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2014 annual report

March 2014 Volume 8

letter from the president

Dear Fellow Clumber Spaniel Enthusiast:

It is time for us, as we do every year, to update you about the activities of CSHF. As you will see in this report, 2014 provided ample opportunities to support canine health research. With the help of our Scientific Advisory Committee (Laurence Schwartz, PhD, Chair, and Christine Haakenson, PhD, Karen Yager, PhD, and Jennifer L. Rojko DVM, PhD, DACVP), we select research projects that are relevant to health concerns in the Clumber spaniel. With your help, we are able to provide funding.

In March, we are looking forward to another National Specialty, where CSHF will host an educational seminar that we hope will help you keep your Clumbers healthy. The seminar is underwritten in part by the generous support of R. Tamara de Silva, through the Judith Rickey Fund, which is described in this report. We are looking forward to this hands-on event and hope many of you will join us. We thank Tamara for choosing CSHF as a means of honoring her friend, Judy Rickey.

As we begin another year working to improve the health of our beloved breed, thanks to everyone who makes this work possible! As always, if you have questions about anything relating to CSHF, please feel free to contact a member of the board.

For the dogs,
Jennifer L. Amundsen, CSHF President



Chip and Shelley Miller's Henry

Diane McGrew, CSHF Webmaster

The Clumber Spaniel Health Foundation maintains a website, enabling us to help disseminate information about health topics, research projects, the PDP1 database, and memorial contributions. Diane McGrew has served as our volunteer webmaster for several years. We asked Diane to share with us her reasons for wanting to help the CSHF.



I grew up and live in the Pacific Northwest, and I'm a professional database developer. Clumber Spaniels have been a part of my life for nearly 19 years, and I think they are wonderful, delightful dogs. Having dealt with a number of health

issues of the breed, I am very excited by, and admire the work the Health Foundation is doing. Since software development is something I can do, I am grateful that I have the opportunity to support them as webmaster.

Diane McGrew and Jack

Board of Directors

Jennifer L. Amundsen – President

Roe Froman, DVM – Vice President

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Directors:

Catherine Cleary; Kim Daboo; Judy Hiller;
Wayne Holbrook; Susan King and Julie Wickwire

2014 Research Projects

The CSHF co-sponsored one grant from the Morris Animal Foundation and five grants from the AKC Canine Health Foundation in 2014. We supported the grants with \$3,000 to \$5,000 donations, totaling \$24,000.

CHF Grant 01759: Disrupting the Differentiation of Cancer Stem Cells to Prevent the Spread of Hemangiosarcoma (\$3,000).

Principal Investigator: Dr. Jaime F Modiano, VMD PhD; University of Minnesota

Hemangiosarcoma is a rapidly fatal disease. The lifetime risk is alarmingly high for some breeds like Golden Retrievers (~20% will die of this disease) and Portuguese Water Dogs (~15% will die of this disease). The risk of hemangiosarcoma is not limited to just these breeds but is considered a research priority for 40 different breed Parent Clubs. Despite considerable efforts to find effective treatments, the outcome for dogs with hemangiosarcoma has changed very little over the past 30 years. Recent evidence suggests hemangiosarcoma conforms to the “cancer stem cell” model, where a defined subset of cells is responsible for initiating and maintaining the tumor. These cells are resistant to conventional therapies and are very adaptable, being able to survive in a variety of tissues in the body. For this project, Dr. Modiano proposes to reduce the malignant potential of hemangiosarcoma stem cells by forcing them to terminally differentiate into cells which can no longer self-renew. He further proposes that by disrupting their ability to self-renew he will enhance the sensitivity of these cells to conventional and targeted therapies and improve the outcomes of dogs with this disease.

MAF Grant D14CA0-047: Testing Strategies to Treat Drug-Resistant Hemangiosarcoma (\$5,000).

Principal Investigator: Dr. Erin B. Dickerson, University of Minnesota

Canine hemangiosarcoma is a common and highly metastatic cancer that affects all breeds of dogs. These tumors are particularly drug resistant, which makes them difficult to treat. The investigators recently identified a more drug-resistant cell population in hemangiosarcoma. These cells appear to be extremely efficient in isolating cancer drugs and preventing them from reaching their targets. The investigators will use several strategies to try to disrupt this process and they will determine whether any of these approaches improves drug responses and diminishes drug resistance. This could lead to more effective treatment of this difficult cancer.

CHF Grant 01889-G: Innovations in Prevention, Diagnosis, and Treatment of Cancer (\$3,000).

Principal Investigator: Dr. Jaime F Modiano, VMD PhD; University of Minnesota

Lymphoma and hemangiosarcoma are major health problems in Golden Retrievers, causing both suffering and premature death. Through ongoing collaboration, Drs. Jaime Modiano, Matthew Breen, and Kerstin Lindblad-Toh have identified several regions of the genome that contain genetic heritable risk factors for lymphoma and hemangiosarcoma in Golden Retrievers. They have tumor-specific mutations that occur recurrently in both cancers, some of which are linked to duration of remission when treated with standard of care. Their results indicate that a few heritable genetic risk factors account for as much as 50% of the risk for these cancers. These findings offer the potential to develop tests and strategies for DNA tests that can predict risk for individual dogs, as well as to manage risk across the population as a whole. Indeed, both the inherited risk factors and tumor mutations point to pathways

that have been implicated in the pathogenesis of lymphoma and hemangiosarcoma, and thus should inform the development of targeted therapies. In the current study, Drs. Modiano, Breen, and Lindblad-Toh will find the precise mutations for the heritable genetic risk factors and to validate markers (mutations) used to determine risk at the heritable loci in a larger independent population of Golden Retrievers from the United States and from Europe in order to develop robust risk prediction tools and an accompanying DNA test. Further, they will identify and characterize tumor mutations and study their relationship to the heritable risk factors, tumor pathogenetic mechanisms, and disease outcome.

CHF Grant 02143-A: Development of a Novel Treatment for Intervertebral Disc Disease (\$5,000).

Principal Investigator: Dr. Gordon S. Mitchell; University of Wisconsin

The spinal cord transmits information from the brain to muscles that initiate movements, such as breathing and walking. Spinal cord injury disrupts these neural pathways, causing partial or even complete loss of walking ability. In dogs, spinal injury commonly occurs as a consequence of vertebral disc herniation. While some recovery of walking ability occurs through uninjured spinal pathways, the extent of spontaneous recovery is slow and frustratingly limited in most cases. Neural plasticity (i.e. changes in neural pathways and synapses) in the spinal cord increases the strength of these uninjured neural pathways and increases the strength of muscular contractions and walking ability. One recently established method of inducing spinal plasticity involves breathing intermittent periods of slightly lowered oxygen levels to create a non-life threatening state of hypoxia. Dr. Mitchell's research group recently discovered that this technique increases walking ability in rats and humans with chronic, incomplete spinal injuries, and has an even greater effect when paired with traditional rehabilitation strategies such as walking practice. In a similar way, they believe administration of very modest protocols of intermittent hypoxia will improve walking endurance and speed in dogs with spinal injuries due to intervertebral disc disease. Dr. Mitchell and colleagues intend to investigate the impact of intermittent hypoxia, with and without paired locomotor training as a completely new canine rehabilitation strategy. Intermittent hypoxia has proven to be a very safe and effective means of restoring motor function in other species, and they predict that the same will be true in dogs with chronic injuries - a population with no prognosis for further recovery using any currently available technique.

CHF Grant 01828: Mapping Genetic Risk Factors for Canine Hip Dysplasia (\$5,000).

Dr. Antti Iivanainen, DVM, PhD, University of Helsinki and the Folkhalsan Institute of Genetics

Canine hip dysplasia is a common developmental disorder of the hip joint that severely affects a dog's quality of life. As the disease has several genetic risk elements and is influenced by environmental factors like diet and exercise, it is of paramount importance that genetic association studies are conducted using adequately-sized cohorts of genotyped diseased and healthy animals. Dr. Iivanainen will sample a large population of dogs (>300-400 dogs) so that contributing genetic loci can reliably be discovered. This research group expects that with such a strongly powered study all major genetic risk factors can be uncovered with a high statistical significance. Investigators expect that identified loci will be discovered across breeds. The identification of genetic risk elements will allow the development of genetic tests that can be used in breeding programs to control the disease incidence, as well as further studies regarding the possible role of diet and exercise in hip dysplasia development.

CHF Grant 01988: Identification of a Safe Storage Time for Canine Blood Used in the Treatment of Anemia (\$3000).

Dr. Mary Beth Callan, V.M.D., University of Pennsylvania

Red blood cells (RBCs) can be refrigerator stored for up to 35 - 42 days in humans and dogs. Given that blood is a precious and limited resource, both human and veterinary blood banks typically dispense the oldest RBC units first to reduce waste. However, accumulating evidence suggests that transfusion of RBCs stored >14 days is associated with increased rates of complications and death in human patients. Preliminary data from a study of more than 2000 dogs receiving RBC transfusions suggest that administration of older RBCs to dogs with certain types of anemia negatively impact survival. Dr. Callan's goal is to conduct a randomized clinical trial in which dogs with anemia in need of RBC transfusions will receive either "fresh" RBCs (stored <7 days) or "old" RBCs (stored 21-28 days). If they document that administration of older RBCs is associated with increased inflammation and poorer outcome in dogs with anemia, the results of this study will have a significant impact on canine health and veterinary blood banks by changing current transfusion practices; that is, by providing fresh rather than older RBCs to anemic canine patients.

The Judith Rickey Fund

Judith Rickey, long time Clumber spaniel breeder and fancier, passed away on April 10, 2014. She was surrounded by five of her treasured Clumbers. In honor and remembrance of a beloved friend of the breed, R. Tamara de Silva has generously funded the Judith Rickey Fund. This will be a continuing annual gift.

The Judith Rickey Fund will be used to support continuing educational and outreach efforts of the Clumber Spaniel Health Foundation. Judy was a champion of the breed, and health was of the utmost importance to her. As Tamara wrote in her remembrance letter "On the somewhat rare occasion that she did breed, she screened prospective puppy homes with a level of scrutiny unsurpassed perhaps even by the NSA. Judy was a beloved champion of the breed and is dearly missed by those who had the privilege to know her."

The Foundation is honored and grateful to be the recipient of this generous donation, and to honor Judy's memory in a way that will continue to benefit the breed she loved so much.



R. Tamara de Silva's Star



R. Tamara de Silva's Jackson

finances 2014

income & expenditures

January 1, 2014 Beginning Balance

\$47,292.53

Income

Cash Donations	\$ 7,270.00	62.2%	
National Specialty Auction and Donations)	\$ 395.00	3.4%	
Memorials	\$ 4,025.00	34.4%	
TOTAL	\$11,690.00	100.0%	\$11,690.00

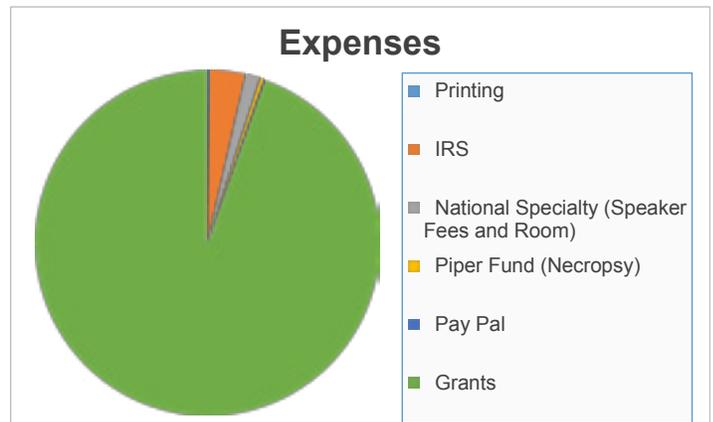
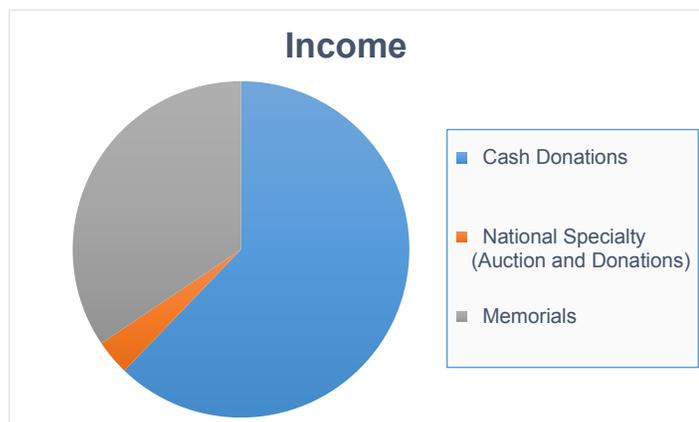
Expenses

Printing	\$ 50.49	0.2%	
IRS	\$ 850.00	3.3%	
National Specialty (Speaker Fees and Room)	\$ 346.13	1.4%	
Piper Fund (Necropsy)	\$ 100.00	0.4%	
Pay Pal	\$ 28.10	0.1%	
Grants	\$24,000.00	94.6%	
TOTAL	\$25,374.72	100.0%	\$25,374.72

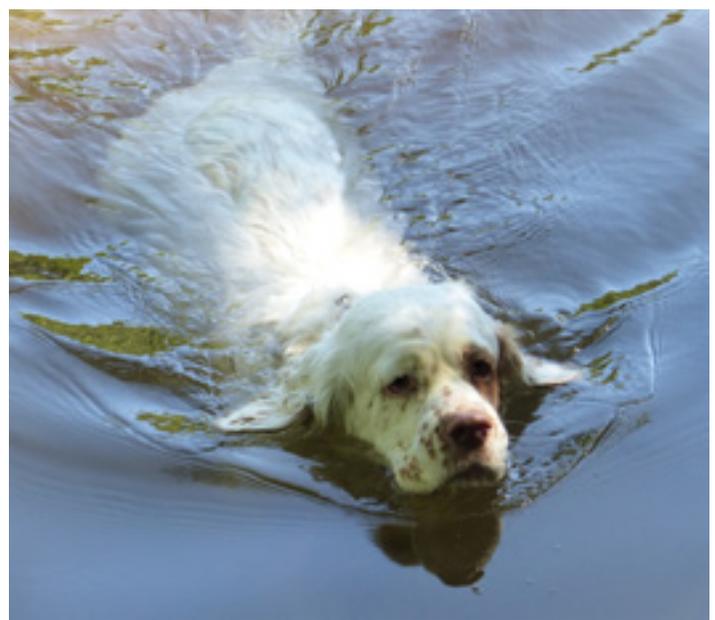
December 31, 2014 Ending Balance

\$33,607.81

In-Kind Donations \$ 462.96



Nancy Merk's Lacey and Joy



Phyllis Potterfield's Katydid

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.

2014 HONOR ROLL

Platinum (\$2,000 or more):

R. Tamara de Silva, Wayne & Kellie Holbrook

Gold (\$1,000-\$1,999):

Bill & Catherine Cleary, Roe & Gordie Froman

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Bronze (\$250-\$499):

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Marsha Biscar's Mish Mish



Judith Rickey

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