

## **CURRENT FECAL CORTICOID PROJECTS AT CCF**

Updated September 2001 by Linda Munson

### **PROJECT 1. “Comparing levels of stress in wild and captive cheetahs”**

**Investigators: Linda Munson and Karen Terio, University of California**

Important samples:

- “Wild” =
- 1) Any fecal sample from a play tree
  - 2) Feces from the colon of a wild animal necropsy if the animal was killed/died in the wild or in a capture cage for < 72 hrs.
  - 3) Feces from a capture cage if < 72 hrs in the cage

“Captive” = Fecal samples from cheetahs held captive for 3 or more months (90 or more days captive). Long term captive animals in Namibia are valuable regardless of the time in captivity

Number of samples: Single sample per animal

Amount of sample: 1 tbsp or more (if feces consists mostly hair, then a larger sample is important). Diarrhea samples are acceptable.

Sample handling: 1) Place sample in 50 ml plastic tube, 2) clearly label with animal number and date and 3) either freeze or fix in 70% ethanol (alcohol).

**PROJECT 2. “Quantifying the stress response to capture and adaptation to captivity”**

**Investigators: Linda Munson and Karen Terio, University of California**

Essential sample: The first sample from each animal must be collected BEFORE THAT ANIMAL HAS BEEN CAPTIVE FOR 72 HRS.

Other important samples: At least 3 or more samples a week for the first 60 days (8 weeks) in captivity. The ideal is daily samples.

Number of samples: As many samples as can be collected from the day of capture until Day 60

Amount of sample: 1 tbsp or more (if feces consists of mostly hair, then a larger sample is important). Diarrhea samples are acceptable.

Sample handling: 1) Place sample in 50 ml plastic tube, 2) clearly label with animal number and date and 3) either freeze or fix in 70% ethanol (alcohol).

**PROJECT 3. “Quantifying the beneficial effects of lure-based exercise.”**

**Investigators: Linda Munson and Karen Terio, University of California**

- Essential samples: At least 3 samples per week for 2 weeks BEFORE exercise is initiated and then 3 or more samples a week for 30 days (4 weeks) AFTER exercise is initiated. The ideal is daily samples.
- Number of samples: Multiple samples per animal are needed over time including pre and post exercise samples
- Amount of sample: 1 tbsp or more (if feces consists of mostly hair, then a larger sample is important). Diarrhea samples are acceptable.
- Sample handling: 1) Place sample in 50 ml plastic tube, 2) clearly label with animal number and date and 3) either freeze or fix in 70% ethanol (alcohol).

**PROJECT 4. “Quantifying the stress response following movement between facilities”**

**Investigators: Linda Munson, Amy Wells and Karen Terio,  
University of California**

- Essential samples: At least 3 samples per week for 2 weeks BEFORE the move and then 3 or more samples a week for 60 days (8 weeks) AFTER the move. The ideal is daily samples.
- Number of samples: Multiple samples per animal are needed over time including pre and post movement samples
- Amount of sample: 1 tbsp or more (if feces consists of mostly hair, then a larger sample is important). Diarrhea samples are acceptable.
- Sample handling: 1) Place sample in 50 ml plastic tube, 2) clearly label with animal number and date and 3) either freeze or fix in 70% ethanol (alcohol).

**PROJECT 5: “Correlating levels of stress with severity of gastritis”**

**Investigators: Linda Munson, Karen Terio, Scott Citino**

Essential samples: 1) **For cheetahs already on site**, at least 3 samples per week for 2 weeks BEFORE and 2 weeks AFTER gastric biopsy. The ideal is daily samples. These cheetahs will be rebiopsied 6 and 12 months later, and feces will be needed for 2 weeks before and 2 weeks after EACH biopsy procedure.

2) **For just-caught cheetahs**, the first sample needs to be collected before an animal is captive for 72 hrs and then daily samples (if possible) need to be collected for 8 weeks (60 days) (these can be the same samples as used for Project #2). The first biopsy will be performed between Day 1-10. These cheetahs will be rebiopsied at 6 and 12 months (if kept in captivity) and feces will be needed for 2 weeks before and 2 weeks after EACH biopsy procedure.

Number of samples: Multiple samples per animal are needed before and after each biopsy procedure.

Amount of sample: 1 tbsp or more (if feces consists of mostly hair, then a larger sample is important). Diarrhea samples are acceptable.

Sample handling: 1) Place sample in 50 ml plastic tube, 2) clearly label with animal number and date and 3) either freeze or fix in 70% ethanol (alcohol).

## **FECAL SAMPLES: GENERAL INFORMATION ON HANDLING AND STORAGE**

1. Collect feces as soon as possible. Samples that are completely dry or samples more than 2 days old are not likely to be usable.
2. Place feces in a 50 ml clear plastic blue-topped tube. Clearly label the AJU # and DATE on the side of the tube and the lid. Use a PERMANENT MARKER, but be careful not to let alcohol smear the writing. A small piece of paper with AJU# and Date written in PENCIL can also be placed inside the tube.
3. Label two large zip-lock bags with the AJU number and either “Linda” or “Laurie”. Use those bags to store all fecal samples from that animal over time, keeping samples for Laurie and Linda separately.
4. Either freeze the feces or store in alcohol if no freezer space is available.

### **“DECISIONS” ON FECES**

1. If multiple days of feces are mixed in a capture cage, then always assume the feces are from the most recent day. eg. The cheetah was caught on March 1 and kept for 4 days in the capture cage, then assume the fecal sample collected in the cage on March 4th is a “Day 4” sample.
2. If more than one animal is in a cage, then always assume the feces belong to the animal in the cage the longest time. eg. If three cats are in one cage and they were caught 3, 6, and 9 days ago, then assume the feces are from the cat held 9 days (most conservative estimate).
3. In enclosures with multiple animals, individual animals can be “marked” by adding food coloring (blue or green), uncooked corn, or uncooked rice to their food. This will require separating animals during feeding and giving the same “marker” to the same animal each day.
4. Discard feces that are more than 2 days old