

Review of BeaCon's 25-Year Milestone

After 25 years of sustained effort on behalf of Bearded Collie health a review of achievements is appropriate. Have the initial missions have been achieved and to what extent? It all began with hope and a vision inspired by the past. The first Board of Directors worked diligently to craft the Bylaws, Articles of Incorporation, and Mission Statement. That enabled BeaCon to obtain 501(c)(3) status from the IRS in April 1999. BeaCon was designed to have only a Board of Directors and no membership, to avoid competition with any membership Bearded Collie Club. I am proud to honor these early adopters whose collective experience and expertise set BeaCon on an ambitious, yet uncertain path.

Linda Aronson, DVM; Elizabeth Coolidge, MD; Kathy Coxwell, JD; Melinda Cumming, DVM; Karen Drummond, PhD; Sharon Dunsmore; Kathy Pavlich; Cheryl Poliak; Gail Romine, RN; Debra Thomas, DVM; Elsa Sell, MD; Chris Walkowicz

Key achievements include establishment of an open health registry, developing educational resources, and research support both with funding and subject recruitment.

Open Health Registry

The registry initially launched on paper in 2001 and transitioned in 2004 to an online relational database. Today it includes 3,520 Bearded Collies from approximately 980 owners in 25 countries; 92% of the dogs' information is accessible. Entry of Beardies to the registry and study of public dogs' information are both free to registered users.

Yearly or biennial data analysis has shown consistent trends in disease incidence, causes of death, and sire and dam reproductive outcomes. Consistency in trends combined with geographic diversity suggests that the findings may be applicable to the breed at large.

Registry data confirm earlier surveys conducted by the Bearded Collie Club of America which documented Addison's disease as a significant issue. Research points to a hereditary component due to risk genetic factors yet it is more complex than a simple autosomal recessive disorder. Additionally, it is possible there are both protective genetic factors and detrimental environmental events that influence whether a particular dog will be affected.

Most frequent causes of death both generally and within age groups have been identified. With AI diseases as a group causing 49% of deaths before age 9 years and a genetic contribution to Addison's disease the desire to find a way to reduce their incidence is understandable.

Population Decline

BeaCon track registration of Bearded Collie litters whelped in the USA and UK to give perspective on the number of registry dogs. There has been a significant decline beginning around 2000; now in the US there are fewer litters born than in 1977 when the breed was first entered in the AKC stud book.

Educational Efforts

Lighting the Way, BeaCon's biannual newsletter, began in 2001 as a desktop software creation that was mailed to an international audience. In 2013, it moved to the cloud with MailChimp for design and electronic distribution. The latter enabled flexibility to include photos with health-related stories. The subscriber base is near 900, an index is available, and the newsletter is free..

It is unclear what most interests readers based on current analysis. The open rate has been in the 60% range until fall 2024 when it dropped to 29%. The lower click rate (recently 14-29%) suggests low interest.

The website has had many redesigns over the years with desktop software until transition in 2023 to the cloud. The current comprehensive rebuild provides enhanced visual accessibility, up-to-date and the historical references, functional links, a blog which is new. All are encouraged to explore the entire website again. Reader feedback and suggestions are welcomed and valued.

Research. Research on Addison's disease and SLO was made possible by contributions of numerous owners submitting genetic samples from their dogs, and funding from BeaCon, the BCCA, the BCCA Charitable Trust, and many individuals.

Addison's disease. BeaCon has worked with Dr. Oberbauer's at UC Davis since the beginning. Recent peer-reviewed research publications are found in the autoimmune section of health information on the website. The research identified chromosomal regions of interest associated with Addison's and complex nature of Addison's disease. It is polygenic, has a strongly associated locus on chromosome 18 that combined with three other smaller effect loci is predictive of disease.

Given that multiple genes indicate risk of developing disease and other genes are associated with less disease (perhaps meaning protection from the disease) it is not clear if a specific genetic marker test is on the horizon. While this is disappointing for breeders hoping to reduce the prevalence of these diseases and the risk of any particular breeding producing the disease, still we have gained a great deal of insight over 25 years.

SLO. The prevalence of the nail disease Symmetrical Lupoid Onychodystrophy (SLO) has increased over the past 20 years—whether due to a genuine rise in cases or heightened awareness remains uncertain. Like Addison’s disease, SLO has become a significant focus of research in Dr. Oberbauer’s lab; findings are published in peer-reviewed journals.

Genetic Diversity. Advances in technology, e.g. whole genome sequencing (WGS), now allow for the precise determination of an individual’s genetic diversity. In a study on SLO in Bearded Collies, the WGS measure of genetic diversity closely correlated with calculated inbreeding coefficients across all generations. While 23 DNA variants were predicted to impact gene function in Bearded Collies, the vast majority (99%) were anticipated to have no functional effect. Among the few high-impact variants, only 30 were identified within ROH (regions of homozygous DNA), which are more characteristic of ancestral breeding practices than recent ones.

Ultimately, ongoing research remains crucial to accurately define functional DNA diversity before current measures are used to guide breeding strategies.

CEA. A third inherited disease, Collie Eye Anomaly (CEA), follows a simple autosomal recessive inheritance pattern. The first screening program with Paw Print Genetics was initiated in 2017 with a combined effort of the BCCA, BeaCon, the BCCA Charitable Trust, and the BOW Calendar Crew. With continued screening and careful mate selection, CEA is on track for elimination within the breed.

IMHA. Immune-mediated hemolytic anemia (IMHA) is a serious autoimmune condition in which the immune system mistakenly attacks its own red blood cells, leading to their destruction. It occurs in Bearded Collies and has the fourth highest incidence among autoimmune diseases. BeaCon donated to a research project on IMHA at the U of Minnesota which began spring 2025. Its goals are to use advanced diagnostic tools to predict course and categorize different forms of the disease, thus deepening understanding and improve treatments for this condition. The project is ongoing under the auspices of Morris Animal Foundation.

Summing It Up

While the achievements have been remarkable, improvement is always a goal. Certainly among the challenges are reaching those who are unaware of BeaCon’s existence, lack of a broader commitment to health registry participation for the common good, and a view that participation will result in others using that to disparage a breeder or dog or person.

Recently, a BCCA affiliate club volunteered to offer a chance to gain awareness about BeaCon. BeaCon was invited to present a zoom webinar that was well attended with a useful Q&A period. This model could be offered by other affiliate clubs and perhaps groups abroad.

Perhaps a limited effort to explain value of having health history information in one place on many dogs hasn't been effective. A large volume of educational material is available all via the website yet perhaps it is only utilized at a time of urgency and need – when a dog is sick.

Other considerations are whether people take actions for the common good and the number of people available to do the work on behalf of an organization.

This review of the first 25 years of BeaCon's work has noted accomplishments and areas that could benefit from attention. Do you have any ideas to share? Views of causes of inaction? Solutions? Certainly, the level of engagement with this discussion will be indicative of people's reading and considering our first blog.

Elsa Sell