



Update cooperation VHNK and the ExpertiseCentrum Genetica Diergeneeskunde (ECGG)

Polymyositis research (Dr. Peter Leegwater, Drs. Yvet Opmeer & Dr. Paul Mandigers)

There is some good news. We have found the mutation that can be associated with polymyositis. All the dogs with polymyositis which are examined by use have the mutation. This mutation is can be found close to two important genes involved in the functioning of the immune system. It also turns out that Kooikerhondjes suffering from polymyositis have an abnormal function of these two genes. So the mutation has no doubt a meaning. However, not all the Kooikerhondjes with this mutation become ill. Kooikerhondjes that are homozygous for this mutation (they therefore have the two different alleles) have an increased risk, but not all of them will get sick. We see this more often with immune-mediated diseases. Environmental factors or variations in the rest of the DNA can cause a dog to become ill or not. That is why we call this mutation a risk factor. Also heterozygous Kooikerhondjes (Kooikerhondjes with only one deviating allele) are also at risk. That risk is very small (probably less than 1 percent) but present. Because there are many Kooikerhondjes with this mutation, we see that about 1 in 3 leaders of polymyositis is heterozygous (carrier) for the hereditary risk factor.

Pedigree research showed that other factors must play a role. We noticed for example that in some litters several dogs got sick, which would not make sense if the mutation is only expressed in a small proportion of the Kooikerhondjes. However, if there is a variation in the DNA that makes a dog more at risk or less at risk, this explains what we see in some litters. In order to investigate this factor the DNA of a group of heterozygous leaders was compared to a group of homozygous leaders which have remained healthy throughout their lives. This comparison led to signals on two chromosomes that have been further investigated. The first signal led to a DNA variant that seemed promising, but it turned out that it had a high frequency in the entire population. It was a false positive result that was a coincidental. The second signal could not yet be traced back to a variant in a gene. This investigation will be continued.

Improvement in the treatment of Kooikerhondjes with polymyositis (Dr. Paul Mandigers)

In recent years we have seen several Kooikerhondjes with polymyositis. In the early years of this study, the treatment results were downright appalling. Not infrequently, a dog did not or hardly responded to the chosen prednisolone therapy. You expect this with an immune-mediated disease such as polymyositis. The treatment results did improve when we also treated with certain muscle supplements. And based on the pathology result, we could also reasonably predict whether or not a dog would respond. Thanks to the research by Dr. Leegwater and Drs. Yvet Opmeer (then a student), the hereditary risk factor was identified. Because the two genes immediately adjacent to this mutation functioned abnormally, we started treating Kooikerhondjes with a specific inhibitor of these genes. And so far, the results seem very hopeful. Meanwhile, we have treated various Kooikerhondjes in various countries and some dogs recover in such a way that the owners report that they no longer notice something about their dog. A hopeful result! Of course the goal remains to combat the mutation, but given the wide distribution of the mutation this requires several generations.

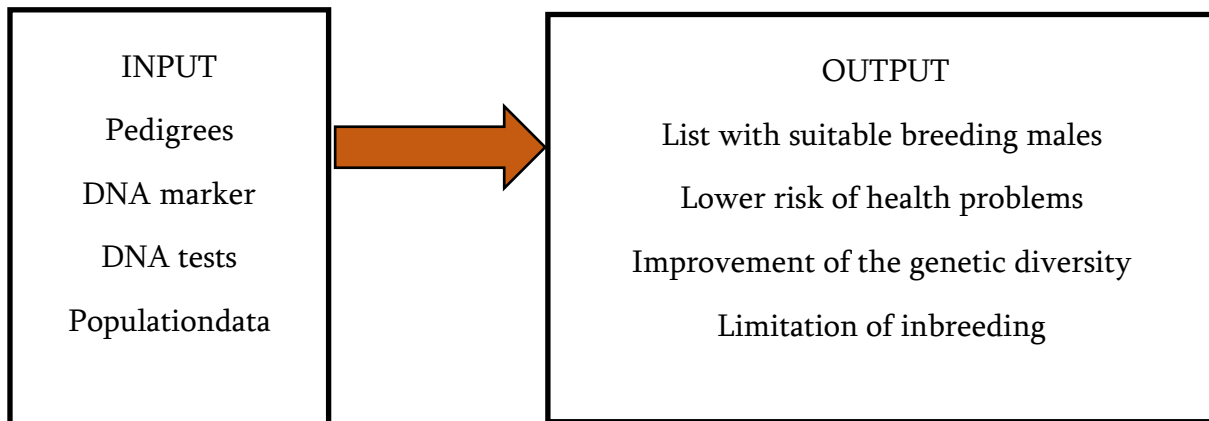


Newsletter foreign clubs



Progress Fit2breed (VHNK)

At the moment a lot of progress is made with the development of “our” new app Fit2breed. Fit2breed will help us in the near future to breed healthy and social Kooikerhondjes in a responsible manner. In the Fit2breed app pedigree data will be combined with DNA data. The app is being developed to provide the breeder with a tool in choosing a suitable partner for their dog.



In the meantime, it is becoming an increasingly large project, many other breed clubs are showing interest and the Raad van Beheer is also considering a participation.

At this moment various people are working with the data in the ECGG, choosing the most important data, converting the ZooEasy data to a version that is suitable for Fit2Breed. In close consultation with the information committee and the board of the VHNK, considerations are made, information and ideas are exchanged and input is given for further development. The structure of Fit2Breed as a company or foundation or also has to be chosen. This has to do with finances and here it is again very important, whether and to what extent major players such as the Board of Directors or Utrecht University participate.

One thing is certain, without the cooperation of the VHNK, the development of such a beautiful project would not have been possible in this time frame. This will also be reflected in the price. We have negotiated hard and owners of Kooikerhondjes will receive a special price. But here, too, no definitive answer is yet possible.

Collecting DNA samples

The next step for further development is now the collection of a large number of (sponsored DNA) samples. These samples are distributed from the VHNK for collection among recently used and soon available breeding animals. Within the Netherlands, a large number of owners have been approached from the VHNK with a request to collect DNA of their dog. Since DNA is already available from many dogs, the VHNK has made a selection for this.

In order to further fill the database, the VHNK will approach various stud owners in Germany, Denmark and Sweden with the request to take DNA from their dog. This selection is made by the VHNK and on the basis of already available DNA profiles.



Newsletter foreign clubs



Research about the behavior of the kooikerhondje

Vereniging het Nederlandse Kooikerhondje and the Expertise Centre Genetics of the Faculty of Veterinary Medicine are working together on the Fit2Breed breeding guidance program. During the development of this program, the Expertise Centre also expressed interest in the behaviour of the Kooikerhondje, because there are sometimes reports of problem behaviour, it often plays a role in the rehoming of the dogs and this is sometimes even a reason for euthanasia. However, in most cases a further description of the exact behaviour is lacking.

The question is therefore what this behaviour entails exactly and which components are involved. When and in which situations is problem behaviour observed? Does taking a course/training have an affect or not? Does a hereditary component also play a role in this? In order to avoid unnecessary rehoming and even euthanasia in the future, it is therefore important to map this out. In order to further investigate the occurrence of certain behaviour in the Kooikerhondje, data is needed from as many Kooikerhondjes as possible (with an age of at least 6 months). We need information from Kooikerhondjes who are currently alive, but also from the already deceased dogs.

Only with enough data can we get good and realistic results. We therefore ask all owners of Kooikerhondjes to participate in this survey. An online questionnaire is developed for this purpose to map out the different types of behaviour in the Kooikerhondje. The research is carried out by Master's student of Veterinary Medicine, Juliette Helleman, under the supervision of the Expertise Centre Genetics and the Behavioural Clinic of the Faculty of Veterinary Medicine, Utrecht. If you have any questions, please contact Juliette via j.helleman@students.uu.nl.

Link/QR code to the questionnaire:

https://survey.uu.nl/jfe/form/SV_9Brm9ibhUo2QniZ

General announcements of the VHNK

Contact persons foreign clubs

At the last symposium in 2017, a contact list was drawn up for a rapid exchange of information and to maintain mutual contacts. When there are changes in the board or changes within the breeding committee, we ask you to inform the board of the VHNK at all times. This can be done by sending an e-mail with the new contact details to l.adams@kooikerhondje.nl.

Confirmation exam

Due to the recent measures regarding the corona virus and the reports from the municipality of Zutphen, we have unfortunately been forced to cancel our confirmation on Sunday, November 8, 2020. As a board we hope to organize the breeding suitability inspection on February 21, 2021 in the Hanzehal in Zutphen.

