

## **PROPOSAL:**

# **HEMOPET STUDY TO DETERMINE A BREED-SPECIFIC THYROID NORMAL RANGE AND POTENTIAL DNA GENETIC MARKER FOR THE IRISH WATER SPANIEL**

**August, 2005 – Revised June, 2006**

## **History of Proposal**

In November 2004, after a discussion of thyroid issues on the IWS Breeders' List, I contacted W. Jean Dodds, DVM (CV attached) about the possibility of undertaking a breed-specific thyroid study for Irish Water Spaniels. At that time, I forwarded Dr. Dodds' initial responses to Health and Genetics Concern Committee Chair, Laurel Baglia.

I re-introduced the idea of a breed-specific thyroid study at the IWSCA Breeders' Committee Meeting at IWSCA 2005. The group agreed that such a study would be beneficial for the breed.

On August 15, 2005 I met with Dr. Dodds to discuss such a study in more detail. The results of that discussion were presented in the form of a proposal to the IWSCA Breeders' Committee and the IWSCA Board. It was discussed on the Breeders' Committee email list in August of 2005, and after lengthy discussion, the topic was deferred.

Dr. Dodds was the health speaker at the IWSCA 2006 National Specialty, where she gave a two-hour presentation regarding the broad-ranging implications of canine hypothyroidism. The lecture was well attended by North American IWS fanciers as well as by many of our European IWS fancier guests.

During the course of her presentation, Dr. Dodds mentioned that as part of her work for other breed clubs (such as Basenjis, Bernese Mountain Dogs, Irish Red & White Setters, Kerry Blue Terriers, Labradoodles, Labrador Retrievers, Leonbergers, Nova Scotia Duck Tolling Retrievers, Portuguese Water Dogs, Rhodesian Ridgebacks), she and her collaborators in Manchester, England, have also been analyzing the DNA of submitted whole blood samples to search for any unique genetic markers associated with canine hypothyroidism.

She also stated that a combination test panel is now being done by Hemopet/ Antech that includes the submittal of new thyroid data to OFA for their Thyroid Registry. This could serve as a means for IWSCA/IWS clubs to expand the OFA thyroid database for IWSs to better reflect the presence or absence of hypothyroidism in the breed.

After Dr. Dodds' presentation, the IWSCA Board referred the matter to the Breeders' Committee to determine whether or not a thyroid study should be undertaken and who should do it. Any decision by the Breeders' Committee would be subject to final approval by the IWSCA Board. IWSCA Board representatives presented this scenario at the IWSCA Breeders' Committee meeting on Saturday, May 6, 2006.

The members of the IWSCA Breeders' Committee present at that meeting voted to voluntarily submit new thyroid blood draw samples over the next year, at their own expense, to Dr. Dodds/Hemopet for analysis in an effort to begin to establish a breed-specific thyroid database. The Committee further agreed to mail in to Dr. Dodds copies of the results of past complete laboratory

thyroid profiles with additional relevant information (pedigrees, anecdotal references, illustrative photos, age, sex, neutered/intact, medications, etc.), and to encourage their puppy owners to either have new blood drawn and sent in for analysis, or to submit existing test data. The European guests present also expressed interest in participating in this effort. I offered to donate the initial set-up charges in the amount of \$500. The Breeders' Committee agreed to revisit the status and results of the data collected at the next Breeders' Committee meeting at IWSCA 2007. [For the Committee's and Board's information, on May 17, 2006, IWSCA Treasurer Michelle Cummings informed me that the dedicated thyroid-specific auction proceeds as of that date amounted to \$3,450.] Should the Committee, with the approval of the Board, decide to proceed with a formal study in 2007, the Committee agreed that individuals would be reimbursed for their costs expended during this initial data collection period. Also, additional fundraising efforts could be undertaken to further underwrite the Study.

## Scope of Study:

### From the August, 2005 proposal – Dr. Dodds then suggested that:

- “A reasonable number of samples would be at least 200 healthy IWS dogs of varying ages and both sexes -- females not in estrus, coming into estrus, pregnant, or lactating.” *As collecting that number of samples may be difficult in such a small breed, we will do our best to collect as many samples as possible with the aforementioned numbers to be used as our goal.*
- “The cost of retrieving cumulative breed data should be minimal, as you just need a person to keep track of it as the samples come in and then make simple statistical calculations on the data. We do this for specific breed clubs all the time. It would be about \$500.00 -- as a donation.” *(I have said that I would make that initial \$500 donation to get this Study started – FB)*
- Dr. Dodds suggested “that the IWS Club (IWSCA and/or other IWS clubs) start sending samples on healthy dogs and bitches to us (Hemopet) to perform the new combo OFA Thyroid Antibody Profile which includes TgAA.
- She further suggested that ill dogs' blood samples could also be sent in for diagnostic purposes. Complete data regarding the illness, medications, and other relevant information should be included at the time of submittal. Data from these dogs would be a separate subset of the Study.
- Hemopet “could work out a special package price for the healthy study dogs, e.g. \$85.00 for the combo OFA thyroid profile including TgAA as well as Dr. Dodds' personal interpretive comments pertaining to the expected normal thyroid results for the age, sex, and performance activity of the IWS breed and individual dog. The research data base for these interpretations is unique and patented.” *Each owner would receive copies of their dog's test results as well as Dr. Dodds' interpretive comments.*
- “Our current research project for the Rhodesian Ridgeback Club of America included a per dog cost subsidy from the parent club -- we just billed the parent club monthly for this amount to help offset our costs.” *A similar subsidy with monthly billing could be arranged for the IWSCA/IWS clubs should the IWSCA Breeders' Committee and Board decide to fully commit to this Study.*
- Hemopet would then “do the data tracking and statistics for the club.”
- “All would be strictly confidential, as only aggregate data are released.”

- “Study should run 1-1/2 years, be advertised in the Club Newsletter and web site, or a separate mailing to members.” *As European IWS fanciers have already expressed interest in participating in this Study, we anticipate working with them and posting information regarding this effort to the various IWS e-lists and asking that appropriate informational notices and forms be published in the newsletters of interested IWS clubs in other countries. Also, if the IWSCA commits to undertaking this Study, the Study’s duration should extend an additional year to reflect this period of equivocation.*

- Laboratory data such as that from Michigan State University/MSU thyroid panels are confidential. If we want to include past MSU/similar data in this Study, the easiest way would be for individual owners to forward copies of their dogs’ previous thyroid profile results to Dr. Dodds for inclusion in the IWS database. They would additionally receive her interpretation of that data.

### **Subsequent Changes or Modifications in Scope:**

- Forwarding of results of Dr. Dodds’ /Antech’s/Hemopet’s data to OFA for inclusion in and expansion of their thyroid database for IWSs. *For this Study and for inclusion in OFA’s thyroid database, dogs need not have permanent identification (tattoo or microchip), however, they must have permanent ID for this OFA thyroid evaluation to appear on AKC documents. Also, it is the prerogative of the dog’s owner as to whether they wish to make the assessment publicly available on the OFA web site. That decision will have no effect on either this Study or on inclusion in the OFA IWS thyroid database.*

- Also included would be the examination of submitted samples by the Centre for Integrated Genomic Medical Research for possible DNA markers for hypothyroidism in IWS.

The result of this Study/undertaking would be an official report in research paper format with aggregate data tables and/or histogram graphs like those done by Hemopet in the past for similar studies for other breed groups. This report would be the property of the Irish Water Spaniel Club of America and any other contributing Irish Water Spaniel clubs. It would remain confidential unless the Club(s) agreed to release it. Dr. Dodds may request permission of the participating IWS clubs to reference it at seminars citing things like the number of dogs entered to date, et cetera. In some past studies, similar data has been released to her for scientific publication as needed. No results or other data would be mentioned without the IWSCA’s/IWS clubs’ expressed permission/release.

Respectfully submitted,

Florence Blecher

June 28, 2006

Post Script It is my understanding that the UK Irish Water Spaniel Association/IWSA has expressed interest in and agreement to participate in this Study. Also, a web site is in the process of being set up to make the relevant forms and information readily available to all interested IWS owners who may wish to participate in this Study.

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### **A Short Biography**

Born in Shanghai, China, Dr. Dodds received the D.V.M. degree with honors in 1964 from the Ontario Veterinary College, University of Toronto. In 1965 she accepted a position with the New York State Health Department in Albany and began comparative studies of animals with inherited and acquired bleeding diseases. Her position there began as a Research Scientist and culminated as Chief, Laboratory of Hematology, Wadsworth Center. In 1980 she also became Executive Director, New York State Council on Human Blood and Transfusion Services. This work continued full-time until 1986 when she moved to Southern California to establish Hemopet, the first nonprofit national blood bank program for animals.

From 1965-1986, she was a member of many national and international committees on hematology, animal models of human disease, veterinary medicine, and laboratory animal science. Dr. Dodds was a grantee of the National Heart, Lung, and Blood Institute (NIH) and has over 150 research publications. She was formerly President of the Scientist's Center for Animal Welfare; and Chairman of the Committee on Veterinary Medical Sciences and Vice-Chairman of the Institute of Laboratory Animal Resources, National Academy of Sciences. In 1974 Dr. Dodds was selected as Outstanding Woman Veterinarian of the Year, AVMA Annual Meeting, Denver, Colorado; in 1977 received the Region I Award for Outstanding Service to the Veterinary Profession from the American Animal Hospital Association, Cherry Hill, New Jersey; in 1978 and 1990 received the Gaines Fido Award as Dogdom's Woman of the Year; and the Award of Merit in 1978 in Recognition of Special Contributions to the Veterinary Profession from the American Animal Hospital Association, Salt Lake City, Utah. In 1984 she was awarded the Centennial Medal from the University of Pennsylvania School of Veterinary Medicine. In 1987 she was elected a distinguished Practitioner of the National Academy of Practice in Veterinary Medicine. In 1994 she was given the Holistic Veterinarian of the Year Award from the American Holistic Veterinary Medical Association. She was the Editor of *Advances in Veterinary Science and Comparative Medicine* for Academic Press, and is an active member of numerous professional societies. She was recently a member of the National Research Council/BANR Committee on National Needs for Research in Veterinary Science, which released its report in July 2005.

Today, Dr. Dodds is actively expanding Hemopet's range of nonprofit services and educational activities. The animal blood bank program provides canine blood components, blood bank supplies, and related services throughout North America. Hemopet's retired Greyhound blood donors are adopted as pets through the Pet Life-Line arm of the project. On behalf of Hemopet, she consults in clinical pathology nationally and internationally, and regularly travels to teach animal health care professionals, companion animal fanciers, and pet owners on hematology and blood banking, immunology, endocrinology, nutrition and holistic medicine.

### **Patents**

U.S. Patent 5,196,311	ELISA Test for von Willebrand Factor
U.S. Patent 5,202,264	ELISA Using Multi-Species Antibodies for Detection of von Willebrand Factor in Multiple Species
U.S. Patent 5,486,685	Oven with Food Presence Indicator
U.S. Patent 5,830,709	Detection Method for Homologous Portions of a Class of Substances
U.S. Patent 6,287,254	Animal Health Diagnostics
U.S. Patent 6,730,023	Animal Genetic and Health Profile Database Management
U.S. Patent 9,419,192	Animal Genetic and Health Profile Database Management
U.S. Patent 9,898,193	Animal Health Care, Well-Being and Nutrition

## Some of Dr. Dodds' Publications Available on the Internet

Dodds, W. Jean DVM, *The Immune System and Disease Resistance*

<http://www.golden-retriever.com/dodds.html>

<http://canine-epilepsy-guardian-angels.com/ImmuneSystem.htm>

An incredible resource about immune system and associated health issues which touches on immune system and how it works, hypothyroidism, autoimmune disease in general, viruses, cancer, vaccines, nutritional factors, etc. It includes two comprehensive tables that list factors associated with autoimmune disorders and clinical signs of hypothyroidism. Very highly recommended.

Dodds, W. Jean DVM, *Autoimmune Thyroid Disease: A Common Problem in Purebred Dogs*

<http://canine-epilepsy-guardian-angels.com/ThyroidDisease.htm>

This article discusses specific recommendations and intervals for thyroid health screening, type and frequency of treatment, as well as clinical signs of hypothyroidism.

Carson, Joanne PhD, Thomas, W.B. DVM, Dodds, W. Jean DVM, *The Connection Between Low Thyroid and Seizures: An Interview with W. Jean Dodds, DVM by Joanne Carson, PhD with Comments by W. B. Thomas, DVM*

<http://canine-epilepsy-guardian-angels.com/InterviewDrDoddsandJoanneCarson.htm>

An overview of hypothyroidism. An interesting article in a format of QandA.

Dodds, W. Jean DVM, Aronson, Linda P. DVM, *Behavioral Changes Associated with Thyroid Dysfunction in Dogs*

<http://canine-epilepsy-guardian-angels.com/behaviorandthyroid.htm>

Published Study: 77% of dogs with seizures are Hypothyroid. This article also describes behavioral changes common in hypothyroid dogs, such as unprovoked aggression towards other animals and/or people, sudden onset of a seizure disorder in adulthood, disorientation, moodiness, erratic temperament, periods of hyperactivity, hypoattentiveness, depression, fearfulness and phobias, anxiety, submissiveness, passivity, compulsiveness, and irritability.

Dodds, W. Jean DVM, *Thyroid Can Alter Behavior*

[http://canine-epilepsy-guardian-angels.com/bizarre\\_behavior.htm](http://canine-epilepsy-guardian-angels.com/bizarre_behavior.htm)

As published in Dog World Vol. 77 No. 10, October 1992, this article describes possible connection between strange behavior and hypothyroidism.

Dodds, W. Jean DVM, Dr. W. Jean Dodds *Non-profit Research Study*

<http://canine-epilepsy-guardian-angels.com/DrDoddsInstructions.htm>

This article includes specific instructions for several tests including hypothyroidism test. It had Dr. Dodds contact info. She is very willing to help or answer questions – personal observation.

Dodds, W. Jean DVM, *Information form to be included with blood sample for non-profit research study.*

<http://canine-epilepsy-guardian-angels.com/DrDoddsInfoForm.htm>

Self explanatory, test order form. Includes current prices for certain tests. Other tests are available as well – call the lab for specifics.

**The information included above was obtained on the Internet from various sources. Some material may be dated and therefore the contents may not be up to date. Please consult with Dr. Dodds' office directly regarding any specific concerns or questions.**

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