

The Oregon Zoo connects communities to the wonder of wildlife to create a better future for all. We are a hub for science, conservation, education and animal well-being delivering the highest quality of care to 165 species and subspecies.

The zoo's Wildlife Endocrine Lab enables hormone monitoring onsite, using enzyme-immunoassay techniques to measure reproductive and adrenal hormones and their metabolites in a variety of biological samples. Our focus is on minimally invasive or non-invasive sampling methods.

We are proud to make these same services available to other wildlife institutions and welcome the opportunity to support others in optimizing animal health, reproduction and welfare in support of global conservation efforts.



4001 SW Canyon Road Portland, Oregon 97221 503.226.1561 oregonzoo.org/endocrine-lab

Oregon Zoo

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Wildlife Endocrine Lab





COMMON APPLICATIONS OF HORMONE MONITORING

- Monitoring reproductive cycles in females
- Diagnosing and monitoring pregnancy
- Evaluating the effectiveness of contraception
- Examining male reproductive physiology
- Assessing changes in hormones due to puberty or aging
- Assessing seasonal hormonal patterns
- Characterizing the reproductive and stress
 physiology of a new species
- Investigating hormonal responses to specific events or management decisions
- Correlating hormones with behavior, health and environmental measures
- Assessing the reproductive health of a captive or free-ranging population

Please contact us for sample collection protocols and any other questions you may have regarding hormone analyses:

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AVAILABLE ASSAYS

We currently offer the following hormone assays:

- Progesterone (P4)
- Estradiol (E2)
- Testosterone (T)
- Glucocorticoids (GC)

All assays are carefully monitored for precision and reproducibility.

Examples of some species we have validated assays

- for: = validated for fecals
 - O = validated for serum
 - * not physiologically validated

| SPECIES | P4 | E2 | т | GC |
|------------------------------|----|----|----|----|
| Armadillo, 3-banded | • | | | • |
| Babirusa | • | | | |
| Bobcat | | | | |
| Bontebok | • | | • | • |
| Black Bear | | | | •* |
| Caracal | • | • | | • |
| Cheetah | | | | |
| Chimpanzee | | | | • |
| Cougar | | | •* | •* |
| Elephant, Asian | •0 | | 0 | • |
| Giraffe, Masai & Reticulated | • | | | • |
| Grey Wolf | | | | •* |
| Guinea Pig | | | | • |
| Harbor Seal | •* | | | •* |
| Hedgehog, Pygmy | • | | | |
| Lemur, Red-ruffed | • | | | • |
| Lemur, Ring-tailed | • | | | • |
| Leopard, Amur | • | • | | •* |
| Leopard, Snow | | | | •* |
| Lion, African | • | • | | |
| Mongoose, Dwarf | • | • | | • |
| Monkey, Red-Tailed | • | | | |
| Monkey, Swamp | • | • | | |
| Mountain Goat | • | | | • |
| Otter, NA River | • | | | • |
| Otter, Sea | • | • | | • |
| Otter, Spotted Neck | • | | | |
| Ocelot | • | | | •* |
| Orangutan | • | | • | • |
| Opossum, NA | | | | •* |
| Porcupine | | | | •* |
| Painted Dog | • | | | |
| Polar Bear | | | | |
| Red Panda | • | | | • |
| Rhinoceros, Black | • | | | |
| Ringtail | • | •* | | •* |
| Saki, White-faced | •* | •* | | |
| Speke's Gazelle | ٠ | | | |
| Tiger | | | | •* |
| Visayan Warty Pig | • | | •* | |

We are adding new species and assays on an ongoing basis. If the species you are interested in is not listed here, please contact us and we can discuss validation of an assay specifically for your needs.

PRICES

| Fecal Hormone Analysis\$23/sample |
|---------------------------------------|
| Urine Hormone Analysis\$21/sample |
| Serum Hormone Analysis\$17/sample |
| Prices include extraction (as needed) |

and analysis of all samples in duplicate and re-dilutions if needed. (Bulk discounts are available for batches of 50 or more samples)

New Species Assay Validation (biochemical validation).....\$270

Validation includes parallelism and recovery analyses.

Sample collection protocol and submission form available upon request. Please email: candace.scarlata@oregonzoo.org.

SHIPPING INFORMATION

Before sending any samples, please email: candace.scarlata@oregonzoo.org to verify that we will be able to receive your samples.

Ship via FedEx overnight on dry ice or ice packs early in the week to:

Candace Scarlata Oregon Zoo 4001 SW Canyon Rd. Portland, OR 97221



Laurel Westcott (left) and Candace Scarlata (right)