Featuring:

- AKC CHF Parent Club Canine Health Conference 2009
- Health Report, February 2010
- The Open Registry & the DNA Bank for Soft Coated Wheaten Terriers at the University of Pennsylvania School of Veterinary Medicine
- Pilot association study of PLE/PLN in SCWTs
- Pet Testing Protocol In Tough Financial Times
- Informative Family and Open Registry Report
- SCWTSC Hosts Dr. Meryl Littman at the SCWTCA Roving Specialty, June 2010
- Raffle to Benefit the Colony Dogs at NC State
- Summary Of SCWTCA Co-Sponsored IBD Research
- Modiano Lab Samples Wish List
- NIH Looking For Wheatens With Hemangiosarcoma
- One More Wheaten Needed To Complete Tamu Ple Study
- Update on DNA Projects, 2-11-2010
- The Good News & The Bad News About The Canine Phenome Project — Your Help Is Needed
- North Carolina State Researchers Find Soy May Aid in Treating Canine Cancers
- Dogs, Humans, put Heads Together to Find Cure for Brain Cancer
- From Bark to Bedside — Dogs Point to Cancer Culprits
- EPA Increases Restrictions on Flea & Tick Products
- Ectopic Ureter Update
- Living With Canine Kidney Disease
- Shari Boyd Carusi’s Wheaten Pet Grooming DVD
- Canine Behavior Seminar
- Canine Eye Registry Foundation (CERF) Report, January 31, 2010
- Allergy Research at the University of Wisconsin-Madison School of Veterinary Medicine
- Geriatric Dog Project, January 2009
- Test! Test! Test!
- Donate to SCWTCA Health Endowment
- Donate to AKC/CHF SCWT Genetic Research Fund
FROM THE EDITOR . . .

These are exciting times in Wheaten Health!!! Read our updates on current research and descriptions of new projects on the horizon. The Pilot Study on PLE at Texas A&M is nearly complete but needs ONE more Wheaten to enter the project!

This issue also features new allergy treatments, cancer treatments and research opportunities, and a new EPA Warning on topical flea/tick products. The new Warning involves restriction of some ingredients and stresses correct usage and dosage. As we enter flea/tick season, please be sure to get this latest information!

The SCWTCSC will be hosting a presentation by Dr. Meryl Littman during the Roving Specialty weekend at in June…, details included. At the request of many breeders, Dr. Littman has approved a modified health testing program that breeders can suggest to their pet owners in cases of extreme financial hardship. Dr. Littman and the SCWTCA strongly recommend that the regular protocol be followed, if at all possible, but realize some families may not be able to afford the full testing in these tough financial times.

I hope you find this issue helpful and informative. Many thanks to all who have contributed articles and to Roxanna for her wonderful graphics and layout!

For the love of the dogs…,

——Cecily Skinner——
The 2009 AKC Canine Health Foundation National Parent Club Canine Health Conference featured reports on the latest research in canine health. The conference, sponsored by AKC/CHF and Nestle Purina Pet Care, was held October 23-25, 2009 in St. Louis, Missouri. About 250 people attended including 130 representatives of parent breed clubs. I attended representing the Soft Coated Wheaten Terrier Club of America.

Some key ideas reoccurred in several presentations. Among them are these take-home messages:

- Rapid technological change is making possible rapid advances in genetic research and in diagnosis and treatment of disease in dogs.
- There are multi-breed and multi-species benefits to canine genetic and medical research. Human medicine and veterinary medicine have a mutually beneficial relationship.
- Determining how to evaluate and use genetic research and DNA tests will be an increasingly significant challenge for breed clubs and individual breeders. Breed clubs will need to help members learn how to select DNA tests to use, to interpret results, and to use results in making breeding decisions.
- Breed clubs have an important role in determining the genetic basis of disease, both that which is breed specific and that which affects several breeds. Breed clubs can facilitate collection of DNA and data which are the basis for research. And they can help fund research.

Two outstanding speakers with impressive credentials were Dr. Matthew Breen, North Carolina State University, and Dr. Danika Bannasch, University of California at Davis. Dr. Breen’s dynamic presentation described new genetic research technologies and advances in canine cancer research. Dr. Bannasch discussed practical considerations for breeders at a session titled “Genetic Tests: How to Interpret Results and Use Them in Your Breeding Program.” She also made several related points in her formal presentation on the genetic mutation that causes uric acid bladder stones in Dalmatians.

“One Health, One Medicine — Strengthening the Human-Animal Link” was the keynote address presented by Mike Sampson, University of Tennessee. He noted that 70% of human diseases also occur in animals. Many of these diseases are zoonotic, transmitted from animals to man or from man to animals. He discussed public health and economic concerns related to these zoonotic diseases and their potential as biologic weapons against people and agriculture. Other conference presentation topics included neurological disease diagnosis and treatment, cardiac research advances, canine herpesvirus, nutrition for performance, and nutrition research techniques. Fund-raising by breed clubs, the CHF grant process, use of CHF Donor Advised Funds, research funding through Purina’s Parent Club Partnership Program, Canine Health Information Center (CHIC) services, and AKC’s role in canine health were also covered.

Conference presentation videos and audio interviews with presenters are available on the Canine Health Foundation website, www.akcchf.org in the “video” or “Genome Barks Podcast” section. A new podcast is added bi-weekly.
HEALTH REPORT, FEBRUARY 2010
—RESPECTFULLY SUBMITTED, CECILY SKINNER, HEALTH COORDINATOR & EDITOR, SCWTCA “WHEATEN HEALTHNEWS”

Dr. Littman has accepted the SCWTCSC invitation to do a presentation on Wheaten health on the Roving Weekend this year. The presentation will include an overview of Wheaten health issues, testing protocols, updates on current projects, and a Q & A Session. I am coordinating the event with the Southern California Club and Dr. Littman. I’ve asked Anna to help with the “Meet and Greet” at the event. Complete details will be included in the SCWTCSC Specialty Mailer.

Neil O’Sullivan, our liaison for the Addison’s Research Project at UC Davis, has reported that we should hear more about the possible participation of Wheatens in the Addison’s Research in the coming weeks. Wheatens are not currently part of the study. Neil will advise us of what will be needed from Wheaten owners and any funding requirements as soon as the information is available from UC Davis.

We are currently putting together the Winter 2010 issue of the “Wheaten HealthNews” and plan on a February publication. My thanks, as always go to Roxanna Springer for the layout of our articles and the wonderful photos and graphics.

Please see the individual Project Chair Reports for updates on the ongoing research projects.

I submit the following items for Board Action:

1. Dr. Littman has ok’d the use of the MA as an alternative to the UPC in regular health screenings including testing for breeding animals. However, any abnormality in the MA would require the owner to do further testing, including a UPC. Our current Code of Ethics states that breeding dogs must have the UPC; so, allowing the MA only would require a change to the COE. Would the Board like the Health Committee to make a recommendation on the change that would include new language for this item in the COE? The proposed change could then be presented to the membership for a vote.

2. In an effort to get more pet owners to do regular health screenings of their dogs, we have been looking at a streamlined, cost effective testing protocol. Of course, the preferred protocol would be the same as that for breeding dogs; but, in the event of financial hardship, Dr. Littman has provided the following guidelines for healthy pets:
   • Serum: Creatinine, BUN, Total Protein, Albumin
   • Urine: Specific Gravity and Dipstick, MA, ERD or UPC
   • I’d like Board Approval to make the Pet Testing Protocol information available on the SCWTCA website and in the Health Newsletter. The Health Committee would provide the layout for the website.

3. As some of you may know, there is a new consult fee schedule in place at Penn. Times are tough for all the universities; so, it’s no surprise that they will need to start charging for consults. I would like permission to include the new consult fee information and how this will affect our ongoing projects at Penn in an article for the newsletter and also to put consult fee information on the website. The Health-News article would also highlight all the free consulting done by Dr. Littman over the years and the support she has given to Wheatens and their owners.

4. As the Board is aware, there is a large shortfall in funding for the Colony Dogs; and I’ve spoken with Ann Leigh, Fund-Raising Chair, about a possible fundraiser. Beth Babos has offered a beautiful sterling silver pendant with a hand-painted onyx to us for a fund-raising raffle. Ann and I would like to donate the pendant; and we

(continued on next page)
think we can get the cost of the raffle tickets donated, as well. The pendant would be similar to the gold one we raffled two years ago and would feature the winner's own dog on the onyx. We had many, many requests for a pendant in silver; so, we think this would do well. All proceeds of the raffle would go to the Colony Dogs. We'd like the raffle tickets available through PayPal on all the Health websites: SCWTCA, the Endowment, and possibly the GRF. Ann has offered to mail out the tickets. The date of the drawing is still to be determined. We’d like approval to proceed with the raffle as soon as possible.

5. There have been a number of requests for the tote bags that we have sold for health. We would like to order 200 more bags and offer a choice of dark green or purple. There is no additional charge for a mixed order. If we keep the same design — the Wheaten with the Butterfly, the cost per bag is $2.70. They have reduced their price on our re-order by 20¢ per bag. If we want to do a different design, there is a $50 set up charge that would, of course, affect the profit on the bags. Ann will send out the bags, as ordered, via PayPal. Please let us know if the color choices are acceptable and the use of the current design. We do have access to a couple of other drawings, if needed.

THE OPEN REGISTRY & THE DNA BANK FOR SOFT COATED WHEATEN TERRIERS AT THE UNIVERSITY OF PENNSYLVANIA SCHOOL OF VETERINARY MEDICINE

—MERYL P. LITTMAN, VMD, DACVIM AND AMY J. SMAGALA, MLAS

INTRODUCTION:

Since 1983, a number of familial diseases in the Soft Coated Wheaten Terrier breed have been recognized that may be described under the umbrella of hypersensitivity, immunemediated, or inflammatory diseases. These include food allergies, inflammatory bowel disease (IBD), protein-losing enteropathy (PLE), protein-losing nephropathy (PLN), and Addison's disease (AD). The breed is also predisposed to renal dysplasia (juvenile renal disease, RD).

We first described 33 SCWT dogs with PLE and/or PLN in 1990. The dogs were related to a common male ancestor that died with evidence of a saddle thrombus, a thromboembolic event that suggests the dog may have been affected with PLE and/or PLN which can cause hypercoagulopathy. By 2000, the number of SCWTs described with the syndrome PLE and/or PLN reached 222 dogs. By August 2009, consultations for diagnosis and management of sick Wheatens (requested by fax, email/mail, phone, or visit at Penn) documented more than 1000 Wheatens to be affected with PLN (460 dogs), IBD or PLE (249 dogs), sequential or combined PLE/PLN (226 dogs), Addison’s disease (80 dogs), renal dysplasia (51 dogs), or incompletely characterized renal failure (RF) before 8 years of age (41 dogs). Veterinarians need to be aware of the genetic predispositions in the breed, especially the immunodysregulation disorders that comprised more than 90% of the requested consultations. Currently there are no genetic markers or predictive tests, so annual screening tests are recommended to find early warning signs before dogs become ill, so that interventions can be started (diet and medication). Since the clinical signs of these diseases may mimic one another at presentation of a sick dog, characterization of the specific diagnosis by further testing is important.

(continued on next page)
METHODS:
The clinical diagnosis for IBD/PLE, PLN, RD, Addison’s disease, and/or incompletely diagnosed renal failure (RF) at a relatively young age (8 yrs or less) was based on the clinical findings including history, physical examination, and diagnostic tests, e.g., clinical pathology, adrenal function tests, histopathology, ± serology/imaging/etc., as necessary. Criteria for inclusion of an affected dog on the Open Registry required permission from the owner(s) and documentation by blood (Bl), urine (U), and/or histopathology (Bx) of abnormalities as follows:

PLE: PROTEIN-LOSING ENTEROPATHY
- Bl: panhypoproteinemia without evidence of hemorrhage or other causes.
- U: absence of proteinuria.
  - Bx: intestinal lesions characteristic of PLE (e.g., inflammatory bowel disease, lymphangitis, lymphangiectasia).

IBD: INFLAMMATORY BOWEL DISEASE
- Bx: changes as for PLE but without panhypoproteinemia (if bloodwork available).

PLN: PROTEIN-LOSING NEPHROPATHY
- Bl: hypoalbuminemia without hypoglobulinemia, ± azotemia.
- U: proteinuria (by urinalysis, SSA, microalbuminuria, or urine protein/creatinine ratio). inactive sediment, and no other cause for proteinuria other than glomerular leakage.
  - Bx: renal lesions characteristic of PLN (e.g., glomerulonephritis, glomerulosclerosis).

PLE/PLN: INCLUDING CRITERIA OF BOTH PLE AND PLN, I.E., PANHYPOPROTEINEMIA, PROTEINURIA, AND/OR CHARACTERISTIC INTESTINAL AND RENAL HISTOPATHOLOGIC LESIONS.

RD: RENAL DYSPLASIA OR JUVENILE RENAL DISEASE
- Bl: changes of renal failure without hypoalbuminemia.
  - U: decreased urine specific gravity.
  - Bx: renal lesions associated with RD (fetal glomeruli, fetal mesenchyme).
  - R: (Radiograph or ultrasound): small kidneys at a very young age.

RF: RENAL FAILURE, INCOMPLETELY DIAGNOSED, AGED 8 YEARS OR LESS
- Bl: changes of renal failure without hypoalbuminemia.
  - U: decreased urine specific gravity.
  - Bx: abnormal but not classic for PLN or RD (possibly end-stage kidneys).

ADDISON’S DISEASE:
- Bl: low Na/K ratio (typical), flat/low ACTH stimulation test results.

Clinical features of the most common of these diseases are compared in Table 1.
### Table 1: Comparisons of Clinical Features of Genetic Diseases in SCWT Dogs

<table>
<thead>
<tr>
<th></th>
<th>RD</th>
<th>ADDISON’S</th>
<th>PLE</th>
<th>PLE/PLN</th>
<th>PLN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age of Onset</strong></td>
<td>1.3 yrs</td>
<td>4.0 yrs</td>
<td>5.7 yrs</td>
<td>6.1 yrs</td>
<td>7.1 yrs</td>
</tr>
<tr>
<td><strong>(Mean, in years)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sex Predilection</strong></td>
<td>F:M = 0.8</td>
<td>F:M = 4.0</td>
<td>F:M = 1.4</td>
<td>F:M = 1.5</td>
<td>F:M = 1.9</td>
</tr>
<tr>
<td><strong>(Female:Male)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PU/PD</strong></td>
<td>Yes</td>
<td>Isosthenuria ± (medullary washout)</td>
<td>No, unless on steroids</td>
<td>As PLE and PLN</td>
<td>In 25%</td>
</tr>
<tr>
<td><strong>Vomiting and/or Diarrhea</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Ascites/EDEMA</strong></td>
<td>No</td>
<td>No</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td><strong>Azotemia</strong></td>
<td>Yes</td>
<td>± (pre-renal)</td>
<td>No</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td><strong>Kidney Size</strong></td>
<td>Small</td>
<td>Normal</td>
<td>Normal</td>
<td>Often normal</td>
<td>Often normal</td>
</tr>
<tr>
<td><strong>Serum Albumin</strong></td>
<td>Normal</td>
<td>± Low (GI ulceration)</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Serum Globulin</strong></td>
<td>Normal</td>
<td>± Low (GI ulceration)</td>
<td>Low</td>
<td>Low</td>
<td>Normal</td>
</tr>
<tr>
<td><strong>Serum Cholesterol</strong></td>
<td>Normal</td>
<td>± Low</td>
<td>Often Low</td>
<td>Anywhere</td>
<td>Often High</td>
</tr>
<tr>
<td><strong>Na/K Ratio</strong></td>
<td>Normal</td>
<td>Low (typically)</td>
<td>± Low in 10%</td>
<td>As PLE and PLN</td>
<td>± Low in 10%</td>
</tr>
<tr>
<td><strong>Urine Specific Gravity</strong></td>
<td>Low</td>
<td>Isosthenuria</td>
<td>± Low or inappropriate</td>
<td>Normal</td>
<td>Mean 1.033</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean 1.023</td>
</tr>
<tr>
<td><strong>Proteinuria</strong></td>
<td>± Mild</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Histopathology</strong></td>
<td>glomeruli,</td>
<td>Small adrenal</td>
<td>(I) = IBD,</td>
<td>As for PLE</td>
<td>Glomerulonephritis,</td>
</tr>
<tr>
<td><strong>(K = kidney)</strong></td>
<td>fetal</td>
<td>glands</td>
<td>lymphangiectasia,</td>
<td>and PLN</td>
<td>glomerulosclerosis</td>
</tr>
<tr>
<td></td>
<td>mesenchyme</td>
<td></td>
<td>lymphangitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(I = intestine)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(K = fetal)</strong></td>
<td></td>
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</table>

## Open Registry:

At the request of the SCWT Club of America and SCWT Association of Canada, an Open Registry (OR) was started in 1997. Normalcy cannot be predicted (there is no age limit), so the OR only lists affected dogs. Owners of affected dogs having confidential consultations at Penn were asked to give permission to have their dogs listed. By August 2009, the OR listed 856 affected dogs (see Table 2). The SCWT Open Registry lists dogs affected with IBD, PLE, PLN, PLE/PLN, Addison’s disease, renal dysplasia, or uncharacterized renal failure at a relatively young age (8 yrs or less), based on documentation from blood (Bl), urine (U), and/or histopathology (Bx) results. Listed are the dog’s registration name/number, call name, sire/dam, dates of birth/death, age of onset, sex, diagnosis, and methods of documentation. Comments note if a littermate, sire, dam, or offspring is also listed. The OR was started in an effort to share health information among breeders, to stop rumors about which dog had what disease, to have standardization of criteria for diagnosis, to educate breeders/owners/veterinarians about these diseases and their prevalence in the breed, to study patterns of inheritance, and to find informative families for study. The mode of inheritance of PLE/PLN appears complicated. Multiple genes, variable expression, and possibly environmental triggers are suspected. The increased risk for female Wheatens for PLE, PLN, PLE/PLN and Addison’s disease agrees with the finding of higher female risk in other species for immune-mediated diseases.

## DNA Bank:

Penn’s SCWT DNA bank was begun in 2000 and now has more than 500 samples. Included are frozen whole blood or tissue samples from affected dogs, members of several informative families including Dr. Shelly Vaden’s Wheagle colony at NCSU, frozen puppy tails/dewclaws saved by conscientious breeders, and geriatric non-affected Wheatens. (continued on next page)
Samples sent in from puppies or normal dogs less than 14 years of age will not be used for study until their phenotype is known. Such dogs need to be followed carefully throughout their lives, with proper documentation of diagnosis, so that the correct phenotypic characterization can be eventually associated with each dog’s DNA sample. Geriatric dogs are considered phenotypically normal for the diseases of interest based on blood, urine, and/or biopsy, and having reached their 14th year of life. Ongoing studies of the genetic areas of interest include especially the immunity-related genes (MHC, DLA, DQA), SNP chip analysis, and karyotype of affecteds vs. geriatrics.

**Table 2: SCWT Open Registry Statistics (as of August 2009)**

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th>Males</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLN Only</td>
<td>232</td>
<td>127</td>
<td>359</td>
</tr>
<tr>
<td>PLN/Addison’s</td>
<td>9</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>PLN/RF</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Totals</td>
<td>242</td>
<td>130</td>
<td>372</td>
</tr>
<tr>
<td>PLN average age onset = 7.1 years, Ratio F:M = 1.9</td>
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<th></th>
<th>Females</th>
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<tr>
<td>PLE Only</td>
<td>102</td>
<td>72</td>
<td>174</td>
</tr>
<tr>
<td>IBD Only</td>
<td>8</td>
<td>7</td>
<td>15</td>
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<tr>
<td>PLE/ADDISON’s</td>
<td>2</td>
<td>0</td>
<td>2</td>
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<tr>
<td>IBD/RD</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>PLE/RD</td>
<td>1</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Totals</td>
<td>114</td>
<td>79</td>
<td>193</td>
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<tr>
<td>PLE average age onset = 5.7 years, Ratio F:M = 1.4</td>
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<table>
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<th></th>
<th>Females</th>
<th>Males</th>
<th>Totals</th>
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<tbody>
<tr>
<td>PLE/PLN</td>
<td>107</td>
<td>72</td>
<td>179</td>
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<tr>
<td>PLN/ADDISON’s</td>
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<td>0</td>
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<td>PLE/PLN/RF</td>
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<td>1</td>
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<tr>
<td>Totals</td>
<td>109</td>
<td>72</td>
<td>181</td>
</tr>
<tr>
<td>PLE/PLN average age onset = 6.1 yrs, Ratio F:M = 1.5</td>
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<td>ADDISON’s ONLY</td>
<td>23</td>
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<td>47</td>
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<td>ADDISON’s/PLE</td>
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<td>ADDISON’s/PLE/PLN</td>
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<tr>
<td>ADDISON’s/RF</td>
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<td>1</td>
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<tr>
<td>Totals</td>
<td>36</td>
<td>27</td>
<td>63</td>
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<tr>
<td>ADDISON’s average age onset = 4.0 yrs, Ratio F:M = 4.0</td>
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<td>37</td>
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<tr>
<td>RD/ADDISON’s</td>
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<td>1</td>
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<td>RD/IBD</td>
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<tr>
<td>RD/PLE</td>
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<td>0</td>
<td>1</td>
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<tr>
<td>Totals</td>
<td>18</td>
<td>22</td>
<td>40</td>
</tr>
<tr>
<td>RD average age onset = 1.3 yrs, Ratio F:M = 0.8</td>
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<th>Males</th>
<th>Totals</th>
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<td>13</td>
<td>26</td>
</tr>
<tr>
<td>RF/ADDISON’s</td>
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<td>1</td>
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<tr>
<td>RF/PLN</td>
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<td>1</td>
<td>2</td>
</tr>
<tr>
<td>RF/PLE/PLN</td>
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<td>1</td>
</tr>
<tr>
<td>Totals</td>
<td>16</td>
<td>14</td>
<td>30</td>
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<tr>
<td>RF average age onset = 4.2 yrs, Ratio F:M = 1.1</td>
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PILOT ASSOCIATION STUDY OF PLE/PLN IN SCWTs

—DRS. PAULA HENTHORN AND MERYL LITTMAN

Nearly one hundred DNA samples have been chosen for initial analysis in the Section of Medical Genetics at the University of Pennsylvania School of Veterinary Medicine. These samples included DNA from both “affected” and “normal control” dogs, and will be subjected to a new technology that assays thousands of single-nucleotide polymorphisms (SNPs) simultaneously. SNP refers to the situation where two different nucleotides (the building blocks of DNA that come in four different flavors, referred to as A, C, G, and T) can be found at exactly the same position along a particular chromosome among individuals within the species of interest. Within a single mammalian species (such as dogs or humans), there are millions of SNPs, and geneticists use them to find the locations of genes that cause various traits, including diseases. If the location can be determined, then it becomes possible (for a species that has had its genome sequence determined) to:

- examine genes in that region as candidates for involvement in the disease process, and
- develop DNA-based genetic tests.

While this sounds straightforward in theory, it can be difficult to execute, particularly for a disease that is complex, as is PLE/PLN. PLE/PLN does not appear to be simply inherited, and may be influenced by environmental factors, making it much more difficult to study. We refer to our initial study as a pilot study because, due to the complexity of the disease, we cannot accurately predict how many dogs are actually needed to have a strong chance of success. In studies of complex genetic diseases in humans, tens of thousands of individuals are studied.

Note: This is one of the studies for which the SCWTCA Endowment is raising money. The original pilot study is funded through the generosity of clients of Dr. Littman. Many of them are not Wheaten owners but have heard of her work with our dogs. Thanks to all of them for the $60,000 to pay for this genetic testing.
PET TESTING PROTOCOL IN TOUGH FINANCIAL TIMES

While the SCWTCA and our researchers strongly recommend that complete health testing following the protocol listed on our website at www.scwtca.org be done at least annually on our dogs, we realize that tough financial times can make it hard for some pet owners to follow. Breeders have asked for guidance in what to recommend to these owners struggling financially. In light of this, Dr. Littman, University of Pennsylvania, School of Veterinary Medicine has provided a streamlined protocol for pets. This protocol should only be used in cases of financial hardship as complete blood and urine testing is still optimal and is required for all breeding dogs by the SCWTCA Code of Ethics.

The Pet Protocol is as follows:

SERUM: Creatinine, BUN, Total Protein, Albumin

URINE: Specific Gravity and Dipstick, MA, ERD or UPC (the MA available through Antech Labs is probably most cost effective)

INFORMATIVE FAMILY AND OPEN REGISTRY REPORT

— RESPECTFULLY SUBMITTED 1/30/10 BY BETH VERNER ON BEHALF OF DR. MERYL LITTMAN AND CAROL CARLSON

This year we will be doing the SNP chip analysis on samples in our DNA Bank, including many Informative Family members. The first run of 90 samples (approximately 30 each normal, affected, and Informative Family & Wheagle Colony) will take place spring semester, which concludes mid-May. Hopefully something will “pop out” on the first run. Using that knowledge, a summer semester student will do 2-3 more runs, with results available September 2010. The SNP chips may identify a particular gene or two or more, which we will want to intensively study by gene sequencing.

The DNA we have from the Informative Families and the Wheagle Colony are certainly important samples. These families have a high percentage of affecteds, in fact most individuals in those litters are/were affected. It will be very interesting to compare the DNA from those affected with the DNA from their ancestors and other family members that lived longer lives, and with DNA from the geriatric (15-17 yr old) Wheatens that we have from other families. It will also be interesting to compare the DNA from affected Informative Family and Wheagle Colony members to DNA from affected dogs that come from families that weren’t as “hard hit” and that appear to have much lower percentages of dogs affected at every generation than were seen in the Informative Families and the Wheagle Colony. Paula and I are very excited to start this next chapter in our Wheaten work!

We would like more Addison’s samples if the owner pays for shipping. To save about $10,000, I am probably going to send Addison’s samples and about 20 more geriatric normal samples from the Penn DNA Bank to a collaborator who is working on Addison’s disease in a number of breeds. I met her at the 2009 Tufts Genetics Conference.

As far as samples for the other categories (normal, affected, and family/colony), we currently have more samples than money. Each SNP chip costs about $300 to run (equipment plus tech, etc.). It doesn’t take long to realize the cost when you multiply 500 samples times $300. It’s a big number!

We need funding more than we need samples at this point. The shipping alone was $1,300 for SNP chips to conduct five projects, including ours. My fund paid for a tech to extract DNA, etc. The first batch of SNP chip analysis will cost my fund about $25,000, with each of the 2-3 summer runs costing approximately the same per run. Gene sequencing will require additional funding.
2010 Goals

1. Get as much information as possible from the samples we already have, including Informative and Cooperative Families, by SNP chip and gene sequencing.

2. Update the Open Registry: hire/train a new summer student (Amy Smagala will be a senior in clinics this summer). Paula and I have identified a good prospect who can help at the bench with the DNA work as well as update the OR.

3. Continue giving consultations/advice, but ask for donations. We may begin charging a fee for these during 2010, but this service will continue to be free for Informative Family members.

4. Replenish the Penn Wheaten fund with reimbursement from the Endowment and SCWTCA Health Funds to cover costs of shipping samples and histopathology.

SCWTSC HOSTS DR. MERYL LITTMAN AT THE SCWTCA ROVING SPECIALTY, JUNE 2010!

On Friday, June 24th, the SCWT Club of Southern California, in conjunction with their Independent Specialty and the SCWTCA National Roving Specialty, will host a presentation by Dr. Meryl Littman, University of Pennsylvania, School of Veterinary Medicine. The event will follow the breed judging and will include a light lunch. Reservation information is included in the SCWTSC Specialty Mailer. For further information or questions, contact Cecily Skinner, SCWTCA Health Coordinator at tarascwt@aol.com or 949-888-1619. We’ve included Dr. Littman’s biography for those who may be new to Wheatens.

MERYL LITTMAN, VMD, DACVIM

I grew up in Philly, went to Bryn Mawr College for my undergraduate degree, and then Penn for vet school (graduated in 1975 with the VMD from the University of Pennsylvania School of Veterinary Medicine. You can always tell a PennVet because our initials are VMD instead of DVM). Most vets go into private practice without doing internship or residency. I stayed at Penn for internship, worked several years in private practice in Boston while my hubby did a post-doc at Harvard (math) and then came back for my Internal Medicine Residency at Penn in 1979. I’ve been at Penn ever since! 30 years! Wow!

I am a Boarded Diplomate of the American College of Veterinary Internal Medicine (ACVIM - Small Animal) and a Clinician-Educator (CE), Associate Professor in Medicine at Penn Vet. In an academic career, we wear 3-4 “hats;” as a CE, most of my time is in #1 and #2:

1. Teaching: I teach 4th year veterinary students, interns, and residents in their Small Animal Medicine clinical rotations. I give lectures to 1st, 2nd, and 3rd year vet students mainly concerning topics in Nephrology/Urology, Infectious Diseases/Vaccinology, and some GI/liver mixed in.

2. Service: I see medicine appointments in the clinics at Ryan VHUP (the Veterinary Hospital of the University of Pennsylvania) and consult with local veterinarians about their cases.

3. Research: I was always interested in the kidney. The first papers and chapters I wrote were about systemic hypertension which, in dogs and cats, is often due to underlying kidney disease. I became interested in infectious diseases, especially Leptospirosis and tick-borne diseases such as Lyme disease that can cause kidney damage. I was honored to Chair and first-author the ACVIM Lyme Consensus Statement (published in 2006, Journal of Veterinary Internal Medicine, JVIM).
I became interested in Wheaten and their genetic problems when I saw a Wheaten in clinics in the 80s who had PLE and whose maternal aunt also had PLE. The owners were helpful breeders; and, eventually with other breeders in North America, we collected information concerning 33 related dogs, and wrote the first abstract describing Wheaten PLE/PLN and, then, the large paper in JVIM 2000 that described 222 Wheatens with PLE/PLN.

I have received medical records of about 1500 dogs, and done hundreds of consultations for owners, breeders, and their veterinarians concerning diagnostic work-ups and management for sick Wheatens. In the 90s, the SCWTCA and SCWTAC asked me to start and manage an Open Registry whose last update lists almost 1000 affected dogs. My main research today concerns Penn’s SCWT DNA bank, which has about 500 samples, including samples from affected dogs as well as non-affected geriatric dogs. With the help of the geneticists, we’ll be looking for genetic markers and predictive tests for the diseases we are seeing in higher incidence in Wheatens.

I believe that PLE/PLN is the worst problem we need to address, but there are actually 5 diseases that Wheatens are predisposed to that mimic each other and get confused; for instance, they all can cause vomiting. The 5 diseases are 1) inflammatory bowel disease, 2) PLE, 3) PLN, 4) Addison’s, and 5) renal dysplasia (juvenile renal disease). I developed the list of annual screening tests recommended for healthy (all) Wheatens and the table of clinicopathologic comparisons for sick dogs. We’ll discuss more about how to characterize and differentiate these diseases, and how the treatments and outcomes are different.

4. Citizenship: As a bonus, I got to help with PennVet administration. I was Chief of the Section of Medicine for 6 years and Chair of the Intern Program for 10 years before the turn of the century. I’ve served on numerous committees, including faculty searches, infectious disease committee, ethics committee, curriculum committee, etc.

On the personal side, I have 1 hubby, 3 daughters, 2 sons-in-law, a grandson and a granddaughter, 2 dogs (but no Wheatens yet, sigh), and 2 guinea pigs. - ML

Raffle to Benefit the Colony Dogs at NC State!

Win a beautiful Silver Pendant with a Black Onyx Stone, hand painted with a portrait of YOUR dog by artist Beth Babos!!!!
All proceeds of the raffle will benefit our Wheaten and Wheagle Colony Dogs.

Tickets are $5 each or 5 for $20 and can be ordered using PayPal, or by sending a check payable to SCWTCA to: Ann Leigh, 35157 Cornet Way, Palm Desert, CA 92211-3028.

Drawing will be held on Sunday, June 27, 2010 following judging at the SCWTSC Specialty.

Visit www.scwtca.org to order using PayPal.
SUMMARY OF SCWTCA CO-SPONSORED IBD RESEARCH

GRANT PROGRESS REPORT REVIEW

Grant: 00945: Mucosal Gene Expression Profiles in Canine Inflammatory Bowel Disease
Principal Investigator: Dr. Albert E. Jergens, DVM, PhD
Research Institution: Iowa State University
Grant Amount: $60,000.00
Start Date: 6/1/2008  End Date: 5/31/2010

Progress Report: 18 month
Report Due: 11/30/2009  Report Received: 2/8/2010

Recommended for Approval: Approved

(Content of this report is not confidential. A grant sponsor’s CHF Health Liaison may request the confidential scientific report submitted by the investigator by contacting the CHF office.)

Original Project Description:
Background: Canine inflammatory bowel disease (IBD) is a chronic intestinal disorder likely resulting from the interaction between genes and environmental factors. While it is generally accepted that luminal bacteria play a critical role in provoking gut inflammation, genetic factors may also contribute to the bacterial-driven inflammatory response. Several susceptibility genes, such as NOD2/CARD15, have recently been identified in humans with IBD and provide a basis for the development of aberrant immune responses to bacteria in certain individuals. It is reasonable to hypothesize that susceptibility genes also affect clinical disease in dogs with IBD by negatively affecting the interaction with intestinal bacteria and/or their products. Genetic factors are thought to contribute to the pathogenesis of canine IBD as in humans. A role for luminal bacteria is suggested by observations that antibiotics reduce clinical signs, and by reports of increased bacterial numbers in intestinal biopsy specimens obtained from dogs with IBD. Given the recognized breed predispositions, genetic susceptibility to IBD is also likely, although studies are lacking.

Objective: The researchers are utilizing unique molecular biology tools to: (1) identify key genetic factors contributing to disease expression, (2) characterize gene expression profiles which may predict responsiveness to specific therapies, and (3) provide the framework upon which to facilitate identification of IBD susceptibility genes that predispose specific canine breeds to clinical disease.

Original Grant Objectives:
Hypothesis: Gene expression profiles in intestinal tissue samples of dogs with IBD will provide comprehensive insight into altered gene expression patterns contributing to gut inflammation.

Objective 1: To investigate global gene expression patterns of inflamed intestinal tissues and normal control intestinal tissue using RNA microarrays. The differentially expressed transcripts will identify patterns associated with inflammation and host immune responses.

Objective 2: To utilize quantitative RT-PCR to confirm microarray data and validate unique gene expression signatures in dogs with IBD.

Publications:

Report to Grant Sponsor from Investigator:
Canine inflammatory bowel disease (IBD) is a chronic intestinal disorder likely resulting from the interaction between genes and environmental factors. We propose to utilize unique molecular biology tools to: (1) identify key genetic factors contributing to disease expression, (2) characterize gene expression profiles which may predict responsiveness to specific therapies, and (3) provide the framework upon which to facilitate identification of IBD susceptibility genes that predispose specific canine breeds to clinical disease. We are making good progress towards these goals as evidenced by the following:

- We have collected samples from a representative heterogeneous population of 18 IBD dogs for comparison to 6 healthy dog tissues.
- We have carefully extracted the genetic material (RNA) from endoscopic samples which will be used in our gene profiling studies.
- We have now evaluated gene expression profiles in the normal versus diseased dog groups using sophisticated statistical modeling to help us 'tease out' gene expression patterns which discern healthy versus diseased intestinal tissues. It is our expectation to identify specific genes which serve as biomarkers for diagnosing canine IBD and for monitoring the effects of therapy.
- We have noted that IBD dogs show differences in intestinal gene expression as compared to healthy dogs; and these differences in expression may help to explain the mechanisms of chronic inflammation in affected dogs.
- We have now confirmed the expression patterns of select differentially expressed genes in diseased dogs using sophisticated molecular techniques. This suggests that the observations regarding gene expression patterns using the gene chips are accurate.
Modiano Lab Samples Wish List

Breed:

Lymphoma

Australian Shepherd
Bernese Mountain Dog
Border Collie
Boxer
Briard
Bullmastiff
Cocker Spaniel
Flat-Coated Retriever
German Shepherd
Golden Retriever
Greyhound
Irish Setter
Labrador Retriever
Mastiff
Poodle
Portuguese Water Dog
Rottweiler
Saluki
Viszla

Samples
1) Ideal: any naïve nodal non-Hodgkin sample from breeds at left, plus blood.
   a. clean, representative, blueberry-size tumor biopsy sample (or at least 2 tru-cuts, 14-gauge) in lymphoma
      transport medium (cold, not frozen)
   b. blueberry-size tumor biopsy sample (or at least 2 tru-cuts) in 10% formalin (for histopath)
   c. 5-10 ml blood in EDTA purple top tubes
2) Blood only, if there is a definitive diagnosis AND phenotype (5-10 ml in EDTA purple tops).

Osteosarcoma

Samples
1) Ideal: any sample of appendicular (limb), untreated bone cancer from breeds at left, plus blood.
   a. clean, representative, tumor biopsy sample (not whole limb) in osteosarcoma transport medium
      (cold, not frozen)
   b. Tumor biopsy sample in 10% formalin (for histopath)
   c. 5-10 ml blood in EDTA purple top tubes
2) Blood only, if there is a definitive diagnosis (5-10 ml in EDTA purple tops).

Hemangiosarcoma

Samples
1) Ideal only samples from breeds at left: fresh tumor from biopsy or surgery, plus blood.
   a. clean, representative, blueberry-size tumor biopsy sample in hemangiosarcoma transport medium (cold,
      not frozen)
   b. blueberry-size tumor biopsy sample in 10% formalin (for histopath)
   c. 5-10 ml blood in EDTA purple top tubes

** Call Mitzi at the Modiano Lab (612-626-6890) for information on submission.
NIH LOOKING FOR WHEATENS WITH HEMANGIOSARCOMA

The Ostrander Lab at the National Institute of Health is hoping to study Hemangiosarcoma in Soft Coated Wheaten Terriers. Hemangiosarcoma is the Number One cancer in dogs and is particularly devastating as it is not responsive to treatment. It is listed as the Number 4 Health Concern in all breeds according to the latest CHF Top Health Concerns List.

Additional information on how to help can be found on the SCWTCA web site at www.scwtca.org in the Health Section.

ONE MORE WHEATEN NEEDED TO COMPLETE TAMU PLE STUDY!

The Texas A&M Pilot Study on PLE is nearly complete. Dr. Nora Berghoff is looking for one more Wheaten to enter the project. Participants in the study will be compensated, and all testing costs and medications will be covered by the study. The study is entirely confidential, and all communication will be through Dr. Berghoff. Wheatens who have both PLE and PLN are not eligible.

Please contact Dr. Berghoff at nberghoff@cvm.tamu.edu if you have a Wheaten you think may be eligible for the project. Information is available on the SCWTCA web site at www.scwtca.org in the Health Section.

UPDATE ON DNA PROJECTS, 2–11–2010

CANINE PHENOME PROJECT (CPP)

Currently, 980 DNA samples from SCWTs have been collected in the CPP DNA Bank at the University of Missouri. Health surveys have been completed for 628 of the dogs supplying samples. There are about 350 dogs for which DNA has been submitted, but no health survey has been completed. DNA without information on the dog’s traits has very limited value. It cannot be used in the discovery stage of research or for gene-mapping. It is only useful for a general survey of the Wheaten population for the presence and frequency of an already discovered gene mutation. Previously completed surveys need to be updated for all dogs when there is any change in status such as being spayed or developing a new health condition.

More samples are needed for the DNA bank. Our target number is 1500 samples. The SCWTCA Endowment has offered to fund half of the cost of DNA processing for an additional 500 samples (total 1500). Liz Hansen, breed club liaison for Dr. Johnson’s lab, stated that up to 2000 samples would be optimal and that samples from “interesting” dogs are always important. She also noted that samples representing a broad cross section of the breed including all “lines” are needed. Clinics are the most effective and economical way to collect more samples.

SCWT LIFETIME STUDY AT NIH

Dr. Parker plans to contact owners who previously have submitted DNA from age-eligible dogs in the next few weeks. There are about 150 samples from eligible Wheatens. Owners will receive a study consent form and a short general questionnaire. A comprehensive health survey is being reviewed by an NIH epidemiologist and other NIH personnel. When complete, it will also be sent to owners.

More samples are needed from dogs born during 2005 through 2009. These may be collected at clinics or by individuals during annual health check-ups. Individual collection is relatively easy, and economical since room temperature samples may be mailed first class for this study.
THE GOOD NEWS & THE BAD NEWS ABOUT THE CANINE PHENOME PROJECT — YOUR HELP IS NEEDED!

THE GOOD NEWS: The Canine Phenome Project (CPP) DNA Bank at the University of Missouri has received samples from 980 of our Wheatens!

THE BAD NEWS: Of the 980 samples collected, about 350 still need to have health surveys completed by owners. Without a health survey, the DNA has very limited value to researchers because it cannot be used in the discovery stage of research or for gene mapping.

HOW YOU CAN HELP: If you have submitted DNA samples, go to www.caninephenome.org and check to see if a health survey has been completed for each dog for whom you have submitted a sample. If you have already completed the health survey, please update it if there has been any change in your dog’s health status. (More detailed directions follow.)

Many of you have given generously of your time and money to have your dog’s blood collected. It is equally important to make sure that the DNA counts by completing or updating the health survey.

How to update your dog’s DNA records at the CPP:

- Go to www.caninephenome.org
- Click on Login or Signup (located about half way down page)
- Enter your email address and CPP password, and click on “Login”. (If you have forgotten your password, there is an option to select to have your password emailed to you immediately.)
- Once you have successfully logged in, a screen pops up that lists the dogs enrolled by you. You can also change your password or enroll a new dog from this screen.
- To select a dog, click on its registration number or ‘n/a’ if no registration number is listed. The dog’s basic information will be displayed as well as a chart showing the status of the surveys.
- Click on “General Health Survey,” and answer as many of the questions as you can.
- You’re done!

NOTES:

If your contact information (mailing address, email address, etc) has changed, update your ‘profile’. This change can be made from either the ‘Welcome’ screen or a specific dog’s screen.

Pedigree information, if known, can be added on the dog’s screen by clicking on ‘Pedigree’ in the survey chart.

You can also check the status of the DNA sample to make sure the sample was received and logged correctly by clicking on ‘DNA Status’ on a specific dog’s screen. If the received status is marked ‘no’ and you know a sample was submitted, please contact one of the DNA Initiatives Committee members listed below.

If you have problems or questions, please contact:

- Elaine Azerolo - eazerolo@centurytel.net
- Kathy Drobnak - kdrobnak@jcfkk.com
- Lee Martin - leemartin1@sbcglobal.net
Researchers at North Carolina State University are looking to soy as a way to make traditional canine cancer therapy more effective, less stressful for the dog and less costly for the owners.

Dr. Steven Suter, assistant professor of oncology, and NC State colleagues studied genistein — a molecule found in soy that has been shown to be toxic to a wide variety of cancer cells in humans — to determine whether it would also inhibit the growth of canine lymphoma cells.

The researchers found that a commercially available form of genistein called GCP was effective in killing canine lymphoid cells in a laboratory setting, and that GCP is “bioavailable” in canines — meaning it is absorbed into the bloodstream where it can affect cancer cells in the body. The researchers hope that their findings will lead to the use of GCP for their canine patients in conjunction with traditional cancer treatments like chemotherapy.

The researchers’ findings were published in Clinical Cancer Research.

“Humans have been using soy in conjunction with traditional chemotherapy for some time as a chemo potentiator,” Suter says. “This means that the GCP makes the chemotherapy work more efficiently and faster, which translates to less stress on the patient and less money spent on chemotherapy.”

Since dogs absorb GCP in much the same way that humans do, Suter hopes that veterinarians will be able to offer this therapy to canine patients in the near future.

“Since GCP is a dietary supplement, it is harmless to patients,” he adds. “Plus it’s inexpensive and easy to administer in a pill form. There’s really no downside here.”

Pinpointing the genes involved in human brain cancer can be like looking for a needle in a haystack, and sometimes the needle you find may not be the right one. By comparing human and canine genomes, researchers at North Carolina State University have discovered that a gene commonly believed to be involved in meningiomas-tumors that affect the meninges, or thin covering, of the human brain and account for one out of four adult brain tumors -may not be as key for tumor formation as previously thought, and they’ve narrowed the search for the real culprit.

Meningiomas are intracranial tumors, meaning that they do not grow within brain tissue itself, but in the space between the brain and the skull. In humans, they are associated with genetic defects of large segments of chromosomes, which makes isolating the specific genes involved extremely difficult. Humans suffering from meningioma frequently lose one copy of almost the entire length of human chromosome 22. This chromosome is made of almost 50 million base pairs of DNA that code for more than 500 genes.
The dog has been man’s best friend for centuries, and now the genome of the dog could well be man’s next best friend,” says Dr. Matthew Breen, professor of genomics at NC State.

“With so much genetic material to consider, one can see why figuring out which genes play a key role in meningiomas is extremely difficult,” says Breen. “By looking at tumors seen in both humans and dogs we have a simple way to narrow the search: we compare the affected areas of a human chromosome with related areas on dog chromosomes. This works because dogs and humans are genetically similar and both get the same kinds of cancers. While we share much of our genetic material, the DNA of a dog is organized differently to our own and this makes it possible to isolate smaller ‘shared’ regions of genetic data rather than looking at an entire chromosome.”

Breen, NC State colleagues Rachael Thomas and veterinary neurologist Natasha Olby, along with researchers from the University of California-Davis and the Wellcome Trust Sanger Institute in Cambridge, UK collaborated on the project, sharing samples of canine meningiomas for research. Their results were published in the Journal of Neurooncology.

Previous researchers had pinpointed a particular tumor-suppressing gene on human chromosome 22, known as NF2, as a possible contributor to meningioma. They believed that the deletion of NF2, with its tumor suppressing abilities, could trigger tumor growth.

In looking at genetic changes across the whole genome, Breen’s team compared human chromosome 22 to its canine counterpart. In dogs, the region shared with 22 is “split up” across three separate dog chromosomes — numbers 10, 26 and 27 — with the NF2 gene appearing on dog chromosome 26. The researchers discovered that in dogs with meningioma, chromosome 26, and hence NF2, was rarely affected, casting doubt on this gene as playing a significant role in the disease. Instead, dogs with meningioma frequently showed loss of parts of dog chromosome 27. This led the researchers to focus on the portion of human chromosome 22 that corresponds to canine chromosome 27.

“Now, instead of looking at 50 million base pairs that contain several hundred genes, we can focus on the portion of human chromosome 22 that is evolutionarily conserved with dog chromosome 27,” Breen says. “By looking at dog and human meningiomas together we reduce the amount of searching we need to do 50-fold. It’s the old needle/haystack dilemma, except that using information from dog and human tumors allows us to concentrate our search on the two percent of the haystack that actually contains the needle, and not spend time and resources on the other 98 percent.”

Breen also noticed that the other chromosome involved for canines that suffer from meningioma is dog chromosome 17, which correlates with part of human chromosome 1. Defects of this chromosome are involved in almost 70 percent of human meningioma cases and are associated with a poor patient outcome. He hopes that he can use this correlation to further narrow the search for specific genes involved with the disease.

In addition the team looked also at gliomas, another kind of brain tumor, and have shown common genetic features shared between human and canine tumors that are now under further investigation.

“The data support that dog and human tumors are very similar at the genetic level, so both species will benefit from this research,” Breen says. “It’s proof of the ‘One Medicine’ concept — the idea that human and animal health relies on a common pool of medical and scientific knowledge and is supported by overlapping technologies and discoveries.”

Dr. Breen’s laboratory is part of the NC State Center for Comparative Medicine and Translational Research — a community of more than 100 scientists from five NC State University colleges. These investigators are involved in collaborative studies with government, private, and other academic researchers to advance the knowledge and practical applications that improve the health of animals and humans.
It is exciting when a chance encounter leads to unexpected insight. In this case, a brief chat with my dogs’ veterinarian set the stage for what is becoming one of the most thrilling scientific experiences of my career.

That veterinarian, Dr. Roe Froman, happened to be the President of the Clumber Spaniel Health Foundation. Roe mentioned that Clumber Spaniels frequently succumbed to a deadly type of cancer called hemangiosarcoma (HSA).

Coincidentally, I had spent the last decade studying the molecular biology of human sarcomas and was particularly interested in vascular tumors like fibrosarcoma, Kaposi’s sarcoma, and angiosarcoma, the human equivalent of HSA.

Our discussion and follow-up conversations set in motion a cascade of events that has led to the formation of the Canine Hereditary Cancer Consortium (CHCC), a unique nationwide coalition of veterinarians, scientists, and physicians united by a common goal: using naturally occurring tumors in dogs to help develop new clinical treatments for rare cancers in humans.

Sarcomas are a type of cancer that develops from muscle, bones, fat and connective tissues. As a scientist, I had worked for years with artificial cell cultures in the laboratory to understand how sarcomas develop in people. Because human sarcomas are rare — less than 1 percent of all adult malignancies — it is difficult to study them directly among patients.

However, many of the sarcomas I find most interesting are far more frequent in dogs. For example, the estimated incidence of angiosarcoma in humans is around 2 in 1 million annually. In contrast, these tumors are relatively common in dogs, particularly in older (8-13 years old), large breeds, such as German Shepherds, Golden Retrievers, and Clumber Spaniels, with an overall incidence more than 100 times greater than in humans.

It was clear from an early stage that dogs offered additional advantages for scientific discovery. Because certain breeds of dogs are prone to this disease there must be an underlying genetic component that is more common in these breeds than in others. This has thrilled the scientific community because it should be easier to find genetic mutations that cause disease. Identifying those mutations are what could eventually lead to better treatments, not only for dogs, but also for humans.

To get our hemangiosarcoma project going, Roe and I organized a small group of scientists at the Van Andel Research Institute. With the generous support of the Canine Health Foundation, we began in 2008 a pilot study of HSA in Clumber Spaniels. Right away, we identified regions of DNA that were associated with this disease. This gave us exciting insights into the biology of HSA that has led to additional research.

The scale and scope of our project took a dramatic turn in April after President Barack Obama announced American Recovery and Reinvestment Act funding for the National Institutes of Health.
Health. These funds presented an incredible one-time opportunity to transform our approach to developing new clinical therapies.

In collaboration with Dr. Jeffrey Trent, President and Research Director of the Translational Genomics Research Institute (TGen) and the Van Andel Research Institute, and with Dr. Paul Meltzer, Chief of the Genetics Branch of the National Cancer Institute, we quickly laid the plans for an exciting research effort of unprecedented scale and scope. Our core proposal was fairly straightforward: take advantage of canine genetics and the high incidence of disease in certain breeds to gain insight into the underlying causes of cancer. Then, use this insight to guide clinical trials in humans.

But we added an important and novel twist. Our proposal called for the introduction of a revolutionary new approach, called personalized medicine, to the treatment of dogs and people. Personalized medicine refers to the practice of using an individual’s genetic information to guide clinical treatment. It holds the promise that therapies tailored to an individual’s genes will increase drug selectivity and response, resulting in better clinical outcomes.

One major obstacle to the advancement of personalized medicine in humans has been the difficulty in identifying cancer causing genetic mutations in the sea of genetic differences that exists between people. However, because of selective breeding in dogs, this genetic background is more uniform and changes in the genetic code may be more easily identified.

Recognizing that no one veterinarian, scientist, or physician possesses the breadth of experience to tackle such a complex project we broadened our consortium to include leading veterinarians, scientists, and physicians from across the nation. The CHCC now includes more than 25 members from 15 academic, clinical and private institutions.

The National Institutes of Health notified us in October that our grant proposal was selected for funding. Now the hard work must begin. In the first two years of the project we will focus our efforts on unraveling the genetic causes of five cancers, angiosarcoma, osteosarcoma, oral melanoma, malignant histiocytosis and non-Hodgkin’s lymphoma.

Our goals are ambitious but this is a one-time opportunity to make an incredible difference in the diagnosis and treatment of cancer — not only in dogs, but also in humans. If we are to succeed, we will need help from all quarters. Therefore, I would like to appeal to AKC affiliated dog owners and breed clubs for help.

Should misfortune strike and your dog is diagnosed with cancer, please consider asking your veterinarian to collect blood and tumor samples for our research. If your dog is healthy but is a member of a breed with elevated cancer risk, why not ask your vet to collect an extra tube of blood for us the next time you take your dog for a check up? Together, with your dog’s help we can make a difference in the lives of our loved ones.

Additional information about our research, as well as downloadable instructions and consent forms, may be found at our website www.vai.org/helpingdogs.

Dr. Nick Duesbery is Deputy Director of Research Operations for the non-profit Van Andel Research Institute in Grand Rapids, Mich.
WASHINGTON – Due to a significant increase in adverse incidents, the U.S. Environmental Protection Agency is taking a series of actions to increase the safety of spot-on pesticide products for flea and tick control for cats and dogs. Immediately, EPA will begin reviewing labels to determine which ones need stronger and clearer labeling statements. Next, EPA will develop more stringent testing and evaluation requirements for both existing and new products. EPA expects these steps will help prevent adverse reactions in dogs and cats that can include skin effects, such as irritation, redness, or gastrointestinal problems that include vomiting or diarrhea, or effects to the nervous system, such as trembling, appearing depressed, or seizures—from pet spot-on products.

“EPA is committed to better protecting the health and safety of pets and families in all communities across our nation,” said Steve Owens, assistant administrator of EPA’s Office of Prevention, Pesticides and Toxic Substances. “New restrictions will be placed on these products, and pet owners need to carefully read and follow all labeling before exposing your pet to a pesticide.”

Following the 2008 increase in incident reports, EPA received additional information from the pet spot-on pesticide registrants and others and began an intensive evaluation of these products. Today, EPA is reporting the results of this evaluation, and taking steps to address the spike in reported incidents.

Among immediate actions that EPA will pursue are:

- Requiring manufacturers of spot-on pesticide products to improve labeling, making instructions clearer to prevent product misuse.
- Requiring more precise label instructions to ensure proper dosage per pet weight.
- Requiring clear markings to differentiate between dog and cat products, and disallowing similar brand names for dog and cat products. Similar names may have led to misuse.
- Requiring additional changes for specific products, as needed, based on product-specific evaluations.
- When new products are registered, granting only conditional, time-limited registrations to allow for post-marketing product surveillance. If there are incidents of concern associated with the product, EPA will take appropriate regulatory action.
- Restricting the use of certain inert ingredients that EPA finds may contribute to the incidents.
- Launching a consumer information campaign to explain new label directions and to help users avoid making medication errors.

In addition, to improve the regulatory oversight of pet products, EPA will require more standardized post-market surveillance reporting on adverse effects, require submission of more sales information so the agency can better evaluate incident rates, and bring up-to-date the scientific data requirements on pre- and post-market testing so they are more in line with the Food and Drug Administration’s requirements.

Flea and tick products can be appropriate treatments for protecting pets and public health because fleas and ticks can transmit disease to animals and humans. While most people use the products with no harm to their pets, the agency’s analysis determined that
smaller dogs tend to be disproportionately affected by some products and that the exposure of cats to some dog products is a concern.

People should carefully follow label directions and monitor their pets for any signs of an adverse reaction after application, particularly when using these products for the first time. EPA recommends that owners consult a veterinarian about the best way to protect their pets from fleas and ticks or whether pesticides are needed, especially before using any product on weak, aged, medicated, sick, pregnant or nursing pets, or on pets that have previously shown signs of sensitivity to pesticide products.

EPA is coordinating these actions with Health Canada as Canada also identified similar concerns about the use of spot-on flea and tick products last year, and with the Food and Drug Administration's Center for Veterinary Medicine.

The agency is inviting public comment on how best to implement these new measures. A Federal Register notice announcing the opening of a docket will be published on March 19, 2010. The docket number is EPA-HQ-OPP-2010-0229.

EPA's report on the evaluation of products and incidents is available at: [www.epa.gov/pesticides/health/petproductseval.html](http://www.epa.gov/pesticides/health/petproductseval.html).

EPA recommends that veterinarians use the National Pesticide Information Center's Veterinary Pesticide Adverse Effects Portal to report incidents: [npic.orst.edu/vet](http://npic.orst.edu/vet). More information on pet products and safety tips: [www.epa.gov/pesticides/health/pets.htm](http://www.epa.gov/pesticides/health/pets.htm).

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**ECTOPIC URETER UPDATE**

— Diane Braunegel

It's hard to believe how fast time passes. Our girl with the ectopic ureter just celebrated her 2nd birthday. It has been 19 months since she had surgery.

She has been doing fantastic since the surgery to repair her ectopic ureter. She continues to take Proin tablets twice daily to help strengthen her bladder sphincter. As long as we remember to give her the medication, she does not leak any urine.

We did allow her to go thru a couple of heat cycles, thinking that doing so may help tighten the sphincter. Boy were we wrong! Each time she came into heat, she leaked urine like a river — even though she was still on the Proin.

She has now been spayed, her blood work and urine samples all look great. We are thankful that all of her days are now “dry” days.

Our original intention was to surgically repair the ureter, then place her in a pet home once we knew how she would do. She is now such a member of our family that placing her in a pet home is no longer an option!
LIVING WITH CANINE KIDNEY DISEASE

—SHANNON L. HILL

When my first dog was diagnosed with canine kidney disease, it came as a shock. Pookie Bear had a history of pancreatitis and elevated liver enzymes, so when she started throwing up uncontrollably and having multiple accidents in the house, I fully expected to hear the words liver failure. It had never occurred to me that something might be wrong with her kidneys.

Pookie was almost 15 years-old when she was diagnosed; due to her advanced age, the vet didn’t expect her to make it 6 months. But Pookie held on for nearly a year, thanks to good medical treatment.

In that very long year, I learned that one of the most common causes of illness and eventual death in older dogs is kidney disease. Early intervention to stop the progress of the disease is critical, as the existing damage is irreversible. As Dr. Joey Romero, DVM, explained it, “As the cells of the kidney are compromised, they begin to die. Once a cell in the kidney dies, it cannot regenerate or come back.”

What makes this condition so dangerous is that by the time symptoms are noticeable, very often the disease is fairly advanced. That does not mean that it’s hopeless. Even just a few years ago, there were few medications available to manage the effects of kidney disease. Recently, however, there have been major advances, and now nutriceuticals (substances that are somewhere between manufactured medicine and nutritional supplements) are available to help maintain kidney function; if the dog responds well, he can live longer and be more comfortable.

HOW DO I KNOW IF MY DOG HAS KIDNEY DISEASE?

One of the most obvious signs may be that your dog begins urinating more frequently, often in copious quantity. Owners often assume the accidents are age-related loss of bladder control. You might notice that the dog is passing what appears to be water, instead of concentrated yellow urine. Your dog will probably also begin to drink a lot more water; your initial reaction will be that the dog is urinating more because he is drinking more. Most people assume that the kidneys must be fine, because, hey, look how much the dog is peeing! Unfortunately, what’s really happening is that the kidneys are not doing their job. The fluid intake is essentially just flowing right on out the other end, without filtering the waste products from the dog’s system.

As the disease advances, other common symptoms include drastic weight loss, unwillingness to eat, and persistent vomiting. The unwillingness to eat was the first symptom Judy Baca, director of E-Rescue (a Houston-based animal rescue group), noticed when her elderly Miniature Pinscher got sick. Mini Mouse suddenly became lethargic; the vet also found that she had developed mouth sores from the toxic buildup in her system, which made it too painful to eat. Like Mini Mouse, your dog might become lethargic or grouchy. Untreated, the toxic material building up in the dog’s system can cause muscle pain, nausea, lethargy, mouth sores, and in some dogs, even seizures. Dehydration from constant urination is another danger.

While symptoms can certainly suggest kidney disease, a definitive diagnosis comes from bloodwork. Most older dogs do have some degree of diminished kidney function, and the disease is largely asymptomatic in the early (and more treatable) stages. Your veterinarian will take a blood sample to determine how well the dog’s kidneys are filtering waste. Two of the most important indicators are BUN (blood urea nitrogen) and creatinine; if these two components are above normal, they are probably responsible for the dog’s discomfort.
Dr. Romero recommends that dogs over age six should have full exams and bloodwork annually, at an absolute minimum; in his words, “Disease processes caught in the early stage are generally easier to combat… than those that have been underlying for years.” The older the pet, the more frequent the exams should be. After losing Pookie Bear, my personal policy is to run bloodwork every six months on any dog over the age of 10. That’s how we caught Bunny’s kidney disease in time.

Bunny is my 12-year-old Pekingese. She had lost a little weight and seemed slightly lethargic; we chalked her symptoms up to two abscessed teeth and to a subsequent diagnosis of thyroid trouble. Infected teeth could have easily accounted for her refusal to eat! She wasn’t throwing up, she didn’t seem ill, and she wasn’t guzzling water the way Pookie Bear had done. Thank goodness for bloodwork, though. One of her routine exams came back with elevated creatinine and BUN. The diagnosis of kidney disease allowed us to pinpoint some of her other symptoms as kidney-related, not just by-products of aging.

Kidney disease is a scary diagnosis, but you can manage the disease. Most pet owners tend to treat symptoms; your pet will be far better off if you manage his condition proactively to prevent the appearance of symptoms.

**TREATMENT OPTIONS**

Very often, the first thing a vet will do is administer fluids to your dog — either intravenously or subcutaneously. Why fluids, you wonder, since your dog is drinking water and putting out urine at a ridiculous rate. Believe it or not, the fluids force the kidneys to filter the waste products that have built up in the dog’s system. They also address possible dehydration caused by vomiting or excess urination. In essence, flushing the dog’s system with fluids serves to clean out and “re-start” the dog’s kidneys, much as human dialysis does for people.

Which option should you choose? Ask your vet if IV or subcutaneous fluids will be more beneficial in your dog’s case, and why. Intravenous fluids are more comfortable for most dogs, but they take longer and cost more. On the other hand, an IV can get a lot more fluid into your pet (roughly 500 ml. in a period of about 6 hours in a 20 lb. Dog), which does a better job of flushing the system.

Subcutaneous fluids are quicker (perhaps 150 to 200 ml. in a period of a few minutes), and less expensive. However, many dogs exhibit discomfort, because the fluids are injected under the skin. The fluids collect under the skin, and can leave the dog with a large “bump” stretching the skin while the fluids soak into the tissues. Needless to say, the dog may feel bruised. Back to the plus side, many pet owners learn to administer subcutaneous fluids at home, which saves both the stress and expense of a trip to the vet. And some dogs don’t seem to mind it at all; it just depends on your pet’s tolerance for the procedure.

In Mini Mouse’s case, it took several days of intravenous fluids to detoxify her system; Judy found that “giving the fluids was difficult but very necessary.” She strongly recommends that owners of dogs with kidney problems learn to give the fluids at home, if at all possible, to minimize stress on both dog and owner.

Another important component in the management of canine kidney disease is diet. Kidney dogs need a reduced protein diet. There are a number of commercially manufactured diets — both dry and canned — available through your veterinarian.

However, because these low protein diets can be very bland, some dogs will refuse to eat. Don’t be discouraged. Just try different brands until you find one your pet will eat. If your pet is very picky and refuses the prescribed diets, you can often find appropriate choices at pet specialty stores. Your vet can tell you what percentages of protein and other nutrients to look for. Some pet owners choose to cook for their pets; if you go that route, make sure you clear your chosen meal plan with your vet. Bunny does best with a combina-
tion of two commercial canned foods; Pookie preferred a prescription dry food.

Many dogs do well for quite some time just with dietary management and administration of fluids as needed. The good news is that new medications make managing this condition much more feasible. In fact, the medications can reduce the frequency with which the dog will need fluids, which can really alleviate stress on both pet and owner. Two excellent choices are fairly recent nutriceuticals called Epakitin and Azodil, both manufactured by Vetoquinol; Bunny is maintaining nicely with the help of these medications.

Here’s the bottom line: canine kidney disease cannot be prevented or cured entirely. Dr. Romero offers several steps you can take to combat the onset of kidney disease: offer plenty of fresh water, keep vaccines up to date (as some viruses can damage the kidneys), and finally, have annual exams including bloodwork (vital for early detection). Like most diseases, the earlier it’s caught, the easier it is to manage and the longer your pet will maintain a good quality of life.

It takes a vigilant pet owner and a good veterinarian working together to keep a pet healthy and happy. Bunny still has kidney disease; but hers is under good control, thanks to diet and medication. And I plan to keep her that way as long as possible.

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**SHARI BOYD CARUSI’S WHEATEN PET GROOMING DVD**

Are you not sure how to properly trim your Wheaten using a clipper and thinning shears? Do you want to learn how to dremel your Wheaten’s nails or to brush your Wheaten’s coat?

Are you tired of picking up your Wheaten from the groomer looking like another breed? Do you want to learn how to trim your own Wheaten? If so, this is exactly what you need!

Shari Boyd Carusi is a breeder and professional handler of top-winning Wheatens. Her DVD will show you how to put a great pet trim on your Wheaten.

The DVD is $25 each for up to 4 DVDs and $20 each for 5 or more DVDs ordered at the same time. Shipping is $3.99 within the U.S.

Please make checks payable to NC Veterinary Medical Foundation, and mail this form along with your check to Holly Craig, 3015 Potshop Road, East Norriton, PA 19403.

Number of DVDs: _______ + $3.99 (shipping inside US) = $ ____________ (check amount)

Name: __________________________________________

Address: __________________________________________

City: ___________________________ State: _______ Zip: __________

Phone: __________________________ Email: __________________________

*Thank you for supporting the Colony Dogs!*

[All of the proceeds from the DVD support the Colony Dogs. The DVD has raised over $5,000 since it started selling in January, 2008. There are still copies available.]
Lee Mannix

Lee Mannix is pack behaviorist who consults on dog behavior and specializes in aggression issues. He is dedicated to a teaching philosophy based on improving relationships between people and their pets. Lee might say he was chased into working with dogs by a German Shepherd that ran him down the street when he was eight. Twelve years later he began his career at the Austin Humane Society/SPCA cleaning kennels. He has a gift with dogs, however, and was promoted within months, first to kennel manager and then into various director positions.

In 1998, Lee left the Humane Society to train people and their dogs at a boarding and training facility in the Austin area. His unique approach to training and his understanding of dog behavior and animal/human relationships has brought him local, state, and national recognition as well as a following of clients from around the country. Lee is an APDT Member and holds an accreditation with John Rogerson’s Northern Centre for Canine Behavior. He is widely regarded as the last stop for many dogs with aggression and other severe behavior problems.

Taking his success with dogs one step further, in August of 2002 Lee acted on a dream and opened the Lee Mannix Center for Canine Behavior in Austin, Texas. At the new facility Lee continues to teach classes and impart as much knowledge as he can about dogs through lessons, seminars, and workshops. Lee sits on the advisory board committee for the Aggie Guide-Dogs & Service-Dogs organization and has held seminars for the American Boarding Kennels Association, shelters and kennels across the country, Old Mother Hubbard, the Australian Cattle Dog Club of America, and the Austin Pet Sitters Organization. He also holds training seminars for canine rescue groups and performs behavior assessments and evaluations. Lee lives in the Greater Austin area and enjoys being a daddy to his beautiful baby girl, Amber, his two dogs, Creek and Floyd, and several goofy cats.
Travel & Accommodations

CLOSEST AIRPORTS:
Chicago Rockford International Airport– Rockford, IL
General Mitchell International– Milwaukee, WI
Chicago O’Hare International Airport– Chicago IL
Van Galder Bus runs from O’Hare to the Clock Tower resort several times a day. For more info, go to www.coachusa.com/vangalder/ss.tickets.asp

HOTELS:
Best Wstrn Clock Tower  815-398-6000
Baymont Inn  815-229-8200
Days Inn  815-282-9300
Hampton Inn  815-229-0404
Holiday Inn  815-398-2200
Quality Suites  815-227-1300
Radisson  815-226-2100
Ramada  815-226-0860
Red Roof Inn  815-398-9750
Super 8 Motel  815-229-5522
Motel 6  815-397-8000

All hotels listed are within 5 minutes of the facility and have many restaurants located nearby.

From the North: Take I-90 East to Rockford. Exit the third Rockford Exit for I-39 south. Shortly after exiting, exit at Hwy 20 East (Belvidere) which is the second exit. Travel 3.2 miles to Irene Rd. Turn Right onto Irene Rd. Go 5/10ths of a mile. Meyer’s is on the right hand side.

From the East: Take I-90 West to Belvidere. Exit at Irene Rd. Turn Left. Travel 500 feet and Meyer’s is on the right hand side.

From the West: Take Hwy 20 towards Rockford. Take Bypass 20 around Rockford. Take the Exit, 20 East to Belvidere. Travel 3.2 miles to Irene Rd. Turn Right onto Irene Rd. Go 5/10ths of a mile. Meyer’s is on the right hand side.

From the South: Take I-39 North towards Rockford. Exit onto Bypass 20 East. Take the Exit, 20 East to Belvidere. Travel 3.2 miles to Irene Rd. Turn Right onto Irene Rd. Go 5/10ths of a mile. Meyer’s is on the right hand side.

FOR MORE INFORMATION CONTACT:
Gwen Meyer at kgmeyer@charterinternet.com
BOARD ACTION REQUEST: I request that the SCWTCA Board approve the purchase of the annual Canine Eye Registry Foundation statistical analysis report for Wheatens when it becomes available each year.

The Canine Eye Registry Foundation (CERF) is eliminating the membership program for breed clubs in which SCWTCA has participated for a number of years. The membership included an annual statistical analysis of eye exam results and quarterly lists of dogs registered with CERF. In the future, these reports will be available only upon request for a $15 fee per report.

The annual CERF breed statistical analysis report compiles results from all Wheaten exams submitted by veterinary ophthalmologists board certified by the American College of Veterinary Ophthalmology (ACVO). This analysis allows SCWTCA to identify types and frequency of eye disorders in the breed.

The reports of dogs registered with CERF list dogs whose eyes are free from hereditary eye disease when examined by an ACVO ophthalmologist and whose owners pay a fee. Since SCWTCA no longer publishes these reports, it does not seem cost effective to purchase them. CERF status of individual dogs can be found on the OFA website and on the CERF website.

Since the last committee report, the list of SCWT dogs registered with CERF during June-December 2009 has been received. It lists 48 dogs. The 2008 statistical analysis is not yet available. It is included in SCWTCA’s 2009 membership fee.
ALLERGY RESEARCH AT THE UNIVERSITY OF WISCONSIN – MADISON SCHOOL OF VETERINARY MEDICINE

Originally published in the July 2009 issue of On Call, the magazine from the UW-Madison’s School of Veterinary Medicine (www.vetmed.wisc.edu/oncall/index.php), this article introduces an interesting alternative to allergy shots for atopic dermatitis in dogs -- drops! The technical terminology for this treatment alternative is Sublingual Immunotherapy (SLIT) because it is administered orally. This treatment concept is in the early stages and only available, for now, at the UW-Madison School of Veterinary Medicine; it will be tested in Univeristy settings and Dermatology Specialty Clinics when results from the initial stages make that possible. The section on practical points about SLIT treatment for dogs presents several considerations regarding this therapy as an alternative to shots. At a national meeting in Portland during April 2010, Dr. DeBoer will be presenting that first set of results which he describes as “very positive -- even in some dogs who have failed conventional “allergy shots.”

New: Needle-Free Allergy Treatment for Dogs

The thought of having to give their dog injections at home scares some dog owners away from “allergy shot” treatments. Instead, they may opt for drugs that relieve the symptoms without addressing the underlying problem, and which can sometimes cause side-effects.

But now, Wisconsin’s School of Veterinary Medicine can offer oral “allergy drops” as an alternative to conventional “allergy shots”.

“It’s needle-free treatment that addresses environmental allergens such as pollen, dust or mold with no side effects,” says Dr. Douglas DeBoer, a veterinary dermatologist at the school. “The drops are drug-free and very safe.”

He explains that allergy is a disease where the immune system overreacts to these environmental substances. To remedy the problem, it is ideal to reverse this underlying cause. This involves testing to determine exactly what an animal is allergic to, and then treating the pet with extracts of those same things, which modifies the immune system so it reacts normally.

Until recently, that has involved giving animals shots. But thanks to funding from the Morris Family Foundation in LaCrosse, Wisconsin, the School of Veterinary Medicine has been able to conduct a trial of allergy drops in dogs.

A dog receives allergy testing to determine what treatment is needed. Now, in addition to allergy injections, animals can receive treatment via oral drops. Both drops and injections contain extracts of allergens that modify the animal’s immune system so it reacts normally.

The Morris’ are physician allergists who were pioneers in the development of drops for treatment of allergies in people. Though controversial at first, the drops have proven effective in many human studies and are commonly used in Europe, with increasing use and interest in the US. When a friend wondered if the drops would work in dogs as well, the Morris family sponsored a study at the school’s Veterinary Medical Teaching Hospital to find out.

“Our initial pilot clinical trial found that drops were effective in about two out of three allergic dogs,” Dr. DeBoer says. “Now we’d like to do a wider trial.”

He encourages dog owners who would like to try the new allergy drops to ask their veterinarian about a referral to the school.

“It’s a novel treatment for pets. We’d like to treat more dogs, so we gain a better understanding of how best to use it,” Dr. DeBoer says.

(continued on next page)
Practical Points about Immunotherapy and SLIT Treatment

1. Diagnostic evaluation and testing for SLIT is done in exactly the same way as is done for conventional allergy shots. Typically, this means initial evaluation to arrive at a clinical diagnosis of AD by eliminating other possibilities, such as food allergy, parasites, infections, etc. After this, allergy testing is performed, using either a blood test, a skin test, or both. The total cost of these examinations and evaluations typically runs from $350-600, depending on the patient, and is usually done over a series of 1 to 3 visits. Because there is currently no funded clinical trial for allergy drops, owners are responsible for paying these all hospital charges.

2. Allergy testing is positive in approximately 75% of dogs with AD. We must have a positive allergy test in order to offer any type of immunotherapy, either drops or shots. Therefore, there is a 25% chance that the patient will not be eligible for these treatments. Patients that are negative on allergy testing must be managed with other medications.

3. In considering “shots vs. drops” the owner must think about which form of treatment will be convenient for them to give. Allergy shots are given with small, nearly painless needles by the owner at home. For the first month, they are given every 2 days, but after this, only once every 10-14 days or longer in some cases. Allergy drops are given by squirting a very small volume (a few drops) into the dog’s mouth twice daily. The twice-daily treatment continues long-term. We do not yet know if the treatment interval for drops can be extended. The drops, which have a slightly sweet taste, must be dispensed directly into the mouth and cannot be added to food or a treat.

4. The cost of allergy drops is approximately the same as allergy shots – around $35 per month. Because both shots and drops work gradually, we recommend an initial treatment trial of between 6 and 12 months. If the treatment works, it must be continued long-term, for at least a few years.

5. At UW-Madison, patients must return to the clinic for brief visits at 3 months after starting shots or drops, at 6 months, and at 1 year. It is very important that we evaluate these patients to make any necessary adjustments in treatments. These visits are required and necessary for us to continue to provide treatment.

For further information on allergy drops, please contact our study coordinator, Dr. Maria Verbrugge, at the Veterinary Medical Teaching Hospital (608-263-7600).
GERIATRIC DOG PROJECT, JANUARY 2009
—KATHLEEN McINDOE

We are very excited that DNA samples from dogs participating in the Geriatric Dog Project are being used by Drs. Littman and Henthorn in the pilot study in the Section of Medical Genetics at the University of Pennsylvania School of Veterinary Medicine. As usual, Dr. Littman is still accepting tissue samples and test results from healthy dogs 13 years of age and older for the Geriatric Dog Project. Criteria and instructions for submission can be found at www.scwhtca.org/health/.
TEST! TEST! TEST!

Please remember to test your Wheaten, at least annually. Our health researchers currently recommend that annual testing include a Complete Blood Count (CBC), Super Chemscreen, Urinalysis, and Urine Protein:Creatinine Ratio. Additional screening tests available include the Heska ERD Test, the MA (microalbumin) Test, and the Fecal API Test. Printable Testing Protocols designed for Wheaten owners and also for their own veterinarians can be found on the SCWTCA website at [www.scwtca.org](http://www.scwtca.org).

Retest your Wheaten, according to your own veterinarian’s advice, if any result indicates a cause for concern.

It is essential that you track your Wheaten’s test results and watch for any trends. Early diagnosis of all health problems — including, but not limited to, kidney issues — is vital for a positive prognosis.

An easy-to-use, online Health Tracker is available through a $10 donation to the SCWTCA Endowment Fund ([www.wheatenenhealthendowment.org](http://www.wheatenenhealthendowment.org)). Please send your donation to SCWTCA Endowment Fund, c/o Rosemary Berg, Endowment Secretary/Treasurer, 37953 Center Ridge Drive, North Ridgeville, OH 44039-2821. You then get the Health Tracker by emailing Anna Marzolino at marzolinoam@aol.com. Anna is also available to help with any questions about how to input data into the Health Tracker.

DONATE TO SCWTCA HEALTH ENDOWMENT

The Board of the Soft Coated Wheaten Terrier Club of America and the Endowment Board thank everyone for their generous donations. Donations either fund grants selected by the SCWT Endowment Fund Board or provide matching funds for grants approved by the American Kennel Club/Canine Health Foundation (AKC/CHF).

Send your contribution to Rosemary Berg, 37953 Center Ridge Dr., North Ridgeville, OH 44039-2821.

Make check payable to “SCWTCA Endowment” (US funds only), or contribute online via the website ([www.wheatenenhealthendowment.org/endowmentform.html](http://www.wheatenenhealthendowment.org/endowmentform.html)).

DONATE TO AKC/CHF SCWT GENETIC RESEARCH FUND

The Board of the SCWT Genetic Research Project thanks everyone for their generous donations to the fund!

The SCWT Genetic Research Fund (GRF), in cooperation with the AKC/CHF, sponsors genetic research into the canine genome that is specifically aimed at identifying the genes responsible for the transference of PLE/PLN. This information will make it possible for the development of testing protocols to identify Wheaten with protein-wasting diseases.

To join our effort and make a tax deductible donation, send your check payable to “AKC/CHF SCWT Genetic Research Fund” to: David Ronsheim, Project Financial Officer, 17827 Fireside Drive, Spring, TX 77379-8017.

Or, visit our website ([www.scwtgrf.com](http://www.scwtgrf.com)) to make an online donation through PayPal.