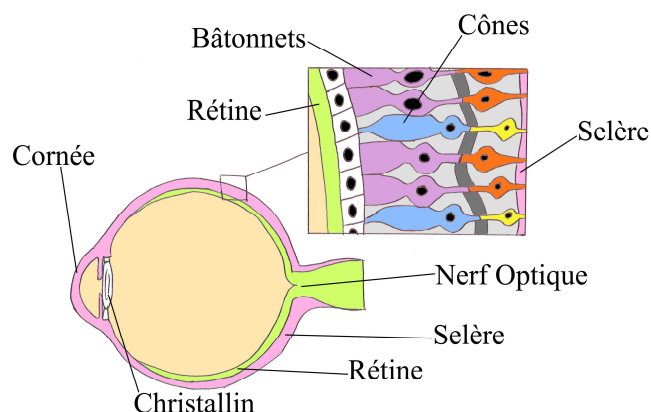


Specific APR

Description :

The Progressive Atrophy of the Retina is a recognized genetic disease due to a degeneration at the level of cones and sticks which forms a part of the retina. Sticks allow to perceive the luminosity and the movement, whereas cones allow to differentiate colors. This disease is due to a genetic transfer. This genetic transfer is present on different chromosomes according to races. APR pulls a loss of the progressive vision and can engender a total blindness between 2 and 8 years. This disease is said autosomale (bound to a single gene) recessive (the animal has to inherit from the gene moved by each of these parents to be declared affected).



APR lié à l'X

For the "APR lié à l'X", the genetic transfer is bound to the sexual chromosome X of the individual. The gene responsible for this disease is the XLPRA and get pedigree dogs Husky and Samoyed. This disease bound in him X begins with a degeneration at the level of sticks, then pulls a degeneration at the level of cones.

Dominant APR

For dominant APR, the genetic transfer is bound to the rhodopsine. The rhodopsine is a protein coupled with a receiver who is activated by the light and who, by a waterfall of reaction, allows the night vision. The transfer Thr4Arg was identified as the responsible of the production of the protein rhodopsine. The transfer of this gene disrupts the production of this protein necessary for the good vision of the animal. The race concerned by this transfer is the race of Mastiff.

APR of A type

For APR of A type, the genetic transfer is bound to a dysplasia of photoreceivers. This disease was determined on races small Schnauzer and leads to degeneration of the retina. The gene responsible of the disease is the phosducin.

Interest of the DNA test :

By means of a genetic test, the responsible transfer can be directly detected. From a simple oral taking, we extract the DNA from cells oral present at the level of the internal mucous membrane of the mouth of the dog (interns surface of the cheek). The analysis is realized thanks to a PCR : it is a question of "photocopying" the gene responsible for the transfer to be capable of detecting it, then of making the comparison with a witness. This method allows a very big precision and can be made at any age. It offers the possibility of making the distinction enter not only the healthy and reached animals, but also to identify the carriers (heterozygotes). It is an essential information to check the disease in the race. Indeed, the carriers are capable of spreading the transfer in the population, but cannot be identified with the only clinical symptoms.

Expression of the results and meaning:

After a screening APR test, the status of a dog can be :

- + / + **Wild homozygote - not carrier of the APR, will never pass on the transfer**
- / + **Heterozygote - Carrier of the APR, passes on the transfer, statistically, in 50 % of the cases**
- / - **Moved homozygote - Affected by the APR, passes on the transfer in 100 % of the cases**

To realize the DNA screening of this disease, a simple oral smear or a blood test allows us to make the analysis. On simple demand of your part, we send you a free of charge kit of taking. After reception of your taking in the laboratory, only 10 working days are enough so that you have your results by phone or by mail. Then a report is quickly sent to you by mail and/or by email. For more information or request of kits of taking, do not hesitate to contact us !