

Veterinary Conservation Research Internship: Elephant Endotheliotropic Herpesvirus (EEHV)

The Houston Zoo is seeking a summer **Veterinary Student Intern for our Elephant Endotheliotropic Herpesvirus** program. This is an opportunity to work on issues surrounding the most important viral disease of elephants with both the elephant husbandry and veterinary teams at the Houston Zoo, as well as EEHV researchers in Dr. Paul Ling's lab at Baylor College of Medicine located across the street from the zoo in the Texas Medical Center. More information about EEHV can be found here: eehvinfo.org.

The successful candidate will participate primarily in research aspects of EEHV at the Houston Zoo and Baylor College of Medicine under the mentorship of the Houston Zoo's veterinary team and elephant herd manager, and Dr. Paul Ling at Baylor College of Medicine. The intern will primarily report to the Houston Zoo's veterinary team. The intern will be expected to design, implement, and complete an original research project relating to EEHV, which may be prospective or retrospective. Moreover, the intern will learn and utilize laboratory skills to assist in the completion of existing EEHV research projects. The intern will have the opportunity to participate in the husbandry aspects of the zoo's Asian elephant herd as well.

AGENDA

- Participate in on-going EEHV related research projects occurring at the Houston Zoo and Baylor College of Medicine, which may include projects from collaborators
- Design, implement, and complete an original prospective or retrospective EEHV research project with mentorship
 - This may include, but is not limited to learning about sample collection and processing, reading elephant CBCs, performing DNA extraction and PCR, data record keeping and analysis, writing a research proposal and budget, peer-reviewed journal article and/or scientific poster presentation creation, presentation of project at end of internship
- Assist with husbandry for the Asian elephant herd at the Houston Zoo under the supervision of the zoo's elephant herd manager
- Participate in continuing education opportunities including, but not limited to zoo journal club sessions, didactic lectures, and possible local veterinary CE
- Opportunities for shadowing the zoo's veterinarians on clinical zoo rounds and in necropsy
- Opportunities for participating in other Veterinary Conservation Research Internship programs, including in Attwater's Prairie Chickens and Houston Toads

Topics expected to be covered include:

- Introduction to research and career development
 - Essentials for scientific research and writing
 - Data and record keeping
 - Write a scientific project proposal
 - Write a scientific article suitable for a peer-reviewed journal
 - Giving a scientific lecture or poster presentation
 - Career pathways in zoo and wildlife medicine or research
- EEHV
 - Basic disease pathophysiology
 - Routine diagnostic screening
 - Medical care
 - Emergency response
 - Conservation implications

- Necropsy
- Research priorities
- Elephant husbandry, health, and welfare
 - Behavioral husbandry and training
 - Routine medical care and treatments

The intern project will be developed, based on discussion with the student, within the first 10 days. It may include a prospective investigation of a current medical issue, or could be retrospective, looking at data accumulated over the zoo's history with EEHV. This will be a learning experience, as well as an opportunity for the student to contribute to the scientific knowledge of the species through publication of the findings.

The research will be presented to zoo staff, zoo volunteers, fellow zoo interns, and Baylor College of Medicine staff at the completion of the internship.

A stipend for the research project is provided to cover expenses associated with the research project.

A motivated intern with has the potential to turn this research into a peer-reviewed publication with primary author responsibility.

SAMPLE SCHEDULE

Start and end dates to be determined pending intern availability with school schedule:

7:00 am: Start of Day

7:30 am: Daily veterinary rounds meeting

8:00 am: Work on project, elephant husbandry, research work at Baylor College of Medicine, or clinical observation

12:00 – 1:00 pm: Lunch

1:00 pm: Veterinary case rounds

1:30-3:30 pm: Independent study, journal club or didactic rounds, research work, clinical observation or

4:00 pm: End of day

This is an example schedule, hours may vary throughout the internship depending on the nature of the research project.

RESEARCH TIMELINE

First full week: Zoo orientation, background reading and research on EEHV, identification of potential research project ideas (mentors will guide this process)

2nd full week: Select a topic and develop a research plan

3rd through second to last week: gather data

Last 3 weeks: analyze data, write up findings, prepare for publication

Last week: Prepare and present findings for staff (20-30-minute talk)

Last day: "house-keeping" activities prior to leaving zoo

PHYSICAL EFFORT AND ENVIRONMENT

This position involves walking and lifting. Time outdoors can be expected, in all different weather conditions including heat, humidity, rain, cold, or dust. It may also involve considerable physical exertion such as climbing, reaching, assuming awkward positions, repetitive motions, and lifting and/or moving of heavy objects (up to 60 pounds) on a regular basis.

COMPENSATION

There is no available funding at this time. The intern must provide his or her own transportation to and from the zoo as well as housing.

REQUIREMENTS

- Applicants should have completed one to two years of veterinary education and have an interest in non-domestic or zoo animal medicine, research, and conservation
- Pay a one-time \$55 fee to offset the cost of your on-boarding and uniform if accepted into the internship program (this cost may be higher for international applicants)
- A negative TB test must be provided and valid for the entire internship
- *Minimum* of 200 hours during summer months (hour breakdown per week can be discussed)
- Weekly meetings with mentors to go over progress, trouble shoot, re-direct, etc.
- Mid-term and final evaluations
- Research project and presentation to staff with potential for peer-reviewed publication

APPLICATION

- To apply, visit <https://www.houstonzoo.org/make-memories/adults/internships/> and complete an application for the Vet Student Internship. For additional information, contact Dr. Christine Molter, Staff Veterinarian at the Houston Zoo (cmolter@houstonzoo.org). Applications are due by **March 1, 2020 at 4:00 p.m. CST.**

Application questions can be directed to volunteer@houstonzoo.org.