



Australian Canine Eye Scheme (ACES)

INFORMATION FOR OWNERS

1 January 2008

A national system of examination and reporting of abnormal eye conditions (both inherited and non-inherited) in all dog breeds, carried out Australia-wide by registered veterinary eye specialists to standards set by the Ophthalmology Chapter of the Australian College of Veterinary Scientists.

The Australian Canine Eye Scheme is administered by the Australian Veterinary Association to strict certification and quality assurance standards, and is endorsed by the Australian National Kennel Council on behalf of Canine Controls and affiliated breed clubs in each Australian State or Territory.

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INTRODUCTION

What is the Eye Scheme?

The Australian Canine Eye Scheme (ACES) offers breeders and ANKC-affiliated breed clubs a nationally standardised system of testing for inherited and non-inherited eye conditions, in all registered breeds. Through systematic screening, breeders can eliminate or greatly reduce the incidence of painful or vision-threatening eye disease. Not all breeds have inherited eye disease and any breeder may take advantage of testing facilities as a form of reassurance, even if the breed is not mentioned in the ACES literature.

ACES Rules and Procedures sets out the rules under which the eye scheme operates. The **ACES Guide to Owners** (available through veterinary practices and the Canine Control offices in each state capital) provides further summary information on the operation of the scheme.

In general, the best age for eye testing is before a dog has reached one year old and thereafter on an annual basis. In some breeds, it is necessary to test them as young pups (between 6 and 10 weeks of age) under separate Litter Screening rules. Breeders of pedigree litters **in any breed** are advised to have the eyes of all pups checked by an ACES Panellist before sale, to protect their interests under Consumer Protection law in the event of a buyer dispute.

What are the Schedules?

Schedule 1 lists the known eye diseases in those breeds where there is enough scientific information to show that the condition is inherited (see Appendix 1). For the breeds in Schedule 1 a certificate is issued with results of 'affected' or 'unaffected' and the findings will be made available to the ANKC's inherited diseases database.

Schedule 2 lists those breeds in which the conditions are, at this stage, only suspected of being inherited and therefore remain 'under investigation' (see Appendix 2).

The reason for having the Schedule 2 list is to alert breeders to a potential problem and to encourage them to have their dogs' eyes examined regularly under the Scheme. As a result, relevant information can be collated and analysed promptly, allowing an emerging condition to be detected and dealt with before the controlling genes become widely disseminated. There is evidence of potentially threatening eye disease in all of the breeds listed in Schedule 1. As new evidence emerges from eye testing and genetic studies on families within a breed where defects have been recorded, some eye conditions turn out to be not inherited at all.

Schedule 3 lists the veterinary eye specialists appointed to serve as ACES Panellists (see Appendix 3).

How does a breed or condition qualify for inclusion in the Scheme?

AVA appoints an Eye Scheme Standing Committee (ESSC) of experienced veterinary eye specialists, that reports to the ACES Chief Panellist. The ESSC meets annually to decide which breeds and conditions will be included under **Schedule 1** and **Schedule 2**. Amendments to the Procedure Notes come into effect on 1 January so it is important to check each year whether new breeds or conditions have been added. The ACES Chief Panellist will notify ANKC and the Canine Controls in each state of any changes to the Schedules, so that ANKC National Breed Councils and all State-affiliated breed clubs should be kept fully informed.

There are a variety of ways in which the ESSC may evaluate the quality of information in forming an opinion on the significance of any newly reported eye problem. For inclusion in **Schedule 2** (under investigation) there may have been a few cases noted and recorded by ACES Panellists, even though they were not listed in the Schedules. Sometimes cases are seen in general veterinary practice and often a breed club will have gathered information on an emerging problem amongst related dogs in Australia or overseas. However the information becomes available and mindful of the fact that breeding populations in different States do not necessarily overlap, if there is enough concern about a newly emerging eye condition (even if localised and restricted to one State) it is placed in **Schedule 2**.

Schedule 1 conditions require either (a) well established ophthalmoscopic signs (arising within a predictable age range) that have been shown to be inherited or (b) scientific evidence of the condition in a particular breed. The criteria for inclusion are strict. The reliability of any supportive evidence is important and often there will need to be recognised published data, produced either in this country or overseas. Continuing research on the canine genome is expected to see the introduction of highly reliable genetic tests for many inherited diseases in dogs, and ACES is committed to working with ANKC to ensure that information from both sources (ACES Schedule 1 and verifiable test results from recognised DNA laboratories) can be integrated to provide a more meaningful knowledge base for breeders.

Because **Schedule 2** alerts breeders to potential emerging conditions, these breeds are encouraged to be seen regularly under the Scheme and in large numbers, if possible. Results of the examination will be made available to the ANKC's planned inherited diseases database, so that meaningful data are not overlooked. Sometimes breeds and/or conditions are moved from **Schedule 2** to **Schedule 1** as a consequence of information gathered.

Does the eye scheme report on the whole eye, including eyelid defects?

At this stage, ACES will record information and accumulate data only on conditions affecting the globe (eyeball), since these represent the greatest threats to vision. Conditions involving the cornea, iris, lens, vitreous, retina, and optic nerve are included, together with goniodysgenesis (a marker for glaucoma). Conditions affecting the eyelids and surrounding structures are not currently reported under **Schedule 1** but because the exam form allows any variation (e.g. distichiasis) to be recorded graphically, information will still be gathered on abnormal trends.

For example, in a breed where head features have been exaggerated to the detriment of normal eyelid function or vision, breeders need to be aware of the potential consequences so that should a situation arise that forces that breed's National Breed Council to take corrective action, the ESSC may be asked to set the necessary criteria to distinguish 'normal' from 'abnormal' so that the ACES Chief Panellist can direct that all dogs deemed 'affected' by faulty adnexal or eyelid conformation are reported under **Schedule 1**.

Do the breed clubs have any input into decisions on breeds listed in the Schedules?

For the great majority of canine eye diseases, the abnormal morphology, age of onset, breeds affected and the mode of inheritance (if any) are well established and have been extensively reviewed in research and clinical journals. The ACES Chief Panellist and the ESSC will have access to all published scientific information as well as the latest reports coming out of eye certification schemes in other countries, and all of this will be taken into account during the ESSC's annual review of the **Schedule 1** and **2** listed breeds.

All popular breeds face various 'threats' that have the potential to restrict public popularity in the long term or cause health problems on a national scale, and the **best way** for breeders and supporters to come together to find ways to deal with these single-breed issues Australia wide, is to direct the breed clubs in each state to apply to ANKC for recognition of a National Breed Council (NBC). Many popular breeds already have active breed councils operating under a uniform ANKC constitution, hopefully drawing on the

talents of experienced office bearers who can best articulate in the public arena, the aims and concerns shared by breeders across the country.

The easiest way for any breed (however large or small in number) to express its view on an issue concerning eye health that may affect the ACES assessment process, is for all the breeders to discuss their concerns at local breed club and State level before coming to an **agreed consensus** nationally, and then direct their National Breed Council to present the ACES Chief Panellist with a formal submission.

The ACES Chief Panellist is responsible to AVA for the operation of the ACES system nationally and is the **sole interface** between the examining panel and ANKC-affiliated bodies, including National Breed Councils in regard to the scheduling of a particular eye defect. At the time of the examination, ACES Panellists should assist owners by explaining the features of a known eye condition (inherited or otherwise), but will be expected to abide by the **assessment criteria** currently in force. Examining panellists should not be expected to comment on or debate these assessment criteria, since issues of interpretation affecting a breed as a whole are best directed through breed clubs or the National Breed Council, to the ACES Chief Panellist.

Before any perceived concern on the severity of assessment standards can be considered by the ESSC in its annual review of breeds and Schedules, there **must be** an agreed consensus amongst breeders in all States and Territories that will allow the issue to be dealt with as a formal National Breed Council resolution. In any event, the decision of the ACES Chief Panellist in respect of the current year's Schedules is final.

Of course, some of the rarer breeds are numerically small and do not have a dedicated breed club in more than one or two States, or they simply do not have the incentive or the necessary manpower to support a National Breed Council. Provided there is visible evidence of a genuine national consensus, dialogue with the ACES Chief Panellist will still be possible in these cases, perhaps with the help of an independent advocate or advisory group recommended to ANKC by the Chairman of its Canine Health Committee.

Note: There are a small number of non-registered breed types or 'designer crosses' with devotees committed to a particular set of features, that do not have a recognised breed standard and do not come under the regulation of ANKC (i.e. they cannot be entered in shows held under Canine Control Rules and have no ANKC stud register). Breeders in this category are welcome to present dogs for eye assessment by ACES Panellists and receive a certificate, but what they do with the information is up to them, as no record will be maintained either by AVA or ANKC.

What does 'Open Register' and 'Closed Register' mean?

There are almost 200 breeds on the ANKC register, many of them being more popular and established (both genetically and in terms of general health and reliability), than some of the more exotic breeds. Supporters of these well-established breeds seek to offer puppy buyers every possible assurance of good health, not only at the time of sale but also in the months and years to follow. To achieve that level of reliability they insist on high standards of health accreditation being maintained in the general breeding population.

By seeking to be placed on an ANKC-endorsed **Open Register** for inherited disease surveillance, the National Breed Council for that breed is making a clear statement on behalf of all active breeders and club members. They are saying that optimum health standards are important to them, and that adherence to a strict policy of disease surveillance is a prerequisite for any serious breeding program. They realise that by offering all puppy buyers such a transparent commitment to quality assurance, they instil a high degree of confidence in the general health of *any puppy* purchased from a responsible breeder and breed club member.

Please refer to the **ACES Rules and Procedures** for a detailed explanation of how ACES results may be reported for each breed as an **Open Register** or **Closed Register** listing, on the nomination of the relevant ANKC National Breed Council following full consultation with the affiliated breed clubs in each State.

THE EYE EXAMINATION CERTIFICATES

ACES uses two forms to collect pertinent information. The **ACES Eye Examination Certificate** (Appendix 4) is used for all adult dogs and pups between three months and a year of age. The **ACES Litter Screening Certificate** (Appendix 5) is used to collect information on all pups in litters aged less than twelve weeks.

The **Eye Examination Certificate** has four main parts.

1. The top section contains the animal's registration details, owner's details, information regarding previous examinations and any genetic testing that has been performed. This section should be completed by the owner, with the declaration signed and dated before the eye exam can take place.
2. The middle section is used to record all abnormalities of the eye and adnexa (lids and surrounding structures), with provision for a diagrammatic record. This is completed by the ACES Panellist.
3. The lower section details the Inherited Eye Disease status. This section relates only to the conditions deemed to be inherited for the breed in question. These conditions are listed in **Schedule 1**.
4. The ACES Panellist signs and dates the form as an accurate record of his/her findings, on that date.

The **Litter Screening Certificate** has three main parts:

1. The top section contains the registration details of the sire and dam, owner's details and information regarding the number of pups in the litter. This section should be completed by the owner, with the declaration signed and dated before the eye exam can take place on any of the pups.
2. The middle section details the Inherited Eye Disease status for each puppy (permanently identified by microchip or tattoo) according to the **Litter Screening Checklist**.
3. The ACES Panellist signs and dates the form as an accurate record of his/her findings, on that date.

INFORMATION FOR OWNERS

What should I do if I want to breed from my dog?

You may wish to obtain information on conditions relevant to your breed from an ACES Panellist or ANKC, so that you are aware of any **Schedule 1** condition listed for your breed and how that may affect the available choices of mating partner (i.e. eligibility of a particular sire for your bitch, or vice versa), especially in a breed where Open Register reporting is in force.

Participation in the Scheme is **entirely voluntary** and there is no obligation to renew individual certificates every year. However, owners of stud animals may insist on a current ACES Certificate being produced for both parties to a planned service, so for that reason as well as the importance of detecting any late-onset eye defects, it will be in the interests of breeders to ensure that eye testing is carried out at regular intervals throughout the active breeding career of both stud dogs and brood bitches. The ACES Certificate is current for one year from the date of issue and it is the responsibility of the respective parties to an agreed transfer, lease or stud service contract, to ensure that the most recent ACES Certificate has been issued within the previous twelve months.

While ACES Certification is based on annual testing, for most breeds there is an age where inherited eye conditions are no longer likely to appear. This **upper age limit** will be notified to ACES Panellists as soon as there is sufficient age-

verified data accumulated in the breed, to be able to offer that as a reliable prediction.

Can I do any more to help the breed?

Yes - not only should you have your dog tested annually for the relevant **Schedule 1** and **Schedule 2** conditions, you should check with the breed club in your State on their policy in regard to controlling inherited disease. By applying guidance through its National Breed Councils, the ANKC's Canine Health Committee aims to help breeders monitor all types of inherited disease. In some cases a geneticist or ACES Panellist with a particular interest in one condition may be offering private help to the breed clubs or a cooperating group of breeders. Wherever possible, you should not breed from a dog that is affected by or suspected of having evidence of inherited eye disease.

How do I get my dog's eyes tested?

- 1) Select a convenient ACES Panellist from the list in Schedule 3 and make an appointment, either directly or through your own veterinary practice. Only AVA-appointed veterinary eye specialists are authorised to issue ACES Certificates. Breed clubs may arrange for an ACES Panellist to attend a show or field trial event to carry out eye testing and issue ACES Certificates, and this is acceptable provided the eye examination can be carried out as prescribed in the **ACES Rules and Procedures**.
- 2) Arrive at the designated appointment, allowing time for both a pre-dilation and a post-dilation examination.
- 3) **The following documents MUST BE brought to the consultation:**
 - (a) The **original registration certificate** issued by an Australian State Canine Control or the registering authority in the country of origin, endorsed with a record of permanent identification (microchip or tattoo).
 - (b) Any **change of ownership documentation**, or original export certificate issued by the country of origin.
 - (c) **The most recent eye certificate** issued in Australia or overseas.
 - (d) A formal transcript of any **genetic test results** for a relevant eye condition issued by a recognised testing laboratory, that the owner wishes to see included in the ANKC Inherited Diseases database.
 - (e) For litter screening (unless individual registrations have been issued), a copy of the **Application for Litter Registration** form showing registration details of both sire and dam, including a signed Certificate of Service.

If any of these documents are held but are not presented, the examination may proceed but results will not be made available (even verbally) and **the certificate will not be issued** until the missing documents are sighted.

- 4) The eye examination is completed and then if all documentation has been correctly presented, the Certificate is issued. There are three copies to each serially numbered form. The owner retains the white (top) copy. The yellow copy is sent to AVA as a permanent record and for data analysis by ANKC, and the blue copy is retained by the ACES Panellist. At the owner's request, a photocopy of the white (top) copy may be forwarded by the ACES Panellist to the owner's regular veterinary practice.

APPEALS PROCEDURE

Any owner has the right to appeal the results of an ACES examination. The procedure shall be as follows:

Any appeal must be lodged in writing with AVA within 30 days of the examination being conducted. The owner will then take the dog **together with the disputed certificate**, for examination by another ACES Panellist. The second panellist will charge the normal fee, with all other costs being borne by the owner.

If the second panellist **agrees** with the first, a Certificate is issued and no further action can be taken by the owner. If the second panellist **disagrees** with the first, the matter is referred to the ACES Chief Panellist, who will review the circumstances and either agree to adjudicate or delegate to a third panellist. Since travel costs will be the responsibility of the appellant, the Chief Panellist will endeavour to minimise this additional expense. There is no further fee payable by the owner for this final opinion, provided no direct cost is incurred by the adjudicating panellist or by AVA. An owner may elect to consult the Chief Panellist directly for the second opinion, in which case a normal fee is applicable. In any event, at the end of this process the Chief Panellist's decision is final.

The final result must be received by AVA within 60 days of the first examination or the original result will stand, to be included in the breed figures supplied to the ANKC Inherited Diseases database. While circumstances that might justify such action are rare, there is nothing to prevent the owner of any dog that has failed a previous ACES examination from re-submitting the same individual in a following year.

Any appeal against the results of a litter screening examination must be notified to AVA as soon as possible so that the ACES Chief Panellist can make arrangements for the whole litter to be re-examined **before 12 weeks of age**. Since additional costs remain the owner's responsibility, ideally the Chief Panellist should examine all pups in the litter but may delegate to an available panellist (e.g. one with a fundus camera) if difficulties with timing or distance are involved.

THE ACES 'GUIDE TO OWNERS' LEAFLET

The AVA has produced a summary leaflet *ACES – A Guide to Owners* which is available from the Canine Control offices in each capital city and can also be downloaded from the AVA website. This leaflet is offered as a basic guide to any owner or agent presenting dogs for an eye examination under ACES Rules, so that they are familiar with the procedure for filling in the forms, distribution of duplicate copies and the way in which the results will be reported for any given breed.

PUBLICATION OF RESULTS

In addition to the 20-breed summary of **Schedule 1** conditions provided to the AVA Board in the form of the ACES Chief Panellist's Annual Report, results from all ACES examinations breed by breed will be made available to the ANKC's Inherited Diseases database, with individual animal details protected.

In breeds where an 'Open Register' listing is in force, registration details of **all dogs** examined (together with their Schedule 1 results) will be released by ANKC for public information, and may be published through the State Canine Journals. For those breeds electing to maintain 'Closed Register' status by national consensus, statistical data will still be stored in a dedicated data file but the identities of individual dogs will not be released.

Litter screening results are collated for statistical purposes only, and are not sent for publication.

FURTHER INFORMATION

Copies of the ACES Rules and Procedures can be obtained from the AVA website or through the Canine Control offices in each State. Information leaflets may also be available through your own local veterinary practice.

Australian Veterinary Association (AVA) - Canberra Office

Unit 2, Level 1
86 Wentworth Avenue, Kingston ACT 2604
Ph: (02) 6239 5928 Fax: (02) 6239 6979
Web address: www.ava.com.au/aces

Australian National Kennel Council Member Bodies

Australian Capital Territory

ACT Canine Association
PO Box 815 Dickson ACT 2602
Phone: (02) 6241 4404
Fax: (02) 6241 1129
Email: administrator@actca.asn.au
www.actca.asn.au

New South Wales

Dogs New South Wales
PO Box 632 St Marys NSW 1790
Phone: (02) 9834 3022 or
1300 728 022 (NSW Only)
Fax: (02) 9834 3872
Email: k9council@dogsnsw.org.au
www.dogsnsw.org.au

Northern Territory

The North Australian Canine Association
Inc.
PO Box 37521 Winnellie NT 0821
Phone: (08) 8984 3570
Fax: (08) 8984 3409
Email: naca1@bigpond.com
www.users.bigpond.com/naca1/

Queensland

Canine Control Council (Queensland)
PO Box 495 Fortitude Valley Q 4006
Phone: (07) 3252 2661
Fax: (07) 3252 3864
Email: dogsqld@powerup.com.au
www.cccq.org.au

South Australia

South Australian Canine Assoc Inc.
PO Box 844 Prospect East SA 5082
Phone: (08) 8349 4797
Fax: (08) 8262 5751
Email: info@saca.caninenet.com
www.saca.caninenet.com

Tasmania

Tasmanian Canine Association Inc.
PO Box 116 Glenorchy Tas 7010
Phone: (03) 6272 9443
Fax: (03) 6273 0844
Email: tca@iprimus.com.au
www.tascanineassoc.org

Victoria

Dogs Victoria
Locked Bag K9
Cranbourne VIC 3977
Phone: (03)9788 2500
Fax: (03) 9788 2599
Email: office@dogsvictoria.org.au
www.dogsvictoria.org.au

Western Australia

Canine Association of Western Australia
Inc.
PO Box 1404 Canning Vale WA 6970
Phone: (08) 9455 1188
Fax: (08) 9455 1190
Email: k9@cawa.asn.au
www.cawa.asn.au

APPENDIX 1 - SCHEDULE 1

Breeds and conditions to be certified under the Scheme (as at 1 September 2007)

1. Alaskan Malamute - HC
2. Australian Cattle Dog - GPRA
3. Australian Shepherd – CEA, HC
4. Basset Hound - G
5. Bedlington Terrier - TRD
6. Belgian Shepherd (all varieties) - HC
7. Border Collie - CEA, RPED, PLL
8. Boston Terrier - HC (two forms)
9. Briard - RPED
10. Bull Terrier (Miniature) - PLL
11. Cavalier King Charles Spaniel - MRD, HC
12. Collie (Rough) - CEA, GPRA, RPED
13. Collie (Smooth) - CEA, RPED
14. Dachshund (Miniature Long-Haired) - GPRA
15. Dobermann Pinscher - PHPV
16. Finnish Lapphund - GPRA
17. Fox Terrier (Smooth) - PLL
18. Fox Terrier (Wire) - PLL
19. German Shepherd Dog - HC
20. Giant Schnauzer - HC
21. Hungarian Puli - MRD
22. Irish Red and White Setter - HC
23. Irish Setter – GPRA
24. Irish Wolfhound - GPRA
25. Lancashire Heeler - CEA, PLL
26. Large Munsterlander - HC
27. Leonberger - HC
28. Lhasa Apso - GPRA
29. Miniature Schnauzer - CHC, GPRA, HC
30. Norwegian Buhund - HC
31. Norwegian Elkhound - GPRA
32. Old English Sheepdog - HC
33. Jack Russell Terrier – PLL
34. Japanese Shiba Inu - G
35. Poodle (Miniature) - GPRA
36. Poodle (Standard) - HC
37. Poodle (Toy) - GPRA
38. Retriever (Chesapeake Bay) - GPRA, HC
39. Retriever (Flat Coated) - G
40. Retriever (Golden) - RPED, HC, GPRA, MRD
41. Retriever (Labrador) - TRD, GPRA, RPED, HC, MRD
42. Retriever (Nova Scotia Duck Tolling) – GPRA, CEA
43. Rottweiler - MRD
44. Sealyham Terrier - PLL, TRD
45. Shetland Sheepdog - CEA, RPED
46. Siberian Husky - HC, G
47. Spaniel (American Cocker) - MRD, GPRA, HC, G
48. Spaniel (Cocker) - GPRA, RPED, G
49. Spaniel (English Springer) - GPRA, RPED, MRD
50. Spaniel (Welsh Springer) - HC, G
51. Staffordshire Bull Terrier - PHPV, HC
52. Tibetan Spaniel - GPRA
53. Tibetan Terrier - GPRA, PLL
54. Welsh Corgi (Cardigan) - GPRA, RPED

KEY:

- CEA = Collie Eye Anomaly
- CHC = Congenital Hereditary Cataract
- G = Goniodysgenesis / Primary Glaucoma
- GPRA = Generalised Progressive Retinal Atrophy
- HC = Hereditary Cataract
- MRD = Multifocal Retinal Dysplasia
- PHPV = Persistent Hyperplastic Primary Vitreous
- PLL = Primary Lens Luxation
- PPM = Persistent Pupillary Membrane
- RPED (CPRA) = Retinal Pigment Epithelial Dystrophy (Central Progressive Retinal Atrophy)
- TRD = Total Retinal Dysplasia

APPENDIX 2 - SCHEDULE 2

Conditions under investigation (as at 1 September 2007)

1. Australian Shepherd – PPM, C, C (iris)
2. Basenji – PPM
3. Beagle - MRD
4. Bichon Frise - HC
5. Bloodhound MOD
6. Border Collie - HC
7. Border Terrier - HC
8. Bullmastiff - PPM
9. Cairn Terrier - APD
10. Cavalier King Charles Spaniel - MOD
11. Collie (Rough) - MOD, MRD
12. Dachshund (Miniature Long-Haired) - ONH
13. Dachshund (Miniature Smooth-Haired) - GPRA
14. Dachshund (Miniature Wire-Haired) - PPM
15. Dandie Dinmont Terrier - G
16. Dobermann Pinscher - MOD
17. Eskimo Dog - HC
18. French Bulldog - HC
19. German Shepherd Dog - MRD
20. Giant Schnauzer - MRD
21. Great Dane - G
22. Greenland Dog - HC (early developing)
23. Griffon Bruxellois - HC
24. Hungarian Vizsla - G
25. Irish Setter - GPRA (Late onset)
26. Japanese Akita - GPRA
27. Lancashire Heeler - HC, PPM
28. Norwegian Elkhound - G, MRD
29. Old English Sheepdog - MOD, CHC
30. Papillon - GPRA
31. Petit Basset Griffon Vendeen - PPM
32. Polish Lowland Sheepdog - RPED
33. Poodle (Miniature) - ONH
34. Poodle (Standard) - MOD
35. Poodle (Toy) – ONH
36. Retriever (Curly Coated) - PRA
37. Retriever (Golden) - MOD, CHC, G
38. Retriever (Labrador) - APD
39. Rottweiler - MOD, PPM
40. Siberian Husky - PPM
41. Spaniel (Cocker) - MOD, PPM
42. Spaniel (English Springer) - G
43. Spaniel (Field) - HC, MRD
44. Spaniel (Sussex) - MRD
45. Staffordshire Bull Terrier - HC (variable onset)
46. Tibetan Terrier – HC
47. Welsh Corgi (Pembroke) - PPM
48. Welsh Terrier - G
49. West Highland White Terrier - MOD, CHC, PPM
50. Yorkshire Terrier - HC, GPRA

KEY:

- APD Abnormal Pigment Deposition
- C = Coloboma
- CHC = Congenital Hereditary Cataract
- G = Goniodysgenesis / Primary Glaucoma
- GPRA = Generalised Progressive Retinal Atrophy
- HC = Hereditary Cataract
- MOD = Multiple Ocular Defects
- MRD = Multifocal Retinal Dysplasia
- ONH = Optic Nerve Hypoplasia
- PLL = Primary Lens Luxation
- PPM = Persistent Pupillary Membrane
- RPED (CPRA) = Retinal Pigment Epithelial Dystrophy (Central Progressive Retinal Atrophy)

APPENDIX 3 - SCHEDULE 3

ACES Panellists and Information on Fees

All ACES Panellists are registered veterinary specialists, practising in their own right or employed in a multi-specialist or dedicated ophthalmology referral practices, where consultation and treatment fees are charged out at prevailing rates.

Different specialist practices work in different ways, but all offer ACES certification at rates **significantly discounted** from their normal consultation charges. Fees for ACES testing will vary between specialists depending on the number of dogs presented and other factors such as travel costs, and will be charged at the discretion of the individual panellist.

Many owners and breed clubs have called for a nationally uniform scale of charges for ACES testing, but this is not possible due to varying practice circumstances, and in any case is not permitted under federal Trade Practices legislation. ACES Panellists will generally charge a basic 'per dog' rate for adults (or a 'per puppy' rate for litters) but may set a minimum fee (e.g. their normal consultation fee) for appointments made for only one or two animals.

The Australian Veterinary Association administers the ACES certification and reporting system, collecting basic data on **Schedule 1** conditions and passing on information on eye conditions in all breeds to ANKC for its inherited diseases database. Administration and data processing costs are recouped as a levy on all ACES certificates issued and this constitutes a significant part of the examination fee charged by the eye specialist. The exam forms are serially numbered and every certificate issued has to be accounted for, which is why the forms must be completed carefully as any form incorrectly filled in or defaced will still incur a minimal **administration fee**, to defray the cost of supply.

An ACES Panellist may be invited to issue ACES Certificates at a **Group Testing** session organised by an ANKC-affiliated breed club or field trial association. Any examining panellist may agree to these arrangements, provided that the minimum testing facilities as prescribed in ACES Rules and Procedures are available and that **prior agreement** has been reached on such matters as travel costs, meal allowances, the maximum number of dogs able to be assessed as well as a minimum number able to be guaranteed by the host club.

At the discretion of the ACES Panellist, Group Testing will attract concessional rates that will be advised to the host club. It should be remembered that because of the additional processing time taken to complete the Owner and Animal details on the triplicate certificates, plus time taken by the panellist to fill in all sections, issue the forms and report the findings verbally, no more than **8-10 adult exams** can be scheduled per hour.

Concessional rates will be offered by ACES Panellists to service dogs (Police, Customs, Military and trainee Guide Dogs), not including travel costs. Guide Dogs in service always qualify for reduced fees.

Where **gonioscopy testing** is requested as a screening test for glaucoma predisposition in certain breeds, this procedure will be charged for in addition to the normal 'per dog' eye assessment. Gonioscopy cannot be carried out until the anterior segment of the eyeball has matured, and it is not a reliable indicator of any glaucoma tendency before 18-24 months. Similarly, **electroretinography** is a separately chargeable service.

The **AVA-approved ACES Panellists** (as at 1 August 2006) are listed on the following three pages. The panellists' names appear alphabetically under the State of primary residence, with contact details given. Some specialists are registered in more than one State. Any veterinary eye specialist appearing on the following list may conduct ACES examinations and sign certificates Australia wide, provided he/she is registered in the relevant State or Territory.

New South Wales

Dr. Frank Mark Billson

Small Animal Specialist Hospital
1 Richardson Place PO Box 157, North Ryde Bc 1670.
Telephone: (02) 9889 0289

Dr. Bruce Fyfe Robertson

Eyevet Veterinary Eye Hospital
274 Pennant Hills Road (cnr Charles Street), Carlingford, NSW 2118
Practice Telephone: (02) 9872 9877. Also registered as a veterinary specialist in ACT.

Dr. Jeffrey Samuel Smith

Eye Clinic for Animals
64 Atchison Street, Crows Nest, NSW 2065
Practice Telephone: (02) 9436 4884. Also registered as a veterinary specialist in ACT.

Dr. Cameron James Gavin Whittaker

Eye Clinic for Animals
64 Atchison Street, Crows Nest, NSW 2065
Practice Telephone: (02) 9436 4884. Also registered as a veterinary specialist in ACT.

Dr. Andrew Grant Turner

All Animal Eye Services
5 Andrew St, Mt Waverley, VIC 3149
Practice Telephone: (03) 9808 2822. Also registered as a veterinary specialist in VIC & TAS.

Dr. Michael Edward Bernays

Animal Eye Services
Cnr. Kessels Road & Springfield Street, Macgregor, QLD 4109
Practice Telephone: (07) 3422 2010. Also registered as a veterinary specialist in QLD.

Queensland

Dr. Michael Edward Bernays

Animal Eye Services
Cnr. Kessels Road & Springfield Street, Macgregor, QLD 4109
Practice Telephone: (07) 3422 2010. Also registered as a veterinary specialist in NSW.

Dr Denise Kathryn Brudenall

Eye Care for Animals
104 Eastlake Street, Carrara, QLD 4211
Phone: (07) 5530 6370
Email: info@eyecareforanimals.com.au

Dr. Anna Rachel Deykin

Brisbane Veterinary Specialist Centre
Cnr. Old Northern Road & Keong Road, Albany Creek, QLD 4035
Practice Telephone: (07) 3264 9400

Dr. Edith Catherine Gertrude Maria Hampson

11 Rupert Terrace, Ascot, QLD 4007

Telephone: 0419 741 961

Dr. Robert Anthony Read

Veterinary Ophthalmic Referrals

102 Magill Rd, Norwood, SA 5067

Practice Telephone: (08) 8132 0533 (available in North Queensland 3-4 times yearly)

Dr. Richard Irwin E. Smith

Lot 16 Bilin Road, Mullumbimby NSW 2482

Phone: 0409 495766

Email: riesmith@internode.on.net (Available in Central Queensland twice yearly)

Victoria

Dr. John Rowan Blogg

No. 1A Irymple Ave, Glen Iris, VIC 3145

Telephone: (03) 9500 9915

Dr. Chloë Hardman

Animal Eye Care

181 Darling Road, East Malvern, VIC 3145

Practice Telephone: (03) 9563 6488

Dr. Simon Daniel Hurn

All Animal Eye Services

5 Andrew St, Mt Waverley, VIC 3149

Practice Telephone: (03) 9808 2822.

Dr. Anu O'Reilly

Animal Eye Care

181 Darling Road, East Malvern, VIC 3145

Practice Telephone: (03) 9563 6488

Dr. Robin Grant Stanley

Animal Eye Care

181 Darling Road, East Malvern, VIC 3145

Practice Telephone: (03) 9563 6488

Dr. Andrew Grant Turner

All Animal Eye Services

5 Andrew St, Mt Waverley, VIC 3149

Practice Telephone: (03) 9808 2822. Also registered as a veterinary specialist in NSW & TAS.

South Australia

Dr. Robert Anthony Read

Veterinary Ophthalmic Referrals

102 Magill Rd, Norwood, SA 5067

Practice Telephone: (08) 8132 0533

Tasmania

Dr. Andrew Grant Turner

All Animal Eye Services

5 Andrew St, Mt Waverley, VIC 3149

Practice Telephone: (03) 9808 2822. Also registered as a veterinary specialist in VIC & NSW.

Western Australia

Dr. Martyn King

Rivergum Referral Service

Unit 1 / 26 Gympie Way, Willetton, Perth, WA 6155

Practice Telephone: (08) 92596344

Australian Capital Territory

Dr. Bruce Fyfe Robertson

Eyevet Veterinary Eye Hospital

274 Pennant Hills Road (cnr Charles Street), Carlingford, NSW 2118

Practice Telephone: (02) 9872 9877. Also registered as a veterinary specialist in NSW.

Dr. Jeffrey Samuel Smith

Eye Clinic for Animals

64 Atchison Street, Crows Nest, NSW 2065

Practice Telephone: (02) 9436 4884. Also registered as a veterinary specialist in NSW.

Dr. Cameron James Gavin Whittaker

Eye Clinic for Animals

64 Atchison Street, Crows Nest, NSW 2065

Practice Telephone: (02) 9436 4884. Also registered as a veterinary specialist in NSW.

New Zealand

Dr. Peter Nigel Collinson

Auckland Animal Eye Centre

18 Barrack Road, Mt Wellington, Auckland, New Zealand

Practice Telephone: (64) 9527 7697

Registered as a veterinary specialist with the Veterinary Council of New Zealand and also in VIC.

APPENDIX 4 - ACES EYE EXAMINATION CERTIFICATE (SEE SEPARATE ATTACHMENT)

APPENDIX 5 - ACES LITTER SCREENING CERTIFICATE (SEE SEPARATE ATTACHMENT)

APPENDIX 6 - GENETIC TESTING FOR KNOWN INHERITED EYE DISEASES

Below is a summary of the genetic tests developed by Optigen Inc. in the USA and the Animals Health Trust in the United Kingdom. Note that some of these tests relate to recognised conditions that are not currently on **Schedule 1** for the Australian Canine Eye Scheme but this situation is under constant review.

It is important to remember that genetic tests are very specific and some controlling sequences have been picked up almost by chance. For example, in the United Kingdom a new hereditary cataract has been described in the Staffordshire Bull Terrier. This cataract was picked up by the BVA/KC/ISDS Eye Scheme and is not detected by the AHT test for cataracts in Staffordshires, which is a test specific for the type of cataract already on **Schedule 1** in the UK. Thus for this breed, being clear on the genetic test does not allow a dog to be claimed as 'unaffected' by inherited cataract.

This highlights the importance of eye certification schemes such as ACES. Even with genetic tests available for a range of inherited eye conditions, **regular eye testing is still essential** if we are to monitor dog breeds for both known and emerging eye conditions, especially when signs are detectable only at a mature age.

Other laboratories exist which can perform some of these tests, and this list may not be exhaustive. Owners seeking more information should search the Internet for the relevant websites. Genetic Science Services in Fitzroy, Victoria (www.geneticscienceservices.com) offers testing for most of the following inherited conditions and has negotiated exclusive rights to carry out Optigen testing in Australia and New Zealand.

(current at 1st January 2008)

OPTIGEN (US)

www.optigen.com

American Cocker Spaniels	OptiGen® PFK test & <i>prcd</i> -PRA test
American Eskimo Dogs	OptiGen® <i>prcd</i> -PRA test
Australian Cattle Dogs	OptiGen® <i>prcd</i> -PRA test
Australian Shepherds	OptiGen® CEA/CH test & <i>prcd</i> -PRA test
Australian Stumpy Tail Cattle Dogs	OptiGen® <i>prcd</i> -PRA test
Basenjis	OptiGen® PK test
Border Collies	OptiGen® CEA/CH & CL tests
Briards	OptiGen® CSNB test
Bullmastiffs	OptiGen® Dominant PRA & CMR tests
Cardigan Welsh Corgis	OptiGen® <i>rcd3</i> -PRA test
Chesapeake Bay Retrievers	OptiGen® <i>prcd</i> -PRA test
Chinese Cresteds	OptiGen® <i>prcd</i> -PRA test
Cockapoos	OptiGen® <i>prcd</i> -PRA test
Coton de Tulear	OptiGen® CMR test
Dachshunds	OptiGen® NARC test
Doberman Pinschers	OptiGen® NARC test
Dogue de Bordeaux (French Mastiff)	OptiGen® CMR test
English Cocker Spaniels	OptiGen® <i>prcd</i> -PRA & Familial Nephropathy tests
English Springer Spaniels	OptiGen® PFK test
Entlebucher Mountain Dogs	OptiGen® <i>prcd</i> -PRA test
Finnish Lapphunds	OptiGen® <i>prcd</i> -PRA test
German Shorthaired Pointers	OptiGen® CD test
Golden Retrievers	OptiGen® <i>prcd</i> -PRA test
Great Pyrenees	OptiGen® CMR test
Irish Sttters and Irish Red & White Setters	OptiGen® CLAD & <i>rcd1</i> -PRA tests
Kuvasz	OptiGen® <i>prcd</i> -PRA test
Labradoodles	OptiGen® <i>prcd</i> -PRA test
Labrador Retrievers	OptiGen® <i>prcd</i> -PRA & NARC tests

Lancashire Heelers
Lapponian Herders
Mastiffs (Old English)
Miniature Poodles
Miniature Schnauzers
Newfoundlands
Nova Scotia Duck Tolling Retrievers
Portuguese Water Dogs
Rough Collies
Samoyeds
Shetland Sheepdogs
Siberian Huskies
Sloughis
Smooth Collies
Spanish Water Dogs -
Swedish Lapphunds -
Toy Poodles -
Whippets: Longhaired

ANIMAL HEALTH TRUST (UK)

Boston Terrier
Briard
English Springer Spaniel
French Bulldog
Irish Setter & Irish Red and White Setter
Miniature Long Haired Dachshund
Miniature Smooth haired Dachsund
Sloughi
Staffordshire Bull Terrier

OptiGen® CEA/CH test
OptiGen® *prcd*-PRA test
OptiGen® Dominant PRA & CMR tests
OptiGen® *prcd*-PRA test
OptiGen® Type A-PRA test
OptiGen® Cystinuria test
OptiGen® CEA/CH & *prcd*-PRA tests
OptiGen® *prcd*-PRA test
OptiGen® CEA/CH test
OptiGen® XL-PRA test
OptiGen® CEA/CH test
OptiGen® XL-PRA test
OptiGen® *rcd1a*-PRA test
OptiGen® CEA/CH test
OptiGen® *prcd*-PRA test
OptiGen® *prcd*-PRA test
OptiGen® *prcd*-PRA test
OptiGen® CEA/CH test

www.aht.org.uk

Juvenile Hereditary Cataract
Congenital Stationary Night Blindness
PRA
Hereditary Cataracts
PRA (*rcd1*)
PRA
PRA
PRA
Hereditary Cataracts