

## Publications

2014

1. (Peer-reviewed Invited Review of Literature) Newcomer BW, **Givens MD**. Update on Testicular Infections with Bovine Viral Diarrhea Virus. Submitted to *Clinical Theriogenology*, May 2014.
2. (Peer-reviewed Invited Review of Literature) **Givens MD**. Safety and Efficacy of Viral Vaccines for Bovine Reproductive Pathogens. Submitted to *Clinical Theriogenology*, May 2014.
3. Newcomer BW, Walz PH, **Givens MD**, Wilson A. Efficacy of bovine viral diarrhea virus vaccination to prevent reproductive disease: a meta-analysis. In internal review for submission to *Theriogenology* summer 2014.
4. Newcomer BW, Walz PH, **Givens MD**. Potential applications for antiviral therapy and prophylaxis in bovine medicine. *Animal Health Research Reviews*, 2014; 15(1):102-117.
5. Newcomer BW, Toohey-Kurth K, Zhang Y, Brodersen BW, Marley MS, Joiner KS, Zhang Y, Galik PK, Riddell KP, **Givens MD**. Laboratory diagnosis and transmissibility of bovine viral diarrhea virus from a bull with a persistent testicular infection. *Veterinary Microbiology*, 2014; Epub ahead of print (April 2014).
6. ♣ Chamorro MF, Walz PH, Haines DM, Passler T, Earleywine T, Palomares RA, Riddell KP, Galik PK, Zhang Y, **Givens MD**. Comparison of levels and duration of detection of antibodies to BVDV 1, BVDV 2, BHV-1, BRSV, and PI3V in calves fed maternal colostrum or a colostrum replacement product. *Canadian Journal of Veterinary Research*, 2014; 78(2): 81-8.

2013

7. Palomares RA, Marley SM, **Givens MD**, Gallardo RA, Brock KV. Bovine viral diarrhea virus fetal persistent infection after immunization with a contaminated modified-live virus vaccine. *Theriogenology*, 2013; 79(8):1184-95.
8. Newcomer BW, **Givens MD**. Approved and experimental countermeasures against pestiviral diseases: Bovine viral diarrhea, classical swine fever and border disease. *Antiviral Research*, 2013; 100(1): Epub 2013 Aug 6.
9. ♣ Walden HS, Dykstra C, Dillon A, Rodning S, **Givens MD**, Bird R, Newton J, Lindsay D. A new species of Tritrichomonas (Sarcomastigophora: Trichomonida) from the domestic cat (*Felis catus*). *Parasitology Research*, 2013; 112(6): 2227-35.
10. ♥ Newcomer BW, Neill JD, Ridpath JF, Marley SD, **Givens MD**. Mutations induced in the NS5B gene of bovine viral diarrhea virus by antiviral treatment convey resistance to the compound. *Virus Research*, 2013; 174(1-2): 95-100.
11. ♥ Newcomer BW, Marley SD, Galik PK, Zhang Y, Riddell PK, Boykin D, Kumar A, Kuhnt LA, Gard JA, **Givens MD**. Effect of treatment with a cationic antiviral compound on acute infection with bovine viral diarrhea virus. *Canadian Journal of Veterinary Research*, 2013; 77(3):170-176.

12. (Peer-reviewed Invited Review of Literature) **Givens MD**, Marley MS. Immunology of chronic BVDV infections. *Biologicals*, 2013; 41(1): 26-30.

2012

13. Neill JD, Newcomer BW, Marley SD, Ridpath JF, **Givens MD**. Greater numbers of nucleotide substitutions are introduced into the genomic RNA of bovine viral diarrhea virus during acute infections of pregnant cattle than of non-pregnant cattle. *Virology Journal*, 2012; 9(150): 1-8.

14. (Peer-reviewed Invited Review of Literature) **Givens MD**. Assessment of available vaccines for bulls to prevent transmission of reproductive pathogens. *Clinical Theriogenology*, 2012; 4(3):308-313.

15. (Peer-reviewed Invited Review of Literature) **Givens MD**. Bull biosecurity: Diagnosing pathogens that cause infertility of bulls or transmission via semen. *Clinical Theriogenology*, 2012; 4(3): 302-307.

16. Rodning SP, **Givens MD**, Marley MSD, Zhang Y, Riddell KP, Galik PK, Hathcock TL, Gard JA, Prevatt JW, Owsley WF. Reproductive and economic impact following controlled introduction of cattle persistently infected with bovine viral diarrhea virus into a naïve group of heifers. *Theriogenology*, 2012; 78(7):1508-16.

17. ♥ Newcomer BW, Marley MS, Ridpath JF, Neill JD, Boykin DW, Kumar A, **Givens MD**. Characterization of an antiviral compound effective against several pestiviruses. *Antiviral Research*, 2012; 96:127-129.

18. ♥ Newcomer BW, Marley MS, Galik PK, Zhang Y, Riddell KP, Boykin DW, Kumar A, Kuhnt LA, **Givens MD**. Prevention of bovine viral diarrhea virus infection in calves treated with a cationic antiviral compound. *Canadian Journal of Veterinary Research*, accepted July 2012.

19. ♥ Newcomer BW, Marley MS, Galik PK, Walz PH, Zhang Y, Riddell KP, Dykstra CC, Boykin DW, Kumar A, Cruz-Espindolae C, Boothe DM, Joiner KS, **Givens MD**. Antiviral treatment of calves persistently infected with bovine viral diarrhea virus. *Antiviral Chemistry and Chemotherapy*, 2012; 22:171-179.

20. **Givens MD**, Marley MSD, Jones CA, Ensley D, Galik PK, Zhang, Y, Riddell KP, Joiner KS, Brodersen BW, Rodning SP. Assessment of vaccinal protection of developing fetuses from natural challenges with bovine viral diarrhea virus and bovine herpesvirus 1. *Journal of the American Veterinary Medical Association*, 2012; 241(4):484-95.

21. ♣ Palomares RA, **Givens MD**, Wright JC, Walz PH, Brock KV. Evaluation of the onset of protection induced by a modified-live virus vaccine in calves challenge inoculated with type 1b bovine viral diarrhea virus. *American Journal of Veterinary Research*, 2012; 73(4):567-74.

22. Bratcher CL, Wilborn BS, Finegan HM, Rodning SP, Galik PK, Riddell KP, Marley MS, Zhang Y, Bell LN, **Givens MD**. Inactivation at various temperatures of bovine viral diarrhea virus in beef derived from persistently infected cattle. *Journal of Animal Science*, 2012; 90(2):635-41.

2011

23. Neill JD, Newcomer BW, Marley MS, Ridpath JF, **Givens MD**. Genetic change in the open reading frame of bovine viral diarrhoea virus is introduced more rapidly during the establishment of a single persistent infection than by multiple acute infections. *Virus Research*, 2011; 158(1-2):140-5.
24. ♣ Chamorro MF, Passler T, **Givens MD**, Edmondson MA, Wolfe DF, Walz PH. Evaluation of transmission of bovine viral diarrhoea virus (BVDV) between persistently infected and naïve cattle by the horn fly (*Haematobia irritans*). *Veterinary Research Communications*, 2011; 35(2):123-129.

2010

25. Walz PH, Grooms D, Passler T, Ridpath J, Tremblay R, Step D, Callan R, **Givens MD**. Control of bovine viral diarrhoea virus in ruminants - ACVIM Consensus Statement. *Journal of Veterinary Internal Medicine*, 2010; 24:476-486.
26. ♥ Johnson JW, Edmondson MA, Walz PH, Marley MSD, **Givens MD**. Comparison of clinical, hematological, and virological findings in alpacas (*Lama pacos*) inoculated with bovine viral diarrhoea virus isolates of alpaca or bovine origin. *Small Ruminant Research*, 2010; 94:66-72.
27. Gregg K, Riddell KP, Chen SH, Galik PK, Xiang T, Guerra T, Marley MS, Polejaeva I, **Givens MD**. Risk and prevention of bovine viral diarrhoea virus (BVDV) transmission through embryo production via somatic cell nuclear transfer(SCNT) using oocytes from persistently infected donors. *Theriogenology*, 2010; 74(1):1-10.
28. ♣ Sellers G, Lin H-C, Riddell MG, Ravis WR, Duran SH, **Givens MD**. Pharmacokinetics of ketamine in plasma and milk of mature Holstein cows. *Journal of Veterinary Pharmacology and Therapeutics*, 2010; 33:480-484.
29. Gard JA, **Givens MD**, Marley MS, Galik PK, Riddell KP, Edmondson MA, Rodning SP. Intrauterine inoculation of seronegative heifers with bovine viral diarrhoea virus concurrent with transfer of in vivo-derived bovine embryos. *Theriogenology*, 2010; 73(8):1154-63.
30. Rodning SP, Marley MSD, Zhang Y, Eason AB, Nunley CL, Walz PH, Riddell KP, Galik PK, Brodersen BW, **Givens MD**. Efficacy of vaccination in preventing the birth of calves persistently infected with bovine viral diarrhoea virus. *Theriogenology*, 2010; 73(8):1009-17.
31. ♣ Passler T, Ditchkoff SS, **Givens MD**, Brock KV, DeYoung RW, Walz PH. Transmission of bovine viral diarrhoea virus among white-tailed deer (*Odocoileus virginianus*). *Veterinary Research*, 2010; 41(2):20.

2009

32. Grooms DL, **Givens MD**, Sanderson MW, White BJ, Grotelueschen DM, Smith DR. Integrated BVD Control Plans for Beef Operations. *The Bovine Practitioner*, 2009; 43 (2):106-116.
33. **Givens MD**, Riddell KP, Edmondson MA, Walz PH, Gard JA, Zhang Y, Galik PK, Brodersen BW, Carson RL, Stringfellow DA. Epidemiology of prolonged testicular infections with bovine viral diarrhea virus. *Veterinary Microbiology*, 2009; 139(1-2):42-51.
34. ♣ Sellers G, Lin H-C, Riddell MG, Ravis WR, Duran SH, **Givens MD**. Pharmacokinetics of lidocaine in serum and milk of mature Holstein cows. *Journal of Veterinary Pharmacology and Therapeutics*, 2009; 32:446-450.
35. ♠ Marley MSD, **Givens MD**, Stringfellow DA, Galik PK, Riddell KP. Lactoferrin from bovine milk inhibits bovine herpesvirus 1 in cell culture but suppresses development of in vitro-derived bovine embryos. *Animal Reproduction Science*, 2009; 112:423-429.
36. **Givens MD**, Riddell KP, Zhang Y, Galik PK, Walz PH, Brodersen BW, Johnson J, Passler T, Widel W, Tremblay R. Safety and efficacy of vaccination of seronegative bulls with modified-live, cytopathic bovine viral diarrhea viruses. *Theriogenology*, 2009; 71:975-983.
37. ♣ Passler T, Walz PH, Ditchkoff SS, DeYoung RW, Foley AM, Brock KV, **Givens MD**. Cohabitation of pregnant white-tailed deer and cattle persistently infected with bovine viral diarrhea virus results in persistently infected fawns. *Veterinary Microbiology*, 2009; 134:362-7.
38. ♠ Marley MS, Tabor JM, **Givens MD**, Kaproth MT, Riddell KP, Galik PK, Zhang Y, Eason AB. Bovine viral diarrhea virus is inactivated when whole milk from persistently infected cows is heated to prepare semen extender. *Veterinary Microbiology*, 2009; 134:249-53.
39. **Givens MD**, Marley MS, Riddell KP, Galik PK, Stringfellow DA. Normal reproductive capacity of heifers that originated from in vitro fertilized embryos cultured with an antiviral compound. *Animal Reproduction Science*, 2009; 113: 283-286.
40. ♠ Marley MSD, **Givens MD**, Galik PK, Riddell KP, Stringfellow DA. Amplification of bovine viral diarrhea virus introduced into an in vitro embryo production system via oocytes from persistently infected cattle. *Reproduction in Domestic Animals*, 2009; 44: 532-35.

2008

41. (Peer-reviewed Invited Review of Literature) **Givens MD**, Marley MS. Infectious causes of embryonic and fetal mortality. *Theriogenology*, 2008; 70:270-285.
42. (Peer-reviewed Invited Review of Literature) **Givens MD**, Marley MS. Pathogens that cause infertility of bulls or transmission via semen. *Theriogenology*, 2008; 70:504-507.
43. ♥ Marley MSD, **Givens MD**, Galik PK, Riddell KP, Stringfellow DA. Development of a duplex quantitative polymerase chain reaction for detection of bovine herpesvirus 1 and bovine viral diarrhea virus in bovine follicular fluid. *Theriogenology*, 2008; 70:153-160.

44. ♥ Marley MSD, **Givens MD**, Galik PK, Riddell KP, Looney CR, Stringfellow DA. Efficacy of a recombinant trypsin product against bovine herpesvirus-1 associated with in vivo- and in vitro-derived embryos. *Theriogenology*, 2008; 69(6):746-757.
45. Walz PH, **Givens MD**, Cochran A, Navarre CB. Effect of dexamethasone administration on bulls with a localized testicular infection with bovine viral diarrhoea virus. *Canadian Journal of Veterinary Research*, 2008; 72:56-62.
46. ♣ Passler T, Walz PH, Ditchkoff SS, Walz HL, **Givens MD**, Brock KV. Evaluation of hunter-harvested white-tailed deer for evidence of bovine viral diarrhoea virus infection in Alabama. *Journal of Veterinary Diagnostic Investigation*, 2008; 20:79-82.
47. Smith RL, Sanderson MW, Walz PH, **Givens MD**. Sensitivity of polymerase chain reaction for detection of bovine viral diarrhoea virus in pooled serum samples and use of pooled polymerase chain reaction to determine prevalence of bovine viral diarrhoea virus in auction market cattle. *Journal of Veterinary Diagnostic Investigation*, 2008; 20:75-78.
48. (Peer-reviewed Invited Review of Literature) **Givens MD**, Marley MS. Approaches to biosecurity in embryo transfer programs. *Theriogenology*, 2008; 69:129-136.

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49. ♣ Stockdale HD, Rodning SP, **Givens MD**, Carpenter DM, Lenz SD, Spencer JA, Dykstra CC, Lindsay DS, Blagburn BL. Experimental infection of cattle with a feline isolate of *Tritrichomonas foetus*. *Journal of Parasitology*, 2007; 93(6):1429-1434.
50. (Peer-reviewed Invited Review of Literature) Gard JA, **Givens MD**, Stringfellow DA. Bovine viral diarrhoea virus (BVDV): Epidemiologic concerns relative to semen and embryos. *Theriogenology*, 2007; 68(3): 434-442.
51. (Peer-reviewed Invited Review of Literature) **Givens MD**, Gard JA, Stringfellow DA. Relative risks and approaches to biosecurity in the use of embryo technologies in livestock. *Theriogenology*, 2007; 68: 298-307.
52. ♣ Passler T, Walz PH, Ditchkoff SS, **Givens MD**, Maxwell HS, Brock KV. Experimental persistent infection with bovine viral diarrhoea virus in white-tailed deer. *Veterinary Microbiology*, 2007; 122:350-356.
53. ♦ Gripshover EM, **Givens MD**, Ridpath JF, Brock KV, Whitley EM, Sartin EA. Variation in Erns viral glycoprotein associated with failure of immunohistochemistry and commercial antigen capture ELISA to detect a field strain of bovine viral diarrhoea virus. *Veterinary Microbiology*, 2007; 125: 11-21.
54. ♥ Edmondson MA, **Givens MD**, Walz PH, Gard JA, Stringfellow DA, Carson RL. Comparison of tests for detection of cattle persistently infected with bovine viral diarrhoea virus. *Journal of Veterinary Diagnostic Investigation*, 2007; 19: 376-381.
55. Gard JA, **Givens MD**, Riddell KP, Galik PK, Zhang Y, Stringfellow DA, Marley MSD. Detection of bovine viral diarrhoea virus (BVDV) in single or small groups of preimplantation bovine embryos. *Theriogenology*, 2007; 67:1415-1423.

56. **Givens MD**, Riddell KP, Walz PH, Rhoades J, Harland R, Zhang Y, Galik PK, Brodersen BW, Cochran AM, Brock KV, Carson RL, Stringfellow DA. Noncytopathic bovine viral diarrhea virus can persist in testicular tissue after vaccination of peri-pubertal bulls but prevents subsequent infection. *Vaccine*, 2007; 25(5):867-876.

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57. **Givens MD**, Riddell KP, Zhang Y, Galik PK, Stringfellow DA, Brodersen BW, Jackson JA, Ellsworth MA, Ficken MD, Carson RL, Wenzel JGW, Marley MS. Use of a modified live vaccine to prevent persistent testicular infection with bovine viral diarrhea virus. *Veterinary Therapeutics*, 2006; 7(3):305-318.
58. (Peer-reviewed Invited Review of Literature) **Givens MD**. A clinical, evidence-based approach to infectious causes of infertility in beef cattle. *Theriogenology*, 2006; 66(3):648-54.
59. ♥ Marley MSD, **Givens MD**, Stringfellow DA, Galik PK, Riddell KP. Effect of phosphonoformic acid in the development of bovine embryos in vitro. *Veterinary Therapeutics*, 2006; 7(2):156-166. (Auburn University Phi Zeta Graduate Student Manuscript Award—Applied Science)
60. **Givens MD**, Stringfellow DA, Riddell KP, Galik PK, Carson RL, Riddell MG, Navarre CB. Normal calves produced after transfer of in vitro fertilized embryos cultured with an antiviral compound. *Theriogenology*, 2006;65(2):344-55.
61. Waldrop JG, Stringfellow DA, **Givens MD**, Galik PK, Riddell KP, Riddell MG, Carson RL. Seroconversion of calves to bovine viral diarrhea virus (BVDV) following intravenous inoculation with artificially exposed, in vivo-derived embryos. *Theriogenology*, 2006;65(3):594-605.

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62. **Givens MD**, Galik PK, Riddell KP, Dykstra CC, Brock KV, Stringfellow DA. Effects of aromatic cationic molecules on bovine viral diarrhea virus and embryonic development. *Theriogenology*, 2005;63(7):1984-1994.
63. Stringfellow DA, Riddell KP, **Givens MD**, Galik PK, Sullivan E, Dykstra CC, Robl J, Kasinathan P. Bovine viral diarrhea virus (BVDV) in cell lines used for somatic cell cloning. *Theriogenology*, 2005;63(4):1004-1013.

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65. Waldrop JG, Stringfellow DA, Riddell KP, Galik PK, Riddell KP, Riddell MG, **Givens MD**, Carson RL. Infectivity of bovine viral diarrhea virus associated with in vivo-derived bovine embryos. *Theriogenology*, 2004;62(3-4):387-397.

66. Waldrop JG, Stringfellow DA, Riddell KP, Galik PK, Riddell MG, **Givens MD**, Carson RL, Brock KV. Different strains of bovine viral diarrhoea virus (BVDV) vary in their affinity for in vivo derived bovine embryos. *Theriogenology* 2004;62(1-2):45-55.
67. (Peer-reviewed Invited Review of Literature) Stringfellow DA, **Givens MD**, Waldrop JG. Biosecurity issues associated with current and emerging embryo technologies. *Reproduction, Fertility and Development*, 2004;16:93-102.

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71. Edens MSD, Galik PK, Riddell KP, **Givens MD**, Stringfellow DA. Bovine herpesvirus-1 associated with single trypsin-treated embryos was not infective for uterine tubal cells. *Theriogenology*, 2003;60(8):1495-1504.

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73. Galik PK, **Givens MD**, Stringfellow DA, Bishop MD, Eilertsen KJ, Crichton EG. Bovine viral diarrhoea virus (BVDV) and anti-BVDV antibodies in pooled samples of follicular fluid. *Theriogenology* 2002;57(4):1219-1227.

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75. **Givens MD**, Galik PK, Riddell KP, Brock KV, Stringfellow DA. Replication and persistence of different strains of bovine viral diarrhea virus in an in vitro embryo production system. *Theriogenology* 2000;54(7):1093-1107.
76. (Peer-reviewed Invited Review of Literature) Stringfellow DA, **Givens MD**. Infectious agents in embryo production: Hazards and solutions. *Theriogenology* 2000;53:85-94.
77. (Peer-reviewed Invited Review of Literature) Stringfellow DA, **Givens MD**. Preventing disease transmission through the transfer of in-vivo-derived bovine embryos. *Livestock Production Science* 2000;62:237-252.
78. (Peer-reviewed Invited Review of Literature) Stringfellow DA, **Givens MD**. Epidemiological concerns relative to in vivo and in vitro production of livestock embryos. *Animal Reproduction Science* 2000;60/61:629-642.

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80. **Givens MD**, Galik PK, Riddell KP, Stringfellow DA. Uterine tubal cells remain uninfected after culture with in vitro-produced embryos exposed to bovine viral diarrhea virus. *Veterinary Microbiology* 1999;70:7-20.

- ♣ Denotes publication by post-doctoral student for whom Givens is the advising professor (n=3).
- ♦ Denotes publication by summer research student for whom Givens is the advising professor (n=1).
- ♥ Denotes publication by graduate student for whom Givens is the major professor (n=10).
- ♣ Denotes publication by graduate student for whom Givens is a committee member (n=11).