sweeter

In Memory of Rhonda Politch and In Honor of “Quinn” Shepherd’s The Final Frontier. I know you and Jennifer will be a loving family for Quinn to live with.

General Fund

In Honor of Cathy Telerico

In Memory of my Collie Molly who passed away in May 2018

In Memory of Andy, lovingly owned by Mary Lenertz

In Memory of Norwood Collicove Contessa “Tessa” lovingly owned by Gerrie Oliver.

Donor continued

Melinda Sunnarborg

Mary Swierkos

Nancy Van Note

Peg & Jim Vohr

Promiti Wahab

Donna Walle

Kathryn Weare

Brenda Wherry

Jordon Wilkerson

Deanna Williams

Mary Wilson

In honor/celebration/memory of....continued

With Thanks to Mike LaSpina of Timberleaf Photo for your generosity at the Northern California Collie Specialty weekend

In Memory of Rafe of Ratharryn

In Memory of CH Galatean Riverrun Looking Glass, RI, CGC, ROM (Vita)

General Fund

In Honor of your friend Shusmita Islam and his Collie Raja

In Memory of your Bienville Winsome Spirit HIC – “Misty” - 8/14/2008 – 11/23/2021

In Honor of Kathy Moll

In Honor of Michael & Becky LaSpina

In Memory of Australian Champion Vedamea I’m Nobody’s Alibi “Lydia”, lovingly owned by yourself and Leah & Barry Ryan

In Memory of Betty White

In Memory of Bonanza

Celebrating Our Seniors!

October 16, 2021 through February 15, 2022

Am.Can. CH Tallywood Motivation “Revel”

DOB: 9/21/2010

Breeder: Nancy Anstruther

Owner: Joyce Woodridge

GCHG Laredo Here Comes the Sun RN – “Tucker”

DOB: 4/12/2006

DOD: 12/18/2020

Breeder/Owner: Sue Webber

Sashay’s Fancy Face – “Hope”

DOB: 2/20/2009

Breeder: Joan B. & Samantha Berg

Owner: Joan & Sami Berg

Can GCH Glendamar’s Calm Before Th Storm – “Ribbon”

DOB: 11/27/2008

Breeder: Marilyn Hofstra

Owner: Nancy Litzenberger

Earthstar’s Shall We Dance CD GN RE PT NAP NJP

THDN CGC - “Scarlet”

DOB: 12/22/2006

DOD: 5/28/2019

Breeder: Mary Catoir

Owner: Paula Dennis

GCHB Wildwood’s at the Stroke of Midnight – “Gage”

DOB: 12/3/2009

Breeder: Susan Owens

Owner: Laura Rinard

CH Kayloma’s Flash of Diamonds CD

DOB: 1/8/2007

Breeder: Vicki Loucks & Richella Veatch

Owner: Mary Lenertz



Gail Currie
CHF Membership
85 High Street
Greeneville, TN 37745
USA

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