

**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

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**Owner Information**

Owner's Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

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**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
<b>Blood test (CBC)</b>		
<b>EEG (electro-encephalogram)</b>		
<b>CSF testing (cerebrospinal fluid)</b>		
<b>CT (computerized tomography)</b>		
<b>MRI (magnetic resonance imaging)</b>		
<b>Thyroid function</b>		
<b>Liver function</b>		
<b>Other (describe)</b>		

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**

Seizure comments:

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

- Less than a minute
- One minute to five minutes
- Five minutes to ten minutes
- Longer than ten minutes
- Not Sure

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

- midnight - 6 am
- 6am - noon
- noon - 6 pm
- 6 pm - midnight
- no particular time

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

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

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

- Appear nauseous
- Vomit
- Show salivation/drooling
- Get restless
- Other (describe): \_\_\_\_\_
- Seek out owner contact
- Become aggressive
- Nothing in particular

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

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

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

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

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

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: \_\_\_\_\_

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**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](mailto: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  
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**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 approved by the UC Davis Institutional Animal Care and Use Committee (IACUC), Protocol #22099.

**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

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**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](mailto: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.  
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



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**UNIVERSITY OF CALIFORNIA, DAVIS**  
DEPARTMENT OF ANIMAL SCIENCE  
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(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: \_\_\_\_\_