LIGHTING THE WAY

BEACON for Health

The Bearded Collie Foundation for Health

The Official Newsletter of the Bearded Collie Foundation for Health

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In This Issue

Reflections
Elsa Sell

Spring has sprung in the south at least. With reasonable rains during the winter, farmers in the SE are hopeful for relief from the devastating drought of the past two years and the return of grasses or the ability to seed new pastures. Though many readers of this newsletter are far removed from the farm and ranch scene (unless they herd with their Beardies), everyone is affected by the same forces that concern livestock producers. Those forces include higher costs for fuel, feed, and fertilizer – driven by supply, demand, and commodity future markets. You see this in the cost of food and gas to get to wherever.

What has all that rambling to do with Beardies? However difficult a day may be or whatever seemingly uncontrollable problems persistently nag at us, one's Beardie(s) will

bring a ray of sunshine and hope. They are just waiting to give you that wiggle, or nose push, ear kiss, or hug. Just let them know now is the time and your day will be instantly brighter.

This newletter issue brings both Beardie specific articles and several of general interest. It includes a short update on USA AKC Bearded Collie registration statistics spanning the years 1977 – 2007, a brief summary of the year 7 open health registry data, a thought provoking article on how research works, research supported by BeaCon, thoughts on one health problem that is a potential research subject, and more (e.g., the difference between monorchid and cryptorchid).

The board of directors has discussed the cost of newsletter printing and mailing. We appreciate those who accept the newsletter by email and we recognize that is hard for those who have a slow internet connection. We know that some prefer to read from paper, rather than on-line at our web site or the emailed version. Even so, we fear that some newsletters hit the circular file never to be read.

Our newsletter yearly costs have been around $4,000. Although that amount would be a mere drop in the proverbial bucket of water when it comes to funding research, still every drop counts. Many projects require hundreds of thousands of dollars, and occasionally into the millions over many years before completion.

With that background, the board of directors is seeking your input about how you would like to receive your newsletter.

You have until the end of June to respond. Please complete the form on page 18 in the newsletter or go to:
www.beaconforhealth.org/sqlweb/BC_nsltr_survey.aspx

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On the Ball
Linda Aronson, DVM

Definitions:
Cryptorchid – one (unilateral cryptorchid) or both (bilateral cryptorchid) testicles are retained in the abdominal cavity and have not descended into the scrotum.
Monorchid – is a genetically male animal born with only one testicle anywhere in its body.

Reading through this years open health registry summary, I was again struck by the number of people reporting their Beardies as monorchid, as this condition is extremely rare, I suspect they are confusing the meaning of this term with unilateral cryptorchid.

In normal dogs, the testicles will have descended into the scrotum by 10 days after birth. However, especially when dogs are cold, stressed or frightened the testicles are drawn up towards the body. Because the inguinal rings remain open in puppies and the testicles are small and soft, they can reenter the abdomen for a time. By the age of 6 months the inguinal rings have closed in most dogs, and at this point a puppy can be declared cryptorchid if it does not have both testicles in the scrotum.

Cryptorchidism is a sex-limited autosomal recessive trait. Multiple genes seem to be involved. One study of miniature schnauzers found that the degree of inbreeding was greater for bilateral cases than unilateral cases. The same study found that in unilateral cryptorchids the right testicle was the one that did not descend, and the right testicle was also smaller in bilateral cryptorchids.

In breeds in which the incidence of cryptorchidism is high, other congenital problems appear to accompany the defect, including umbilical and inguinal hernias, luxating patellas and problems with the prepuce and penis. The retained testicle is 9 to 14 times more likely to develop testicular cancer than a descended testicle. Generally, bilaterally cryptorchid dogs are sterile. Testes in the scrotum are 4 or 5 degrees cooler than body temperature, and this is necessary for fertile sperm production. Abdominal testicles are more likely to undergo torsion of the spermatic cord. This is extremely painful.

It is sometimes possible to “milk” retained testes from the inguinal ring down into the scrotum. However, it is also easy to mistake scrotal fat or the inguinal lymph nodes for the retained testicle. Cryptorchid dogs cannot be shown and should not be bred. They should ultimately be castrated – the operation being slightly more complex than normal castration – however, there is no reason to do so before the long bones have closed and the dog has finished growing. Because testicles are difficult to visualize on ultrasound, the surgeon has to follow the ductus deferens to locate the testicle. Only if no testicle is found and application of gonadotrophin releasing hormone or other hormones fails to produce an increase in blood testosterone levels can the dog be diagnosed as monorchid.

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Research
Elsa Sell MD

Initiating research generally elicits excitement with the prospect of discovery of “cause”, hope for “cure”, and elimination of a specific problem. Some research endeavors are successful; some are not. All are very costly; for example, on March 11, 2008 AKC CHF announced that The Rottweiler Health Foundation and the Bernese Mountain Dog Club of America have both pledged a combined $100,000 from their respective Donor Advised Funds

in support of canine cancer research. Almost all research projects take many years to get to their endpoint. The research process and interactions between those with the health problem being researched and the scientists is not always well understood (see the article on How Research Works elsewhere in this newsletter).

BeaCon Supported Research
We have donated to these projects administered by AKC CHF:

1. Active Grants 589A and B. Identifying Genes Regulating Addison's Disease in the PWD. Lark (U Utah) and Ostrander (NIH) are the investigators. Progress has been made. They have identified two gene regions on canine chromosomes 12 and 37 that they believe are associated with the disease. Although PWD's are the dogs in that study, and the results are different from Oberbauer's, we believed it wise to continue support. If this project gets the answer first, then it can extend to other breeds and we would be there. Our donation was $1000 for 2008.
2. Active Grant 1031-A. Determination of Target Antigens in Canine Primary Immune-Mediated Hemolytic Anemia (IMHA). PI - Darren Wood, DVM, University of Guelph. Basically, the goal is to pursue in canines what is known already from humans and mouse models – that a particular protein or set of proteins found on certain cells are targeted by the immune system, and result in the damage or death of these cells (in this case the red blood cells). Since Beardies have IMHA we donated the requested $500.
3. Completed Grant No 2226: Characterizing the Inheritance of Addison's Disease and Linked DNA Markers. PI. Anita Oberbauer, PhD, UC Davis.
4. Completed Grant No 225: Establishing a Genetic Linkage Between Addison's Disease and DNA Markers. PI. Anita Oberbauer, PhD, UC Davis. The project has demonstrated that for Standard Poodles and Bearded Collies, Addison's disease is highly heritable. Statistical evaluation of the dogs' pedigrees suggests a single locus of large effect significantly influences the expression of Addison's in the Standard Poodle and that this locus acts as an autosomal recessive. Similar findings characterize Addison's for the Bearded Collie although the level of significance is less robust. If a new application to AKC CHF for continued work is approved, BeaCon will again support the effort.

In addition, BeaCon will be donating $1,300 (from the 2006 BOW donation to BeaCon specifically for research) to the Rabies Challenge Fund this spring.

As many newsletter readers know, BeaCon was recently the recipient of a substantial donation from the BCCA. Those funds are to be used for research only. As time goes along BeaCon's directors will see where the funds would be best utilized. Among possible research topics we have discussed is symmetrical lupoid onychodystrophy (SLO).

HOW RESEARCH WORKS

By J.P. Yousha
Chairman, Health & Welfare
GREAT DANE CLUB OF AMERICA

(This first appeared on a Great Dane list a few years back. The author has given permission for BeaCon to reproduce the article in our newsletter. We believe this article will help Beardie folks better understand what transpires as BeaCon begins work to identify and bring new health problems to the point of research. One topic we have discussed is symmetrical lupoid onychodystrophy [SLO] about which more will come in the future. E Sell)

There always seems to be a lot of confusion about how scientific research works, so I thought I'd write a little outline that might help. Research is a confusing topic as it's outside the experience of most people & functions by rules and restrictions unfamiliar to most of us normal folks.

So hopefully this will help understanding, which can reduce the frustration people often have about research in that they have false expectations of what to expect, given they are unfamiliar with how things simply have to work when, for example, trying to track down the genes behind some canine disease. This is just an outline, written in broadstrokes and is to be taken that way, not as a detailed explanation of all or any particular research work.

Research isn't just a matter of finding an able party (i.e. a scientist), nor is it just about funding, for all these are needed. Research, from the researcher's perspective, has to be productive to be of interest. So not only does the research project have to dovetail with the scientist's abilities, facilities and background, s/he is going to have to feel there is a fair chance to be able to recruit and assemble the target population, that the problem can be solved with the tools to hand, and there has to be no better project offered for the same limited resources of time, personnel, lab resources, and money.

Typically, with veterinary research, the work can really depend on what walks through the door (especially when it comes to dogs); they have to know they are going to have the subjects they need to actual make progress. There are other ways to recruit a target population (more on that in a minute), but each project has constraints that mean all styles won't always work, and this HAS to be assured before a project can actually become research.

Research therefore usually starts with a target case: some individual or set of individuals with what seems to be a shared problem that science already knows something about. At this point this isn't really more than a tentative project. If the researcher can develop some leads as to what kind of analysis the problem might lend itself to, then they can see if they have the needed tools to do the work, if they can develop the background to get support, if they can find enough individuals with the common problem, and then they have just begun--we are not really even yet to the point of *having* research, just to the point of being able to (maybe) start a research project. Grants are only given to those scientists who can demonstrate they have the tools, skills, ability, people & materials needed, and who can demonstrate, using the work of other scientists, that there is good reason to believe their hypothesis and so to support their research. All this to just get off the ground.

Once research has actually started, for example, when the CHF reviews a grant a scientist has submittted and suggests to the relevant breeds that they consider supporting this research, then we are at the first stage. (Often this really takes some time & effort, and many attempts at the preliminary level don't turn out, so don't turn into research. So people in the preliminary stage can feel very frustrated.) This is the point where a certain population is recruited to gather together candidates for the initial group. This group has to be EXACT; it has to have particular traits & has to commit to supplying particular samples, sometimes over a long period of time, sometimes involving many exams.

There is always the chance a group or an individual, at any phase of the project, is not going to fit the needed data, and so will be rejected. This isn't personal, but research, to be considered quality, has to be exact. Anytime there is a question if a dog or a family doesn't fit the research parameters, they have to be turned away, as otherwise the results of the research will be considered contaminated, and all of it will be seen as dubious and so is wasted. You cannot start with "muddy water" if you plan to later claim you KNOW something and can prove it. In fact at each phase you have to keep your data pristine so it's seen as valid.

We often today talk of "having researched the breed," and/or talk of doing online "research," so we tend to think it's just a matter of looking things up, asking questions and so on. Scientific research isn't like this. It's more like detective work and often you don't even know what questions to ask and often you get answers you never expected. And, for all it may not be fair, some of real health issues are also the harder problems and so are not going to be chosen, as science is all about asking questions and trying then to find the solutions to them. A question can be *very* important and still be far too mysterious at this point in time for science to tackle.

If the tools are not there and/or if success isn't likely, no researcher is going to reasonably be able to work on it. They need to be in a learning curve themselves, that's what being a scientist is all about, the excitement of learning, of "cracking the code." SO they need to feel they are doing some productive work for personal satisfaction as well as to keep their jobs, their status and the respect of their peers. And feed their families.

And there are special constraints on research into pet species. For one thing, human research will naturally always be a priority for most researchers; secondly, when it comes to animal research, a lot of emphasis is going to be on commercial large animal studies (they are better organized and pay better, animals are easier to track and keep), and thirdly much research is going to want to use animal models to explore disease, and that doesn't always allow us the comfort zone of ethics we want as to how our dogs are going to be managed and treated. We are not typically going to donate large numbers of dogs from a family with a problem to live out their lives in kennels at some university, nor are we going to want to see potentially dangerous or uncomfortable procedures done on our beloved pets for the sake of learning as a rule.

Plus we do not, as a rule, have the sort of organizations in place to help researchers find the target population they need, we don't have a tradition of support, or even a tradition (as do horse and cattle people) of working with universities and researchers. Here we are just beginning where the cattle industry, for example, is miles ahead in being able to promote and support research. So they get the researcher's attention, as the researchers feel confident about their involvement. They have a track record. And lots of problems can be studied in several species, so from the researcher's perspective, this matters.

So for all these general, as well as particular reasons, research is a somewhat difficult and challenging prospect for our canine and feline friends. Research takes years, decades: each phase in fact typically takes years, and at each phase there is a chance the research will be abandoned as not fruitful. More goes wrong in science than right, in the sense you simply must follow where the facts lead you, and be honest when they lead you nowhere. And that happens. And then you have to start over, rethink, find a new pro-

ject, a new method of analysis, or something.

So no honest scientist (and they should be this above all else, as they need be ruled by clarity of mind) can say what tomorrow will bring and they tend to speak, especially to those hopeful, in somewhat cautious, even pessimistic tones. And we in the general population anyway don't often "speak the same language" as they do: scientists are immersed in their specialty and are more accustomed to talking to each other than to "us." Plus they are mostly very busy, and they generally do not anticipate having to talk to individuals who may feel they have a stake in the outcome of the research. Generally, in fact, it's expected they will simply write reports on a regular basis to the organizations they feel they need to account for the progress of their research with. It's unusual for any researcher to be expected to actually deal directly with the study's participants, so, for all that feels normal to us, it's not the normal thing for them. So we miscommunicate a lot.

Plus the exact research we want is what matters to us: we want this problem in that breed studied. But being able to hope for progress is what matters to researchers. As one told me recently, they do not like to write reports that say "no progress," and so don't want to take on projects that don't look to be fruitful (for whatever reason). Scientists are not dedicated to one breed like many of us are, and their connection to our breed is through how interesting to them our problems are. Interesting to a scientist means it's a fruitful problem, one they have some reason to think they can have some success with if they choose it. And they typically have many choices on what to work on. And they go where the research leads them.

So we can help them pick us in several ways. We can be "savvy" about how it all works and not have unreasonable expectations. We can accept how it works, understand it's not personal when we (our dogs) are not needed or are rejected for a study. We can be patient, knowing the scientist is playing a very hard game of "Clue" and one that has a lot of false starts and often no solution, or takes you places you didn't expect, gives you results you never anticipated, and the only thing they can control sometimes is the data they put in, so they focus on it being "clean", but that doesn't mean they don't understand we are still upset when our dogs are sick, it's just that they cannot always help us--on any level, and that's a blunt fact.

But we can work together to help make our problems work for them, be approachable. For example, we can take a page from large animal folks, and have a focused force to interface for us with the science community (this is why the CHF is so important and representatives from various dog organizations need to step forward to act as liaisons mean so much). We can also not expect them to have time to talk to each of us individually or help with our individual dogs.

For all we would like these experts to have time for us they don't usually--not if they are going to focus on research. (We can use a clinician, our vet, or a referral for this individual attention.) We can hope for good progress reports, but know they will only come once a year or less often, not call, but wait for the liaisons to put out what the researchers send (and so look to the CHF website, for example, for results, not call the university). And we have to also realize with all good intentions of all parties, things are not typically going to go just as planned and sometimes we all are going to start over, let a project sit while new tools or ideas are made, or just be patient when it goes in a new, unexpected direction. That's just part of the gamble we have to take to get any progress at all.

I know this is already too long and still I don't feel I've scratched the surface. But I would like to give one example that is recent from the Dane community.
A few years back I was getting a lot of calls from people wanting information on Addison's disease in Danes. Now this isn't "supposed" to be a Dane disease, it's "supposed" to happen typically in middle-aged females, and it's "supposed" to be rare in dogs and usually restricted to certain breeds (like Poodles). But I was getting a lot of calls on all Danes, young and old, female and male, and some were not just asking for help treating their dogs, but where was the research going as to this problem. So I went to the scientific community, found out who to ask, and asked this. And I was told this isn't a problem in Danes.....you get the picture. So I told them: "But I have all these Danes....." and they answered it was anecdote, a self-selected sample...which all came down to I was seeing something really not there as to research possibilities. And they had reason to think that, to be fair; everyone thought this wasn't in this breed except the people who had to deal with it directly.

So to make a long 3 year journey short - I kept asking around the research community, followed the work in other breeds, talked to the Health and Welfare liaisons in other breeds, to the veterinary community, while the people with the Addison's Danes kept pushing, and I finally got someone in research who was pretty far along in the research (on the third phase essentially, so a ton of work already done & a lot known, so might help us) to say they'd look at what I had. And when they did, they told me it wasn't enough.

And so they still were not interested--they said it would take

them years to get enough Danes, and they could meanwhile work on other breeds. So I asked them what they had to have to take us seriously; they told me and I spent nearly a year assembling the dogs they needed. (I had help from some folks with Addison's dogs thank goodness, but I also had to go out and canvas the veterinary community, get the message out in veterinary journals, personally called a bunch of endocrinologists, write letters to vets, take calls day and night, assemble all the individuals and their information in format, etc.)

And then I gave the data to the researcher (who was really great to even TAKE data from me, something they hadn't themselves assembled). And then they said: "Okay, we'll add Danes in, using this list." And THEN we had to go to the CHF to get permission to change the grant, and they wouldn't do that until the GDCA would promise the needed funds to support Danes being added (which the Board did, and fast, as we had a deadline or miss out on this phase, have to wait several more years). So now we are started. It took almost 5 years to get here. (And this was a fast and really successful venture.) And we don't know anything yet! The research itself is just started. It will be years before we have answers. If we are lucky it will be years...instead of decades ...or never.
That's just the way it works in research, it's a lot of cautious footwork, a lot of "dotting i's" and so on, a lot of false starts, disappointing results, **and to help them help us we need to understand what "rocks their world" as it were.**

1. They need a "good" project that can realistically be seen to be solvable.
2. They need assurance the group wanting it will provide the subjects and stay the course.
3. They need to be left to do their work once it's started.
4. They need our patience and understanding most of all. We find them frustrating at times, but I'm pretty sure the feeling is mutual.
5. One of the biggest problems in the dog community having research work for them is that we just don't have realistic expectations as we don't understand the constraints that scientists labor under.

So the better we understand them, the better we can get them to work for us! And, to me, that's the point, getting to know more about how disease works, finding better treatments & finding better ways to test for disease.

"Greatness is not in where we stand, but in what direction we are moving. We must sail sometimes with the wind and sometimes against it -- but sail we must, and not drift, nor lie at anchor." Oliver Wendell Holmes

Milk Thistle – it's not just for livers any more
Linda Aronson, DVM

Actually, it never really was. 2000 years ago it was being prescribed for the serpent bites, plague, milk production and melancholy – and as melancholia was attributed to bile stasis, for moving bile.

The active ingredient in milk thistle seeds is silymarin. Raw seeds contain about 4% silymarin but crushing and extraction increases the content to around 80%. When buying milk thistle products it is important to buy from manufacturers who standardize silymarin content between batches. A semipure fraction of silymarin – silibinin, also known as silybin is tracked to ensure adequate concentrations both in plasma and target organs. This is important as raw silymarin exhibits poor or at best erratic bioavailability. By combining silibinin with phosphatidylcholine oral availability is improved dramatically. Some products also contain zinc and Vitamin E to help address liver dysfunction.

Silymarin stimulates the liver to repair and helps it to detoxify. First it acts as an antioxidant, scavenging free radicals and regulating levels of glutathione. Glutathione is the body's natural antioxidant. It regulates the antioxidant redox state, and allows the body to recycle its store of antioxidants including: vitamin A, C, E and Co-enzyme Q10. Second silymarin stabilizes the membrane of the liver cell limiting it's permeability to toxins. Third it promotes ribosomal RNA synthesis, thereby stimulating liver regeneration. Finally, it slows the onset of cirrhosis by slowing the deposition of collagen.

These properties are useful in protecting other organs from radiation; chemotherapy as well as other foreign chemical and pharmaceuticals; and chronic diseases. In rat models, Silymarin has reduced the formation and incidence of chemically induced tumors in colon, tongue and bladder cancers. In immunodeficient mice it has reduced the growth of grafted lung tumors, and it has also reduced the growth of human prostate cancer.

Milk thistle derivatives protect the kidneys from injury by radiation, cisplatin – a chemotherapeutic drug, and aminoglycoside antibiotics. They also protect the heart from damage by doxorubicin – another chemotherapeutic drug. Combined with omega 3 fatty acids milk thistle reduces radiation induced necrosis and prolongs survival time.

One concern about the use of milk thistle is that it may inhibit certain isoforms of the cytochrome P450 family which are involved in metabolizing many drugs. This could potentially delay the breakdown of some drugs and increase their

toxicity. At present there is little data to support this concern, but different species can have large differences in cytochrome p450-mediated metabolic activities – which is why some over the counter human drugs can be potentially lethal to our animals.

Because milk thistle promotes liver regeneration it was feared that it might actually promote liver tumor growth, but studies have shown strong anticancer activity in human liver carcinoma cells. However, in two rodent models silymarin promoted mammary tumor growth, probably by increasing estrogen receptor stimulation. Caution should be used, therefore, in giving the herb to dogs with mammary cancer. In general though, milk thistle is very well tolerated, and the most serious problems reported usually involve gastrointestinal upset.

Milk thistle is proving as multitalented as our ancestors thought it to be, and with improved manufacturing and bioavailability it is proving a very useful herbal remedy indeed.

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SLO Annotations
Notes in italics from E. Sell

From Jo Tucker. SLO has been a problem in the UK in Beardies for decades. It was known by breeders as nail bed infection and was freely spoken about until Dr Chesney, a dermatologist, made reference to it being associated with autoimmune disease. The problem was then swept under the carpet. He wanted to do a study in Beardies but amputation of a digit was required and this is too much of a sacrifice (I totally agree). Anyway, since that time many breeders do not admit to ever having the problem in their line - usual story! It is not uncommon in UK Beardies and for something not to be of genetic origin it occurs quite a lot in Beardies. *While Jo's observations are just that – observations – they provide an important historical perspective on the problem.*

From Judy Howard. I guess I am one of a very few Beardie owners who have opted to have the amputation done in order to get a definitive diagnosis. When Brooks first started having nail "problems" it affected all of the nails at once. He was having a really bad time of it so it was decided to sedate him and cut all nails back as far as possible. That would have been too painful to do without sedation. While he was already sedated my vet amputated a digit, at my request, from a rear foot since Brooks didn't have dew claws. I have to tell you that the amputation never gave him any trouble but it was many days before the rest of his nails were not VERY sensitive. Years later I do not regret my decision. It was a decision made in the hopes of someday helping to find a cause and/or cure for SLO. The amputation has not affected Brooks' gait or ability to herd sheep or jump to the moon. Brooks is my second SLO dog and his breeder has been very supportive and helpful. *Judy is among a small group of SLO dog owners who opted for establishing the SLO diagnosis with the "gold standard" diagnostic test – claw removal. Many are squeamish at even the thought of claw removal. Dogs can deal with claw removal though there must be some discomfort early on; more likely it is the owner one who has difficulty dealing with the claw removal. If your dog is lucky enough to have dew claws, those can be biopsied and for certain dew claw removal won't affect walking on the feet.*

From Elsa Sell. Back in 2003 when BeaCon conducted an online survey on "Nasty Nails", I also contacted several researchers about the prospects of starting up a SLO study. The authors of the only paper published on the subject at the time were too busy with other responsibilities to consider a new project. I found a dermatologist interested in proving that SLO is autoimmune. She indicated that the "gold standard" would be essential for any research, as one can't base a diagnosis on clinical response to therapy. Furthermore, one needs the afflicted tissue to study for proof of an autoimmune etiology. With that researcher having a change in career, we lost the chance to go further at that point in time.

There is certainly no doubt but that Bearded Collies have the disease and as Jo pointed out above, it is not a new disorder. There are 27 Beardies in BeaCon's open health registry with this diagnosis and 18 others have a diagnosis of "nail problems, other". Counting only the 27 with a SLO diagnosis, the incidence of the problem in open registry dogs is 2.2%.

Fortunately, SLO is a problem in other breeds than Bearded Collies. I say fortunately because some progress in research is being made in those breeds. For example SLO was identified as the #1 problem in Nordic Gordon Setters. A poster presentation at the Am College of Vet. Dermatology gave information on 22 Gordon and English Setters with multiple nail involvement. All dogs had claw biopsies and blood specimens drawn, and a detailed medical history. Microscopic findings were documented. Below is a list of the main findings:

1.Dogs with symmetrical onychomadesis had higher prevalence of conjunctivitis and skin infections compared to a control group.
2. In one litter, six of eleven dogs have SLO and in another litter, four out of eight had the disease. This supports the genetic base of the disease.
3. There was no correlation between time of vaccination and

occurrence of disease
4. Most of the dogs developed the disease in August and September (in the hunting season), but 20% of the dogs where not used for hunting.
5. 40 % developed SLO at a young age (1-3 years) and 60 % at middle age (4-7 years).

Two of the dogs were euthanized because of the disease, two went into remission and the rest of the dogs had mild onychodystrophy without lameness or other problems on therapy.

SLO has also been described in Swedish dogs and there is mention of SLO in Swedish Bearded Collies.

BeaCon will gather additional information from the Gordon and English Setter SLO project as it becomes available, and discuss the feasibility of research in Bearded Collies.

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Summary of
Open Health Registry
Cumulative Data for Year 7

The complete year 7 report is available as a link web site on the home page. The owner and dog participation increased noticeably this year with 81 new owners and 242 new dogs. The total number of dogs was 1203 at the close of the registry year in March. Indicative of widespread international participation, only 54.3% of Beardies are from the USA. With the addition of more young dogs, the percent of healthy dogs is now up to 55.8% as compared with 47.7% last year.

Health Problem	# of Dogs	% of All Dogs
None	671	55.8%
Fear, loud sharp noises	164	13.6%
Autoimmune diseases	135	11.2%
Hypothyroidism	90	7.5%
Cancer (all types)	76	6.3%
Umbilical hernia	60	5.0%
Hip dysplasia	44	3.7%
Fear, other	31	2.6%
Dietary allergy/food intolerance	28	2.3%
Atopy	27	2.2%
Allergy, flea bite	23	1.9%
Depigmentation	23	1.9%

Table 1

The most frequent health problems are relatively unchanged from previous years, as shown in the table 1.

Autoimmune Problems. There are 167 cases of autoimmune disease in 135 Beardies. Although the frequency appears to be unduly high in this population of Bearded Collies (i.e., in the open health registry), it is not known if the figures are applicable to the general population of Bearded Collies worldwide. That will remain unknown until a much larger number of dogs are in the open registry.

Disease	# cases	% of all dogs
Addison's disease (hypoadrenocorticism)	59	4.9%
Symmetrical lupoid onychodystrophy (SLO)	28	2.3%
Inflammatory bowel disease (IBD)	19	1.6%
Systemic lupus erythematosus (SLE)	15	1.3%
Autoimmune hemolytic anemia (AIHA)	12	1.0%
Rheumatoid arthritis	11	1.0%

Table 2

The most frequent autoimmune diseases are in table 2.

There were also 7 cases each of pemphigus and immune-mediated thrombocytopenia (low platelets), 3 cases of discoid lupus erythematosus, and 1 with myositis.

Interestingly, some dogs have more than one immune mediated problem, as shown in table 3. See the complete report for more details.

Disease	#	#(%) with > one A/I disease**
Addison's disease (hypoadrenocorticism)	59	10 (17.0%)
Symmetrical lupoid onychodystrophy (SLO)	28	6 (21.4%)
Inflammatory bowel disease (IBD)	19	5 (26.3%)
Systemic lupus erythematosus (SLE)	15	4 (26.7%)
Autoimmune hemolytic anemia (AIHA)	12	2 (16.7%)
Rheumatoid arthritis	11	9 (81.8%)
Pemphigus	7	6 (85.7%)
immune-mediated thrombocytopenia	7	5 (71.4%)
Discoid lupus erythematosus	3	2 (66.7%)
Myositis	1	1 (100%)

Table 3

Reproductive Outcome. This is reported for 93 dogs who produced 310 litters and 1786 puppies.

There were 108 bitches successfully bred to produce 376 litters with 2161 puppies. The mortality rate at birth (i.e., stillborn) was 6.6% for male pups and 5.1% for female pups. The total mortality (stillborn + early death) by 6 weeks of age was 13% for male pups and 11.5% for female pups.

The most common abnormalities in male pups were cryptorchid (5.9%), mismark (5.1%), and umbilical hernia (3.6%). For female pups the most common abnormalities were mismark (5.6%) and umbilical hernia (4.5%).

Mortality. As in previous years, the leading causes of death before 9 years of age were autoimmune (n=14, 26.9%) and accidental (n=10, 19%) for a cumulative total of 45.9%. The final report of the BCCA 96-98 health survey found 30% of deaths before age 9 were due to autoimmune causes. This is of concern and focus should be on supporting research to identify cause(s) of the problems, and elimination of these problems where feasible. The most common cause of death in the 9-14 year age group was cancer and in the 14 year age and older group, it was "old age".

Coefficient of Inbreeding (COI). The COI is calculated for 10 generations with Breeder's Assistant software. The COI values for foundation stock in the USA and open registry dogs from the USA and all dogs combined are shown below.

Future. The gain of several thousand more Bearded Collies into the open registry would provide a respectable base for measuring with greater certainty the levels of wellness and potentially genetic conditions in the breed.

Year of Report/ Other	Coefficient of Inbreeding				
	# dogs	Av	SD	min	max
USA – 1977 stud book	318	18.3	5.9	3.8	40.1
Yr 7 – all dogs	1198	23.6	5.8	0	43
Yr 7 - USA	650	23.7	5.3	11.2	42.8

HAPPY 9TH BIRTHDAY TO BEACON
APRIL 1999 – APRIL 2008

AKC Bearded Collie Dog and Litter Registrations
Elsa Sell

In keeping with BeaCon's tracking of this topic, here's a shortened summary of where Bearded Collies numbers have been and where they appear to be headed. For yearly details since AKC recognition of the breed, please see the Fall 2006 Lighting The Way newsletter or the year 7 open registry paper, both on the web site. The source of data is the AKC.

Year	# Dogs Registered	# Litters Registered	# Pups in Litters	Av # Pups Per litter
1977*	446	89	496	5.8
1983	895	207	1190	5.9
1993	749	166	912	5.8
1998	752	188	1077	6.2
2003	543	161	897	5.8
2004	562	142	842	5.6
2005	485	118	658	6.0
2006	447	109	537	5.2
2007	413	103	591	5.5

*Year of AKC recognition.

The number of dogs registered may reflect births late in the previous year and it includes a small number of imported dogs. We should question where this will lead in the future if the recent trend of declining numbers of litters and numbers of pups in litters persists. We should also wonder about the trend toward fewer pups per litter in the last two years. Perhaps these are topics for dialogue at the parent club level.

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!

Donations

Contributions to BeaCon and the open health registry should be mailed to:

Elsa Sell
764 Liberty Rd
Milner, GA 30257

First time Donors

For up to $15-$99 you receive a logo pin
For $100-$199 you receive a sterling silver angel pin
For $200 and up you receive a 14K gold angel pin
The pins can be viewed on the BeaCon Web Site.
Http://www.beaconforhealth.org/

Support BeaCon

If you are inclined to have another bank card, here's an approach that also supports your favorite charity. SunTrust Bank has a charitable giving campaign that runs through August 15, 2008. You open an account and make a purchase with your SunTrust Visa Check Card and fill in a redemption form. You donate $100 to the charity of your choice.

Go to:
www.suntrust.com/mycause
and select "Toolkits for Nonprofit Organizations." BeaCon's name is Bearded Collie Foundation for Health.

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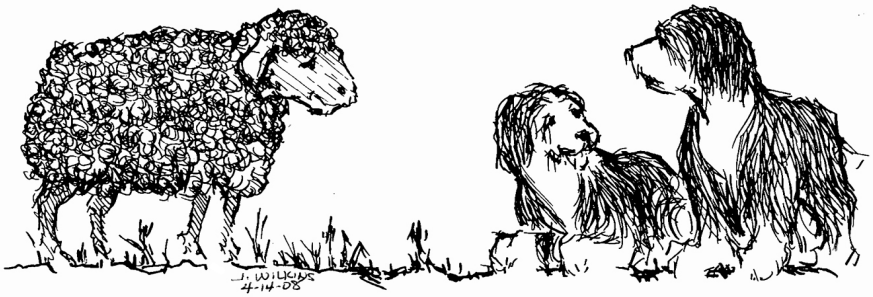

"She told me that she gets her fleas cut off every year"

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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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Alternatively, fill in form online at: www.beaconforhealth.org/sqlweb/BC_nsltr_survey.aspx