



CLUMBER SPANIEL
HEALTH
FOUNDATION

www.clumberhealth.org

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2019 annual report

March 2020 Volume 12

Tribute to Wayne Holbrook

Oct 21, 1962 - Jan 13, 2020

Wayne Holbrook was a founding member of the CSHF in October 2007. With his help we addressed many projects in the beginning, including creating a website, developing a Conflict of interest and Full Disclosure Statement, creating a Confidentiality Agreement and developing a Fund Raising policy. Given Wayne's business background, he was essential to forming our foundation. Wayne served as President and Treasurer of the foundation for several years.



Wayne chose to briefly leave the Clumber Spaniel Health Foundation because of his need to address his business and career, but he returned in 2011 as President. During his tenure, we addressed the make-up of our Scientific Advisory Committee, non-profit fund raising initiative and communications. DNA storage and control, Morris Animal Foundation and Canine Health Foundation grant support and development of a key message were also issues we addressed.

Wayne and his wife Kellie were very generous contributors to the CSHF over the years. We will miss his dry sense of humor as well as his business perspective in the future. Wayne was a voice of reason during our monthly conference calls. We are forever grateful for Wayne's contribution to the CSHF, and to Clumber Spaniels in general.

Our thoughts and prayers go out to Kellie and her family at this difficult time, as we all will miss Wayne.



Wayne and Kellie Holbrook and Gracie

letter from the president

The old dogs. The “super seniors”. Last year I wrote about looking at four day old pups, and how they related to the Health Foundation. Today I am thinking about our beloved old dogs, the Clumbers who make it well into double digits of years lived and loved.

Health matters. The more we can understand about the conditions that affect our Clumbers, the better we can be prepared to help them fight diseases. Better yet, perhaps we may be able to help predict and breed away from conditions that compromise their ability to live long, healthy lives.

I believe scientific research is a way forward. Research gave us the PDP1 test – which means no more affected Clumbers need be born, only to break their owners’ hearts when they die way too young. Thank you to Ron Porras, for your determination in seeking answers.

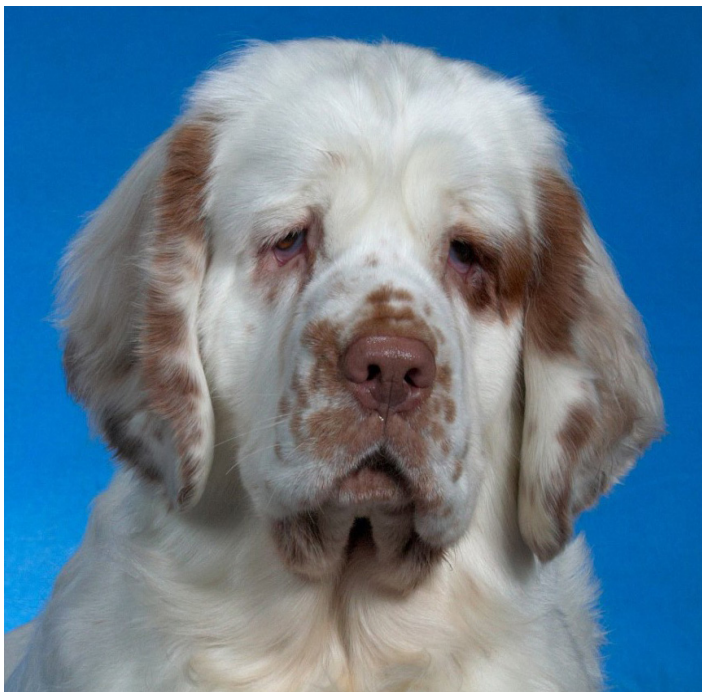


Roe and Gordie Froman’s Shandy

Not everything is as straightforward as PDP1 – a simple, recessive gene. Many conditions, such as disc disease, are multifactorial. Multiple genes (plus likely environmental factors) play a role in their development. Research helps us better understand these conditions, and may help us develop better treatments, and earlier diagnostic methods.

We learn more about diseases such as hem-angiosarcoma, intervertebral disc disease, and immune mediated hemolytic anemia every day. Progress may not be as fast as we’d like, but funding research leads to more discoveries. THIS is what your contributions help us to achieve. Health matters.

Roe Froman, DVM



Roe and Gordie Froman’s Annie

Board of Directors
Roe Froman, DVM – President
Grace Wozniak – Vice President
Shelley Miller – Treasurer
Janice Friis – Secretary
Judy Hiller - Recording Secretary
Doug Johnson - CSCA Liaison

Directors:
Jennifer L. Amundsen, Kim Daboo, Jayde Dian

CSHF Grant Application Support

In 2019 the CSHF supported two Canine Health Foundation Grants At \$3000 each.

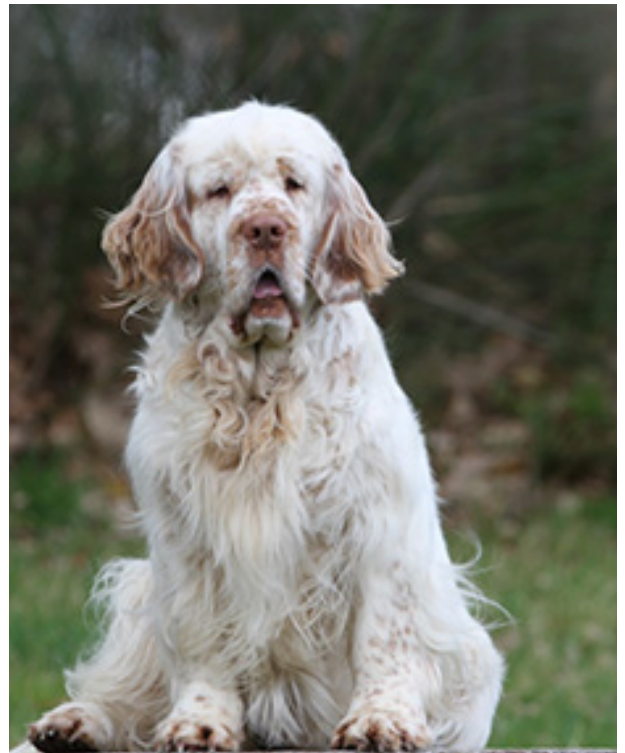
Study No. 02534 Clinical Trial for Evaluation of Propranolol and Doxorubicin in the Treatment of Canine Hemangiosarcoma

Principal Investigators: Erin Dickerson, PhD and Brian Husbands, DVM; University of Minnesota

Project Abstract: Canine hemangiosarcoma is a largely incurable cancer in dogs, and treatment approaches to improve outcomes have remained relatively stagnant over the past few decades. Treatment remains a challenge partly because the cancer is frequently detected at an advanced stage and because these tumors are often resistant to chemotherapies. Recently published reports showed that propranolol, a drug used to treat heart disease in humans and dogs, substantially increased the survival time of human angiosarcoma patients when used in combination with standard of care treatments. Propranolol was also shown to sensitize hemangiosarcoma cells to doxorubicin, providing a more effective way to kill tumor cells. Because angiosarcoma is strikingly like canine hemangiosarcoma, this multi-institutional clinical trial has been designed to determine the efficacy of propranolol in dogs with hemangiosarcoma when used in combination with surgery and chemotherapy. The main goal of the study is to establish whether propranolol in combination with doxorubicin following surgery improves outcomes for dogs when compared to the use of chemotherapy and surgery alone. The investigators will also evaluate the plasma concentrations of propranolol achieved during dosing to assess whether the levels of propranolol correlate to survival times. If successful, the findings from this approach will be rapidly conveyed to the veterinary community, and the guidelines provided to clinicians for the use of propranolol and doxorubicin for the treatment of canine hemangiosarcoma.



Jan and Walt Friis' Darwin



Jan Irving's Socks

CSHF Grant Application Support (cont.)

Study No. 02519 Prevalence of *Bartonella* spp. Infection in Dogs with Cardiac and Splenic Hemangiosarcomas within and between Geographic Locations

Principle Investigators: Edward B Breitschwerdt, DVM; Matthew Breen, PhD; North Carolina State University

ABSTRACT: Splenic masses comprise ~50% of all canine splenic disease. Despite advances in imaging and pathologic definition, the etiology and medical relevance of splenic lesions in dogs are often ambiguous. While some splenic tumors are benign, approximately two-thirds are highly malignant and carry a poor prognosis. Hemangiosarcoma (HSA) accounts for the majority of canine malignant splenic tumors and occurs in many large dog breeds, including mixed breeds. A less common site of HSA localization is the heart (cardiac HSA). Risk factors for both cardiac and splenic HSA remain unclear, confounding development of preventative strategies. The investigators recently reported a high prevalence of species of the bacterial genus *Bartonella* in dogs with HSA from North Carolina, suggesting a potential role in the initiation and/or progression of this cancer. *Bartonella* species exist worldwide and are transmitted by blood-sucking arthropods (e.g. ticks, fleas) and their presence in splenic tissue could potentially be explained by the fact that the spleen is primarily responsible for removal of blood-borne parasites from the systemic circulation. The investigators will perform a comprehensive examination of the potential association between *Bartonella* infection and HSA by comparing the prevalence of *Bartonella* DNA in tumor and blood samples from both splenic and cardiac HSA cases, and also within and between distant geographical locations in the US. Ultimately, demonstration of a robust association between *Bartonella* infection and the development of HSA may lead to new opportunities for improved diagnosis, treatment and prevention of this devastating cancer.



Wayne Holbrook and his Clumbers

Embark Seminar at the CSCA National Specialty Show

In 2018, the Clumber Spaniel Health Foundation decided to partner with Embark, a comprehensive canine DNA testing service, to offer a discounted rate for DNA testing kits for Clumber Spaniels in order to increase the number of dogs (and corresponding breed and health data) tested. This will help us develop a new computerized DNA bank that will aid in future research. In March of 2019, the CSHF was pleased to sponsor a presentation, “Embark for Clumber Spaniels” by Alison Ruhe at our National Specialty.

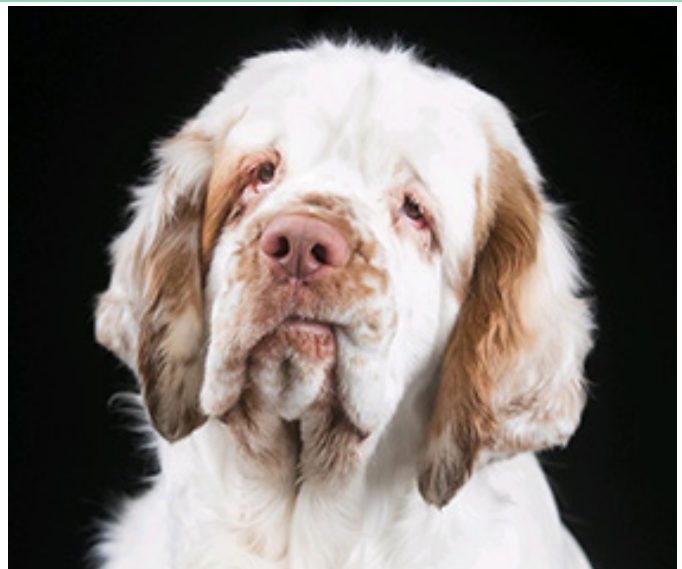
Alison began by explaining that Embark looks at over 200k sites within a high-density DNA microarray. DNA microarrays are devices capable of detecting the identity and abundance of numerous DNA or RNA segments in samples. They are used for analyzing gene expressions, identifying genetic markers and detecting mutations on a genomic scale. Essentially, they help identify what specific genes make a Clumber Spaniel a Clumber Spaniel, and what specific gene mutations can cause illnesses within our breed. At the time, Embark was able to identify markers for over 170 health mutations, and that number increases every day. Embark also identified the genes for dominance in specific dog characteristics – size, coat type and color, body size, etc.

Alison then discussed how Embark testing and data can assist in breeding programs. For generations, breeders have been looking at a Coefficient of Inbreeding (COI), calculated purely by pedigree tracking and assuming each get received 50% DNA from each parent. Embark can provide a specific and accurate COI for each dog tested, thus enabling breeders to make more informed decisions with their breeding program. A separate “breeder” section and database could be invaluable, especially when it becomes more populated.

While summarizing the presentation, Alison stressed that we are all still in an infancy state about DNA testing. The more data gathered (by testing dogs) allows for more research and better, more accurate results. But there is still a lot of work to be done as the clinical relevance of some disease associated mutations depends heavily on the breed, and we just don’t know what some of these mutations mean from one breed to the next. But the more we test, the more data we get, the more we will know; and the healthier our dogs will be.



Grace and William Wozniak’s Claude



Grace and William Wozniak’s Colby

Partial EMBARK GENETIC ANALYSIS REPORT

Q3 GENETIC ANALYSIS REPORT

Clumber Spaniel Health Foundation

This summary reflects from January 1st, 2018 - October 8, 2019.

Total number of Clumber Spaniel dogs genotyped by Embark as of this Q3 report: **132**

ABOUT EMBARK

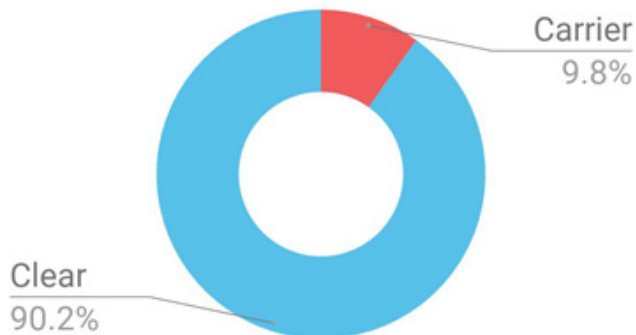
Embark Veterinary offers the industry-leading canine DNA testing service. With just one cheek swab, Embark provides the most actionable health, trait and diversity information available, while simultaneously producing the data to power future health advances. By testing your dog for over 200,000 markers genome-wide, Embark uniquely combines health screening with scientific research in one single step. With your help, Embark has unprecedented potential to make genetic discoveries for your breed, and advance our mission of ending preventable disease in dogs.

RESEARCH METHODOLOGY

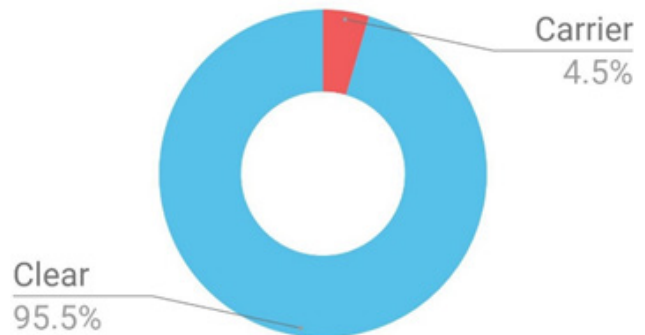
Embark employs a custom high-density marker panel to collect genetic information at over 200,000 sites across the canine genome. A subset of these markers to assess whether individuals are “Carriers” or “At Risk” for over 170 different health risk variants.

GENETIC HEALTH REPORT | OFA registerable genetic tested condition

Pyruvate Dehydrogenase Deficiency (PDP1)



Exercise-Induced Collapse (DNM1)



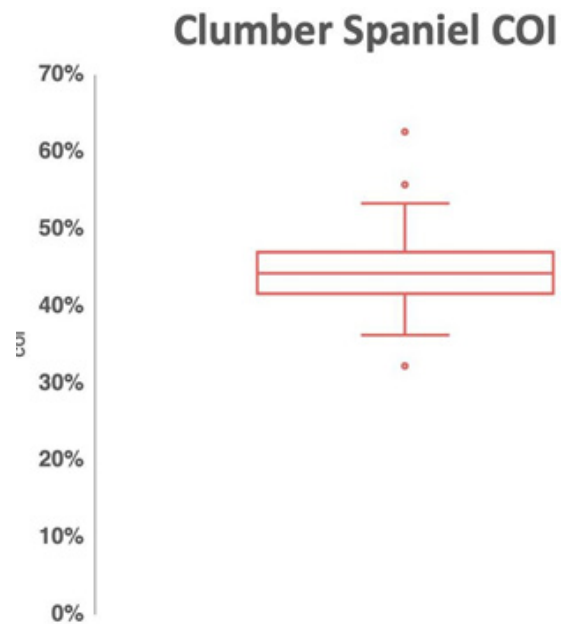
Degenerative Myelopathy (SOD1A)

100% of Embark-tested Clumber Spaniel dogs are clear of this condition.

COI STATISTICS

This chart shows the average COI (Coefficient of Inbreeding) across all Clumber Spaniel dogs tested by Embark.

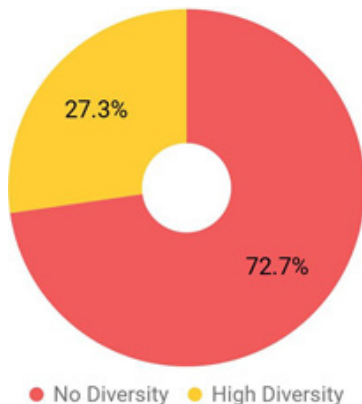
Minimum 32%
Median 44%
Mean 45%
Max 63%



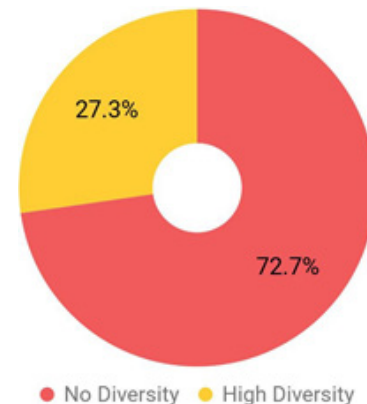
DLA DIVERSITY

The Dog Leukocyte Antigen genes, or DLA genes, are the canine homologue to the human Major Histocompatibility Complex (MHC) genes. While DLA haplotype frequency has been linked to increased risk for certain autoimmune diseases in some studies, most have not been validated in other sample populations. As such, the significance of zero, low, or high DLA diversity in any given breed remains open to speculation.

MHC Class II - DLA DRB1 CHROMOSOME 12



MHC Class II - DLA DQA1 and DQB1 CHROMOSOME 12



Clumber Spaniel Health Foundation, Inc.
Statement of Income and Expenses
January 1, 2019 to December 31, 2019
 Actual YTD

January 1, 2019 Beginning Balance	\$35,316.07
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INCOME

Income from Activities	
Cash Donations	\$4705.00
Fannie Mae	\$2900.00
Apple Match	
Williana	\$200.00
Pfizer Match	\$1500.00
Memorial Donations	
* Benevity Community Impact Fund	
** Network For Good	\$2172.68
Amazon Smile	\$41.23
PayPal	\$465.00
National Specialty Sales	\$795.00
Piper Fund	
Total Income	<u>\$48,094.98</u>

EXPENSES

Expenses for activities	
Grant support	
-AKC CHF	\$6000.00
- Morris Animal Foundation	
National Speaker Fees	\$250.00
Embark Testing	\$2400.00
Web Site design/service	\$75.00
Web Site Annual fee	
CPA (Tax Preparation)	
Bank fees	
PayPal fees	\$22.46
Administrative expenses	
Piper expenses (necropsy)	
Catalog Ad/print service	<u>\$30.00</u>
Total Expenses	<u>\$8777.46</u>

<u>INCREASE (DECREASE) IN NET ASSETS</u>	<u>\$4,001.45</u>
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Ending Balance as of December 31, 2019	\$39,317.52
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*A fund of the American online giving foundation

**Online giving service-Facebook

We would like to thank our donors who make the CSHF's work possible. We offer our sincere gratitude to all of you and thank you for your continued support.

2019 HONOR ROLL

Gold (\$1000 and Over)

Anonymous, Kim and Cyrus Daboo (Apple*), Janice and Walt Friis (Pfizer*), William and Grace Wozniak (Fannie Mae*)



Grace and William Wozniak's Claude and Colby

Bronze (\$250-499)

Roe and Gordie Froman, Jan Irving, CSCA National Specialty Sales-Decals/Tumblers, CSCA National Specialty-Silent Auction/Books, Alison Ruhe

Partners (\$100-249)

Jennifer Amundsen and Michael Finnegan, William and Linda Browder, Chuck and Gail Budde, Clumber Spaniel Club of America, Robert and Cassandra Copeland, Linda King, Nancy Merk, Joanne Smith, Lizz Squashic, Williana Clumber Spaniel Club

The Foundation is a tax-exempt public charity under Section 501(c)(3) of the Internal Revenue Code. All donations are tax deductible to the extent allowed by law.



Jan Irving's Jester

Friends (\$1-99)

William and Polly Davies, Jacquelyn Deaton, Al-lene Gagliano, Sharon Harrison, Ben and Karen Hoyle, Maureen and Steve Leland, Susan McCutchan, Judith Pollard, Caitlin Ryan, Rebecca Smith, Jan and Lorin Sutherland, Jenni Toebben, John and Naiza Woodlief



Kim and Cyrus Daboo's Hudson and Gin

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