

## 2. Introduction

According to the bylaws of the ECVO, article 4.9, there is an Hereditary Eye Disease Scheme (further referred to as the Scheme) of the ECVO that should be adhered to in regards to diagnosis and control of Presumed Inherited Eye Diseases (PIED) of animals.

The main purpose of the Scheme is to aid in the diagnosis and control of PIED, which are either disabling, painful or seriously affecting the wellbeing of animals, and those PIED that necessitate surgical intervention and/or lifelong medication.

The Scheme provides definitions, guidelines, recommendations and information concerning PIED. Information is given in this Manual in regards to Inherited Eye Disease of dogs and cats with illustrations on the website ([www.ecvo.org/public/index.htm](http://www.ecvo.org/public/index.htm)).

The Scheme guarantees that:

- Rules and guidelines are provided for the examination and authentication of specifically trained European veterinary eye specialists (Diplomates) and specifically trained veterinarians in regards to PIED (European Eye Scheme Examiners or ESE)
- The examiners are able to recognize, differentiate the relevant and irrelevant clinical signs of PIED and establish their significance
- A high level of service is given in regards to veterinary ophthalmology and information about PIED in general and more specifically for breeds in regards to owners, breeders, breed and kennel clubs and the public in general.

The Scheme includes a general examination of the entire eye and its adnexa. A certificate of the eye examination is issued in respect to PIED. The certificate is valid for one year from the date of examination. Further, it is recommended that the animal is examined annually. If the findings are inconclusive it may be necessary for the animal to be re-examined sooner, e.g. within 6 months, which is then stated on the examination certificate. Litter screening is performed under the Scheme.

The veterinarians working under the ECVO Scheme are either Diplomates or ESE. By training and examination, new panel members and diplomates are continuously added to ECVO in order to provide sufficient examiners for the number of animals to be examined in Europe.

For this Manual we choose the term "ophthalmologist's advice", to illustrate the aim of the ECVO; to give medical advice in the field of Veterinary Ophthalmology, and intentionally avoid the words "pass", "certifiable", "registerable" or "fail". It is up to the breed and kennel clubs to register animals and to give their more precise breeding rules, taking into account other hereditary diseases affecting the breed and the population of animals at large.

It is important to recognize that the sensitivity of genetic disorder detection is greater when large numbers of dogs or cats are examined. Thus, if popular breeds are examined, more PIED will be recognized. Conversely, it may appear that relatively small breeds or breeds that are usually not examined or in which eye diseases are more or less accepted, appear to have almost no hereditary ocular disorders. Especially dog and cat breeds in which exaggerated facial conformation is desired, thus "unrecognized", by owners and breeders, the registered eye problems will be comparably low. These abnormalities include e.g. bulbus luxation, entropion, ectropion, macroblepharon, trichiasis and exposure keratopathy syndrome. Some owners, dog fanciers, and breeders believe excessively prominent, large globes, oversized palpebral fissures, and massive facial folding to be normal, such as e.g. everted lower eyelids, giving the dog a "nice sad and devoted expression". Moreover, some breed standards tolerate or even promote these conditions. Breed prescriptions vary from: "showing little, if any, haw", "Acceptable to have some haw showing but without excess"; "the haw may sometimes show without excess"; "appear slightly sunken beneath thick eyelids..., the lower lid shows a certain looseness"; "lower lids a little slack so that a little haw is visible are nevertheless tolerated", and to: "a small angular fold on the lower lids with the haws only slightly

visible as well as a small fold on the upper lids are permitted". The country of origin prescribes the text of the breed standards. The UK has made a start, adding "Free from obvious eye problems" for all descriptions, and "Never protruding, exaggerated or showing white when looking straight ahead". We find it important to influence the Kennel clubs to revise the breed descriptions and recommend adding a general line, such as: "exaggerated facial conformation is undesired". According to the rules of many kennel clubs, breeding from entropion- or ectropion-affected dogs is, however, not accepted.

It is the opinion of the ECVO HED committee that responsible judges, breeders and owners should recognize and select away from exaggerated facial features that cause acute or chronic eye disease. It is up to the conscientious breeder to use the information given in this manual, along with other criteria in regards to the breed as a whole, when selecting the animal from which to breed.

Until the genetic basis of an ocular disorder is defined in a published report, we rely on statistical information available from other registry organizations, informed opinions and consensus of ECVO diplomats and ESE, and must satisfy ourselves with terms like "presumed inherited" and "possibly inherited". Further, several universities and companies provide information on genetic testing and assist in providing information and data to aid in defining the genetics of ocular diseases of dogs and cats.

The ECVO considers that the prudent approach towards these disorders is to assume they are hereditary, except in cases specifically known to be associated with trauma, other causes of ocular inflammation, specific metabolic diseases, nutritional deficiencies or age-related changes.