

SAMPLE HANDLING

For Canine DNA testing at the University of Missouri

Blood Sample - The ideal sample for DNA extraction is 3 to 7cc's of **whole blood**, in **purple-topped (EDTA)** tubes (one or several, depending on tube size). For very small dogs, 1 to 2 ccs should be sufficient. Please do not send less than 1 cc. The blood sample needs only to be put in the tubes and rocked gently a few times to distribute the anticoagulant - do **not** spin, extract serum, or do anything further. Refrigerate if the sample is being held for any time before shipping, but do not hold the sample longer than 1 week before shipping or it may become unusable.

Frozen Semen - Frozen semen stored from deceased sires or affected dogs can be a source of DNA for testing. Please send about 1 breeding unit. The straws or pellets do not need to be shipped frozen, but do pack them in a crush-proof & leak-proof container. Special handling fee is \$40 for this sample, in addition to the regular testing fee.

Tissue Sample - DNA can be extracted from any cell-rich tissue. If a dog is to be tested post-mortem, a 1" cube (or equivalent) of tongue, other major muscle, spleen, kidney, or liver will provide a large amount of DNA (one tissue is sufficient – do not send multiple tissues). Tissue samples should be placed in a clearly labeled freezer bag or other sterile container and frozen. **DO NOT place in formalin!** Place the bagged tissue inside another bag, freeze, and ship with a frozen cool pack (do not use dry ice, or ice cubes placed in a ziplock bag). If this is the only sample (no blood sample available), add special handling fee of \$40 to testing fee.

Label sample with the following:

call name - owner's last name

(If samples from several dogs are sent together, number samples and forms)

The ***Individual Dog Information Form & Survey*** that follow this instruction sheet should be completed, and a ***pedigree copy***, if available, should be included with the sample.

Include TESTING FEE of \$65 for all dogs. Fee payable via check or money order payable to "University of Missouri", or major credit cards (Visa, MC, AmEx, Discover).

Shipping – Ideally, blood samples should be shipped immediately, tissues should be frozen first. If samples are held for a couple days or over a weekend, blood must be refrigerated, and tissue samples must be kept frozen. Ship for **standard next day** delivery (FedEx, US Mail-Express service, or UPS) Priority/first AM delivery is not necessary. **Do not send on a Friday** - there will not be anyone to accept the delivery on a weekend, and the sample could be unusable by Monday. Pack in a small insulated container (Styrofoam box, small cooler or insulated lunch bag), with one or more cool packs - it is important that blood samples be kept cool but not frozen, and tissue samples be kept as frozen as possible.

The delivery address is;

Canine Genetics Lab - DM Testing
320 Connaway Hall - UMC
1500 Bouchelle Ave
University of Missouri
Columbia, MO 65211

(NOTE: if UPS does not recognize 320 Connaway as a valid address, use 201 Connaway)

If you need clarification, or have any questions about any of these procedures, please contact us by email (MUCVMk9genetics@missouri.edu), or call 573-884-3712

UMC CANINE DM DNA TESTING & RESEARCH

Blood – Tissue – FTA-swab – semen - other _____ Breed: _____
Registered Name _____ Call name _____
Reg#/PID _____ Birth Date _____ Male / Female - - Intact / Altered
Microchip or Tattoo: _____ Color _____

Test Being Requested: **DM – Degenerative Myelopathy**

Owner: name _____	Veterinarian _____
address _____	address _____
city-st-zip _____	city-st-zip _____
phone (day) _____	phone _____
phone (eve) _____	_____
cell _____	_____
EMAIL _____	EMAIL _____

******Results are reported via email – please provide complete, legible email address!!******

Report test results to (please circle): Owner Veterinarian Both

PAYMENT INFORMATION: ☐ Check or money order payable to “University of Missouri” enclosed

OR ☐ Charge to VISA-MC-AmEx-Discover via payment portal

Send payment portal instructions and code to this email: _____

FEE: = \$65; frozen semen or tissue, + \$40

Does this dog exhibit any of the following conditions? (Please provide details for any Yes answer)

Y - N Allergies	Y - N Digestive difficulties
Y - N Arthritis	Y - N Heart Problems
Y - N Autoimmune Disorders	Y - N Hernia (where? _____)
Y - N Bite or Tooth Abnormalities	Y - N Reproductive Problems
Y - N Cancer / Tumors	Y - N Seizures
Y - N Cataracts / Vision Problems	Y - N Skin / Coat Problems
Y - N Deafness / Hearing Impaired	Y - N Skeletal Abnormalities (Hip Dysplasia, etc.)
Y - N Hindlimb weakness/paralysis	Y - N Temperament Problems (shy, aggressive, etc.)

other (please list):

Comments / Questions / Concerns? _____

I submit this sample and pedigree for the purpose of DNA testing; I understand that DNA left over following the test may be stored for potential future research; I understand that the results of this test will be reported only to the owner listed on this form and to the veterinarian (if requested) listed here, via email; and I have supplied complete and accurate information, to the best of my knowledge.

Signed: _____ date _____

IMPORTANT!! PLEASE COMPLETE THE QUESTIONNAIRE ON THE NEXT PAGE!

Please circle your answer to the questions below, and fill in blanks as appropriate.

Has this dog been diagnosed with Degenerative Myelopathy? **Y N Suspected**

Was Degenerative Myelopathy in this dog diagnosed by a veterinarian? **Y N**

When did this dog begin showing signs of DM (month & year)? _____

Is this dog still alive? **Y N** If NO, when did this dog die? _____

What was the cause of death? _____

How long has this dog been showing signs of DM?

1-3 mos 4-8 mos 9-12 mos 13-18 mos 19-24 mos 25-36 mos over 36 mos

Which of the following tests were done to make the diagnosis of DM?

No diagnostic tests, clinical symptoms only ...	Y N		
Spinal radiographs (x-rays)	Y N	result was:	normal abnormal
Myelogram (contrast x-rays)	Y N	result was:	normal abnormal
CT (CAT) scan	Y N	result was:	normal abnormal
MRI	Y N	result was:	normal abnormal

For any abnormal result, please list findings: _____

Describe the **FIRST** symptoms of DM in this dog:

One rear leg weaker than other:	Y N
Dragging toes	Y N
Falling in rear legs	Y N
Tremors in rear legs	Y N
Pain in back	Y N

Describe **CURRENT** symptoms of DM in this dog (if deceased, symptoms at time of death):

Weakness in one rear leg	Y N	Loss of muscle mass in rear legs	Y N
Weakness in both rear legs	Y N	Loss of muscle mass over entire body ...	Y N
Unable to support weight in rear legs	Y N	Urinary incontinence	Y N
Unable to move rear legs	Y N	Fecal incontinence	Y N
Weakness in front legs	Y N	Difficulty swallowing	Y N
Unable to support weight in all limbs	Y N	Pain in back	Y N
Unable to move all limbs	Y N		

Do you know of relatives of this dog who are diagnosed with DM? **Y N**

If yes, please circle: sire dam sibling grandparent offspring other _____

Pedigree (family tree) information is very helpful for continuing research, and is held in strict confidence by the researchers. Please enclose a pedigree copy or registration certificate copy if available.

Pedigree attached Pedigree will be mailed or emailed separately Pedigree unknown/unavailable

Any other information you feel would be useful for the researchers, please list below or attach. Thank you for submitting this sample and providing complete information.