

SYSTEMIC LUPUS ERYTHEMATOSUS (SLE)

By Jo Tucker

SLE is a multi-systemic autoimmune disease that can affect many parts and systems of the body. Reaching a diagnosis of SLE is not always straight forward as it can mimic many other conditions. The earlier a diagnosis is achieved and appropriate treatment given, the better prognosis for the dog. The longer this disease is left without immunosuppressive treatment the more body systems are likely to be affected, and this reduces the chance of a good recovery. Symptoms of SLE are categorised into major and minor signs.

Major signs can be:

Polyarthritis (shifting lameness)
Blood abnormalities - anaemia and thrombocytopenia (low platelets)
Skin lesions
Kidney nephritis (inflammation)

Minor signs can be:

Inflammation of the heart, lungs & muscles,
Mouth ulcers
Enlarged lymph nodes
Gastrointestinal signs (vomiting and diarrhoea)
Central Nervous System may be affected causing:
Behavioural changes, seizures, and ataxia (staggering)

Clinical signs are extremely varied and not all dogs with SLE will show the same symptoms. An antinuclear antibody test (ANA) is useful in diagnosis but a negative result doesn't rule out SLE.

The dog will normally have signs of pain and stiffness in the joints, and this may be accompanied with anaemia, skin lesions and one or more of the minor signs. The

Vision is the gift to see what others only dream. — Anonymous

dog will show other clinical signs one would expect, such as high temperature, lethargy, depression, lack of appetite, etc. Lung congestion, mega-oesophagus and kidney disease may also be evident. Anecdotal evidence suggests that blood tests may show nothing remarkable for many weeks after clinical signs start to show.

A definitive diagnosis may not be achieved, but is sometimes presumed based on clinical evidence and response to treatment. Knowledge of breed predisposition and family history could be beneficial in obtaining a diagnosis.

Immunosuppressive treatment with Prednisolone is usually given and may be used in combination with a cytotoxic drug such as Azathioprine. A dog on immunosuppressive therapy should be prescribed a gastroprotectant, such as Ranitidine, to protect the stomach from excess acid produced by high doses of steroids. Drugs will be gradually reduced over a period of months depending on the dog's response to therapy.

Dogs can have periods of remission and relapse. Once remission has been achieved, anecdotal evidence shows most dogs with SLE fair better if they are kept on a low, every other day dose of immunosuppressive drugs. The prognosis for SLE is guarded but many dogs can go on to lead a full and active life.

"The sea is dangerous and its storms terrible, but those obstacles have never been sufficient reason to remain ashore...unlike the mediocre, intrepid spirits seek victory over those things that seem impossible....it is with an iron will that they embark on the most daring of all endeavors....to meet the shadowy future without fear and conquer the unknown."

**Ferdinand Magellan
explorer (c. 1520)**

L I G H T I N G T H E W A Y



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In Memoriam Mia Sedgwick

**A True Friend of Beardies
by Chris Walkowicz**

Mia visited the California specialty where she met many of her fellow Bearded Collie lovers – and was able to meet and go over many Beardies. She loved learning about the breed and, knowing Mia, she loved every one she went over! Unfortunately, we missed that National, but I was invited to judge at the Bearded Collie Club of New South Wales. Mia immediately sent us an invitation to stay with her, and I looked forward to meeting her. When we landed, I had no idea what she looked like, and she had been sent to the wrong terminal, so we had a few tense moments, landing in another country with no way to contact her. While I sat with the luggage, Ed started walking around “accosting” women who looked like we imagined a Bearded Collie person might look like! Finally, he made connections, and we were off for a short tour of Sydney before crashing at her house after the 25 hr. trip over the pond.

Mia and her partner, Mick Heppleston, were great hosts and so much fun. Mia had tours of all the local interests planned for us. We visited the Blue Mountains (beautiful) the day the big fire swept through the area. She wanted us to have a good time, but allowed us to rest and chat too. Mick enjoys car racing and rebuilding cars, so he and Ed had some good talks, plus other “manly” sports and non-doggy talk while Mia and I talked all hours about Beardies. While she was very interested in conformation, her great interest was in health of the breed. Mia was a retired nurse (due to an automobile accident she’d been in), and so her medical knowledge was great.

Besides her love for her Beardies, the breed, Mick, and her sister Averil, she adored books. I thought I had a lot of books! I think she’d kept every one she ever got. I found old favorites on her ceiling-high shelves. Of course, the obvious hostess gift was a selection of my books. I also enjoyed meeting her beautiful Beardies (Misty, Rummy, Sprite – missed meeting the newest pup, Lyric), especially that hunky brown boy Rummy (since I’d just lost my ALF) and getting a daily Beardie fix!

She had another love, and that was her dream house she and Mick were building on acreage in Bungonia. She took us down there one day and excitedly showed us where everything would be. When they moved in, I was able to picture her sitting in her office, walking the grounds with her Beards, or choosing a book among the many in her library. A booklover’s dream that room, wall-to-wall, ceiling high shelves.

A nice lady, described with adjectives that didn’t really describe her: efficient, enthusiastic, deeply caring, humorous, a glass half-full person. I’m glad I knew her and counted her as a friend. She is a loss to the breed, her friends and family and to BeaCon.

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Presidential Reflections

By Elsa J Sell

As Chris has written elsewhere, Mia’s energy, enthusiasm, and humor will be sorely missed by BeaCon. Mia was disappointed in the very limited participation in our open health registry by Beardie owners and breeders. We sincerely hope that her disappointment can be translated into action by your participation in the registry to honor someone who cared so deeply about so many aspects of the breed.

Confused about whether you are in BeaCon’s open registry or not?

You remember you participated in something related to health, but aren’t sure what. The following should help:

- There were 2 confidential health surveys by the BCCA – early and mid 90’s. Those surveys were closed at completion and the data were not transferable to any other health system due to confidentiality and original design of the surveys.
- CHIC (Canine Health Information Center) is a program for parent clubs that requires certain screening health tests be done but not necessarily passing. Information is not interchangeable between CHIC

and the BeaCon registry. Learn more about this at:
<http://www.caninehealthinfo.org/>

- BeaCon conducts “mini-surveys” periodically. Topics have included fear of sounds, general information about Beardie households, symmetrical lupoid onchy-dystrophy, and the open health registry.

Mini-surveys do not identify owner dog, and no contact information for the owner is obtained.

Mini-survey data remain with that survey and do not become part of the open registry.

- BeaCon’s open health registry began in July 2000. Owners of dogs living when entered into the registry or living when last updated receive a yearly notice in the spring that is time to update again.

- The last 2 years, notification by e-mail or snail mail has included a username and password to access the on-line data entry system.

- You can go to this URL, enter your username and password, and view your information in the database. http://www.beaconforhealth.org/previous_registry_log.htm

- You may send me an e-mail or letter to ask if you and your dogs (please give their names) are in the open health registry.

Attitude is a little thing that makes a big difference.
Anonymous

Why people haven’t participated in the open health registry results from the mini-survey

Reason. I thought it was only for breeders.

Fact. The registry is for everyone – breeders and non-breeders, dogs who are pets, work, do performance or conformation.

Reason. Dog is a rescue.

Fact. A dog must have a known sire and dam to be in the registry. So a rescue with known parents can be in the registry.

Reason. Wasn’t sure if I had already entered information.

Fact. See previous section.

Reason. Thought dog had to be registered.

Fact. Registration is not a requirement for participation in the registry

Reason. It is daunting to do the work and get all the information on puppies I have bred.

Fact. Owners and co-owners are the only persons who can submit information to the registry. A breeder needs to contact their puppy buyers if they want those offspring in the registry. A breeder can record under a dam’s record if she produced certain diseases and with what sire – but not the names of the pups.

A breeder who wants to enter their own dogs but has a lot, might start with the youngest ones, then gradually add the older ones, then the deceased dogs. If you leave out some who have health problems that others then ask us about, we’ll refer them back to you to discuss why those dogs weren’t put in.

It is doable. Doing it depends on your willingness to put forth the effort and to have others know about your kennel's dogs.

Enter your puppies in the registry once buyers are matched to pups. At that time you are owner and you can do this. Explain the registry to future owners, and let them know they will be contacted for yearly updates. We'd like to see around 40 litters in the registry for long term follow up.

Reason. Worried that all can see information on every dog.

Fact. This is true if someone buys the registry book. After all, the purpose of having a collection of publicly available health data is to inform others of wellness or health problems.

If this referred to someone else being able to see info in the database, that is not possible with the security built into the system.

Later this year, it will be possible to search and study the database on-line, separately from entering data. This will be available to both registry participants and non-participants.

Reason. Names aren't protected.

Fact. This is true because the "open" in the title of the registry means a publicly available resource.

Reason. I would need to be assured that the information I submit is kept confidential.

Fact. Confidentiality is not a component of BeaCon's open health registry. Breeders cannot learn about where wellness or health problems exist if information is kept confidential. If you are concerned about someone in BeaCon looking at your data and telling others about it, kindly read our Code of

Ethics online. Unless a new or potentially serious health problem is reported, directors do not discuss content of the database.

Reason. I want to see the information kept by a non-Bearded Collie person.

Fact. Frankly, I'd like that too. It is impossible financially. If those who hold this objection would like to step to the plate and donate up front the tens of thousands of \$ needed long term to maintain the project outside BeaCon – you are welcome to do so.

Reason. I thought it was only for dogs with health problems.

Fact. Healthy dogs are very important. It tells breeders what mates are producing healthy dogs. Also, when enough dogs including health ones are in the registry, frequency of disease can be determined.

Reason. Online data entry was difficult and I got bumped off several times.

Fact. That occurred July 04 while we were locating a reliable ISP to support the MS Access database.

The new system being designed now will be easier to use than the previous set of forms. The ISP we have been with since mid-July 04 has been very reliable.

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A final observation about the 'registry use' survey. Some people suggested access to the open registry information be FREE. If BeaCon were well endowed, it could be free. However, our budget is very limited. It costs \$28-\$40 just to print the registry book. Hundreds of volunteer director hours and

donations from many individuals, some regional Bearded Collie Clubs, and other organizations bring you what is available free. Regrettably, not everything can be free.

As President John Kennedy said: "Ask not what your country can do for you, but what you can do for your country." Just substitute the word "Beardies" for "country".

Attention

Help in Research on A/I disease. If your Bearded Collie has one of these diseases, you may be able to contribute to the following research.

E. Sell

"We are trying to support the work of Wayne Potts at the University of Utah on our Malamute Health web site. He needs DNA samples from dogs who have hemolytic anemia, autoimmune thyroiditis, or diabetes. The scientific description of the study and the consent form are on the web site at:

www.malamutehealth.org/grant305.htm

For those who, like me, are not sure, Autoimmune thyroiditis must have been diagnosed on a complete thyroid panel with one or more elevated thyroid autoantibodies (whichever one(s) the particular lab is using). — Editor

Follow Up On Elbow Dysplasia Linda Aronson, DVM

In the spring 2004 Newsletter, I reported on a Bearded Collie that had received a mild elbow dysplasia rating from the

Orthopedic Foundation for Animals (OFA), despite no evidence of dysplastic or arthritic changes when examined by an orthopedic veterinary specialist. He suggested that the rating was based on an enlargement of the olecranon, the bony point of the elbow. This was not indicative of dysplasia, but the result of increased bone mass in response to stress as the Bearded Collie was involved in several performance sports. He reported having seen this in other performance dogs, especially those of herding breeds.

A correspondence with dog trainer, Shirley Chong, may shed further light on this matter. This is what she wrote: "I had a GSD bitch whose OFAs came back hips Excellent, elbows DJD grade I. She never had any symptoms. I had heard that the OFA's rulings on elbows were suspect so I hadn't made up my mind about breeding her. Unfortunately she died at 3 1/2 years old. Because she was so young when she died, I took her to the teaching hospital at Iowa State University for a necropsy. As an aside, I explained about the OFA elbows thing and asked them to check out her elbows (in addition to figuring out the cause of death). The results? Her elbows were "textbook perfect."

I was *steamed*. So I called the OFA and ended up talking to Dr Ed Corley who was the head of the OFA at the time (may still be). He explained that if the vet had not flexed her elbows as far as possible, they would come back as DJD grade I. I was rather cutting when I suggested that if they couldn't tell the difference between a positioning error and degenerative joint disease, they should SAY SO in their explanatory notes.

Apparently they didn't listen to me because I've heard of the same thing happening a bunch of times since then." Shirley went on to describe how the owner of a Belgian Tervuren with an OFA rating of DJD grade 1 had the bitch's elbows CAT scanned and the scan sent to several orthopedic specialists around the country, all of whom said that her elbows were absolutely normal. The CAT scan offers far greater detail than an X-ray and in these circumstances may be considered the gold standard.

A possible explanation for the erroneous results was offered by Shirley's vet who pointed out that her Tervuren, Hunter "is so heavily muscled that if he stiffens up it feels like he's bending all the way but he really isn't. He was just excited and he's so strong that he can out-muscle the person positioning him. A light sedative took care of that little problem."

When positioning a dog for hip X-rays the knee caps (patellas) indicate whether or not the legs are positioned correctly, but there is no such landmark when positioning a dog for elbow X-rays, and if they are not fully flexed the OFA verdict may be wrong. The Beardie mentioned in the Spring 2004 article, was not sedated/anesthetized for his elbow and hip X-rays. The elbow X-rays will soon be retaken with him sedated. I know that we all like to avoid using drugs wherever possible with our dogs, but as Shirley says: "I can fully flex Hunter's elbows but then he's relaxed with me, in his familiar environment for such manipulations (my bed), etc. As I understood it from my vet, Hunter was not being uncooperative or struggling but was definitely excited,

thumping tail, trying to kiss the person positioning him, etc, and my vet strongly suspected he wasn't flexing all the way. A little sedation was administered and all was well."

Beardies are usually high energy, high drive dogs and they tend to take longer to induce than some other breeds. They also, when active, should have less body fat than many dogs. As a result, vets have a tendency to overdose them. This happened with the Beardie boy when his preliminary hip X-rays were taken, and his owner wanted to avoid the long recovery time when his adult hip and elbow X-rays were taken.

The take home message would seem to be that the Beardie needs to be fully relaxed when elbow X-rays are taken for OFA. Discuss this with your vet. I have found that reversible sedation with medetomidine (Domitor) works very well provided you give it time to take effect, and don't rush to give the full dose by weight to the Beardie athlete.

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Genes Underlie Behavior

(Taken from Science, vol 307, January 1, 2005, p 31-2, Elizabeth Pennisi).

By Elsa Sell, MD

Several techniques are being used to identify specific genes or genetic sequences that are involved in some behaviors. Honey bees have been studied to understand the difference between becoming a "nurse" or a "forager". One research group identified a hormone produced by the queen bee that shifts gene expression toward the nurse profile, possibly by suppressing the

forager gene. Another group identified a hormone that sifted about half the genes to a forager-like direction.

Mice have the ability to recognize another mouse and to react in a friendly or unfriendly manner. When manipulations were done with the 4 proteins known to be involved in social recognition, it didn't matter which of the genetic defects were tested – the outcome was the same. The mutant mice with a genetic defect couldn't tell a familiar mouse from a stranger and were no longer worried about newcomers.

A McGill University researcher has found a "promoter" regulatory region to be pivotal in the relationship between parents and offspring. Their team showed that when a mother rat fails to lick and groom her newborn pups, those pups grow up timid and abnormally sensitive to stress. It has been learned that a biochemical process happens where DNA sequences are modified and those in turn suppress a gene activity. It was discovered that in mice, a mother's behavior alters this chemical process of the promoter for the gene of a chemical receptor (namely, glucocorticoid) in the offspring. In the brain, this receptor protein helps to offset the cascade of gene expression that underlies the stress response.

Before birth, the biochemical process to alter the gene promoter does not occur. In mice neglected by their mothers, the promoter is chemically altered soon after birth. This chemical change causes less of the receptor to be produced; the result is anxious animals.

A research team is now following 200

mothers and their children to look at the interplay between maternal care and activity in key genes of the offspring.

What does all this have to do with Bearded Collies? Well, among the more common problems in Beardies is fear of loud sounds, and other fear problems. No one really knows why this occurs in many cases. For some dogs, hypothyroidism is associated with fearful reactions. Otherwise, it has been speculated that perhaps exposure to the modern noisy environment (vs. a relatively quiet farm of 100 years ago) may play a role. Now one can also wonder if maternal behaviors (or lack thereof) have an influence alone or in combination with other "causes".

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Stress, Drugs and Immunity

By Linda Aronson, DVM

The immune system is an interactive network of cells and proteins designed to protect the body from pathogens in the environment, parasites, malignant cells, allergens and toxins. The system has specific and non-specific moieties to protect and serve. The latter includes the barriers of skin and mucous membranes, non specific Natural Killer (NK) cells that destroy anything that isn't self, phagocytes – cells that engulf and neutralize anything alien and various chemical defense mechanisms. Other cells are produced in response to a particular invader. In the blood we circulate antibodies (immunoglobulins) produced by B cells that neutralize specific viruses and toxins. Together with "complement" proteins they also destroy and clear out invading bacteria.

The bone marrow makes large macrophages – big eating machines - and B cells, while the thymus gland in the neck produces T-cells (there are three types, one turns on B-cells, another turns on the third type of T-cells the ones that destroy virus and tumor infected cells). Like any army, the immune system needs to coordinate and communicate, and it does so through hormone like substances called cytokines – including interleukins (ILs),

Special Thanks

Everyone connected with BeaCon would like to recognize and thank certain people whose help and contributions have been invaluable.

Robbie Howie who has arranged printing of BeaCon's open registry book in the UK for Jo Tucker. His interest in Beardies shows through in the work he has done to turn out the registry.

John Wilkins who's cheerful contributions of his cartoons have improved the content of our newsletter immensely.

CJ del Valle whose tireless fundraising efforts have helped make it possible to pay the bills. We all know Cj and her special helper Giselle and appreciate both of them.

interferon (INF) and tumor necrosis factor (TNF). Psychological stress causes sleep disturbances, decreased appetite and delays wound healing. Restraint, isolation and physical manipulation are very stressful to animals. Unfortunately, going to the vets tends to involve many of these stressful procedures and in an already sick dog may contribute to a worsening of his condition. Vets can help minimize the stress by making sure pets that require hospitalization are kept in adequately sized cages, that floors are dry, the environment is comfortable and clean and at an optimal temperature, noise should be minimized; species kept separately, water and food of good quality and appropriate for the animal's condition provided, and periods of light and dark maintained so that the dog's normal patterns of rest and sleep aren't disturbed. Many vets will provide Dog appeasing pheromone diffusers, pheromones mimicking those produced by bitches when they nurse their puppies, and which calm and comfort many agitated dogs. Owners who have trained their dogs to accept all manner of handling and have them crate trained while they are healthy can help minimize the stress their dog experiences when being examined or hospitalized. Physical stress – surgery and trauma – as well as psychological stress result in suppression of the immune system.

As we might expect surgical trauma causes a reduction in the immune response, however - beyond the physical stress, the psychological stress and the pain often present before but also involved in the surgery - anesthesia itself causes immunosuppression. These multiple stresses to the system can lead to postoperative problems – hypother-

mia, low blood pressure, increased pain, sleep difficulties, impaired respiration, increased cardiac demand, gastrointestinal problems – ulcers and/or loss of normal motility - as well as loss of appetite, weight loss, delayed healing, infection and growth of malignant tumors.

Controlling pain before, during and after surgery is of paramount importance. It has been shown that the more pain an animal experiences, the more likely that any tumor present will metastasize. Most effective in blocking endocrine metabolic responses is the use of analgesics applied to nerves serving the surgical site – nerve blocks, spinal and epidural anesthesia. Local/regional anesthesia can abolish surgical stress. Maintaining the block post surgically can further reduce immunosuppression and speed healing. Opioids and non steroidal anti-inflammatory drugs (NSAIDs) have little effect in reducing stress at recommended doses, although they do reduce inflammation, which infiltrative anesthetics do not affect. Some immune cells however, have opioid receptors; and T and perhaps B cells can produce opioid immunopeptides – beta-endorphin, enkephalin and dynorphin. Local application of opioids is far less likely to produce immunosuppression, and can be very helpful in treating such conditions as arthritis.

Other preoperative strategies that may help reduce surgical stress are a single dose of glucocorticoids; in patients with heart disease beta blockers are helpful; adequate nutrition, especially feeding carbohydrates, may stop the body breaking down muscle and other tissues.

Hypothermia is a threat to surgical patients on several fronts. Immunosuppression makes the body more susceptible to bacterial infections. Blood vessels constrict near the skin, and reduce blood flow that is needed for repair of damaged tissues and further decreases the activity of local immune defense factors. Neutrophil – white blood cell – function is compromised so they are less effective at eliminating bacteria, the production of cytokines and reproduction of T cells is also reduced. Even a central hypothermia of 1.9°C tripled the incidence of surgical wound infections in one study. Lowered blood pressure, as a result of blood loss and various anesthetic agents, further exacerbates these problems.

The longer the animal is anesthetized and surgery lasts, the greater the risk of infection of the wound and respiratory infection. One study showed that in surgeries lasting less than an hour, the concentration of B and T cells took about 7 days to return to normal, but for longer surgeries the return to normal took significantly longer.

Because of the immunosuppression produced by anesthesia and surgery, vaccinations should not be given at the time of surgery, and elective surgery should be delayed at least 3 weeks after vaccination. This must obviously be weighed against further stress when dealing with wild or feral animals, but in the domestic dog there is no medical excuse to vaccinate an animal at the time of surgery. This practice can not only diminish the immune response to and efficacy of the vaccine, but is more likely to result in anaphylactic (allergic) reaction, thrombocytopenia (lowering of platelets and risk of bleed-

ing). Anaphylactic reactions are often fatal, and may be delayed up to 48 hours. Modified live vaccines (MLV) are particularly associated with thrombocytopenia, which could obviously be dangerous and lead to excessive post operative bleeding and other complications. The use of NSAIDs and some other drugs could worsen these complications. Dogs with undiagnosed von Willebrand's disease or hemophilia would be at particular risk. MLVs may also induce a mild viral infection, fever, anorexia and lethargy, all of which would be more serious in the post surgical patient.

Similarly, elective surgery should never be performed on dogs that are sick. In the case of emergency surgery all efforts must be made to reduce both surgical and psychological stress in the debilitated animal. While there has been some disagreement between various studies, there is evidence that anesthesia and surgery do make metastasis, particularly to the lung, of tumors more likely. Because morphine decreases natural killer efficacy there may be increased growth of tumors post surgically if opioids are used for pain relief. However, even worse is providing no pain relief as this really promotes tumor growth.

Surgery, even simple tooth cleaning and other minimally invasive practices, is not to be taken lightly. At some time or other most of our Beardies are going to have to be anesthetized and I hope that this article has clarified why we need to look at the general health of a dog – including looking at the CBC and biochemistry profile – before we consider elective surgery. Because of the immunosuppression we need to bolster

the dog's natural immunity, and antibiotics may be started even before surgery begins. Always make sure your vet knows about any medical conditions your dog has, because this may affect the choice of appropriate drugs to use for anesthesia and pain relief. Make sure your Beardie is given pain relief; he will heal better and faster. Never agree to vaccinations being given at the time of surgery. Most important of all, before your dog ever needs surgery, make sure he is comfortable with different situations and being handled by strangers. Make sure he is used to being crated. If you do this you will have done your best to ensure his well-being when he is sick, so that he can come through medical procedures and surgery with minimal stress and a much healthier immune system to speed his recovery.

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DR. GEORGE PADGETT

By Chris Walkowicz

A true friend of dogs died in December, 2004. Professionally, Dr. Padgett was a professor of pathology at Michigan State University. But he was much more to fanciers and the breeds they love. He frequently gave lectures and also wrote about canine genetics. His acclaimed book, Control of Canine Genetic Diseases (New York: Howell Book House 1998), stressed breeder responsibility. He repeatedly said there was no shame in producing a defective dog...that the shame lay with those who denied defects. His belief was that every dog likely carries five or six defective genes.

He said, "The only way we are going to

do anything with genetic disease is to make information generally available to breeders. You have to know which dog has the genes for what disease. It's as simple as that. Even as we develop more and more DNA tests, we still have to make that information available to the people who are choosing which dogs to breed and buy."

Dr. Padgett believed that open registries would help improve the future of dogs and the people who own, breed and love them. The advantage of open registries would be to discover which dogs are carriers so that they could be bred to those that are clear of the defect.

"We need to quit whispering about defects, and gossiping about defects, and instead set up a sound program that allows the standard selection procedures to go on so that we breed good dogs and avoid major defects."

Dr. George A. Padgett

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Herbs and Foods and Drugs, Oh My

By Linda Aronson, DVM

We all want to do the best by our Beardies. The trouble is there is so much advice – much of it contradictory – extolling the virtues of this and the dangers of that until it makes our heads spin. We have to apply a lot of judgment as to the reliability of the source, and we all know that one day something is the salvation of health and the next it's going to kill us. The recent controversy over the value of Vitamin E comes to mind. Too often I see people scrambling to give their dogs all the things that will help them, and while I commend their zeal, I would like to

suggest more may not be better. Often these different additives can have a negative effect on one of the other ingredients in these super diets. We are what we eat, and some of the things we eat get along about as well as rival football fans.

Most people consider herbs benign, but in a previous issue I have pointed out this is not always the case. If we mix herbs, there can be hidden effects that are anything but benign, and sometimes foods and herbs can have major effects on the efficacy of drugs. One you may have heard of recently is that St John's Wort reduces the efficacy of oral contraceptives. The outcome may not always be what we wanted.

The reason for many of these interactions is that the body has only so many ways to metabolize the foreign materials ingested be they food, drug, medicinal herbs or passing flies. One of the most overused enzymatic systems is the cytochrome P450 pathway. Drugs metabolized by this pathway can have many functions – certain immunosuppressants, antibiotics, anti-epileptics, steroids, antidepressants, cardiovascular drugs and cancer drugs pass through this enzyme pathway. Some drugs are broken down for clearance from the body, while others are given as "pro-drugs" which are broken down by the enzymes in the pathway into active forms. Anything ingested by the body that is metabolized through the same pathway will have to get in line to be broken down. This means that the levels of drugs may be widely influenced by other substances consumed around the same time. Some substances increase enzymatic activity, while others slow it to a crawl.

Some drugs have a very narrow concentration range in which they will have their maximum effect while producing minimum side-effects – the therapeutic index. Increasing the activity of the various enzymatic systems potentially decreases the plasma drug concentrations of those drugs broken down in the pathway, while increasing the concentrations of drugs activated by it.

St. John's Wort is probably one of the best studied herbs in this regard. Drug levels that are reduced and less likely to produce the desired therapeutic response when given with St. John's Wort include antiretroviral drugs, coumarin anticoagulants, cyclosporine (immunosuppressant), benzodiazepines (valium etc), digoxin, amitriptyline, theophylline (bronchodilator), anticonvulsants, drugs that reduce blood lipid levels and opioids, whereas levels of selective serotonin reuptake inhibitors – such as Prozac and Paxil – are increased and may lead to serious side-effects. Given that St. John's Wort might be taken for some of the same reasons as several of these drugs, there is an obvious risk here.

Other commonly used veterinary herbs that may interfere with this pathway include silymarin, the active ingredient in milk thistle. This suppresses the activity of the cytochrome P450 enzymes and interferes with the conversion of proto-drugs into the active form. Garlic metabolism produces substances that irreversibly bind with one enzyme in the cytochrome P450 pathway that is needed to break down inhalant (gas) anesthetics, and prolongs anesthesia. Ginseng and licorice also alter activity in the pathway.

Cruciferous vegetables like broccoli increase activity in the pathway as do black and green teas – due to their caffeine content. Apiaceous vegetables – carrots, parsley, celery and fennel – decrease cytochrome P450 activity.

Grapefruit and grapefruit juice are often listed as not to be taken with certain drugs. These produce long term inhibition of intestinal cytochrome activity. This can only be reversed by production of new enzymes; repeated juice intake amplifies the process. As a result grapefruit juice increases the uptake of many drugs and can lead to overdose or at least adverse reactions. However, proto drugs are not converted to the active form and are less effective or ineffective. As yet there has been no report on whether grapefruit seed extract – popular now as an antiparasitic and antimicrobial – might produce a similar effect, but stay tuned.

At present the study of interaction between foods, herbs and drugs is in its infancy and we learn as much by trial and error. Always be very aware of any negative change in your Beardie's health following the addition of a new ingredient to his diet or supplement regimen. Carefully read warnings on any drugs he gets for foods and other things to avoid, and when you do add something new, take your time to make sure it is well tolerated and not causing problems.

The greatest discovery of any generation is that a human being can alter his life by altering his attitude."

William James

In the Spotlight Meet the Director

Jo Tucker

Jo Tucker, our Director from the UK, has had Beardies for 17 years and has had dogs almost her entire life. She was brought up with many dogs and they played a big part in her childhood. Her dad bred Irish Setters and showed them in a small way. He adored dogs and was very proud to have owned and bred Truce, his Kerry Blue Terrier, during the time they were establishing the breed in Kerry in the 1920s. Bonnie was her first Beardie and joined their family when her youngest child was 10 years old. They had intended to get a 'pet' Beardie, but when Bonnie was six weeks old, her breeder said they couldn't have her unless she was shown. When they picked her up at 8 weeks of age she ran straight up to Jo and jumped on her lap. Bonnie knew she was coming home with them! That's when they got hooked on Beardies. Jo currently has two Beardies at Padimor. She does not consider herself a breeder (she has bred 2 litters in the past), has exhibited in conformation and is currently sharing the wealth of those Beardie kisses and charisma through pet therapy.

Jo is a great fan of pet therapy. Her Chester was a big 'woosie' and he adored going to the old people's home. He would sit in front of every elderly person in turn and allow them to pat and stroke him, and then wait for his biscuit. When he had eaten it, he would move on to the next person and the whole process would start all over again. He brought back so many lovely memories of the dogs they had once loved. Chester was the epitome of a

gentleman-Beardie, his manners were impeccable!

Jo currently works 4 hours a day in the Library, and at the Reception, of the Learning Resource Centre at Middlesex University, North London, UK. She provides information to the students who come from all corners of the world to the University. She sometimes seems to be a surrogate mother to some of them. Some of the young lads she works with call her "Mum"!

She also shares her furkids with her husband, three grown children and two grandchildren, who are just as passionate as she is about the breed. Her children showed the dogs in Juniors at one time. Jo is a member of three UK clubs and for seven years served as Editor on the Committee of the SCBCC.

When Jo was asked why she joined BeaCon, she answered, "Primarily the reason for me joining BeaCon is because I am a lover of the breed and, as all Beardie lovers should, I feel dutifully concerned about Beardies' health and well being. I have been working to broaden the awareness of autoimmune disease in the dog, in the UK, for a number of years, and promoting the benefits of BeaCon to UK Beardie owners seemed an opportunity too good to miss."

She feels that the Open Registry is very important for the future of the breed. Jo feels it is important to protect the good health that Beardies enjoy and to avoid incompatible matings if at all possible. If a particular mating produced too much white coat, or pups with high tail carriage for example, when the breeder came to mate again

they would take these genetic defects into consideration and avoid pairing their bitch to a dog that also carried these unwanted genes. The same is true with inherited disease. In the absence of DNA testing for inherited diseases, knowledge, honesty and careful planning is the best policy and the Open Health Registry can assist the breeder to make informed decisions.

Jo knows the heartbreak of autoimmune disease personally. Having bred a litter of 8 healthy Beardie pups, from seemingly healthy parents, and subsequently the mother and 6 from the litter going on to develop autoimmune disease, she realized that sound knowledge and awareness of health issues are vitally important to the future health of any breed. She believes if the Open Health Registry had been available 14 years ago, when she planned her first litter, she would have done things differently and maybe could have saved a lot of suffering to the dogs and distress to their owners. There is more information available to breeders now and so much more documented, genetic health history of the breed.

Like all the other BeaCon directors, Jo is concerned about Beardie health and decided she could best help by joining the tour de force two years ago. She is part of Canine Immune Mediated Disease Awareness (CIMDA) which Jo formed five years ago. CIMDA provides support and information about autoimmune disease for dog owners and breeders of all breeds. Autoimmune disease is showing in so many different breeds, maybe because vets are able to diagnose it more now than in the past. When a dog is diagnosed with an autoimmune disease many

owners say they feel as if they are on their own, as if they are the only one who has a dog with this problem. All of a sudden they are thrown into a regime of essential, often life saving medication for their dog and are on a steep learning curve in order to manage their dog's condition. They take comfort in being able to contact dog owners who understand how they feel and learn by the experience of others. Awareness of autoimmune disease and support for the owners of affected dogs can avoid unnecessary suffering for all concerned.

She encourages Beardie owners with questions about health, BeaCon or the survey to contact her for information. People are invited to do this by phone, e-mail, letter or at shows and fun days. In other words, any time, anywhere! She is quite active in spreading accurate information about autoimmune disease for dog owners of all breeds. Beardies are not the only dogs with these problems, but simply the ones we love most! Jo feels that breeders and show owners who do not acknowledge genetic health problems – especially autoimmune disease – are the biggest problem in Bearded Collies today.

Her final comment on the purpose of the open registry is: “The mating of pedigree dogs is determined by human selection not natural selection, therefore the genetic make-up of the pups is the responsibility of the breeders, e.g. owners of the bitch and stud dog. Mating in ignorance, (unaware of genetic defects in their line) or mating with arrogance (knowledge of genetic defects but ignoring the facts and breeding regardless) can exacerbate inherited disease. A comprehensive Open

Health Registry can provide valuable information. It's not a perfect selection tool, but it is a lot more than previous breeders have had. Anyone who breeds a litter of pups is creating a genetic base for future generations, and that is an enormous responsibility. Any tool that assists wise mating decisions must be beneficial to the future welfare of the breed. The Open Health Registry is not an assurance certificate but it does attempt to be open and honest, and to assist the breeder and the potential puppy owner to make wiser breeding and purchasing decisions. The more owners and breeders who participate in the Open Health Registry, the more comprehensive and valuable the tool.”

With her job, as well as enjoying her family and dogs, Jo still finds time to read, pursue her passion for touring car racing and still smell the flowers.

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Product Warning Colloidal Silver Products By Linda Aronson, DVM

A lot of people recently seem to again be extolling the benefits of colloidal silver products as safe antibacterials. However, evidence is accumulating that they are anything but. Claims for their miraculous powers tout them as everything from essential mineral supplements to cures for cancer, diabetes and every known infection. Colloidal silver products consist of a mixture of silver nitrate, sodium hydroxide and gelatin. There is no quality control and these products are being hawked for people and animals with no concern for safety. DIY kits are perhaps the most dangerous, but there is no consistency

in concentration of products marketed as colloidal silver, nor any scientific basis for recommended dosing. Research has shown that silver accumulates throughout the body especially in the skin, liver, spleen and adrenals but also in the brain and muscle tissue. If there are inflamed or damaged mucous membranes silver absorption increases. Silver accumulated in the subepithelium can cause a permanent, irreversible blue gray discoloration of the skin.

Brain deposition has resulted in epileptic seizures and coma after daily ingestion for 4 months - despite most manufacturers claiming daily ingestion is safe and protects against pathogens. The manufacturers claim bacteria can't develop resistance to silver, and this has also been disproven. In fact, it has never been shown that bacteria are killed or even slowed down by colloidal silver in living creatures, and it is likely that even if they are, they are likely to become resistant quite quickly. This obviously poses even more of a risk to anyone taking the product - not only are they subject to the toxic effects of the silver, but their pathogens will be more resistant to other treatments. Caveat emptor.

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The Complexity of Autoimmune Disease By Jo Tucker

The incidence of autoimmune disease in the dog is increasing in so many different breeds and now seems to be generally acknowledged within different dog communities as an inherited problem.

For many years Beardie owners and

breeders have expressed their concern about autoimmune disease and its familial occurrence. Its inheritance is known to involve more than one gene, termed as a polygenic inheritance. This mode of inheritance makes it impossible to predict which dogs may be likely to become affected or those who are carrier dogs, or indeed, those who are clear of any deleterious genes. This predicament is made even more complicated by the fact that although some dogs develop autoimmune disease when they are young, many dogs are well into middle age before they become affected. This means that some 'genetically affected' dogs are bred from before an autoimmune disease develops, which causes further implications regarding the genetic status of their offspring.

At the moment, the only way of identifying a 'genetically affected' dog is when the dog becomes unwell and is diagnosed with an autoimmune disease, and not before. However, the diagnosis of an affected dog does give some insight as to the genetic status of its parents. It is known that both parents are responsible for passing these deleterious genes on to their offspring. In other words, neither parent of an affected dog is 'genetically clear'. Unfortunately this information does not indicate if the parents will go on to develop an autoimmune disease. If a dog develops an autoimmune disease, it does not mean that its siblings will be affected. Individual puppies will inherit a different combination, sequence, and quota of genes, although in all probabilities, the likelihood of siblings becoming affected may be increased.

Without having a genetic predisposi-

tion a dog cannot develop an autoimmune disease. However, this is not the only factor required for the immune system to become confused and destroy its own body parts or systems, a trigger is also needed. There has been a lot of information written about trigger factors, but this is a subject that can be discussed another time.

It is impossible to identify the good and bad genes of a dog just by its looks and general health status. Before an autoimmune disease occurs most dogs are usually fit and healthy. I must stress that this is not just happening in Beardies, there is a great deal of concern in many other breeds too. The only answer is to have a DNA test which will enable breeders to identify the genetic status of puppies and from a litter retain 'clears' or 'carriers' which can be bred to identified, genetically clear dogs in order to remove the deleterious genes from their breeding stock, and ultimately from the breed. This is a perfect solution which every breeder and dog owner should welcome. Already this sort of work is underway in the USA. UC Davis is currently researching Addison's Disease in Beardies and a few other breeds. New research into all autoimmune disease in Bearded Collies is starting in 2005 at The Royal Veterinary College, London.

Discovering a DNA test for a polygenic condition is not going to be easy but with the completion of the canine genome and advances in human genetics, this sort of research is now very feasible and projects considered previously as impossible are now being undertaken.

Matthew Binns is Professor of Genetics

at The Royal Veterinary College, London and is considered to be among the top animal geneticists in the world. He worked for nearly 15 years at The Animal Health Trust, Cambridge and has headed several teams that have been successful in finding DNA tests for companion animals. He knows Anita Oberbauer, the geneticist heading the Addison's research at UC Davis, and is familiar with the project. Professor Binns has agreed to undertake DNA research into autoimmune disease in Bearded Collies, at the Royal Veterinary College, London.

It is not legal in the UK for blood to be drawn from animals for research purposes only. For this reason the samples will be obtained by means of blood taken at the same time as blood drawn for clinical purposes. At present the research will be restricted to UK and European Beardies. If, at a later date, it's thought beneficial to involve Beardies from the rest of the world then Professor Binns may apply for a special licence to have blood imported or possibly adopt cheek swab tests. Proof of diagnosis, the dog's pedigree certificate and relevant family history, will be necessary and the study will be undertaken in strict confidence.

It is hoped that all the Bearded Collie breed clubs within the UK will actively support and welcome this project. Southern Bearded Collie Aid has already pledged their support and also one of the regional clubs. I hope when the clubs have had time to discuss this at committee, they will all actively support and encourage their members to participate in this study. I believe it is not far short of 20 years since Addison's disease started to be diagnosed in

Beardies. Since that time, and with the advancement of veterinary medicine, many more autoimmune diseases have been recognised in Beardies. Many AI affected dogs have a good prognosis now. Thankfully, there is more knowledge about how to diagnose and treat these diseases, and this is helping to save affected dog's lives, some are so young they are barely out of puberty. Many of these dogs can be weaned off treatment and never relapse, others achieve remission, and are maintained on low dose steroids. The prognosis for Addisonian dogs and dogs who are hypothyroid is excellent but this doesn't mean that DNA research isn't justified. Unless a dog with a serious autoimmune disease is promptly diagnosed and correctly treated there is a grave risk to their life. Indeed some dogs, for reasons unknown, do not respond to treatment and die prematurely. Owners who have experienced this will know just how devastating autoimmune disease is for the dog and the whole family. This complicated mode of inheritance means that DNA tests for autoimmune diseases are not going to be found overnight, it will be a long haul, but it is the only way to a better, healthier future for all Beardies and their owners.

"The soul is dyed the color of its thoughts. Think only on those things that are in line with your principles and can bear the full light of day. The content of your character is your choice. Day by day, what you choose, what you think, and what you do is who you become. Your integrity is your destiny...it is the light that guides your way."

Heraclitus Greek Poet, Philosopher

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[Http://www.beaconforhealth.org/](http://www.beaconforhealth.org/)

E-Mail Contest

Don't forget, if you elect to receive your copy of the BeaCon Newsletter by e-mail, you will be entered into the drawing for some great Beardie "stuff". Just contact the editor at;

grfitz@bellsouth.net

to get your name on the list. Not only can you win a nice prize, but the postage saved can be used for health issues. Thanks!

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Please contact the Board if you have any ideas, questions, problems or wish to participate in any of BeaCon's ongoing projects.

Visit BeaCon on the web at
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Special Thanks goes out to our Past Directors:

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Year 4 sold out. If interested in a copy, contact Elsa. If enough requests are made, another printing will be made.

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For copies of the Open Registry in Great Britain or Australia, originals of the book are sent to Jo Tucker and Sharon Wiggett. They have generously agreed take orders from their respective areas and print the copies in those countries to reduce mailing costs.

Please contact:

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"He said I have to wear these if I wanted to ride on his skateboard."