

## ISCA Memo February 2024

### Cori's story & legacy: idiopathic epilepsy

This is a story no breeder wants to write, but every responsible breeder should talk about openly. They say breeding isn't for the faint of heart and that's certainly true.

At his ISCA seminar at the Ohio National, Jerold Bell DVM reminded all of us that the days of hiding issues and not discussing them openly need to be in the past. It is only by sharing our experiences that we can help each other get through the tough times and hopefully someday solve tough issues. (Dr Bell's seminar can be viewed for free thanks to the ISCA Foundation at: <https://irishsetterclub.org/references-for-breeders/ins-and-outs-of-pedigree-analysis/>)

This is my recent experience as a breeder having a litter that produced a dog affected by epilepsy. All the people's names used in this article are done with their full support for honesty and transparency.

Certainly, as an informed breeder, I know that epilepsy is one of the issues that we face in Irish setters. I have always spoken openly about my experience with Kildavan's pups. For those of you new to the breed, here's the recap. Davan was the National specialty winner in 1987; he wasn't used as a stud extensively. He was bred to a lovely bitch and produced many champions in that litter. They were all healthy throughout their lifetimes. Due to that successful nitch, he was then bred to the daughter of that bitch. Sadly, there were multiple epileptics in that litter. Ironically about the same time he was bred to a half sister (same sire) of that 2<sup>nd</sup> bitch. That litter also had multiple dogs affected by epilepsy.

Davan had also been bred to his daughter about the same time as those two half-sister bitches were bred to him. None of those puppies were affected by epilepsy despite being a father /daughter breeding. No other puppies produced by him bred to several gorgeous bitches produced epilepsy.

I sought advice from top neurologists and honestly their advice now would probably be the same as it was then: don't breed an affected epileptic and try and avoid similar combinations that caused epilepsy.

As the years went by, we continued breeding and line breeding on several sires I admired: Good Fortune, Pipedream O'Charlton and Vindicator. Along the way, there were a few breedings with outcrosses to wonderful dogs with pedigrees from the UK, Australia and here in the USA that I admired not only for their breed type, health and temperament, but for the honesty of the owners and breeders of those sires.

In January 2023 I received a phone call that no breeder wants to get. My good friend Bonnie Jo Hall had a two-year-old dog from us that was seizing. His seizures were so severe (also known as cluster seizures) that he had to be anesthetized. Cori had been taken to a fantastic 24 hr. specialty hospital with a top-notch neurologist on staff. His temperature on arrival at their ER was 104 due to the seizure activity. He had severe hyperlactatemia: his lactate was 16.2, which did resolve with IV fluids and supportive care. Sadly, every time there was an attempt to wean him off IV antiepileptic meds via Constant rate infusion, he resumed seizing. He had loading doses of multiple antiepileptic drugs orally and injectable that were unsuccessful in stopping the seizure activity.

Bonnie Jo and I were in constant communication. Fortunately, a good friend of mine from AMC worked at that specialty hospital and she also kept me informed. I also was in touch with the sire of our litter's owners Heidi and John Laabs.

Bonnie Jo and I had some honest talks and I felt it appropriate to warn her that not being able to be weaned off IV sedation was not a good sign, especially given that Cori was also getting loading doses of oral anti-epileptic medication. Meanwhile, other testing was done that could find no underlying reason for the seizures (like a shunt for example). Based on the lack of evidence for any other cause of the seizures, a diagnosis of idiopathic epilepsy was the only conclusion. Bonnie Jo and I talked honestly about humane euthanasia. After days of being unable to stop the seizures except on IV sedation, Cori was set free from the grips of epilepsy from which he could not escape.

During the days surrounding Cori's hospitalization, I reached out to Liz Hansen at the University of Missouri Animal Molecular Genetics Lab at the University of Missouri vet school. Liz and I had talked many times over the years about projects ISCA was supporting. She has always worked with Dr Gary Johnson, whose epilepsy research ISCA has funded over the years. Now I needed her help: I asked her to remind me of the steps to submit samples for the epilepsy research project.

You can find all the forms and information at: <https://canine-epilepsy.net/>

I explained to Liz that many of the siblings and half siblings and dogs in the pedigree were in the OFA DNA database and I would try and find out how to get those samples to her. Liz gave me the best news: she had access to those samples and all I had to do was send her the CHIC numbers for the dogs involved and she could access the samples. At the time I was emotionally a wreck and knowing that Liz had the samples from multiple generations of our breeding program at hand was a relief.

ISCA has been collecting DNA from EVERY dog from which a blood sample is drawn at our National specialty and sending it to the OFA DNA bank. Occasionally I get feedback from people filling out the forms online that they find it cumbersome to have to fill out that OFA form in order to participate at our health clinics. There are no exceptions: no DNA form, no sample drawn for any test at our health clinics. I am grateful to the ISCA Foundation for FULLY funding this process so that researchers and owners have access to these samples. It also will allow genetic testing for newly developed tests to be done on dogs who have died but have DNA banked. And in my case, it made it so much easier to submit samples to the Epilepsy project.

Cori himself was not in the database. The staff at Upstate Veterinary Specialties was so helpful about getting a blood sample from him and overnighting it to Missouri. It is SO important that samples are sent from the affected dog as well as from sibs, half sibs, sire, dam, and grandparents. I also emailed a pedigree to Liz for the litter.

Needless to say, I contacted everyone with a sibling of Cori and explained the situation. There was nothing else to do except hope and pray that no other littermates would be affected. There is no test for epilepsy and despite years of research in both the human and animal fields, no real progress in determining its inheritance. So far, all Cori's siblings are unaffected; they were 3 in October 2023

How will I proceed? Initially I had planned to breed Cori's litter sister in the Fall 2023, now we've decided to hold off until at least spring 2024 and reassess. Of course, if we do breed her, anyone contacting us about a puppy will be told that the dam had a sibling with epilepsy.

I hope reading this article has encouraged some breeders to speak more openly about ANY problem in their litters. None of us set out to breed dogs that have issues for which there is no genetic test. Irish setters can have epilepsy, skin disease, gut issues including IBD as well as temperament issues. None of these have genetic tests available.

It's no doubt a good practice to NOT breed any dog affected with these issues. But it's a bigger dilemma to decide how to go forward with siblings of these dogs. Genetic diversity is VERY important. If you eliminate whole bloodlines of siblings based on affected dogs, you could in fact just be creating other issues by eliminating dogs whose bloodlines are valuable. Dr Bell explains all this in the seminar link above.

To be honest, it makes me angry to hear ringside whispering about "that breeder breeds \_\_\_\_\_ (fill in the blank). " And it makes me even angrier when breeders are having conversations and a breeder sanctimoniously states "I don't have that". I used to bite my tongue but recently when someone says that to me I usually answer with "you mean you don't have that in your house.....". It is so discouraging when breeders who have had disappointments by selling dogs affected with health issues continue to act as though their bloodlines are "clear". Newsflash: no one knows how these issues for which there are not genetic testing are inherited and therefore no one can say they are "clear".

It is even sadder to hear about breeders who warn those with dogs from them with health issues that tell the owners NOT to discuss these issues with anyone. Some have even gone as far as to warn those owners that no one will ever sell them another Irish setter if they talk openly about the health challenges their dog has had. That is SO wrong on every level.

The best we can all do is be supportive of each other & talk openly about the health challenges we've experienced in our breeding program. And work hard to support research to solve the mystery of inheritance.

One final thought: many years ago, I wrote an article like this about my experience with HOD (hypertrophic osteodystrophy). My idol in Irish setters Lucy Jane Myers contacted me. She applauded me for my honesty, but warned me that my honesty would likely result in no one wanted to buy show dogs from me. I was grateful to her for reaching out to me, and for her support. I told her I really didn't care if anyone ever bought a show dog from me. My goal was to produce healthy dogs to the best of my ability. I will never forget L J's support and kindness.

My goal remains the same in 2024 as it was back then: to represent the dogs we breed in a totally candid transparent way.

May we all be open, honest, and supportive about the breed we love.

With grateful appreciation to my son Peter, my husband Randy, the co-breeder of this litter Tina Toohey and the owners of the stud dog Heidi and John Laabs for their complete support of this article. And most of all to Bonnie Jo Hall, Eileen Miller and Gail Tannenhaus for allowing me to tell Cori's story....it was not the story that we all dreamed about for Cori, but his legacy thanks to this article will hopefully be for people to be more open in discussing issues within our breed without malice and negativity.