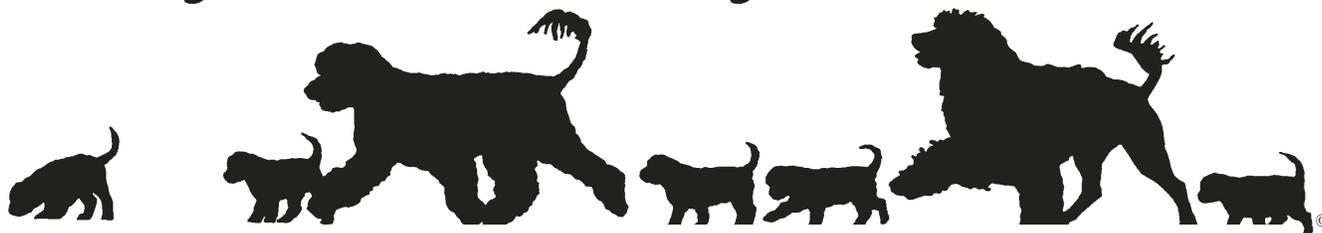


Portuguese Water Dog Foundation, Inc.



2011 FALL UPDATE

NEW CANCER RESEARCH PROJECT CO-SPONSORED WITH MAF

D12CA-026 Developing a New Treatment For Canine Lymphoma

Nicola Mason, BVetMed, PhD, DACVIM
University of Pennsylvania

Objective: To develop a drug similar to Rituximab that works on canine lymphoma patients.

More Info: Blood cell lymphomas affect about 30 dogs in every 100,000. Diffuse large B cell lymphoma (DLBCL) is a common type affecting dogs and is similar to non-Hodgkin's lymphoma in humans. Current treatment induces remission in about 75 percent of patients but the majority relapse and the lymphoma is drug resistant within six to nine months of diagnosis. In human medicine a drug called Rituximab is used to treat various types of lymphoma. The researchers in this study will work to develop a drug similar to Rituximab that works on canine lymphoma patients. The results of this work could lead to the development of the first targeted treatment of canine B cell lymphoma and may significantly improve the outcome for dogs with B cell lymphomas.

MAF CO-SPONSORED RESEARCH PROGRESS REPORTS

D06CA-065 - Reciprocal Relationship of PTEN and p21 in Canine Cancer

Jaime F. Modiano, VMD, PhD
University of Minnesota
(FINAL)

An estimated one out of every two dogs alive today will get cancer in its lifetime, and as many as 50 percent of those will die from the disease. Despite significant gains in cancer treatment, a thorough understanding of why cancers arise and why they behave as they do is essential to improving prevention and treatment. For this project, researchers will investigate two proteins whose interactions appear to be intimately tied to the behavior of two serious cancers, melanoma and hemangiosarcoma. What they learn may help to test targeted therapies for these cancers and significantly improve the lives of affected dogs.

Results: Cancer is the leading cause of disease-related death in dogs, which is why the Morris Animal Foundation and the Portuguese Water Dog Foundation have invested considerable resources to understand this group of diseases to develop more effective treatments. Cancer happens when genes that control the balance of division and survival cease to function normally in a cell and cause it to become malignant. One of these genes is called PTEN. The protein product of this gene generally restrains cell division, in part by controlling another protein called p21. Scientists at the University of Minnesota and at the University of California, Davis have found that using compounds to lower the levels of p21 in some tumors decreased the resistance to conventional chemotherapy drugs. They also concluded that chemotherapy resistance is sometimes unrelated to abnormalities of PTEN, while it is often associated with elevations of p21. The results have allowed the investigators to justify efforts to move these compounds to the next step of clinical development.

(continued on page 2)

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MAF CO-SPONSORED RESEARCH PROGRESS REPORTS (CONT'D)

(Continued from page 1)

D07CA-029 - Pharmacokinetics and Pharmacodynamics of Hydroxyzine in Healthy Dogs

Thierry Olivry, DrVet, PhD, Dip. ECVD, Dip. ACVD
North Carolina State University
(FINAL)

Atopic dermatitis is a common allergic skin disease in dogs and humans. Antihistamines are among the most commonly prescribed treatments. Unfortunately, the optimal dosages of commonly used antihistamines have never been scientifically determined, and their effects have not been validated in dogs. Researchers at North Carolina State University wanted to determine whether hydroxyzine, one of the drugs most commonly used to treat atopic dermatitis in dogs, truly provides an antihistamine effect and, if so, what the appropriate dose is for dogs.

Results: The researchers successfully determined that hydroxyzine does produce an antihistamine effect and confirmed that a twice-daily dose is appropriate, versus the previously standard prescription of three times a day. They also discovered that when hydroxyzine is administered orally or intravenously the drug breaks down into its simpler form (cetirizine), and this simpler form is responsible for the actual antihistamine effect. They now want to look at this drug as a more effective treatment for atopic dermatitis.

D07CA-085 - Pooled Association Mapping for Canine Hereditary Disorders

Gregory M. Acland, BVSc
Cornell University

More than 450 canine diseases have an underlying genetic cause, making the task of researching and identifying specific mutations for each genetic disease daunting. Researchers from Cornell University are exploring a more efficient way to use canine single-nucleotide polymorphism (SNP, pronounced "snip") chips to identify genetic mutations. Specifically, they have developed a pooled-sample strategy that rapidly identifies genes for hereditary canine retinal disorders that cause blindness. With a pooled-sample strategy, scientists combine the DNA from several affected dogs into one sample and analyze them together. This allows more samples to be tested in a cost-effective manner. So far, the researchers have mapped the chromosomal location of genes for cone-rod dystrophy (a deterioration of the light-absorbing cones and rods in the retina) and developed a new DNA diagnostic tool for American Pit Bull Terriers and Irish Glen of Imaal Terriers. This test is now available and will enable these diseases to eventually be eliminated through informed breeding practices. Researchers have also completed a genome-wide association mapping for cone-rod dystrophy in American Staffordshire Terriers and for adult-onset progressive retinal atrophy (degeneration of retina) in Italian Greyhounds and have identified the location of candidate genes for further evaluation. The next step is to identify causative gene mutations and develop DNA diagnostic tests for these breeds. The researchers are also assessing a recently made available SNP chip platform for pooled-sample genotyping, which can yield twice as many genotypes as their original testing method at nearly half the cost. They are currently using this new method to perform genome-wide association mapping for colobomas (an absence or defect in the ocular tissue) in Collies, Border Collies, Australian Shepherds and Soft Coated Wheaten Terriers. This project continues to

establish more cost-efficient ways of identifying the causative mutations for genetic diseases. This will make the tools for future development of DNA-based diagnostic tests more widely accessible and affordable and, thereby, allow for many of the genetic diseases affecting dogs to be eliminated.

D09CA-029 Determining Risk Factors for Lymphoma

Lauren A. Trepanier, DVM, PhD
University of Wisconsin

Lymphoma, one of the most common cancers in dogs, has been linked to exposure to environmental chemicals. Because glutathione S-transferase (GST) enzymes play an important role in the detoxification of environmental carcinogens and some chemotherapy drugs, researchers at the University of Wisconsin–Madison are studying GST genes to determine whether gene mutations are associated with risk and prognosis in canine lymphoma. Researchers have successfully identified the expression of an important class of GST genes, GSTT, in banked canine liver samples and in white blood cells collected from the general dog population. This class of genes, similar to those found in humans, encodes an enzyme that protects the body from environmental pollutants and pesticides. Researchers are currently completing their screening of 100 healthy dogs and 100 dogs with lymphoma for mutations in the GSTT gene sequence. Preliminary analysis so far has revealed some GSTT variants among the first dogs screened; once all genetic screening is complete, the researchers will begin comparative analysis of findings between lymphoma patients and healthy dogs, looking for associations between GSTT variants and risk for lymphoma. The researchers continue to collect relevant follow-up data for each lymphoma patient, including stage/substage of the disease, remission time, survival time and adverse events occurring during treatment. These data will help them evaluate chemotherapy tolerance in dogs with GSTT variants to determine whether they are more prone to adverse effects of chemotherapy. Understanding the link between GSTT variants and lymphoma will lead to a better understanding of the relationship between environmental toxicants, such as pesticides, and disease development. In addition, screening for high-risk mutations in this gene may lead to better patient monitoring to reduce toxicity from chemotherapeutic drugs.

D09CA-060 Characterization of MicroRNA Dysregulation in Canine Mast Cell Tumors

Cheryl A. London, DVM, PhD Dip. ACVIM (Oncology)
Ohio State University

Mast cell tumors (MCTs) are the second most common type of cancer in dogs, and despite recent advances in available treatments, the most aggressive forms of MCT are frequently fatal. Identifying which MCTs are malignant is challenging because these tumors frequently lack physical characteristics that differentiate benign from malignant MCTs. Researchers at the Ohio State University are analyzing the expression of microRNAs (miRNAs) in hopes of identifying markers to differentiate benign versus malignant MCTs. The miRNAs are small non-protein-coding RNA molecules that have been shown to be involved in the initiation and progression of cancer in humans. To date, researchers have identified 51 miRNAs that are differentially expressed in malignant versus benign tumors. Initial testing revealed that an important miRNA found in human tumors is highly expressed in malignant canine MCTs and in canine MCT cell lines. Further testing of this particular miRNA suggested that its overexpression is associated

The Spring and Fall Updates are publications of the Portuguese Water Dog Foundation, Inc.

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www.pwdfoundation.org



The mission of the
**Portuguese Water
Dog Foundation**

is to generate significant resources to fund research into genetic and other canine diseases that will improve the life and health of all Portuguese Water Dogs.

(Continued on page 4)

MODIANO LAB SAMPLES WISH LIST

The first step to sample submission to the Modiano Lab is contacting Mitzi Lewellen (lewe1001@umn.edu or 612-626-6890, press Option 1). She coordinates sample submissions and will provide you with forms and shipping information, and, if appropriate, provide your vet with a sample collection kit.

The samples we need most include fresh tumor samples and come from as yet untreated dogs affected with **hemangiosarcoma, osteosarcoma, or lymphoma**. Included in the sample collection kits we ship to veterinarians is transport media specific to these three tumor types. These media help keep fresh biopsy samples in the best possible condition for transport to our lab for cell culture. Unused media can be kept refrigerated (not frozen) for use for up to two years.

Ideal sample submissions include:

- 1) **A fresh tumor biopsy sample:** aseptic, representative sample, about the size of a blueberry, taken during surgery (or post mortem **within 20 minutes** of death) and placed in relevant transport medium (provided in sample collection kit).
- 2) **A preserved tumor biopsy sample:** clean, blueberry-size or smaller sample placed in a jar of 10% formalin (included in kit). We will submit this sample to our histopathology lab for a definitive diagnosis. *The report from this sample will be forwarded to the dog's attending vet when it becomes available, but, because of the backlog of samples, it should NOT be considered a substitute for the report from the vet's own histopathology lab.*
- 3) **A whole blood sample:** 5-10 ml in EDTA purple top tubes (included in kit).

We can accommodate emergency situations, where an untreated dog with a suspected diagnosis is on the surgery table and the owner is willing to contribute tumor and blood samples but the vet is without our kit. In these cases, the vet should get in touch with **Mitzi Lewellen** (see above) at the Modiano Lab for instructions on sample submission. Likewise, **if a sample must be taken late on a Thursday, on a Friday, or over a weekend, please contact Mitzi for submission instructions.**

Because fresh tumor samples are our highest priority and need to be overnighted, we will pay the cost of shipping the kit both ways. We can receive samples at the lab **Tuesdays through Fridays (excluding holidays), but we ask for 24 hours' advance notice** that an overnight sample is coming so that we can have the personnel ready to process it.

Blood-only samples: Blood samples of 5-10 ml in EDTA purple top tubes are always welcome for susceptibility mapping studies. These studies require **blood samples from pedigreed dogs with a definitive diagnosis** of one of the cancers we are researching. To a somewhat lesser extent, we can use blood samples from healthy pedigreed dogs that are close relatives of the affected dogs in our studies. We can even accept blood samples from affected dogs that are being treated by chemotherapy, if the blood draw can be scheduled to occur at the longest interval between treatments.

Although we consider all samples important and useful, blood without tumor samples, even in untreated dogs, is of somewhat lower priority than blood with tumor samples. **Most often these samples will be referred to mapping studies being done by our collaborators (for example, the Broad Institute), which may have additional criteria for inclusion.** We will nevertheless bank samples we receive, even if they are currently ineligible (for example, when they are excluded because of age or breed), as they may be vital for future research efforts.

AKC CHF CO-SPONSORED RESEARCH PROGRESS REPORTS

01429: Mechanistic Relationship of IL-8 in Cell Proliferation and Survival of Canine Hemangiosarcoma

Jaime F Modiano, VMD PhD
University of Minnesota

During the first 6 months of this project, analysis of IL-8 in hemangiosarcoma was performed. The expression of IL-8 and other inflammatory cytokines was assessed in 11 hemangiosarcoma cell lines and three primary hemangiosarcoma tissues using gene expression array data. The correlation between IL-8 gene expression and secreted IL-8 protein in four representative cell lines was further examined. It was investigated whether cells elaborated more or less IL-8 under conditions of "cancer stem cell enrichment". Finally, the viability (steady state between proliferation and survival) of hemangiosarcoma cells given exogenous (human recombinant) IL-8 was assessed. The results were intriguing and are driving the project further to fully understand IL-8's role cell proliferation and survival of canine hemangiosarcoma.

00632: MicroRNAs and Canine Lymphoma

William C Kisseberth, DVM, PhD, Dip. ACVIM (Oncology)
Ohio State University
(FINAL)

MicroRNAs (miRNAs) are small non-coding RNAs that have been implicated in humans as having a fundamental role in cancer initiation and progression. Canine diffuse large B cell lymphoma (DLBCL) represents one of the most frequently encountered canine neoplasms. We hypothesized that canine DLBCL possess a unique miRNA expression signature and that miRNA dysregulation contributes to more resistance and prognosis. In this study we confirmed that miRNAs in the dog are very similar to those in humans, i.e. are highly evolutionarily conserved, and that different miRNA analysis technologies that are applied to human cancers can be similarly

applied to canine cancers. Furthermore, miRNA expression in healthy normal tissues is similar in dogs and humans. When we used "next generation" sequencing of canine DLBCL tumor samples to determine their miRNA expression profiles we identified a miRNA that was significantly overexpressed in chemotherapy naive tumors compared to chemotherapy relapse tumors from the same patients. Significantly, this was a miRNA with known importance in human cancers. Additionally, we identified a unique miRNA expression signature (multiple coordinately expressed miRNAs) that was associated with overall survival in dogs with DLBCL and treated with a standard chemotherapy regimen. These findings provide insights into mechanisms of lymphomagenesis and potential targets for future therapies.

SAMPLES NEEDED FROM DOGS WITH IBD/PLE/PLN

Meryl P. Littman, VMD, DACVIM at the University of Pennsylvania, has a research project studying PLE/PLN in Soft Coated Wheaten Terriers with Dr. Paula Henthorn (*her research resulted in our current test for JDCM*). Since we are looking for research into these diseases in PWDs, if you have a dog that has been diagnosed with IBD, PLE and or PLN, Dr. Littman is interested in receiving information, pedigrees, and DNA samples from dogs with suspected or documented IBD, PLE and/or PLN. Dr. Littman can consult with **veterinarians** (only, please) about these cases. DNA samples are just 2 ml whole blood in a lavender top tube sent with an ice pack overnight (don't send any samples unless Dr. Littman is contacted first as to availability). Also, it would be useful to include a pedigree, test results and diagnostic reports as well as updates on the dog's condition.

MAF CO-SPONSORED RESEARCH PROGRESS REPORTS (CONT'D)

(Continued from page 2)

with enhanced tumor invasion and overproduction of the enzymes that break down extracellular barriers, which allows tumor growth and spread. Therefore, overexpression of this miRNA may play an important role in promoting aggressive behaviors such as tumor growth and invasion. To confirm these findings, researchers are measuring miRNA levels in MCT specimens and are establishing a protocol for manipulating the expression of this miRNA in cell lines and cultured mast cells to further study its role in MCT development. So far, they have found that MCTs that metastasized and resulted in the death of a dog had substantially higher levels of this particular miRNA than MCTs that were cured with surgery alone. Additionally, this study identified 117 genes that are overexpressed in MCTs, and the researchers are currently evaluating the function and biological consequences of these genes. This study is providing the groundwork for the future development of potential diagnostics and therapeutic treatments for dogs with aggressive MCT tumors. Specific breeds predisposed to mast cell disease include Boxers, Bull Terriers, Pugs, Shar-peis and Labrador and Golden Retrievers.

D09CA-405 Studying Chemoresistant Cancer Cells

Aric M. Frantz, CVM, ACCR
University of Minnesota

Success of anticancer therapies is currently gauged by how much the tumor shrinks, but in some cases, therapy fails because it doesn't destroy rare and special cells called cancer stem cells. These cells can spread to new areas of the body and can give rise to new tumors. Thus, leaving behind even one cancer stem cell after treatment can result in cancer recurrence. Researchers from the University of Minnesota are looking at the genetic signatures of cancer stem cells from three canine cancers: hemangiosarcoma (cancer of blood vessel-forming cells), osteosarcoma (bone cancer) and glioblastoma multiforme (brain tumors). They have identified a common cell culture system for all three tumor types that allows the researchers to propagate cells with specific features of cancer stem cells, including greater resistance to chemotherapy drugs. To date, preliminary work has generated evidence that the enriched subset of cells in hemangiosarcoma (potential cancer stem cells) is less sensitive to certain chemotherapy drugs, such as Paclitaxel, that prevent cell division. However, researchers found that not every tumor shows this same behavior. Researchers continue to enrich the cells from cultures of all three cancers with the aim of generating sufficient biological material to study shared genetic properties of cancer stem cell subpopulations of hemangiosarcoma, osteosarcoma and glioblastoma multiforme. Targeting cancer stem cells requires understanding what is unique about them. If researchers can successfully identify shared genetic signatures in the three types of cancer stem cells, the discovery will lead to better treatment strategies for canine cancers. This Fellowship Training Grant is also providing valuable hands-on training for a future cancer researcher.

D09CA-082 - Potential Drug Therapy for Lymphoma

Laura D. Garrett, DVM, Dip. ACVIM (Oncology)
University of Illinois

DISCONTINUED (Ended Early)

PLEASE NOTE: *The entire amount of the our co-sponsorship was transferred to another research study and therefore was not lost or wasted by the early termination of this research project.*

Lymphoma is one of the most common and fatal cancers in dogs. Most dogs treated with chemotherapy go into remission, but the cancer quickly develops drug resistance and recurs. Chemotherapy generally works by initiating apoptosis, a normal process in which cells undergo programmed death. Apoptosis occurs throughout life and is critical for developing and maintaining healthy

tissues, but cancer cells develop ways to avoid apoptosis, which allows them to grow and survive in an uncontrolled fashion. Researchers studied a novel compound, PAC-1, that has been shown to induce apoptosis in tumor cells without the presence of chemotherapy. This study attempted to evaluate the safety, dosing and efficacy of PAC-1 in dogs with lymphoma. The researchers felt the this compound held great promise for the treatment of lymphoma and other cancers.

Results: Dogs enrolled in this clinical trial had not responded to other therapies or had owners who could not afford other therapies. PAC-1 works via a different mechanism than traditional chemotherapy and based on preliminary data, it showed promise as a revolutionary treatment for dogs with cancer. Recent study developments, however, indicate that the drug cannot be used safely at the levels needed to produce an anticancer effect. Because of these developments, this clinical trial was discontinued. It is important to note that preliminary data in laboratory cell-line models were promising and that the drug was well tolerated in the initial three dogs that were treated. However, as the study progressed, there was unexpected neurotoxicity. The researchers quickly determined that PAC-1 is not safe for dogs at blood concentrations needed to be therapeutic and therefore terminated the study.

Although the results were not what we hoped for, this study has provided critical knowledge about PAC-1. First, researchers clearly determined that PAC-1 isn't safe for dogs. It can cause severe and unpredicted neurotoxicity and, therefore, shouldn't be pursued as a treatment for canine lymphoma. Second, similar drugs are in development, and these findings indicate the need for safer formulations of these drugs for future studies.

D10CA-501 - MADGiC: Making Advanced Discoveries in Golden Cancers

Jaime F. Modiano, VMD, PhD, University of Minnesota
Dr. Matthew Breen, North Carolina State University
Dr. Kerstin Lindblad-Toh, Uppsala University, Sweden

Golden Retrievers have been one of the most popular breeds in America for decades, but unfortunately these dogs also have one of the highest incidences of cancer and are frequently diagnosed with hemangiosarcoma and lymphoma. In this three-year, multi-institutional study, researchers are examining genetic traits that contribute to risk and progression of these cancers in Golden Retrievers. So far, preliminary analysis of collected samples from more than 200 dogs has identified several significant locations on the Golden Retriever genome that are associated with each cancer. Researchers have also collected hemangiosarcoma and lymphoma tumor samples and are developing cell lines from some of these tumors to study specific traits of malignant cells and genetic abnormalities of the tumors. For breed comparisons, several tumor samples and cell lines originating from dogs of other breeds have also been acquired. **Although this study focuses on Golden Retrievers, hemangiosarcoma and lymphoma tumors occur in all breeds, so the results of this study may be widely applicable to all dogs.** The long-term goals are to understand what causes hemangiosarcoma and lymphoma and to develop strategies to prevent and treat these cancers.

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- Melissa Hatton in honor of Lilly
- Overboard Portuguese Water Dog Club as a Thank You to Lauren McDermott for giving a great Water Workshop
- Portuguese Water Dog Club of the Twin Cities in memory of their Member's dogs who crossed the Rainbow Bridge in 2010
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- Vicki & Ken Goldberg in honor of our 3 best friends, "Blue", "Maggie" & "Indy"
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- Bev & Dick Boccaccio in memory of Zach
- Benita Bottom-Svitchen wishing a Happy 3rd Birthday to Bayley, Hogan, Macia, Nala, Ryder, Savoy & Toby
- Lance & Deonne Boxer in memory of Deke
- The Burke Family wishing Jake a Happy 4th Birthday!
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- Julie Conger
- Julie Conger & Remy Smith-Lewis in memory of Ron Holden
- Phyllis Crane in honor of Archie, Jiggs, Noah and the new puppy!
- Jim & Judy Dupont in memory of Ronald Holden
- Anat Cunha in honor of Karma Queen of Kings Litter "Seal" - Karma Puppy Pledge
- In honor of Herb, Mari and Sara Szauerzopf from your friends, Roslyn Eskin, John H. Brown, Gillian & Frank Goldschmidt, & Mindy Selby
- Laura Fitzgerald in honor of Fiddler Girl
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- Jean Minskoff Grant
- Roger & Diane Greenberg in memory of "Boo" Timbermist Black n Boo, we loved you so much
- Ted Hecht in honor of Karma Queen of Kings Litter "Squid"
- Karma Puppy Pledge and as a Thank You to Miika Cunha
- Michele Hemenway in memory of Zaphod & Radagast
- Mr. & Mrs. Joseph A. Horgan in memory of Ronan - #1 PWD in our hearts



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Winkler & RiverRun for our wonderful dogs
- Casey & Stephanie McLellan in honor of Karma
Queen of Kings Litter "Captain" - Karma Puppy Pledge
- Midpeninsula Surgical (Saul, Peter, Valerie,
Eileen & Lianne) in memory of Ronald Holden
- Pam & David Miller congratulating GCH Millcrest
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- Gary & Berneil Mroz in memory of Seadream's "Catch of the Day"
- Buffy, Ken and Willy Nicolas in memory of Bica: Loved
& adored by Judy Harrison & Rowland Johnson
- M. Norris in honor of Ajax & Echo & of course & always Nike
- Mariana Palacios & Tim Abbott in memory of Archie
- John Piper & Deborah Tuttle in memory of Simon (PWD)
- Greg & Merry Poe in memory of Ron Holden who loved his dogs
- Portuguese Water Dog Club of Northern California thanking
Lauren McDermott for Foundations for Water Work
- Portuguese Water Dog Club of the Twin Cities as a Thank You
to Suzanne Malick for judging our August 2011 Water Trials
- Portuguese Water Dog Club of the Twin Cities as a Thank You to
Marv Strassburger for judging Sweepstakes at our Regional Specialty
- Portuguese Water Dog Club of the Twin Cities as a Thank You
to Janis Watts for judging at our Regional Specialty
- Norberto Quintana & Paul J. Radtke in honor of
Friendship's Lugo - Friendship Puppy Pledge
- In memory of Ron Holden from the Read Family
- Bill & Marlene Rebello in memory of Tigo Rebello
- Tom Rendulich in honor of Karma
Queen of Kings Litter "Minnow" - Karma Puppy Pledge
- Stan, Milarie & Mickey Rude in memory of Brewster
- Philip & Kathleen Salopek in memory of CH Ebb Tide's All That Jazz
- Ellen Sard in memory of Satchmo
- Ken & Cheryl Sears
- Charles & Marge Schreiber in honor of Friendship's
Stand By Me "Sharky" - Friendship Puppy Pledge
- Donna Shalala in memory of Cheka with matching
contribution from Gannett Foundation
- Abby Silva in honor of Chloe, Tugboat,
Phoebe, Dory, Phin, & Pippi Longstocking

Boatswain \$100-\$249(cont'd)

- Southern California Portuguese Water Dog Club
in memory of Evelyn Cease (Mumsie)
- Southern California Portuguese Water Dog Club
in memory of CH Aarion's Calypso of Roseknoll AWD TDI - Caly
- Southern California Portuguese Water
Dog Club in memory of CH MACH Del
Sur's She Sells Seashells WWD - Shelly
- Southern California Portuguese Water Dog Club
in memory of Alto Mare Chuva Deusa - Tessa
- Lori & Frank Spera in honor of Friendship's
Victoria Barkley - Friendship Puppy Pledge
- Lewis & Sharon Steinberg in memory of
CH Timbermist's Devil May Care
- Susan Straight in memory of Margo
- Sheila Susman-Scheftner
- Connie Szefflinski and Hale Landis in loving memory of
CH Timbermist's Devil May Care CGC TDI "Brewster"
- Jay & Diana Talsania in memory of Stryker
- Susan & Alan Tassler as a Thank You to Sandy Mejias
- Judge & Mrs. Thomas Wallitsch in honor of Regina & Rainha
- Janet Warnsdorfer - Galaxy PWDs in memory
of Galaxy's Abigail Angel From Heaven (Abby)
- Janet Warnsdorfer - Galaxy PWDs in memory
of Galaxy's Virgo Supernova (Guinness)
- Janet Warnsdorfer - Galaxy PWDs in memory
of Galaxy's Kissed by the Sun (Kissie)
- The Weinberger Family
- Tom & Peggy Weissenborn in honor of Baron, Ripley & Jeremy
- The Wednesday Water Practice Group - Susan, Carl,
Sherry, Barbara & Valerie in memory of Ron Holden
- Lisa Wilkinson in memory of CH Cutwater Rise And
Shine CD MX AXJ JWD "Daisy" and in memory of
CH Pennrico Knollcrest Simon UDX CWDX "Simon"
- Frank & Penny Yamamoto in memory of Brinee &
in memory of her mates, Roger & Diane Greenberg's
Boo & Pat & Arvid Qvigstad's Brewster, all together again
at the Rainbow Bridge - you are missed so very much!!!
- Robert & Mary Yellowlees
- Geri Zuckerman, Seadream PWDs in memory of
Seadream's Catch of the Day 4/20/05 - 4/25/11

Sailor \$50-\$99

- John & Geri Azevedo in memory of Ron Holden
- Julie Bailey & Kevin Kelly, Yare PWDs in honor of the PWD PSG
- Durfee Betts
- Janet Boyd in honor of the PWD PSG
- Bill & Lucille Burmeister in memory of Fancy.
- Terry & Frank Cardillino in honor of Judy Murray & HIT CH.
Pennrico Knollcrest Simon UDX NA CWDX GROM "Simon"
- Terry & Frank Cardillino in honor of Pat Qvigstad & CH.
Timbermist's Devil May Care CGC TDI "Brewster"
- Dr. Judith Coché
- Julie Conger in honor of the PWD PSG
- Julie Conger in memory of Bria
- Julie Conger in memory of Joaquin
- Carl & Susan Craig in memory of Ron Holden
- Barb Crowther in memory of CH. Brieahndriftwood's Xs NA "Toz"
- Cliff & Susan Curfman as a Thank You
to our wonderful dog Summer

Sailor \$50-\$99(cont'd)

- Cari & George Damoose in memory of Catch, beloved pet of Debra & Marc Channick
- Mrs. Donald Davidson in memory of Isabelle
- Angelika Ebenig in honor of the PWD PSG
- Christy Fitz
- Heidi L. Forman in memory of Cabo
- Verne Foster in memory of OZ – An amazing girl
- Verne Foster in memory of Simon
- Verne Foster as a Thank You to USSPWDC for the Water Trial logo artwork
- In loving memory of Ronald Holden from The Friends
- Peter Gardner & Patty Smith in honor of PWD "Atticus"
- Therese Gertiser in honor of Sam & Suzy
- Ed & Karen Giles
- Betty Gray in memory of Langford Keith
- Elena Gretch in memory of Roger - An endless source of joy, fun and unconditional love
- Elena Gretch in honor of Splash & Diver - Inspired by their remarkable ways
- The Guziak Family in memory of Charlie Shultz
- Silke Hirtz-Schmidt in honor of the PWD PSG
- The Holte Family in honor of Boomer
- Linda & Krista Hunt, Kalista in honor of "Lucy" Kalista's I'm Gilded Two CD RN NA NAJ WWD on her WWD
- Linda & Krista Hunt, Kalista in memory of "Abby" Kalista's Alcontessa Azul loved by the Pagel family
- Linda & Krista Hunt, Kalista in memory of "Mad Dog" Kalista's Barbada MX MXJ XF CWDX loved & missed by the Tammy & Bill Etscheidt
- Patricia & Kenneth Krushel in memory of Cody
- Bobbe Kurtz in honor of CH Cortereal Seakiss of Starview
- Karen & Randy Latham in honor of the PWD PSG
- Scott Lenz in honor of the PWD PSG
- Robert & Edythe Ligosky in memory of Catch of the Day (Catch)
- Mary Lou & Ray Mallo in memory of our beautiful boy, Mac
- Tom & Tina March
- Claire McLean in memory of Am Mex Bmd Dutch Lux Int CH Deewal Intrepid
- John & Diane Parks in honor of Bella & Gabby
- Carole Prangley-Mclvor in memory of "Ben" – Nina's special friend
- Janine Richter & Tony Patton in honor of Puddles
- James & Nancy Ruprecht
- Saltydawg PWDs (Karen & Jim Ash) in memory of CH Saltydawg's Aerial Skydancer, Aerial
- Saltydawg Tater Tots in memory of Saltydawg Run To Me, Whitney
- Saltydawg & Sweetmeadows PWDs in memory of CH Saltydawg On The Snow Trail, Remington
- Mary Salvary in honor of the PWD PSG
- Marge & Charles Schreiber in memory of Leon Costello
- Marge & Charles Schreiber in memory of CH Pennrico Knollcrest Simon UDX CWDX "Simon"
- Pam Wilson Selvig in honor of Hunter's Diamond Decoy Diver XJ OA "Deke"
- Kami Smith in honor of Molly Brown
- Russell & Noni Smith in memory of "Salty"
- Kathy Souza in memory of Ron Holden
- Kathy Souza in memory of Stargazer Pacifica Come Sunday owned & loved by Margaret O'Hair
- Stacy, John & Tony Stahl

Sailor \$50-\$99(cont'd)

- Linda Strauch in memory of Charlie, loving companion of Linda Shultz
- Sheila Susman-Scheftner in memory of Mac Mallo
- Martha Thomas in honor of the PWD PSG
- Peggy L. Thomas in memory of CH Peja Catarina Amarelo UDX5 RA OA OAJ NAP NJP CWDX GROM
- Lillemor Elfstrand Thorén in honor of the PWD PSG
- Karin & Edward Threat in memory of Seadream's Catch of the Day
- Deborah Vaccaro in honor of the PWD PSG
- Denise Wallentinson in memory of Stephanie Yee
- Janet Warnsdorfer - Galaxy PWDs in memory of Leon Costello
- Bill & Ellen Whelan in memory of Catch
- Sandi & Gary Willis wishing Bella & Toli a Happy Birthday
- Linda Winters in memory of Rags to Riches
- Gail Wolaniuk & Joan McFadden in memory of Leon Costello
- Jerry and Kim Wolcoveick in memory of Alice, Frannie, Cassie and Curly
- Zohar PWDs in honor of the PWD PSG

Deck Hand up to \$49

- Anonymous
- Brad & Michelle Baculis
- Sharon & James Barrett
- Susan & Michael Burke
- Karen Coleman in honor of Sea Dream's Catch of the Day
- Colorado Portuguese Water Dog Club Seafarer Grooming Guide Sales
- Carol & Warren in memory of Ivana
- Craig Family in memory of Grady
- Cheryl D'Altrui in honor of Bella
- Rachel, Kenneth & Benny in memory of Sea Dream's Catch of the Day
- Nancy Greer in memory of Mac Mallo
- The Guziak Family in memory of Gulliver
- John Haeger in memory of Piedelai Allegretto Con Brio
- Linda & Krista Hunt, Kalista on in honor of "Lucy" Kalista's I'm Gilded Two CD NA NAJ WWD on her WWD
- Kerk Family in honor of Black Hills Olive
- Larry & Glenda Lee Lane
- Carol Mattingley & Ann Bowley in memory of Circe
- Carol Mattingley & Ann Bowley in memory of Rivendell Red Charcoal Charlie "Charlie"
- Betsy Olix in memory of Aarions Doco Paixao "Lizzy"
- John & Diane Parks in memory of Ron Holden
- Peggy Perkins in memory of Ron Holden
- Merle H. Piro in honor of Darby & Libby
- Saltydawg PWDs in memory of Darth Wader
- Linda Shultz in memory of Helen Strauch
- In memory of Deewal's Prince of Tides "Breaker", CDX CGC sadly missed by Andrea, Bob, Ali, Rowdy & Rio
- Kathy Souza in memory of MACH7 Roughrider's Makin' Waves CD MXF CWDX V13 "Kyma" owned & loved by Barb & Ron Avila
- Eileen Stukel
- Judy & Steve Weinstein in memory of Chili Pepper Aquatico OA AXJ CWD and Amarinhar Shiver Me Timbers MX MXJ OF AD EAC OJC ECC TN-E TG-O WV-N AWD
- Kendra & Matthew Yociss in memory of Ferncliff Thunder by the Sea, "Thunder" - Our beloved girl, forever missed
- Carol Zenas in honor of Shelly