

# **The DNA Clinic:**

*A detailed, "how to" manual on hosting a clinic for collecting canine blood samples  
for storage with the Canine Health Information Center's DNA Repository*

*compiled by Jennifer Zablony and Tamzin Rosenwasser*

*Health and Longevity committee*

The Orthopedic Foundation for Animals, Canine Health Information Center and the AKC Canine Health Foundation joined forces to provide a central storage location for canine DNA. The DNA is stored for future research initiatives and storage is available to all CHIC breeds. Only 5-10cc's of blood is needed from each dog which will provide enough DNA for hundreds of studies. This blood can be stored for many years, long after affected dogs are gone. Rarely occurring diseases have a better chance of being studied as, over time, potentially more affected dogs have their DNA banked. Researchers need approximately 50 affected dogs to consider a study. You can have unlimited funding at your disposal, but if you don't have samples, nobody will study the genetics of the disease.

To that end, the Newfoundland Club of America is encouraging all Newf owners to store DNA on their dogs with OFA/CHIC. Blood is needed from all Newfoundlands: healthy, sick, pet, breeding or show. The cost is \$20 per kit (bar code labels, survey and sample processing), but rebates are available to owners through Newfoundland Charitable Trust for the full cost of the kit. NCA will also assist Regional clubs by funding clinics where blood is drawn. These clinics are quite beneficial to owners. The cost of the DNA banking is rebated, blood draw personnel and shipping are provided by NCA or the Regional club.

This document is a guide to the organization of a clinic, either on a regional or National level. Personnel and supplies that are needed will obviously be determined by the number of dogs expected at the clinic. Depending on the venue, regional clubs can expect anywhere from 10-50 dogs for a clinic. National clinics can generate up to 200 samples over the course of 3-4 days.

**Clinic Venue:** Clinics can be held in conjunction with Regional Specialties, fun days, working events, etc or as a stand alone event. If the clinic is to be held at a show, or working event, place announcements in the premium, the catalog, the Regional club's website and newsletter, if possible, and the NCA e-notes. The announcement should include the CHIC website, ([www.caninehealthinfo.org](http://www.caninehealthinfo.org)), the fee, any rebate that may apply, directions to send the Application for DNA Repository by blood sample to CHIC, and a reminder to bring each dog's pedigree or copy of AKC papers (if available) and completed Health Survey to the show or event. If people

have confidentiality concerns, the health survey can be mailed in by the owner separately from the blood. It just needs to be labeled appropriately with the owner's name, dog's registration number and registered name.

At the show or site, have announcements posted at various spots where people can see them to encourage walk-ins. For the National clinic, place signs in hospitality, the hotel lobby, around the show ring and in grooming directing people to the clinic. If possible, have a flyer for the registration bags or at a working event, the ring favors. Most people do not usually send money to CHIC ahead of time, so the majority of samples will be from walk-ins. Extra volunteers can circulate and remind participants about the clinic as well.

Notify CHIC that there will be a clinic and that you will be sending samples from the clinic. You can send an email to [chic@offa.org](mailto:chic@offa.org)

Grants of up to \$500.00 from the NCA Health and Longevity committee are available to Regional clubs for DNA collection clinics. This can cover the cost of supplies, personnel and shipping of the samples for one large clinic or, preferably, multiple clinics. The forms are available on the NCA website. There is also a clinic report to be sent to H & L (Jenny Zablotny, 6410 E Allen Rd, Fenton, MI 48430) after the clinic.

### **What is needed:**

Paperwork: A health survey and application for storage of blood are needed for each dog. The application can be filled out and sent in to CHIC ahead of time by the owner. Bar coded labels are then sent from CHIC to the owner before the clinic. This is usually much more feasible for a regional clinic. Alternatively, the paperwork can be filled out at the clinic with labels being handwritten. If a dog has an AKC registration number, a 3 generation pedigree is not required. Dogs do not need to be microchipped to participate and it isn't critical that the microchip number is on the paperwork. Rescue dogs without pedigrees can participate, especially if they have health issues. In the section for a registration number, write "unknown/rescue". Puppies that are not yet registered can also have their blood drawn. Owners will have to update records with CHIC ([chic@offa.org](mailto:chic@offa.org)) when the registration number and name are official. If owners are uncomfortable submitting their health surveys at the clinic, they can mail them in on their own. It is, however, much easier to have everything completed and included at the time the blood is sent in, than to rely on it being done later, after the event, when people must get back to their other lives.

Ideally, two people handle the paperwork for larger clinics. Unless there is more than one table, more than two people will add too much confusion. Space can be the limiting factor. In an Excel file on a computer, or a log book for smaller clinics, have headings for Owner's Name, Dog's registered name, and boxes to check off that fee, Health Survey, Pedigree, and Application are present and have been received. Staple

or paperclip the application to the survey and pedigree. A cash box is present to make change and to store checks and cash. Change for the cash box can be obtained from either the NCA Treasurer (National clinic) or provided by the person running the clinic. A simple, pre-printed receipt is given for each dog's received fee, with the dog's and owner's names written on it. Internet access is very helpful as it is then possible to look up registration numbers on sires and dams through AKC or the OFA database, if people don't have that in their paperwork.

For the National clinics where the cost may be less, a list of the dogs' registered names should be sent to Kathy Paxton, 3101 Benjamin Drive, Taneytown MD 21787-2755 for monitoring of rebates. An Excel file will make alphabetization easier.

Dogs: 10cc's of blood is needed from all Newfoundlands. Cheek swabs have very limited use for DNA storage and are not eligible for the rebate from NCA. 10cc lavender (EDTA) top tubes are the ideal size and can be obtained from Health and Longevity for smaller clinics (see addendum).

Sample Submission Cost: Variable. \$20 through regional clinics. National clinics may be less. Reduced rate clinics are not eligible for rebate through NCA CTMB. As of 5/2009, there is still money available for rebates.

Where does it go: Blood from clinics with walk-ins goes to OFA, 2300 E Nifong Blvd, Columbia, MO 65201, attn Eddie Dzuik. If all samples have been pre-registered, then they are sent to the University of Missouri, per the instructions. Otherwise, with a mixed set of samples, all can go to OFA to simplify shipping.

Blood draw personnel: While the assistance of NCA member veterinarians is appreciated, at a large Regional event or a National, most are quite busy with their own entries. Hiring veterinary technicians or even veterinarians outside the breed to work the clinic and do nothing else, can be very helpful. People who fully understand the necessity for and technique of, proper restraint of the dogs during blood draws is critical. Obviously, the size of the clinic will determine the number of people working it. For a large show, like a National, 2-4 veterinary technicians would be best, working in 2 teams. Depending on the venue, veterinarians/veterinary technicians in the NCA may provide some of the manpower. For smaller Regional clinics, one vet or vet tech may be sufficient.

The tube label should consist of the dog's registered name and registration number. It should be written in black ink (Sharpie), so if it gets wet, it will not run. Staples return address labels work well. It is easiest to fill them out before they are stuck to the tubes. The label is put on the tube just before, or just after, the blood has been put into it.

The phlebotomist asks the dog's and owner's names and checks them against the paperwork and labels for the tubes. It is imperative that the correct dog's blood goes

into the tube labeled for that dog. Good lighting and good footing are helpful when drawing the blood. A grooming table can be useful as it may allow the drawers to stand, and the dog may behave better on a table. Clippers can be available, but get permission before clipping fur. Most of the time, clipping is unnecessary. Since a larger volume of blood is needed, many techs or veterinarians will draw the blood from the jugular vein as it is less likely to collapse during the draw.

Miscellaneous blood drawing supplies can be provided by the persons drawing blood for a smaller clinic. A bottle of isopropyl alcohol is handy for wetting the fur.

Once the blood is drawn, it may be put into the tube by inserting the needle on the syringe through the rubber stopper on the tube. Alternatively, the stopper can be removed from the tube, the needle can be removed from the syringe and the blood can be squirted directly into the tube from the syringe. Replace the stopper. Allow the blood to run down the side of the tube rather than splashing in to the bottom to minimize trauma to the blood cells. During that procedure, or immediately after, the purple top tube should be inverted several times to thoroughly mix the blood with the anticoagulant which is in the tube.

The tube is then wrapped in a paper towel or a little piece of bubble wrap, or some other padding and placed in a Ziploc bag, in a refrigerator, if one is available, or in a cooler or Styrofoam box with cold bricks or ice in it. The blood should not be frozen, but should be kept cool. The envelopes with the forms in them may be placed in a large Ziploc bag, together with others, to keep them dry and together. For larger clinics, tubes can be placed into the storage box that they came from and kept cool until prepared for shipping.

Shipping: Canine blood is considered an exempt biohazard/biologic. These particular samples need to be shipped overnight on ice. Shipping by Federal Express will be the easiest. Shipping by USPS will be the cheapest and is much more feasible for a regional clinic. For a National clinic, use NCA's FedEx account number to ship the samples from the hotel. Most hotels will have FedEx pickup available. The account number can be obtained from the treasurer. If shipping smaller numbers of samples via the Postal Service, check with the local post office ahead of time to see what you need to do to ship the samples safely. All shipping containers should have absorbent material in case of tube breakage (paper towel) and the tubes should be in leak proof containers (Ziploc bags). Paperwork, if shipped with the samples, should be in a baggie separate from the samples.

## ITEMS REQUIRED:

Numbers required for some items will be dependent on the number of dogs expected.

- Large notebook or ledger
- Plenty of black pens. Markers are undesirable because the ink may run or smear. Sharpies to label tubes.
- Box of rubber bands.
- Large self-adhesive address labels to label tubes.
- Clipboards.
- Cash box, stocked with some change. Most people will pay by check. Have checks made payable to "CHIC".
- Catalog of the event, to assist those who may have forgotten their dog's AKC number, sire, dam, date of birth, etc. A copy of the annual of titlists, or access to the database, if we have one by then, would also be helpful.
- Computer with Internet access and printer
- CHIC forms: the Application and Health Survey, for those who may not have filled them out in advance. Bring enough for every dog at the show. Instructions for Sending Blood Samples to highlight missing information for owners. Available to print from [caninehealthinfo.org](http://caninehealthinfo.org)
- A book/books of receipts, with carbons. (available in most office supply stores)
- A box to store all this in, when it is not in use.
- Banquet and grooming tables, chairs.
- Some drinks or refreshments.
- 10 cc lavender top tubes/EDTA tubes. This size is ideal because only one tube and label is needed per dog. The larger tubes are easier to handle. Since this is not a size commonly found in most vet clinics, Health and Longevity will maintain an inventory of tubes for regional club clinics. Contact Jenny Zablotny to have the tubes mailed to the contact person for the clinic. Please allow three weeks prior to the clinic.
- 20 or 21 gauge needles. Boxes of 100 each (only way they can be purchased). 18 gauge is too big, and 23 is too small.
- 12cc, Luer lock syringes, again, plenty of them.

(Regional clinics. If possible, have the persons drawing the blood bring the syringes and needles that they are comfortable using. They may also be able to bring the tubes if they have 10cc lavender top tubes.)

- Tourniquets; several. Penrose tubing is usually acceptable. Nye tourniquets are easier to use, but more expensive. Again, blood drawing personnel may be able to provide what they are comfortable with.
- Plenty of isopropyl alcohol. 70% or 90% is fine. Alcohol pads are useless for Newf fur. The alcohol should be put into squirt bottles, spray bottles or some other easy to dispense container.
- Hydrogen peroxide. To clean blood off of white fur. Especially important if you use 20 gauge needles and are drawing blood on a lot of Landseers.
- Clipper with #40 blade if the owner does not mind shaving, especially if a jugular approach will be taken.
- Grooming table
- Sharps container for needles and syringes. (Check with local regulations as to acceptable containers. Area pharmacies may take the sharps for disposal.)
- Boxes of quart and gallon Ziploc bags. Several samples can fit in each bag. If using multiple, small tubes for samples, package each dog's samples together in a Ziplock sandwich or snack bag to keep them together.
- Packing material, not bulky, just enough to keep the tubes from crunching on one another.
- Large Styrofoam mailing coolers, to ship samples overnight, and store them after drawing. They should contain frozen cold bricks. Most veterinarians will have one or two around a clinic especially if they have just gotten a shipment of vaccines.
- Cold bricks, sold in stores, and available from veterinarians, and physicians; pharmaceuticals are shipped with them.
- Shipping tape, at least a couple rolls.
- Fedex shipping labels.
- Clean towels, paper towels.
- Garbage bags
- Dog cookies
- An extra helper who can leave the area to go get things.
- People doing the clinic should get together in advance of starting and review how they will operate together. Get everybody's cell phone number!

## Contacts:

Jennifer Zaboltny DVM, Health and Longevity Committee Chairperson  
zaboltny@msu.edu 517-552-2914 6410 E Allen Rd, Fenton, MI 48430

Mary Price, NCA Treasurer, mlprice@mhtc.net 608-437-4553 1004 State Road 78,  
Mount Horeb, WI 53572

Eddie Dzuik, OFA, chic@offa.org

## Funding:

Grants from NCA are available to Regional clubs. The grant will pay for hiring a vet or vet tech, supplies including copies and the shipping of samples. Grants can be applied for ahead of time or receipts can be sent in after the clinic for reimbursement. Forms are at the end of this document.

## Examples of costs:

Box of 80, 12cc syringes \$25.00

Box of 100, 10cc lavender top tubes \$25.00

Box of 100, 21 ga x 1" needles \$15.00

Overnight shipping of samples \$30.00-\$40.00 via USPS

Cost of vet/vet tech-regionally variable. Regional club members with veterinary expertise may do it for little or no charge. Local veterinary schools or technician programs may also be able to provide manpower for little or no cost. State regulations vary as to whether personnel must be licensed in that state to be able to draw blood.

Your dog's DNA in the CHIC repository-PRICELESS!!!!

## Application for Grant to Fund DNA Clinic

If more than one clinic is planned, please fill out a separate application for each clinic (weekend clinics or clinics including multiple days held in conjunction; i.e., Sat & Sun, are considered to be only one clinic).

Clinics must be held within 6 months of application date.

Please note any that any remaining grant amounts must be returned to NCA treasurer. Original receipts or copies of original receipts must be returned with the clinic report which goes to H&L Committee.

Application Date:	
Name of Regional Club:	
Area Regional Club serves:	
Contact Person for DNA Clinic:	
Mailing Address for Contact:	
Contact Person Phone #:	
Contact Person Email:	

Date of Clinic(s)	
Location of Clinic:	
Estimated Number of Dogs:	
Amount Requested for Grant:	

Signature of Regional Club Contact Person: \_\_\_\_\_

Date: \_\_\_\_\_

## DNA CLINIC REPORT

Please submit the following information regarding the clinic to the Chair of the NCA Health & Longevity Committee within 2 weeks of date of clinic. Be sure to include any additional information that may be of help to future clinics held by other clubs.

Date of Clinic(s)	
Name of Regional Club:	
Name of Clinic Chair:	

Number of Reservations:	
Number of Walk-ins:	
Total Number of Dogs:	
Number of Newfoundlands:	

Number of other breeds DNA was collected:	
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List of other breeds collected:





(The following sheets are examples of further information that can be provided to owners at clinics.)

Sample 1:

## **CHIC DNA Repository**

### **Mission Statement**

The CHIC DNA Repository, co-sponsored by the OFA and the AKC/CHF, collects and stores canine DNA samples along with corresponding genealogic and phenotypic information to facilitate future research and testing aimed at reducing the incidence of inherited disease in dogs.

### **Objectives**

- Facilitate more rapid research progress by expediting the sample collection process
- Provide researchers with optimized family groups needed for research
- Allow breeders to take advantage of future DNA based disease tests as they become available
- Foster a team environment between breeders/owners and the research community improving the likelihood of genetic discovery

Thank you for participating in the blood draw collection today! Every dog collected and stored will hopefully take us closer to new tests for genetic disease, and closer to finding answers to make our breed healthier in the future.

Please submit any missing information directly to CHIC at [chic@offa.org](mailto:chic@offa.org) or by mail to  
OFA/CHIC

2300 E Nifong BLVD

Columbia MO 65201-3806

To apply for the NCA rebate, please photocopy your certificate when it arrives and send a copy, along with a self-addressed stamped envelope, to Kathy Paxton, 3101 Benjamin Drive, Taneytown, MD 21787

In the future, please advise CHIC of any changes in your dog's health status by emailing them at [chic@offa.org](mailto:chic@offa.org). This will enable them to make certain your dog's DNA is available for any future related health research.

Sample 2:

Thank you for participating in this blood sample collection clinic for the Canine Health Information Center DNA Repository!

The Newfoundland Charitable Trust is currently sponsoring a rebate program of \$20 per kit/dog.

To obtain your rebate(s):

Certificates are issued by CHIC after they have received:

- Blood sample
- Application & \$20
- Health Survey

Once your certificate arrives from CHIC, please make a photocopy and send, (along with a self-addressed stamped envelope) to

Kathy Paxton

3101 Benjamin Drive

Taneytown MD 21787-2755

\*\*\*3 generation pedigrees are not necessary if your dog has an AKC number.

Missing information can be emailed to Ed Dzuik at [chic@offa.org](mailto:chic@offa.org)

In the case of rescue Newfs, if a dog's pedigree is unknown and does not have an AKC number – please write "rescue/unknown" in the applicable areas.

Microchip numbers are not required.

**IMPORTANT:** if your dog's health status should change, if it should ever develop any health problem, please update your health survey info by emailing [chic@offa.org](mailto:chic@offa.org).

Again, THANK YOU for participating!!!!

Sincerely,

Sponsoring Club

## DNA Collection Steps for Canada 1-2-3

### 1. Complete the DNA Application Form

<http://www.caninehealthinfo.org/dnaapp.pdf>

Request 1 Kit per Dog

Select Blood Collection Kit option

Don't forget to sign and include payment with Application Form

### 2. Collect Sample

Once you receive your kit...

(a) Have your vet collect the sample as per the CHIC DNA Repository Submission Instructions via Blood Sample;

[Instructions for submission of DNA samples via Blood Sample](#)

(b) Label the tubes with the tubes with the stickers provided in your kit

(c) For added safety, the samples should be put in a small plastic tube with a top that can be taped closed (the plastic tubes from syringes work well for this).

### 3. Mail Sample

Once your sample has been collected...

#### **Sending DNA Blood Samples from Canada to the USA:**

(a) The sealed tubes should be placed in a well-padded container/small cooler (i.e. foam chips with cool packs), and this container should be packed tightly (with padding) in the shipping box to prevent movement and damage, samples must remain cold! Blood samples get mailed to (labels provided):

**University of Missouri**

**Attention: Dr. Gary Johnson,**

**320 Connaway Hall,**

**Columbia, MO 65211**

**USA**

(b) Send the parcel by courier (Purolator appears to be the least expensive), include 3 or 4 signed original copies (sign with blue pen), of each of the two required documents:

- i) [Certification Letter](#) (required by US Customs and Border Protection; and
- ii) [Commercial Invoice](#) (required by Purolator).

When completing the Commercial Invoice, write **“Non-infectious canine blood sample for DNA testing purposes only”** in the *Complete Detailed Description of Goods* section; *Unit Value* should be a nominal amount (i.e. \$2-\$5), if you put \$0 the shipment may get held up. [REDACTED]

Place all the copies of the signed required documentation in a zippered plastic pouch/envelope taped to the outside of the package so that it can be accessed by the courier and US Customs.

(c) Clearly label the outside of package **“Canine Blood Sample: Non-Infectious To Humans or Other Species, for DNA Testing Purposes Only”**.

(d) Submissions are not complete without the [Health Survey](#)! Once completed, mail to (labels provided):

**OFA**

**2300 E Nifong Blvd.,**

**Columbia, NO 65201**

(e) Some helpful links:

<http://www.caninehealthinfo.org/>

<http://www.cbp.gov/xp/cgov/home.xml>

<http://www.purolator.ca>