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# DNA Banking

## Tips for holding clinics

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# What Should I Bring?

List of items in my DNA banking clinic kit

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## Dog Restraint Supplies

- Cling gauze, brown gauze - can be used to muzzle a dog
- Leashes
- Grooming Table
- Experienced people to restrain dogs
- Advice: Be flexible on how you will get the sample. Front legs worked the best for us, though we also drew from rear legs and the jugular. St Bernards are known for their roll-y veins, and legs worked best for us in this breed. Corgis have such short necks, legs worked better for us. If a Northern breed dog had not been groomed for show, often their undercoat was somewhat felted, making it extremely difficult to part the hair and locate the jugular. Many pets have never been restrained and would not tolerate sitting with their neck extended for a jugular stick - these dogs were held down on their sides to get the sample. We had a couple of aggressive dogs, and found that they tolerated drawing from the rear leg much better than having someone "in their face." Some dogs that squirm and struggle on the ground will sit perfectly still on the grooming table. There are many acceptable ways to get a sample. Be patient and be safe!

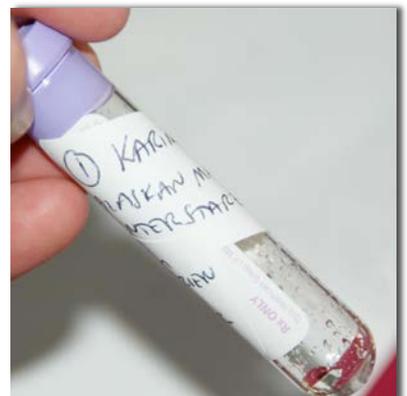
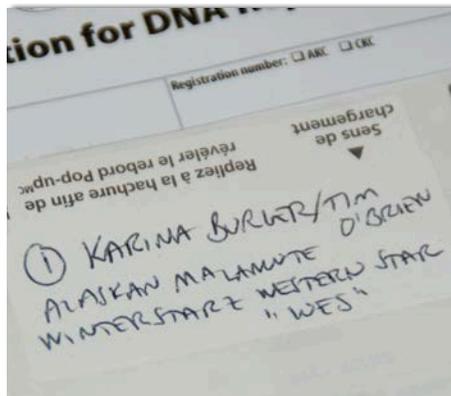
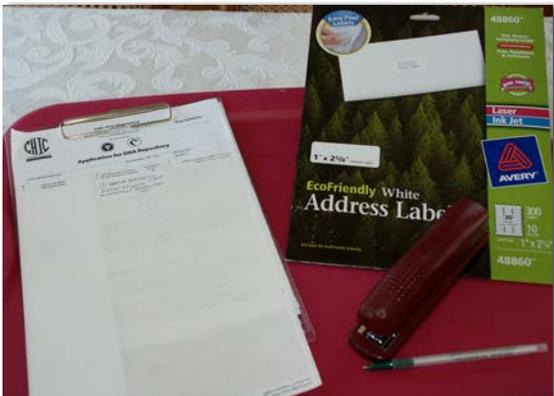


## Blood Collection Supplies

- Syringes - 12cc, 6cc, 3cc - 6cc is the most useful if you only bring one size
- Needles - ask whoever is drawing the samples what needle they prefer! People get used to drawing blood with the same setup and will struggle to hit the vein if you give them a longer or shorter needle than they are used to using. I brought 20ga, 1" and 22ga, 1" needles to our clinics, because that is what the vet techs asked me to bring. Some techs prefer 3/4" needles.
- EDTA (Purple Top) Vacutainer tubes - 7cc or 10cc draw preferred, so you can send 1 tube/dog. Most vet clinics will **not** have these tubes in stock.
- 70% Isopropyl alcohol in a spray bottle to wet hair and raise vein
- Hydrogen peroxide and gauze sponges or cotton balls - to remove any blood from the coat
- Vetwrap and gauze sponges - to make doggy bandaids in case of a hematoma
- Sharps container
- Garbage bag for non-sharp biological waste
- Box to hold tubes, inside a ziploc bag, to keep box dry
- Cooler and ice pack for blood
- Hand Sanitizer
- Paper towels
- Dog treats
- Optional:
  - Butterflies - 23ga - these are very useful in small dogs or dogs that jump for needle sticks
  - Tourniquet

## Paperwork Supplies

- Blank CHIC banking forms - I bring a few along, but mainly I email the fillable forms to participants and instruct them to fill them out at home, print them, and bring them to the clinic. Note - pet owners often have never filled out a form like this and don't know where to find registered name, number, etc. Recommend that they bring their dog's registration certificate along or info they have on the dog's parents, if the dog was not registered.
- Internet connection - laptop or smartphone - if you need to look up registration numbers, the OFA website is very helpful and shows parents. The AKC website is also good, if you have an account with AKC and can log in, you can search for a dog by registered name or part of registered name, and find their registration number.
- Stapler
- Clipboards
- Pens
- Envelope(s) for paperwork
- Labels for tubes - I use self-stick address labels, 30 per sheet, and write on them:
  - METHOD ONE
    - Tube Number
    - Owner's name
    - Breed of Dog
    - Registered Name
    - Call Name - then I barberpole the sticker onto the tube, and write the tube number on top of the paperwork that goes with it.



- METHOD TWO
  - Make triplicate labels, numbered 1-40 (or whatever total number of dogs you plan to bank)
  - Put one label on the tube, one label on the paperwork, and one label on a log sheet that lists Owner, Dog Name, and Amount Paid
  - Send Log Sheet to CHIC as cover sheet for the forms
- Cash box/container to secure money and checks
- Cash to make change

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# Procedure

## How I Organize a Clinic

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### Paperwork is Important - Start Off Right!

If samples are submitted with inaccurate paperwork, they may not be useful for health research. Therefore, one person should be handling the paperwork, checking it over, and labeling the tubes. Do not have multiple people drawing samples, each labeling tubes with their own system.

At our events, I collected all the paperwork and sat down in a quiet place alone with it, and wrote out labels for the tubes as described above, using the forms to get the info. This way, the tubes and forms will match. I marked the tube numbers on the forms, and figured out what each owner owed. This 15-20 minutes of preparation before starting to draw the blood samples was very helpful. When we started the blood draws, many distractions occurred - people asking questions, help needed to restrain a dog, looking up missing information, etc. It did not matter what order the dogs came in for the blood draws - I was ready for them and their tube label was easy to locate on my sheet of labels. This also allowed me to keep all the dogs owned by one person grouped together.

As additional dogs arrived for banking, I always got their paperwork in my hands first, and wrote the tube label from the submission form. I often found owners would tell me the dog had a different name than they had indicated on the form. This information needs to be consistent for the bank to figure it out. Someone on the team should be the person who takes responsibility for the paperwork and labeling.

**Payment:** CHIC accepts samples from dogs that are affected with a disorder for free. Always check that the health questionnaire (page 2 of the DNA banking form) is filled out, and if any of the boxes are checked "Yes," do not charge the person for that sample. Be sure to thank them for banking DNA, as samples from affected dogs are especially valuable.

Otherwise, samples are \$20 each to bank, unless you have the special pricing CHIC gives for banking done at National shows. I started off having people write me checks or give me cash, then I would write a check to CHIC and just send one check with the samples. After I was given a couple of checks that bounced and ended up personally paying to bank someone else's DNA, I stopped accepting checks written to me. I now prefer cash; if any checks are given to me, they must be written to CHIC, and I only write a check for the cash I collected.

### Drawing the Blood

We had 7cc draw EDTA vacutainer tubes, and wanted at least 5cc per dog. We started off with 12cc syringes. They are really hard to hold and draw back without losing the vein; they are too long for most hands. What worked best was using a 6cc syringe and filling it all the way up, which gives you 6-7cc of blood.

If you get a few ccs and then lose the vein, save that blood in an EDTA tube and gently invert the tube several times to prevent clotting. We drew more blood with a fresh needle and syringe if we failed to get at

least 5cc on the first try. The techs preferred to use a 3cc syringe for the redraws if they had enough blood from the first attempt, because the smaller syringes are easier to draw back. Add the blood from the redraw to the EDTA vacutainer tube, but do not add more than the tube capacity. If you overfill the tube with blood, it may clot. If you stick a needle into the vacutainer tube more than once, draw air back out of the tube so it is under a vacuum when you finish. If a tube is overfilled with blood and air, it is pressurized; and during the flight to ship the samples, the top will pop off of a pressurized tube and the sample will leak out.

Gently invert the tube several times and barberpole the label onto the tube.

Place tubes of blood into the box. The box should be inside a ziploc bag in a cooler with ice packs to start chilling.

## Storing the Blood

The blood samples keep several days in the refrigerator. For this reason, we did our DNA banking clinics over a week's time. I started one weekend at a weight pull; as the dogs finished pulling on Sunday, we banked their blood. During the week, I offered DNA banking at my obedience and agility classes, and found a vet tech to draw the blood there. Also some people who could not make our club picnic came by my home to get their dog drawn during the week. Finally, we wrapped up the effort with the DNA banking at the club's annual picnic.

## Shipping the Blood

The blood samples have to be shipped overnight, Monday through Thursday. Do not ship on Friday as the lab is not staffed on Saturday to receive the samples. Freeze an ice pack at -20F for 48 hours. Chill the blood samples overnight in the refrigerator. Pack the shipping cooler just before shipping to keep everything chilled. The box(es) of blood samples should be sealed inside a ziploc bag with a paper towel inside in case of breakage or spillage. The ice pack and blood should be packed snugly into the cooler, to avoid breaking any tubes. Send the paperwork inside the cooler, inside of its own ziploc bag, to prevent it getting wet through condensation from the ice pack.

Shipment is costly and is based on weight. Use the lightest styrofoam cooler and box you can find, and pre-chill everything. Summer shipments may need two ice packs, but the other seasons may be fine with just one. Assess the temperatures and pack the cooler accordingly.

Ship the blood via FedEx, Standard overnight, to:

**Orthopedic Foundation for Animals - CHIC DNA Repository**

**2300 E Nifong Blvd.**

**Columbia, MO 65201**

**Contact Person: Eddie Dziuk Phone: (573) 442-0418 x222**



## Communication

Let the lab know the cooler is being shipped and how many samples you are sending. (Email Eddie Dziuk at [edziuk@offa.org](mailto:edziuk@offa.org).) I also informed them ahead of time that we would be holding a DNA banking clinic. Track the shipment, and be sure it arrives.

