

## **SAMPLE HANDLING**

### **For Canine NCL- DNA Research & Testing at the University of Missouri**

#### **DNA SAMPLING:**

**Blood Sample** - The ideal sample for DNA extraction is 5-10cc's of whole blood, in purple-topped (EDTA) tubes. For very small dogs or puppies, 3ccs should be sufficient. When the sample is placed in the tube, rock it gently a few times to distribute the anticoagulant - do not spin, and do not extract serum. Refrigerate until the sample is shipped.

**Tissue Sample** - Tissue removed as a result of surgery, or upon death of the dog will provide a large amount of DNA for research. Please discuss this with your vet ahead of time if you intend to do this. (If the dog is to be euthanized, have a blood sample pulled first, if possible, and send both samples.) First choice is muscle tissue, second choice is organ tissue (spleen, kidney, or liver). A thumb-sized piece is all that is needed - not an entire organ, and one tissue sample is sufficient. Have the tissue removed as soon as possible following death, place into a labeled freezer bag, put that into a second bag, freeze, and ship.

**Label sample** with the following;

call name - owner's last name

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

An **Individual Dog Information Form & Survey** should be completed, and a **pedigree copy** should be included with the sample to tie it in with the correct family. If the dog is not affected but is a relative of an affected, please indicate the relationship.

**Testing fee** for breeds where a test is available (American Bulldogs & English Setters) is \$40 per dog – make check or money order payable to “University of Missouri” and enclose with sample.

**Shipping** - Ideally the sample should be shipped immediately. If samples are held for a day or over a weekend, blood must be refrigerated, and tissue samples must be kept frozen. Ship via overnight delivery (US Mail, UPS, FedEx, or others). **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 (most vets have these for shipping samples to labs), with one or more cool packs - it is important that samples be kept cool.

**The delivery address is:** Dr. Gary Johnson - NCL Research  
320 Connaway Hall  
University of Missouri  
Columbia, MO 65211

#### **DIAGNOSTIC and RESEARCH SAMPLING:**

For definitive diagnosis and confirmation of NCL and for research analyses, dog owners or their veterinarians should contact Dr Martin Katz for instructions and a collection and shipping kit. Samples desired include whole blood, skin biopsies, and tissues obtained at the time of euthanasia. Kits need to be available to the veterinarian at the time of sample collection, so please request a kit as far in advance of when the samples will be collected as possible. Dr Katz can be reached by email at [KatzM@health.missouri.edu](mailto:KatzM@health.missouri.edu), or by phone at 573-882-8480 (please leave a message).

**If you need clarification**, or have any questions about any of these procedures, please contact Liz Hansen by phone (573-884-3712), email ([HansenL@missouri.edu](mailto:HansenL@missouri.edu)), or regular mail (321 Connaway Hall, University of Missouri, Columbia, MO 65211). Liz is the Project & Information Coordinator, and can help with any questions you may have.

**Thank you** for your cooperation and participation!