

## **HEATHER A. SIMMONS DVM, Diplomate ACVP**

Wisconsin National Primate Research Center

University of Wisconsin

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### **EDUCATION**

Kansas State University, Manhattan, KS

**Doctor of Veterinary Medicine**, 12 May 1995

Kansas State University, Manhattan, KS

**B. S. in Biology** - Magna Cum Laude, with Honors, May 1991

### **HONORS**

Michigan State University recipient of the 2003 Charles Louis Davis D.V.M. Foundation, Student Scholarship Award in Veterinary Pathology, Banff, Canada

Completion of Kansas State University Arts and Sciences Honors program, May 1991

Senior Honors Thesis "Extension And Restoration Of Photosensitivity In Harris' Sparrows (*Zonotrichia querula*)"

### **SPECIALTY BOARD CERTIFICATION**

2007 - Diplomate of the American College of Veterinary Pathologists

### **VETERINARY EXPERIENCE**

#### **4/1/2007 to Present**

**Unit Head, Pathology Unit**, Wisconsin National Primate Research Center, Madison WI  
Direct a team of personnel in the support nonhuman primate colony health by providing rapid diagnoses of clinical disease through hematology, parasitology, necropsy, and surgical pathology services. Responsible for research support at the WNPRC through histology services, specialized terminal procedures, and pre and post-experimental consultations and collaborations.

#### **7/1/2006 to 4/1/2007**

**Anatomic Pathologist**, Wisconsin National Primate Research Center, Madison WI  
Responsible for the diagnosis of disease through necropsy, surgical pathology, and clinical pathology services. Responsible for maintenance of the SNOMED database of necropsy diagnoses. Co-chair of weekly comparative pathology rounds for UW veterinary students, pathology residents, clinicians, and pathologists. Responsible for research support at the WNPRC through histology services, specialized terminal procedures, and pre and post-experimental consultations.

**7/2003 to 6/31/2006**

**Zoo and Wildlife Pathology Fellow**, U-W Madison and the Milwaukee County Zoo, Madison WI & Milwaukee WI

Primary pathologist for the Milwaukee County Zoo, an 1800+ animal collection of carnivores, primates, herbivores, birds, reptiles, amphibians, fish, and arachnids. Responsible for wildlife and collection animal necropsy cases following species survival plan (SSP) protocols, surgical biopsies, weekly comparative pathology rounds at the school of veterinary medicine, and quarterly Zoo Pathology rounds for curators and animal care staff at the Milwaukee zoo. Responsible for 4th year veterinary student rotations in zoo and wildlife pathology. Responsible for lab animal necropsies for the Research Animal Resource Center, U-W Madison.

**8/2000 to 6/2003**

**Instructor/Resident in Anatomic Pathology**, zoo & wildlife focus, MSU, East Lansing MI

Responsible for necropsy cases, surgical biopsies, and supervision of veterinary students during primary necropsy duty. Designated resident for cases from the Detroit Zoo, Binder Park Zoo, Potter Park Zoo, and John Ball Zoo. Primary participation in the Michigan deer tuberculosis survey and Michigan carnivore tuberculosis survey. Assisted in Easter Lilly toxicity research in domestic felines.

**7/99 - 8/2000**

**Veterinary Intern, Henry Doorly Zoo**, Omaha NE

Primary case management and preventative medicine for a 2000+ animal collection of carnivores, primates (including great apes), herbivores, birds, reptiles, amphibians, and fish. Narcotic, non-narcotic, and inhalant anesthesia of animals for diagnostic and medical procedures. Responsible for veterinary student preceptor training, gross necropsy, and review of histology with pathologists. Sample collection for reproductive physiology and genetic conservation medicine research.

**4/97 - 8/2000**

**Consulting Veterinarian**, Folsom Children's Zoo, Lincoln NE

Primary clinical and preventative care of a 300 animal collection consisting of carnivores, primates (including great apes), and herbivores, birds, reptiles, and amphibians.

**4/97 - 7/99**

**Associate Veterinarian**, Forney Animal Center, Lincoln NE

Small animal practice with 15% exotic and avian clientele.

**9/95-3/97**

**Associate Veterinarian**, Rohan & Harper P. C., Buffalo NY

Small animal practice with 5% exotic and avian clientele.

**5/95-8/95**

**Research Assistant**, Tompi Seleka, South Africa

(Omaha Henry Doorly Zoo's Center for Conservation and Research, South African Project)

Assisted with basic research in cryopreservation of epididymal sperm cells of elephants and native ungulates. Additionally, trained in basic technique for post mortem oocyte retrieval, in vitro oocyte maturation, and in vitro fertilization.

**10/94-12/94**

**Veterinary Preceptor**, Fossil Rim Wildlife Center, Glenrose TX

Management and clinical care of exotic species in confined and semi-free ranging captive situations.

**5/93-8/93**

**Veterinary Assistant**, Forney Animal Center, Lincoln, NE

Assisted with daily medical treatment, soft tissue, and orthopedic surgeries.

**5/92-8/92**

**Black Footed Ferret Keeper**, Henry Doorly Zoo, Omaha NE

Participated in the care and behavioral conditioning of endangered ferrets slated for reintroduction into the wild. Familiar with strict biosecurity control practices.

**5/92-8/92**

**Veterinary Assistant**, Brunk, Roseberry, & Assoc., Omaha, NE

Assisted with treatments, soft tissue, orthopedic, and arthroscopic surgery on racehorses.

**5/91-8/91**

**Hospital and Nursery Assistant**, Henry Doorly Zoo, Omaha NE

Medical and daily care of neonates, quarantined, injured, and ill animals. Study of Asian bear reproductive physiology (evaluation of semen morphology and post-cryopreservation semen quality for several species of Asiatic bears in four AZA institutions).

**5/90-8/90**

**Friends of the National Zoo Trainee**, Front Royal, VA

Assisted with endocrinology research on Eld's Deer and giant panda using hormonal extractions of serum, feces, and urine. Techniques used: radio immuno assay, HPLC chromatography, and scintillation counting.

**5/89-7/89; 5/88-8/88**

**Hospital and Nursery Assistant**, Henry Doorly Zoo, Omaha NE

Medical and daily care of neonates, injured, ill, and quarantined animals.

**5/87-8/87**

**Aquarist**, Henry Doorly Zoo, Omaha, NE

**5/86-8/86**

**Bird Keeper**, Henry Doorly Zoo, Omaha, NE

**JOURNAL PUBLICATIONS**

1. Christine R Swanson, James J Raschke, Valerie Joers, Viktoriya Bondarenko, Kevin Brunner, **Heather A Simmons**, Toni E Ziegler, Joseph W Kemnitz, Jeffrey A Johnson and Marina E Emborg. The PPAR-gamma agonist pioglitazone modulates inflammation and induces neuroprotection in parkinsonian monkeys. Journal of Neuroinflammation. (submitted MS ID: 1930470768510882)

2. **Simmons, H.A.** and Mattison J.A. The incidence of spontaneous neoplasia in two populations of captive rhesus macaques (*Macaca mulatta*). ARS forum issue on Primate and Human Aging. ARS V14. #2. (2011).
3. Colman, R.J., Anderson, R.M., Johnson, S.C., Kastman, E.K., Kosmatika, K.J., Beasley, T.M., Allison, D.B., Cruzen, C., **Simmons, H.A.**, Kemnitz, J.W., and Weindruch, R. Caloric Restriction Delays Disease Onset and Mortality in Rhesus Monkeys. *Science*. 35: 201-204 (2009).
4. Hanley, C.S., **Simmons, H.A.**, Wallace, R.S., and V.L. Clyde. Visceral and Presumptive Neural Baylisascariasis in an Orangutan (*Pongo pygmaeus*). *J. Zoo Wildlife Med.* 37(4): 553-557, (2006)
5. Hanley, C.S., **Simmons, H.A.**, Wallace, R.S., and V.L. Clyde. Erythema Multiforme in a Spotted Hyena (*Crocuta crocuta*). *J. Zoo Wildlife Med.* 36(3): 515–519, (2005)
6. **Simmons, H.A.**, Fitzgerald, S.D., Kiupel, M., Rost, D.R., and R.W. Emery,. Multicentric T Cell Lymphoma in a Dromedary Camel (*Camelus dromedaries*). *J. Zoo Wildlife Med.* Dec. 2005 (In press)
7. Fitzgerald S.D., Patterson, J.S., Kiupel, M. **Simmons, H.A.**, Frimes, S.D., Sarver, C.F., Fulton. R.M., Steficek, B.A., Cooley, T., Massey, J.P., and J. Sikarskie. Clinical and Pathological Features of West Nile Virus Infection in Native North American Owls (Family Strigidae). *Avian Dis.* 47 (2003) pp. 602-610.
8. Kiupel, M., Fitzgerald, S.D., Patterson, J.S., Wise, A., **Simmons, H.A.**, Hollamby, S., Cooley, T.M., Sikarskie, J.G., Massey, J.P., and R. Maes. West Nile Virus Surveillance in Michigan – Detection of West Nile Virus in Non-Corvid Avian Species and Small Mammals. *Verh.ber Erkr. Zootiere.* 41 (2003). Pp. 39-45.
9. **Simmons H. A.**, Steffen D., and D. L. Armstrong. *Parelaphostrongylus tenuis* in Captive Pronghorn Antelope (*Antilocapra americana*) in Nebraska. *Journal of Wildlife Diseases*, 38 (4), 2002, pp. 821–825
10. Moisan P.J., Lorenz M.D., Sromburg P.C., **Simmons H.A.**: Concurrent trichinosis and oral squamous cell carcinoma in a cat *J Vet Diagn Invest* 10 (1998) pp. 199-202
11. Loskutoff N.M., **Simmons H.A.**, Goulding M., Thompson G., De Jongh T., and Simmons L.G.: Species and individual variations in cryoprotectant toxicities and freezing resistances of epididymal sperm from African antelope. *Animal Reproduction Science* 42 (1996) 527-535.

#### ORAL PRESENTATIONS (\* indicates published abstracts)

1. 2011 Primate Pathology Workshop, Case 17. American College of Veterinary Pathology, Nashville, TN. Dec 3, 2011.
2. UW SVM Pathology and Lab animal medicine clubs, "Primate Medicine and Pathology", December 8, 2009.
3. Zoo Careers Student Group, "The winding road to Pathology", November 15, 2005
4. \*Case #17, Erythema Multiforme in a Spotted Hyena, 12th Annual Zoo and Wildlife Pathology Workshop, Omaha, Nebraska, October 16, 2005
5. \*Disseminated *Mycobacterium kansasii* in a Reindeer, American Association of Zoo Veterinarians, Omaha, Nebraska, October 21 2005
6. \* Case 24, "Natocystitis in two Arapaima", Midwest Association of Veterinary Pathologists Madison, Wisconsin, August 11, 2005
7. PBS Seminar, A BIG Fish Story, Madison, Wisconsin, May 11, 2005
8. Zoo Pathology rounds for curators, animal care staff, and medical staff, Milwaukee, Wisconsin, March 31, April 4, June 6, and June 9, 2005

9. Pathologists Night Out, Case #5 Slide 238-C, Arapaima Gigas?, Madison, Wisconsin, February 11, 2005
10. Zoo Pathology rounds for curators, animal care staff, and medical staff, June 3 & 7, and September 15 & 18, Milwaukee, Wisconsin
11. Swine Diseases. Workshop and Symposium on Laboratory Animal Diseases, April 24, 2004 Univ. of Illinois at Chicago, Chicago, Illinois
12. Zoo Pathology rounds for curators, animal care staff, and medical staff, November 4 & 7, 2003 Milwaukee, Wisconsin
13. \*Neoplasia in a Jaguar. American Association of Zoo Veterinarians 10th Annual Zoo and wildlife Pathology Workshop, October 5, 2003, Minneapolis, Minnesota
14. \*Disseminated T Cell lymphoma in a Dromedary Camel. American Association of Zoo Veterinarians 9th Annual Zoo and Wildlife Pathology Workshop, October 6, 2002, Milwaukee, Wisconsin
15. \*Pathology of West Nile Virus in Two Snowy Owls. American Association of Zoo Veterinarians 9th Annual Zoo and Wildlife Pathology Workshop, October 6, 2002, Milwaukee, Wisconsin
16. \*Ocular Involvement in Multicentric Lymphoma. Midwest Association of Veterinary Pathologists, August 8-9, 2002, Peoria, Illinois.
17. \*Bacterial Hemorrhagic Septicemia in two Motoro Stingrays. North Central Conference of Veterinary Laboratory Diagnosticians, June 10-11, 2002, Reynoldsburg, Ohio.
18. \*An Epidermoid Cyst in A Golden Retriever. Midwest Association of Veterinary Pathologists, August 9-10, 2001, Augusta Michigan

### **EXTENSION PRESENTATIONS**

1. Keynote Speaker "Expanding Your Horizons: Educational program for Eighth grade girls in Math and Sciences". August 1999, Lincoln, Nebraska
2. Keynote Speaker "Expanding Your Horizons: Educational program for Eighth grade girls in Math and Sciences". August 1998
3. Keynote Speaker "Expanding Your Horizons: Educational program for Eighth grade girls in Math and Sciences". August 1997

### **EXTENSION PUBLICATIONS**

1. Simmons, H.A.: Blister Disease in Snakes, Michigan Association of Veterinary Technicians News vol. 4, Dec 1, 2002.

### **PROFESSIONAL ORGANIZATIONS**

1. American College of Veterinary Pathologists
2. American Veterinary Medical Association
3. American Association of Zoo Veterinarians
4. Wildlife Disease Association

### **COMMITTEES**

1. Committee on Pathobiology and Diagnostic Investigation Training Programs: 2000-2002.

### **POSTERS** (\* indicates published abstracts)

1. \*Student poster competition ACVP, "Death of a Black Rhinoceros due to severe necrotizing myocarditis caused by Beta Streptococcus infection", C. Gottfredsen\*<sup>1</sup> and H. Simmons, DVM<sup>2</sup>, Roberta S. Wallace, D.V.M.<sup>3</sup>, and Victoria L. Clyde, D.V.M.<sup>3</sup> <sup>1</sup>School of Veterinary Medicine, University of Wisconsin, <sup>2</sup>Department of Pathobiological Sciences, University of Wisconsin, Madison, WI. <sup>3</sup>Milwaukee County Zoo, Milwaukee, WI

## **TEACHING EXPERIENCE**

1. Facilitator VM 532 (VIPS III - Veterinary Interactive Problem Based Learning) 2001, 2002
2. Teaching Assistant PTH 553 Urinary system laboratories 2001, 2002 Neurology laboratory, 2001 Respiratory laboratory 2002
3. MSU Pathology Club Gross Necropsy Workshop.  
Feb. 15, 2002
4. Microscope rounds for the MSU Pathology Club and the Zoo and Wildlife Club  
April 1, 2003
5. 4th year Veterinary Student Rotation in Zoo and Wildlife Pathology with the Milwaukee Zoo  
One on one instruction in Gross Necropsy Technique and Histopathology  
June 1-June 30 2005 and Sept 18-Sept. 30, 2005
6. Gross Pathology rounds for ACVP Board preparation  
Aug. 16, Aug. 9, Sept. 1, 1Nov. 15, 2005
7. Gross Pathology rounds for ACVP Board preparation  
a. May 14, Aug. 12
8. Gross Pathology rounds for ACVP Board preparation  
Jan. 9, Feb. 13, March 6, 1Nov. 15, 2007