

# SPECIAL SCA NATIONAL SPECIALTY EDITION

April 2018



## History of the Schipperke Diversity Project

By Lee Ann Stusnick

Had someone told me in April 2006 that the SCA Rescue and Health Foundation would be sponsoring the DNA testing of Schipperkes through a partnership with Embark, in association with Cornell School of Veterinary Medicine, I think I would have been incredulous. It was October 2005 that I attended the AKC Canine Health Foundation Parent Club Health Conference, where the big excitement was the presentation announcing the mapping of the canine genome, and the subsequent publication of that complete work three months later in *Nature*. It was hailed as a premier tool that researchers worldwide would utilize for quicker results, more accurate tests and definitive therapies in the fight against canine and human disease. It could only have been imagined that for a relatively small amount of money a Schipperke owner could collect saliva at home, mail it to Embark, and receive results for 160 health conditions affecting dogs.

At the 2017 SCA National Specialty the Foundation presented a FREE seminar on "The Nuts 'n Bolts of Genetics for Dog Breeders", presented by Carol Beuchat PhD, the Scientific Director Institute of the Institute of Canine Biology. This brought up the ideas of genetic diversity, genetic basis for health conditions and the genetic testing to identify these in our Schipperkes. Enter Embark Testing. This testing also provides information about the dog's genetic background and the actual coefficient of inbreeding, as well as traits such a coat type and markings.

The Foundation launched the Schipperke Diversity Project in

October 2017 with the solicitation of pedigrees and genetic samples from 50 Schipperkes, show lines and pet lines, healthy and those with diagnosed medical conditions. These tests were paid for by the Foundation in exchange for the Foundation owning the results and sharing those results with the owner.

The results from many of those initial 50 tested are in. We have discovered three health conditions in our Schipperkes, in both show and pet lines: two Hematologic conditions - Von Willebrand Type 1, carrier and affected; Factor VII Deficiency (F7 Exon 5); one ocular condition Canine Multifocal Retinopathy *cmr2* (BEST1 Exon 5).

The second phase of testing was begun in March to offer testing at the rate of \$69 instead of the usual \$179 available through a subsidy from both the Foundation and Embark. The individual test results in this phase are private between the owner and Embark. The Foundation will receive the raw data reports from these tests, but no individual results identified with any particular dog or owner will be shared with the Foundation. The first 50 tests were snapped up via our Facebook page in less than two hours. Days later a second set of 50 tests were offered and they too were purchased in less than a day. A third set of 50 tests was offered at a rate of \$89 per the Foundation agreement with Embark, which have also been purchased by individual owners.

This testing is a numbers game in that the sample size (N) must be large enough to predict results with enough certainty to be meaningful. There are known

conditions for which there are known genetic markers; there are known conditions for which there are NO known genetic markers; there are conditions that are not yet known for which there may be genetic markers. Once the sample size reaches 100 (which we already have) Embark will be able to investigate conditions that particularly affect Schipperkes. When we reach the 300 samples submitted mark this ability will be even greater.

The prospect for the future of this project could never have been imagined ten years ago. The DNA results are recorded and can be used by researchers all over the world! The recorded results can be analyzed for presence of genetic conditions yet to be discovered----a look back in time. None of us knows what the future holds for the continuing health and well being of our Schipperkes. It is our hope that this project will help insure a more healthy future for our breed.

We would like to thank all our generous donors from all over the world. In fact we have owners from all over the world who have or will participate in this program. This is about all Schipperkes, from pet and show lines, from North America and the rest of the world.

Be sure to see our ad in the show catalog concerning another offering for testing. Please come by our table Wednesday through Saturday for information.



## A Testimony to DNA Testing

By Terrie Rolph

When I first learned of the Schipperke Club of America Foundation's Project to collect the DNA of 100 Schipperkes and screen them for 160 genetic diseases, I was so excited! I donated money, although it's not a charitable deduction in Canada, but the opportunity to support the project was reinforcement enough!

My next step was to volunteer the genetics of my Schip, who has been diagnosed with idiopathic epilepsy. I wasn't sure if this project was limited to participants in the USA or not. Almost immediately, I heard back from Beth Lilly, one of the many tireless volunteers working on the project. Yes, she said, they would be happy to accept her DNA.

Kaylah (Mazeru's Kenya), born in January, 2004, was the first Schipperke I'd ever bought from a CKC breeder. She is feisty creature, a master trainer of humans, and has ruled supreme in our household for 14 years.

When she had her first seizure at about 3 years old, I was shocked and devastated. Over the next two and a half years, I worked my way through various diet and lifestyle changes, a myriad of alternative therapies and potions and at least three veterinarians. I spent numberless hours researching canine epilepsy and having mostly

fruitless conversations with other Schipperke owners and experts.

The questions swirled in my mind. Was it food additives, environmental toxins or stress? And always there was the pervasive anxiety that somehow I had failed her and that her illness was my fault. The seizures gradually increased in frequency and duration. Many nights my husband and I held her convulsing body in our arms, willing her to breath as we waited for the Valium to kick in and the seizure to subside.

Finally, I found the right veterinarian, Dr. Margaret Henderson. She carefully listened to my descriptions of the seizures, watched the videos I'd taken, correctly diagnosed her focal seizures, and helped me to find the right dosage of potassium bromide. Over time, Kaylah's seizures diminished in intensity and duration. I'll always be grateful to her kindness and her expertise.

Nine years on, I was pleased that Kaylah had lived long enough to contribute her genetics to research that might help other Schipperkes and their owners in the future. But in late November, just as I learned of this wonderful project, Kaylah began to weaken. Her usually prodigious appetite diminished and she barely

moved for weeks. The kit arrived at the beginning of January. I swabbed her cheek and mailed the kit back the day after it arrived. Coincidentally, her energy and appetite began to improve and she has now returned to her imperious self.

If you have not yet submitted your Schipperke's genetics, please consider doing so. They welcome submissions from any Schipperkes, pets or breeding stock. Healthy or sick, registered or unregistered; if you've got a Schipperke, participating in the SCA Embark testing project benefits Schipperkes of the future.

And if you're thinking of breeding your Schipperke, this test is vital.

The project has already revealed at least three genetic diseases that were not formerly associated with Schipperkes.

In the future, I hope that the information can become part of an open database, so that people worldwide can use it to breed healthier Schipperkes. I am so grateful to the SCA Foundation, Embark, Dr. Carole Beuchat and all the volunteers involved in this project. I am also grateful that Kaylah and I could play a small but important part in it.



*The Schipperke Club of America Rescue & Health Foundation, Inc. has received an exemption as a 501(c)(3) Charitable Organization under the Internal Revenue Service Code.*



**Donation checks MUST be made out to  
The SCA Rescue & Health Foundation, Inc.  
to be tax deductible.**

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