

Epilepsy Disease Study
Canine Genetic Analysis Project (CGAP)
Department of Animal Science, University of California, Davis
Principal Investigators: Dr. A.M. Oberbauer and Dr. T.R. Famula
Phone: 530-752-1046, FAX: 530-752-0175
<http://cgap.ucdavis.edu/>

Dog Information *(Please include a pedigree)*

Dog's Registered Name: _____

Call Name: _____ AKC Registration #: _____ Date of Birth: _____

Coat Color: _____ Sex: ☐ F ☐ M Spayed/Neutered: ☐ Yes ☐ No Date of spay/neuter: _____

Breed (check one): ☐ Belgian Sheepdog ☐ Belgian Tervuren ☐ Giant Schnauzer
☐ English Mastiff ☐ Miniature Poodle ☐ Toy Poodle

Sire's Name: _____ AKC Registration #: _____

Dam's Name: _____ AKC Registration #: _____

Was this dog produced by (check): ☐ Natural breeding/fresh semen ☐ Chilled AI ☐ Frozen AI ☐ Not sure

Owner Information

Owner's Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ E-mail: _____

Health Information:

Healthy: ☐ YES ☐ NO

General comments regarding your dog's health (allergies, arthritis, infections, surgeries, etc.):

Is your dog taking any long term (>6 months) medications or supplements? ☐ YES ☐ NO

If yes, please indicate medications or supplements, dose and reason for taking. For example, Thyro-Tabs®/0.2mg daily/hypothyroidism, Cosequin®/1 tablet daily/arthritis.

Has your dog been vaccinated for rabies? ☐ YES ☐ NO

At what interval is the rabies vaccine given?

☐ Every year ☐ Every 3 years ☐ Never ☐ The rabies vaccine is not available where I live

☐ Other (explain): _____

Epilepsy Disease Information:

Has your dog ever had a seizure?

- ☐ **YES - once**
☐ **YES - more than one seizure**
☐ **NO - never** (continue to page 5)

Age at first seizure: ____ years ____ months Date of last seizure before sample was taken: _____

If your dog is spayed or neutered, were seizures diagnosed (check) ☐ **prior to** or ☐ **after** spay or neuter?

Has a veterinarian diagnosed seizures/epilepsy in your dog? ☐ **YES** ☐ **NO**

Please list all veterinarians who have seen your dog for seizure-related issues.

Veterinarian Name	Phone Number	Date

Please identify any tests that have been run on your dog to help diagnose/treat your dog's seizures, and describe any abnormal or unusual findings. Include copies of medical records pertinent to diagnosis and blood test results at the time of diagnosis. Your veterinarian can fax the information to the Oberbauer Lab, Department of Animal Science 530-752-0175.

Test	Date	Describe findings
Blood test (CBC)		
EEG (electro-encephalogram)		
CSF testing (cerebrospinal fluid)		
CT (computerized tomography)		
MRI (magnetic resonance imaging)		
Thyroid function		
Liver function		
Other (describe)		

Seizures are (check all that apply):

- ☐ **Partial or Focal** (typically localized to one side of the body, usually remains conscious)
☐ **Cluster** (multiple seizures within a short time period with interspersed periods of consciousness)
☐ **Generalized** (involves entire body, may lose consciousness, may stop breathing)

Types of generalized (check if known):

- ☐ **Tonic-Clonic** (Grand Mal – uncontrollable muscle activity/paddling, collapse, salivation, urination/defecation)
☐ **Tonic** (abrupt non-vibratory muscle contractions; legs flex and relax)
☐ **Atonic** (brief attack with rapid recovery)
☐ **Clonic** (usually rare and associated with elevated temperatures)
☐ **Myoclonic** (brief muscle jerks often triggered by startling sights or sounds)
☐ **Absence** (Petit mal – brief with shaking/tilting of head, staring/gazing, licking lips, eyes roll upward)
☐ **Not Sure**

Frequency of seizures (give a number):

____ **times a day**
____ **times a week**
____ **times a month**
____ **times a year**

In general, how long does a seizure last? (check)

- | | |
|--|--|
| <input type="checkbox"/> Less than a minute | <input type="checkbox"/> Longer than ten minutes |
| <input type="checkbox"/> One minute to five minutes | <input type="checkbox"/> Not Sure |
| <input type="checkbox"/> Five minutes to ten minutes | |

Do seizures occur at any particular time of day? (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> midnight - 6 am | <input type="checkbox"/> 6 pm - midnight |
| <input type="checkbox"/> 6am - noon | <input type="checkbox"/> no particular time |
| <input type="checkbox"/> noon - 6 pm | |

When does your dog have seizures? (check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> While resting | <input type="checkbox"/> With sexual activity |
| <input type="checkbox"/> While sleeping | <input type="checkbox"/> With weather changes |
| <input type="checkbox"/> While awake during normal activity | <input type="checkbox"/> Certain season of the year (describe): _____ |
| <input type="checkbox"/> While playing | <input type="checkbox"/> Before eating |
| <input type="checkbox"/> When exercising | <input type="checkbox"/> After eating |
| <input type="checkbox"/> During physically stressful activities | <input type="checkbox"/> After not eating for a long period of time |
| <input type="checkbox"/> Following physical stressful activities | <input type="checkbox"/> When ill |
| <input type="checkbox"/> During mentally stressful activities | <input type="checkbox"/> When highly aroused (aggression, etc.) |
| <input type="checkbox"/> When dog is left alone | <input type="checkbox"/> No predisposing factors (seems completely random) |
| <input type="checkbox"/> Other (describe): _____ | |

Prior to a seizure, does your dog (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Appear nauseous | <input type="checkbox"/> Seek out owner contact |
| <input type="checkbox"/> Vomit | <input type="checkbox"/> Become aggressive |
| <input type="checkbox"/> Show salivation/drooling | <input type="checkbox"/> Nothing in particular |
| <input type="checkbox"/> Get restless | |
| <input type="checkbox"/> Other (describe): _____ | |

Please select any of the following that apply to your dog during a seizure (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Breathing stops briefly | <input type="checkbox"/> Following imaginary objects (fly snapping) |
| <input type="checkbox"/> Loss of consciousness | <input type="checkbox"/> Trembling |
| <input type="checkbox"/> Conscious, but loss of awareness of surroundings | <input type="checkbox"/> Head tremor |
| <input type="checkbox"/> No response to commands | <input type="checkbox"/> Twisting head |
| <input type="checkbox"/> Stiffening of neck and limbs | <input type="checkbox"/> Twisting facial muscles |
| <input type="checkbox"/> Sitting or falling to the ground (lose limb muscle tone) | <input type="checkbox"/> Drooling |
| <input type="checkbox"/> Lack of coordination | <input type="checkbox"/> Chewing or lip smacking |
| <input type="checkbox"/> Jerking motion of single/multiple limbs | <input type="checkbox"/> Opening and closing mouth |
| <input type="checkbox"/> Rhythmic contraction or flexion of single limb | <input type="checkbox"/> Does not recognize owner |
| <input type="checkbox"/> One part/side of body behaves differently from the rest | <input type="checkbox"/> Trying to get near people |
| <input type="checkbox"/> Generalized convulsions | <input type="checkbox"/> Pressing head against object/person |
| <input type="checkbox"/> Change in posture | <input type="checkbox"/> Fear |
| <input type="checkbox"/> Restlessness | <input type="checkbox"/> Aggressiveness |
| <input type="checkbox"/> Chasing tail | <input type="checkbox"/> Anxiety |
| <input type="checkbox"/> Moving in circles | <input type="checkbox"/> Confusion |
| <input type="checkbox"/> Temporary loss of vision | <input type="checkbox"/> Unmotivated barking |
| <input type="checkbox"/> Repetitive blinking | <input type="checkbox"/> Urination |
| <input type="checkbox"/> Staring | <input type="checkbox"/> Defecation |
| <input type="checkbox"/> Other (describe): _____ | |

Please select any of the following that apply to your dog ***immediately after*** a seizure (check all that apply):

- | | |
|--|--|
| <input type="checkbox"/> Fatigue | <input type="checkbox"/> If inside, asks to go outside |
| <input type="checkbox"/> Aimless wandering | <input type="checkbox"/> Reluctance to get up |
| <input type="checkbox"/> Aggression | <input type="checkbox"/> Hungry |
| <input type="checkbox"/> Vomiting | <input type="checkbox"/> Thirsty/drinking water |
| <input type="checkbox"/> Retching | |
| <input type="checkbox"/> Responds if you call his/her name | |
| <input type="checkbox"/> Responds to commands | |
| <input type="checkbox"/> Other (describe): _____ | |

How long does your dog take to return to normal after a seizure?

- ☐ Less than 5 minutes
☐ 5-30 minutes
☐ 30-60 minutes
☐ 1-2 hours
☐ > 2 hours
☐ Behaves normally right after the seizure

List any prescribed medications your dog currently takes for seizures (check all that apply):

- | | |
|--|--|
| <input type="checkbox"/> Clonazepam | <input type="checkbox"/> Phenobarbital |
| <input type="checkbox"/> Diazepam (Valium®) | <input type="checkbox"/> Potassium Bromide (KBr) |
| <input type="checkbox"/> Felbamate | <input type="checkbox"/> Primidone |
| <input type="checkbox"/> Gabapentin | <input type="checkbox"/> Zonisamide |
| <input type="checkbox"/> Levetiracetam (Keppra®) | <input type="checkbox"/> Other (describe): _____ |
| <input type="checkbox"/> Neurontin | |

How effective is the medication(s) in controlling the seizures? (check all that apply)

- ☐ Stopped seizures completely
☐ Reduced number of seizures by half
☐ Reduced number of seizures by a little
☐ Reduced intensity of seizures
☐ Reduced duration of seizures
☐ No effect
☐ Other (describe): _____

Does your dog undergo other types of treatment for seizures (e.g., acupuncture, herbal supplements, any other complementary alternative medicine (CAM))?

Please describe: _____

Has your dog ever had any type of head trauma? ☐ YES ☐ NO

Please describe: _____

Did seizures start ☐ **before** or ☐ **after** head trauma? (check)

Has your dog been diagnosed with any other conditions listed below? (check all that apply)

- ☐ **Addison's Disease**
- ☐ **AIHA** (autoimmune hemolytic anemia)
- ☐ **Atopy**
- ☐ **Cancer (type):** _____
- ☐ **Hypothyroidism**
- ☐ **IBD** (inflammatory bowel disease)
- ☐ **ITP** (idiopathic thrombocytopenia)
- ☐ **SLE** (systemic lupus erythematosus)
- ☐ **SLO** (symmetrical lupoid onychodystrophy)
- ☐ **Other (describe):** _____
- ☐ **None**

- Age at diagnosis of the condition: ____ years ____ months
- What specific test was used to determine the diagnosis for the above condition(s):

Relatives:

Check any relative(s) of your dog who have seizures:

- ☐ **Sibling** ☐ **Half-Sibling** ☐ **Sire** ☐ **Dam** ☐ **Grandparent** ☐ **Offspring**
- ☐ **Aunt/Uncle** ☐ **Niece/Nephew** ☐ **Don't know**

Please indicate registered name of relative(s) if known: _____

Genotype Data

If your dog has genotype data in the form of a zip file (tfam/tped files) and you would be willing to send the data to our study, please email the file to jmbelanger@ucdavis.edu Please include dog's name, owner name and data id for each data file submission.

Owner Signature: _____ Date: _____

☐ Check here if you agree to donate the excess DNA not used directly in this study to the CHIC DNA Repository. If so, download and complete the CHIC DNA Repository form under Miscellaneous Forms at <https://ofa.org/applications/> Send the CHIC DNA Repository application and the health survey along with the CGAP questionnaire and the pedigree with this sample. Note there is no fee associated with CHIC submission when the excess DNA is submitted through CGAP.

**Genetic Basis for Canine Diseases
Canine Genetic Analysis Project (CGAP)**

Department of Animal Science, University of California, Davis
Principal Investigators: Dr. A.M. Oberbauer and Dr. T.R. Famula
Phone: 530-752-1046, FAX: 530-752-0175
<http://cgap.ucdavis.edu/>

OWNER CONSENT FORM

PURPOSE OF STUDY

I hereby grant permission for my dog to participate in a study designed to collect DNA from dogs and their relatives to study various diseases including, but not limited to Addison's disease and Epilepsy, in order to determine the genetic basis for these diseases. This protocol has been ethically reviewed by the UC Davis Institutional Animal Care and Use Committee (IACUC), Protocol #23674.

CONSENT FOR PROCEDURE

I consent to the use of blood samples for this project, and appropriate future projects, and I will provide a pedigree with the sample, provided that neither my animal nor I will be identified in any publications, reports, or presentations.

RISKS ASSOCIATED WITH PROCEDURE

The risk involved in drawing blood is minimal. However, I do understand that my dog may experience mild redness or bruising at the collection site. Additionally, the veterinarian I have chosen to do this procedure may clip the hair to facilitate visualization of the vein. The veterinarian who will be performing this procedure is the veterinarian of my choice, and I will not hold the University of California Davis responsible for any complications associated with drawing the blood.

POTENTIAL BENEFITS

I understand that there is no guarantee that my dog will benefit from its participation in this study. However, such participation may provide veterinarians and researchers with additional information and a better understanding of canine diseases, which could ultimately influence the course of treatment or genetic testing to help my dog and other animals in the future.

COSTS TO OWNER

There is no fee for participating in this study. In the event that DNA from my dog is used in the development of commercially available diagnostic markers, I understand and agree that any proceeds or benefits from such development are the sole and exclusive property of University of California, Davis. I also understand that the University of California will not cover any charges that may be incurred for the drawing of blood or shipment of samples. If this dog's sample is directly used in the development of a genetic test associated with this disorder, upon the owner's written request after the test becomes commercially available, the results of the test for this dog will be provided to the owner at no cost.

CONFIDENTIALITY

I understand that any information about my dog, obtained from this study, will be kept confidential.

AUTHORIZATION

I hereby donate, assign, and transfer a DNA sample from my dog to CGAP for research purposes and warrant my authority to do so. I understand that any future use or distribution of this DNA sample will be within the sole direction and authority of CGAP. I further understand that any distribution of samples to researchers will be in a blind format that maintains the anonymity of the dog and owner identities. My intent in providing this DNA sample is to further research into canine health issues. I hereby relinquish all rights to, and ownership of the DNA sample. I have read and understand the foregoing statements and agree to allow my dog to participate in this study. To the best of my knowledge, the information I have supplied is true and accurate.

Owner Signature

Date

Owner Printed Name

Date of Blood/Buccal Collection

Canine Genetic Analysis Project (CGAP)
Department of Animal Science, University of California, Davis
Principal Investigators: Dr. A.M. Oberbauer and Dr. T.R. Famula
Phone: 530-752-1046, FAX: 530-752-0175
<http://cgap.ucdavis.edu/>

Canine Buccal Swab Submission (swab kit request at <http://cgap.ucdavis.edu/>)

(Please use all 3 brushes for each dog being submitted)

1. If the dog has been eating or drinking, wait 10-15 minutes before taking samples.
2. Sample one dog at a time. If you are sampling several dogs in the same session, complete the process for one dog before sampling the next dog.
3. Before opening or collecting sample, label each wrapper of the 3 brushes with **the name of the dog** to be sampled and **the date of collection**.
4. Peel open the top of the wrapper and remove the brush by its handle.
5. Place the bristle head against the inside of the dog's cheek and swirl 10 times. Please be vigorous, since these are the only samples we will have for the dogs. Please take each sample from a **different location** on the cheek.
6. **Allow swabs to air dry for 5 minutes.** Carefully return each swab to its original wrapper.
7. Fold over the end of the wrapper and seal with a paperclip or staple (do not use tape). **Do not** place samples in a Ziploc® bag.
8. If you are sending only swab samples, return samples and appropriate forms via regular mail in the enclosed self-addressed, postage paid envelope (U.S. residents only).

Blood Sample Collection and Shipping Procedures (Preferred Sample Submission)

1. Please collect 2 purple-top (EDTA) tubes with 2cc (2ml) in each tube. Rock the tubes gently (do not centrifuge).
2. Label each sample with the dog's registered name, owner's last name and date. Wrap tubes in paper towels and place the blood tubes in a plastic bag, sealing the bag securely.
3. Place the samples in a sturdy box, packed so that the blood tubes do not move around (bubble wrap).
4. Include the completed questionnaire, pedigree and signed owner consent form.
5. The ideal shipping method is to keep the samples cold (ice pack) in an insulated, leak-proof container and ship via FedEx or UPS immediately following collection to arrive within 2 days of collection. Refrigerate the sample until it can be shipped. **DO NOT freeze the sample at any time. For USPS, please send samples on ice packs priority 1-2 day service.** Samples shipped via USPS are only delivered Monday, Wednesday and Friday mornings. Samples from other couriers can be delivered weekdays (Monday – Friday). Campus is closed on weekends and holidays. Samples may be compromised if they are shipped on a Friday to arrive on a Monday due to inadequate storage at courier facilities. Shipping containers cannot be returned. For international submissions, please check with your local courier for requirements and/or restrictions on sending biological samples and include CGAP's Declaration of Material Shipped Form with the samples.
6. For FedEx or UPS shipments, please email jmbelanger@ucdavis.edu with date of shipment and tracking #.

Please write "Refrigerate Upon Arrival" on the outside of the box and ship to:

Oberbauer Lab
Canine Genetic Analysis Project
Department of Animal Science
University of California
2251 Meyer Hall
450 Bioletti Way
Davis, CA 95616-8521
Phone: 530-752-1046

UC Davis Campus Holidays/Closures: Note that campus receives USPS mail on Monday, Wednesday and Friday mornings only.

2023 January 2, January 16, February 20, March 31, May 29, June 19, July 4, September 4, November 10, November 23-24, December 25-26

2024 January 1-2, January 15, February 19, March 29, May 27, June 19, July 4, September 2, November 11, November 28-29, December 24-25, 31

2025 January 1, January 20, February 17, March 28, May 26, June 19, July 4, September 1, November 11, November 27-28, December 24-25, 31

UNIVERSITY OF CALIFORNIA, DAVIS
DEPARTMENT OF ANIMAL SCIENCE
ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616-8521
(530) 752-1250 (Animal Science)
(530) 752-0175 (Fax)
Canine Genetic Analysis Project (CGAP)

**Declaration of Material Shipped for
International Submissions Only**

To comply with United States Federal Guidelines for the importation of research samples from dogs, please complete the form below and include with the samples upon return. Thank You.

Shipper's Name (print): _____

Sample Type (check): ☐ Buccal Swab ☐ Blood

Species: Canine

I declare that the enclosed sample(s) contain only material derived from dogs and does not contain any other animal derived material (i.e., nothing from livestock or poultry), nor were the dog(s) sampled exposed or inoculated to any infectious agents of agricultural concern.

Signature of Shipper: _____

Date: _____