Methods: Seven ESS dogs of both genders (age 1.5-10 years) were examined (Table) at different clinics in Sweden and in USA. Five dogs were closely related and were all related to individuals previously diagnosed with PRA. ERGs were performed in all dogs, 4 were tested twice (3 months apart) using similar methods: dogs were sedated (Medetomidine, 0.05 mg/kg IM) and topical anesthetics and short acting mydriatics were applied in the right eye of each animal. After preparation of the dogs in a dark light, the dark adaptation for 20 minutes followed. A portable mini-Ganzfeld ERG unit (HMSERG, Ret/efCorp, Columbia, MO, USA) was used (Fig.1), which had the capability of automatically running a protocol recommended for diagnostic ERGs in dogs (4). The Rod and cone function, the process of dark adaptation and b- and a-wave ratios were evaluated. The oscillatory potentials (OPs) were studied after digital filtration of the scotopic response to 3 30/s of white LED light stimulation at 100-300 Hz. The adaptation was reversed following the ERGs (Adalpxeem) and ophthalmoscopy and fundus photography were performed. Two of the dogs, a 6- and a 10- year-old, were the eyes obtained for light- and electron microscopy using procedures as previously described (5).

Background: Hereditary retinal dystrophy, classically termed progressive retinal atrophy (PRA) in dogs, affect more than 100 breeds, many of which have been clinically characterized into specific types of rod cone degenerations and rod and/or cone dysplasias. The over is a group of late-onset diseases, while the latter are congenital or early-onset disorders. Autosomal recessive, dominant and sex-linked patterns of inheritance have been described for various forms of PRA. These spontaneously occurring canine retinal diseases are useful for comparative research, especially in the search for effective treatment modalities for both canines and humans, such as gene transfer (1).

PRA has been described in the English Springer Spaniel canines and humans, such as gene transfer (1).

The English Springer Spaniel dog sedated and prepared for ERGs in dogs (4).

According to a predetermined, published protocol for diagnostic species electroretinograph (HMsERG) unit. Note that the unit is standardized procedures and a portable mini-Ganzfeld ERG unit with an automated protocol.