Progressive retina atrophies (PRA) are a group of eye genetic diseases widespread in the canine species with over 100 affected breeds. These diseases are homologous with retinitis pigmentosa (RP) in humans.

The PRA are characterised by a degeneration of the retina photoreceptors which results initially in impairing peripheral vision (night vision) and gradually progresses to complete blindness. The affected dog will have trouble moving and apprehend obstacles, first in darkness then under daytime conditions. PRA clinical signs may appear late, the disease is often diagnosed after the dog has reproduced, thus resulting in the spread of the disease in the breed; hence the importance of early PRA diagnosis in our race at risk. At present, only a complete and regular eye examination can diagnose, at the earliest, affected dogs.

To identify the genetic cause of the APR Berger Picard, genomes (set of chromosomes) of 3[2] dogs were completely sequenced at the University of Missouri (USA) between 2013 and 2015 and the genetic and statistical analyses are taking place. However, other dogs genomes should be sequenced to identify more accurately and easily the genetic cause. The team "Dog Genetics" CNRS Rennes has already established a pedigree of 150 Berger Picard after collecting samples with the club and Dr Gilles Chaudieu at the Nationale in 2014 and is always looking for new blood samples: primarily from affected dogs and their parents but also samples from clinically disease-free old dogs with an eye examination at an advanced age (> 7 years). The team "Dog Genetics" CNRS Rennes will select new dogs to be sequenced in collaboration with the University of Missouri, to speed up the identification of the gene and mutation responsible for this form of APR in the Berger Picard.

If you wish to participate in this research, please contact the "Dog Genetics" team CNRS of Rennes:
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[2] 4 dogs in September 2016