

## **Melanie A. Breshears, DVM, Ph.D., Diplomate ACVP**

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Stillwater, OK 74078

### **Education:**

1995: B.S., Animal Science, Oklahoma State University  
1998: D.V.M, Veterinary Medicine, Oklahoma State University  
2004: Ph.D., Pathology/Virology, Oklahoma State University  
2005: Board certification by American College of Veterinary Pathologists, Anatomic Pathology

### **Academic Appointments:**

1998-1999: Large Animal ICU Veterinarian, Boren Veterinary Medicine Teaching Hospital, Oklahoma State University, Stillwater, OK.  
1999-2002: Veterinary Histology Teaching Assistant/ Graduate Research Associate, College of Veterinary Medicine, Oklahoma State University, Stillwater, OK.  
1999-2003: PhD Student/Resident, Anatomic Pathology, College of Veterinary Medicine, Oklahoma State University, Stillwater, OK.  
2003-2005: Lecturer, Anatomic Pathology, College of Veterinary Medicine, OSU, Stillwater, OK.  
2005- 2011: Assistant Professor, Anatomic Pathology, College of Veterinary Medicine, Oklahoma State University, Stillwater, OK  
2011-2017: Associate Professor, Anatomic Pathology, College of Veterinary Medicine, Oklahoma State University, Stillwater, OK  
2017-current: Professor, Anatomic Pathology, College of Veterinary Medicine, Oklahoma State University, Stillwater, OK

### **Awards and Honors:**

1991-1995: Charles W. Roberts President's Distinguished Scholarship  
1992-1995: Samuel Roberts Noble Foundation Scholarship  
1993: Totusek All-Around Freshmen  
1995: Senior Scholarship Award, Department of Animal Science  
1995: Carl A. Rott Distinguished Graduate Fellowship  
1995-1996: Dean's List of Distinguished Students  
1997: American College of Veterinary Pathologists Externship Scholarship, \$1350  
1998: Krull Prize in Parasitology  
1998: Salutatorian of Class of 1998, College of Veterinary Medicine, Oklahoma State University  
1998: Dean McElroy Outstanding Senior Award (College of Vet Med, OSU)  
2000: Phi Zeta Research Day, 2nd Place, Graduate/Resident/Intern Basic Science Research  
2001: Phi Zeta Research Day, 1st Place, Graduate/Resident/Intern Basic Science Research  
2002: Phi Zeta Research Day, 1st Place, Graduate/Resident/Intern Basic Science Research  
2002: Phi Zeta Research Day, Overall Grand Prize, \$1000

2002: Joe Mack Mason Memorial Scholarship, \$800  
2000-2003: Howard Hughes Medical Institute Predoctoral Fellowship  
2011: Pfizer (Norden) Distinguished Veterinary Teacher Award  
2012: Outstanding Instructor, OSU CVHS First Year Class  
2014: Regents Distinguished Teaching Award, Oklahoma State University  
2015: Outstanding Instructor, OSU CVHS First Year Class  
2015: Commencement Hooder for CVHS Class of 2015

#### **Other Experience and Professional Memberships:**

2005-present: American College of Veterinary Pathologists, member  
2005-2007: American Association of Veterinary Laboratory Diagnosticians, member  
1998-present: American Veterinary Medical Association, member  
1996-present: Phi Zeta (Nu Chapter), member Licensed by the Oklahoma State Board of Veterinary Medical Examiners

#### **Selected Publications:**

1. Breshears MA, Eberle R, Ritchey JW. Characterization of gross and histological lesions in Balb/c mice experimentally infected with herpesvirus saimiri 1 (HVS1). *J Comp Pathol.* 2001 Jul; 125(1): 25-33.
2. Washburn KE, Breshears MA, Ritchey JW, Morgan SE, Streeter RN. Honey mesquite toxicosis in a goat. *J Am Vet Med Assoc.* 2002 Jun 15; 220(12): 1837-1839.
3. Breshears MA, Black DH, Ritchey JW, Eberle R. Construction and in vivo detection of an enhanced green fluorescent protein-expressing strain of Saimiriine herpesvirus 1 (SaHV-1). *Arch Virol.* 2003 Feb; 148(2): 311-327.
4. Breshears MA, Eberle R, Ritchey JW. Temporal Progression of Viral Replication and Gross and Histological Lesions in Balb/c Mice Epidermally Inoculated with Saimiriine herpesvirus 1 (SaHV-1). *J Comp Pathol.* 2005 Aug-Oct;133(2-3):103-13.
5. Breshears MA, Holbrook TC, Haak CE, York PA. Pulmonary Aspergillosis and Ischemic Distal Limb Necrosis Associated with Enteric Salmonellosis in a Foal. *Vet Pathol.* 2007 March; 44(2):215-7.
6. Haak CE, Breshears MA, Lackner P. What Is Your Diagnosis: Retrobulbar Nerve Sheath Tumor. *J Am Vet Med Assoc.* 2007 Sep 15; 231(6):863-4.
7. Johnson EM, Allen KE, Breshears MA, Panciera RJ, Little SE, Ewing SA. Experimental transmission of Hepatozoon americanum to rodents. *Vet Parasitol.* 2008 Feb 14; 151 (2-4).
8. Allison RW, Brunner JD, Breshears MA, Avery AC, Moore PF, Affolter VK, Vernau W. Dendritic cell leukemia in a Golden Retriever. *Vet Clin Pathol.* 2008 Jun; 37(2): 190-7.
9. Breshears MA, Johnson BJ. Multisystemic intravascular endothelial proliferation in a steer persistently infected with bovine viral diarrhea virus. *Vet Pathol.* 2008 Sep; 45(5):645-9.
10. Rogers KM, Deatheridge M, Breshears MA, Chapman S, Black D, Ritchey JW, Payton M, Eberle R. Type I IFN response to Papiine herpesvirus 2 (Herpesvirus papio 2; HVP2) determines neuropathogenicity in mice. *Virology.* 2009 Apr 10;386(2):280-9. Epub 2009 Feb 11.
11. Breshears MA, Kocan KM, Johnson EM, Panciera RJ. Light and transmission electron microscopic characteristics of a novel Hepatozoon spp. in naturally infected cotton rats (*Sigmodon hispidus*). *Parasitol Res.* 2009 Oct;105(5):1327-32. Epub 2009 Jul 21.

12. Jann HW, Breshears MA, Allison RW, Pechman RD, Day J, Hart JC, Moorman VJ. Occult metastatic intestinal adenocarcinoma resulting in pathological fracture of the proximal humerus. *Equine Vet J*. 2009 Dec;41(9):915-919. Breshears MA, Meinkoth JH, Stern AW\*, Buoncompagni S, Thomason JD. Pathology in Practice: Lymphoma with hypercalcemia and soft tissue mineralization. *J Am Vet Med Assoc*. 2011 Jan 15; 238(2).
13. Ritchey JW, Davis MS, Breshears MA, Willard MD, Williamson KK, Royer CM, Payton ME, Cragun AS. Gastritis in Alaskan Racing Sled Dogs. *J Comp Pathol*. In press; anticipated publication in 2011.
14. Hays KA and Breshears MA. Presence of Hyperplastic Pectoral Mammary Glands in a Whitefooted Mouse (*Peromyscus leucopus*) from Tar Creek Superfund Site. *J Wild Dis*. In press; anticipated publication in Jan 2011.
15. Breshears MA, Peters JL. Diagnostic exercise: Ambiguous Genitalia in a Fertile Male Miniature Schnauzer Dog. *Vet Pathol*. In press; anticipated publication in 2011.
16. Cramer SD, Breshears MA, Qualls HJ. Pathology in Practice: Equine penile squamous cell carcinoma with metastasis to the lungs and heart. *J Am Vet Med Assoc*. Provisional acceptance, Jan 2010.
17. Breshears MA and Brunker JD. Pathology in Practice: Juvenile nephropathy and renal failure in a two-year-old Weimaraner dog. *J Am Vet Med Assoc*. Provisional acceptance, Feb 2010.
18. Banse HE, Gilliam LL, House AM, McKenzie HC, Johnson PJ, Lopes MAF, Carmichael RJ, Groover ES, LaCarrubba AM, Breshears MA, Brosnahan MM, Funk R, Holbrook TC. DVM. Gastric and enteric bezoars caused by persimmons (*Diospyros virginiana*): report of 13 cases (2001-2008). *J Am Vet Med Assoc*. Provisional acceptance, July 2010.
19. Cordero M, McFarlane D, Breshears MA, Miller LM, Miller MA, Duckett WM. The Effect of Season on the Histological and Histomorphometric Appearance of the Equine Pituitary Gland. *J Eq Vet Sci*. Provisional acceptance, Nov 2010.
20. Kocan KM, Busby AT, Allison RW, Breshears MA, Coburn L, Galindo RC, Ayllon N, Blouin EF, de la Fuente J. Sheep experimentally infected with a human isolate of *Anaplasma phagocytophilum* serve as a host for infection of *Ixodes scapularis* ticks. *Ticks Tick Borne Dis*. 2012 Jun; 3(3):147-153.
21. Piao D, McKeirnan K, Jiang Y, Breshears MA, Bartels KE. A low-cost needle-based single-fiber reflectance spectroscopy method to probe scattering changes associated with mineralization in intervertebral discs in chondrodystrophoid canine species- A pilot study. *Photonics & Lasers in Medicine*, 1(2): 103-115 (2012).
22. Bhaskaran M, Xi D, Wang Y, Huang C, Narasaraaju T, Shu W, Zhao C, Xiao X, More S, Breshears M, Liu L. Identification of microRNAs changed in the neonatal lungs in response to hyperoxia exposure. *Physiol Genomics*. 2012 Oct 17; 44 (20): 970-80.
23. Simpson KM, Streeter RN, Wall CR, Sula MJ, Breshears MA. What Is Your Diagnosis: Chronic urethral trauma secondary to urolithiasis. *J Am Vet Med Assoc*. 2013 Nov 15; 243(10): 1395-7.
24. Reppert E, Galindo RC, Breshears MA, Kocan KM, Blouin EF, de la Fuente J. Demonstration of transplacental transmission of a human isolate of *Anaplasma phagocytophilum* in an experimentally infected sheep. *Transbound Emerg Dis*. 2013 Nov; 60 Suppl s2:93-96.
25. Piggot AM, Haak CE, Breshears MA, Linklater AKJ. Acute bronchointerstitial pneumonia in two indoor cats exposed to H1N1." *J Vet Emerg Crit Care (San Antonio)*. 2014 Apr 8.
26. Huang C, Xiao X, Chintagari NR, Breshears M, Wang Y, Liu L. MicroRNA and mRNA expression profiling in rat acute respiratory distress syndrome. *BMC Med Genomics*. 2014 Jul 28;7:46.
27. Piao D, McKeirnan KL, Sultana N, Breshears MA, Zhang A, Bartels KE. Percutaneous single-fiber reflectance spectroscopy of canine intervertebral disc: is there a potential for in situ probing of mineral degeneration? *Lasers Surg Med*. 2014 Aug;46(6):508-19. Epub 2014 Jun 1.

28. Reppert E, Galindo RC, Ayllón N, Breshears MA, Kocan KM, Blouin EF, de la Fuente J. Studies of *Anaplasma phagocytophilum* in sheep experimentally infected with the human NY-18 isolate: characterization of tick feeding sites. *Ticks Tick Borne Dis.* 2014 Oct;5(6):744-52. Epub 2014 Aug 7.
29. Herndon AM, Breshears MA, McFarlane D. Oxidative Modification, Inflammation and Amyloid in the Normal and Diabetic Cat Pancreas. *J Comp Pathol.* 2014 Nov; 151(4): 352-62. Epub 2014 Aug 11.
30. Boileau MJ, Mani R, Breshears MA, Gilmour M, Taylor JD, Clinkenbeard KD. Efficacy of *Bdellovibrio bacteriovorus* 109J for the treatment of dairy calves with experimentally induced infectious bovine keratoconjunctivitis. *Am J Vet Res.* 2016 Sep; 77(9): 1017-1028.
31. Bagwell JM, Herd HR, Breshears MA, Hodges S, and Rizzi TE. Concurrent multiple myeloma and mast cell neoplasia in a 13-year-old castrated male Maine Coon cat. *Vet Clin Pathol.* 2017; 46: 151-157.