

MICHAEL JAMES DARK

Phone: (616) 818-8996
michael.james.dark@gmail.com

3718 S.W. 21st Terrace
Gainesville, FL 32608

EDUCATION

PhD	Veterinary Microbiology and Pathology Washington State University, Pullman, WA College of Veterinary Medicine	Dec. 2008
DVM	Michigan State University, East Lansing, MI College of Veterinary Medicine	May 2001
BS	Veterinary Medicine Michigan State University, East Lansing, MI College of Veterinary Medicine	May 1999

SPECIALTY CERTIFICATION

Diplomate, American College of Veterinary Pathologists Anatomic Pathology	2011
--	------

WORK EXPERIENCE

Associate Professor	2016-Present
Assistant Professor	2009-2016
University of Florida College of Veterinary Medicine Department of Infectious Diseases and Pathology	
Post-DVM Graduate Research Assistant	2002-2008
Washington State University, College of Veterinary Medicine Department of Veterinary Microbiology and Pathology	
Associate Veterinarian	2001-2002
Animal Emergency Hospital of Kent County Grand Rapids, MI	

HONORS AND AWARDS

Special Achievement Award for Research Teams, Laboratories or Agencies Florida Entomological Society	2015
Graduate student travel grant American Society of Rickettsiology national meeting, Asilomar, CA	2006
Graduate student travel grant First International Symposium on the Comparative Biology of the Alphaproteobacteria, Blacksburg, VA	2006
Dr. Robert F. Langham Diagnostic Pathology Award Michigan State University College of Veterinary Medicine	2001
Best Graduate Student Presentation 39th Annual North Central Conference of Veterinary Laboratory Diagnosticians, East Lansing, MI	2000

TEACHING EXPERIENCE

University of Florida, Gainesville, FL

Lecturer – VEM 5115 Introduction to Histology and Embryology	2014 – Present
<ul style="list-style-type: none"><input type="checkbox"/> Team-taught the introduction to histology<input type="checkbox"/> Covered an introduction to microscopy, epithelium, glands, connective tissue, bone, and skin<input type="checkbox"/> A total of 5 classroom contact hours and 16 laboratory hours with 120 students	
Coordinator, USDA Foreign Animal and Emerging Disease Awareness Course	June 2013
<ul style="list-style-type: none"><input type="checkbox"/> Helped coordinate UF contributions to this three-day course<input type="checkbox"/> Hosted bovine and avian necropsy wetlabs for 50 individuals each<input type="checkbox"/> Out of 33 total course evaluations, 28 evaluated the necropsy wet lab<ul style="list-style-type: none"><input type="checkbox"/> Mean score – 4.6 out of 5<input type="checkbox"/> The lab was ranked as the most beneficial part of the course by 10	
Lecturer – VEM 5162 Systemic Pathology	2010-2015
<ul style="list-style-type: none"><input type="checkbox"/> Hepatic and pancreatic pathology, including common diseases, pathophysiology, and clinical signs.<input type="checkbox"/> Three classroom contact hours and four laboratory contact hours per semester, approximately 115 students per class	

- Lecturer – VEM 5162 Systemic Pathology 2015
- Musculoskeletal and reproductive pathology, including common diseases, pathophysiology, and clinical signs.
 - Three classroom contact hours and four laboratory contact hours per semester, approximately 115 students per class
- Lecturer – VEM 5571 – Emerging Diseases Issues 2009-2015
- An overview of the pathologist's role in emerging diseases, as well as information about the intersection of politics and science in emerging diseases. Bovine TB, foot and mouth disease, and classical swine fever are used as examples.
 - Two classroom contact hours per semester, approximately 25 students per class
- Lecturer – VEM 5165 – Large Animal Pathology 2010-2014
- A review of diseases of porcine pathology, with a focus on diseases important for boards.
 - Four classroom contact hours per semester, approximately 30 students per class
- Lecturer – VEM 5164 – Small Animal Pathology 2009-2014
- A review of hepatic and pancreatic pathology, including common diseases, pathophysiology, and clinical signs.
 - Two classroom contact hours per semester, approximately 70 students per class

Washington State University, Pullman, WA

- Lecturer – VM 536 Veterinary Bacteriology and Mycology 2005-2007
- Normal gastrointestinal defenses, Escherichia coli, Salmonella spp., and Campylobacter jejuni
 - Three contact hours per semester, approximately 100 students per class
- Lecturer – VM 546 Systemic Pathology Gross Laboratory 2007
- Introduction, lymphatic system, review lab
 - Twelve contact hours – four laboratory sections, each with 25 students
- Lecturer - VM 546 Systemic Pathology Gross Laboratory 2004
- Taught all labs, co-wrote and administered the laboratory final
 - Sixty contact hours – four laboratory sections, each with 25 students
- Facilitator – Diagnostic Challenges (as part of VM 546) 2004-2007, 2013-2014
- Coordinated cases with non-veterinarian clients
 - Assisted students in formulating differential diagnoses and learning issues
 - Reviewed and graded student performance
 - Approximately twelve contact hours per year – two groups a semester with four to five students per group

GRADUATE STUDENTS

Ph.D. Advisor for Firas Abed, Ph.D. Candidate Department of Infectious Diseases and Pathology	2014 – current
Committee member for Jeffrey Hertz, Ph.D. Candidate Department of Entomology and Nematology Major Advisor – Phil Kaufman	2014 - current
Committee member for Eric Mccown, Ph.D. Candidate Department of Infectious Diseases and Pathology Major Advisor – Anthony F. Barbet	2013 - current
Committee member for Katherine Sayler, Ph.D. Candidate Department of Infectious Diseases and Pathology Major Advisor – Anthony F. Barbet	2014
Committee member for Junjie Liu, Ph.D. Candidate Department of Infectious Diseases and Pathology Major Advisor – Maureen Long	2012-current
Committee member for Liliana Crosby, Ph.D. Candidate Department of Infectious Diseases and Pathology Major Advisor – Anthony F. Barbet	2009-2014
Committee member for Amanda Eiden, Ph.D. Candidate Department of Entomology and Nematology Major Advisor – Phil Kaufman	2010-2013

PUBLICATIONS

Journal Articles

Payne, C.L., Dark, M.J., Conway, J.A., Farina, L.L. A retrospective study of the prevalence of calcium oxalate crystals in veterinary *Aspergillus* cases. *JVDI*, in press

Abed, F.M., Dark, M.J. Determining the utility of veterinary tissue archives for retrospective DNA analysis. *PeerJ* 2016 May 3;4:e1996. doi: 10.7717/peerj.1996

Noh, S.M., Dark, M.J., Reif, K., Ueti, M., Kappmeyer, L.S., Scoles, G., Palmer, G.H., and Brayton, K.A. Superinfection exclusion of the ruminant pathogen *Anaplasma marginale* in the tick vector is dependent on time between exposures to the strains. *Appl. Environ. Microbiol.*, 2016 May 16;82(11):3217-24. doi: 10.1128/AEM.00190-16

Taylor K.R., Garner M.M., Russell K., Epperson E.D., Grodi H.A., Roff S.R., Dumonceaux, G.A., Struthers, J.D., Dark, M.J., Abbott, J.R. Chordomas at High Prevalence in the Captive

Population of the Endangered Perdido Key Beach Mouse (*Peromyscus polionotus trissyllepsis*). *Vet Pathol* 2015. doi: 10.1177/0300985815575051 PMID: 25791038

Craft, W.F., Conway, J.A., Dark, M.J. Comparison of histomorphology and DNA preservation produced by fixatives in the veterinary diagnostic laboratory setting. *PeerJ* 2:e377 doi: 10.7717/peerj.377 PMID: 24860702

Kelly, P.J., Lucas, H., Randolph, C., Ackerson, K., Blackburn, J.A., Dark, M.J. Efficacy of slow-release tags impregnated with aggregation-attachment pheromone and deltamethrin for control of *Amblyomma variegatum* on St. Kitts, West Indies. *Parasit Vectors*. 2014 Apr 14;7(1):182. doi:10.1186/1756-3305-7-182. PMID: 24731252

Miller, J., Dark, M.J. Evaluation of the effect of formalin fixation on skin specimens in dogs and cats. *PeerJ* 2014 2:e307; doi: 10.7717/peerj.307. PMID: 24688882

Dark, M.J. Whole-genome sequencing in bacteriology: state of the art. *Infect Drug Resist.* 2013 2013;6 115-123. doi: 10.2147/IDR.S35710. PMID: 24143115

Leone, A., Dark, M.J., Kondo, H., Rotstein, D.S., Kuipel, M., Walsh, M.T., Erlacher-Reid, C., Gordon, N., Conway, J.A. Gastrointestinal leiomyosarcoma in a pygmy sperm whale (*Kogia breviceps*). *J Zoo Wildl Med.* 2013 44(3):744-748. doi: 10.1638/2012-0147R.1. PMID: 24063105

Pierlé S.A., Dark M.J., Dahmen D., Palmer G.H., Brayton K.A. Comparative genomics and transcriptomics of trait-gene association. *BMC Genomics*. 2012 Nov 26;13(1):669. PMID: 23181781

Watson R.S., Broome T.A., Levings P.P., Rice B.L., Kay J.D., Smith A.D., Gouze E., Gouze J.N., Dacanay E.A., Hauswirth W.W., Nickerson D.M., Dark M.J., Colahan P.T., Ghivizzani S.C. scAAV-mediated gene transfer of interleukin-1-receptor antagonist to synovium and articular cartilage in large mammalian joints. *Gene Ther.* 2012 Nov 15. doi: 10.1038/gt.2012.81. PMID: 23151520

Dark M.J., Lundgren A.M., Barbet A.F. Determining the Repertoire of Immunodominant Proteins via Whole-Genome Amplification of Intracellular Pathogens. *PLoS ONE* 2012 7(4): e36456. doi:10.1371/journal.pone.0036456

Hostnik, E.T., Wickins, S.C., Conway, J.A., Dark, M.J. Ocular and Olfactory Forebrain Abnormalities within a Neonatal Alpaca (*Vicugna pacos*). *Journal of Veterinary Medical Science* 2012, 74(4), 945-7. PMID: 22446393

Smith, K.M., Clark, C.K., Dark, M.J., Kiupel, M., Gary, J. T-cell rich, B-cell lymphoma in the small colon of a yearling horse. *Equine Veterinary Education* 2013, 25(2), pgs. 74-78. DOI: 10.1111/j.2042-3292.2012.00398.x

Dark, M.J., Al-Khedery, B., Barbet, A.F. Multistrain Genome Analysis Identifies Candidate Vaccine Antigens of *Anaplasma marginale*. *Vaccine* 2011 29(31):4923-32 PMID: 21596083

Dark, M.J., Herndon, D.R., Kappmeyer, L.S., Gonzales, M.P., Nordeen, E., Palmer, G.H., Knowles, D.P. Jr., Brayton, K.A. Conservation in the face of diversity: multistrain analysis of an intracellular bacterium. *BMC Genomics* 2009 10(1):16. PMID: 19134224

Nelson, D.D., Dark, M.J., Bradway, D.S., Ridpath, J.F., Call, N., Haruna, J., Rurangirwa, F.R., Evermann, J.F. Evidence for persistent bovine viral diarrhea virus infection in a captive mountain goat (*Oreamnos americanus*). *Journal of Veterinary Diagnostic Investigation* 20: 752-759. PMID: 18987224

McKune, C.A., Brosnan, R.J., Dark, M.J., Haldorson, G.J. Safety and efficacy of intramuscular propofol administration in rats. *Journal of Veterinary Anesthesia and Analgesia* 2008 35: 495-500 PMID: 18980630

Fidel J.L., Pargass, I.S., Dark, M.J., S.P. Holmes. Granulocytopenia associated with thymoma in a domestic short haired cat. *Journal of the American Animal Hospital Association* 2008 44: 210-217 PMID: 18593858

Futse, J.E., Brayton, K.A., Dark, M.J., Knowles, D.P. Jr., Palmer, G.H. (2008) Superinfection as a driver for genomic diversification among strains of highly antigenically variant complex pathogens. *Proceedings of the National Academy of Sciences of the United States of America*, 105, 2123-7. PMID: 18252822

Lopez, J. E., Palmer, G. H., Brayton, K. A., Dark, M. J., Leach, S. E. & Brown, W. C. (2007) Immunogenicity of *Anaplasma marginale* type iv secretion system proteins in a protective outer membrane vaccine. *Infection and Immunity*, 75, 2333-42. PMID: 17339347

Noh, S. M., Brayton, K. A., Knowles, D. P., Agnes, J. T., Dark, M. J., Brown, W. C., Baszler, T. V. & Palmer, G. H. (2006) Differential expression and sequence conservation of the *Anaplasma marginale* msp2 gene superfamily outer membrane proteins. *Infection and Immunity*, 74, 3471-9. PMID: 16714578

Brayton, K. A., Kappmeyer, L. S., Herndon, D. R., Dark, M. J., Tibbals, D. L., Palmer, G. H., McGuire, T. C. & Knowles, D. P., Jr. (2005) Complete genome sequencing of *Anaplasma marginale* reveals that the surface is skewed to two superfamilies of outer membrane proteins. *Proceedings of the National Academy of Sciences of the United States of America*, 102, 844-9. PMID: 15618402

Bell, T. G., Butler, K. L., Sill, H. B., Stickle, J. E., Ramos-Vara, J. A. & Dark, M. J. (2002) Autosomal recessive severe combined immunodeficiency of Jack Russell terriers. *Journal of Veterinary Diagnostic Investigation* 14, 194-204. PMID: 12033674

Meek, K., Kienker, L., Dallas, C., Wang, W., Dark, M. J., Venta, P. J., Huie, M. L., Hirschhorn, R. & Bell, T. (2001) SCID in Jack Russell terriers: A new animal model of DNA-PK_{CS} deficiency. *Journal of Immunology*, 167, 2142-50. PMID: 11489998

Book Chapters

Dark, M.J. Mycobacteria. In *Foodborne Infections and Intoxications*, 4th Edition (eds. J. Glenn Morris, Jr. and Morris Potter). Elsevier Academic Press, Waltham, MA, USA. 2013, pgs. 337-341. ISBN: 9780124160415

Brayton, K.A., Dark, M.J., Palmer, G.H. Anaplasma. In Genome Mapping and Genomics in Animal-Associated Microbes (eds. C. Kole and V.M. Nene). Springer Life Sciences, Heidelberg, Germany. 2009, pgs. 85-116. ISBN: 9783540740421

PRESENTATIONS AND INVITED LECTURES

American Society for Rickettsiology Dark, M.J., A.F. Barbet Multistrain Analysis of <i>Anaplasma marginale</i>	August 2010 Stevenson, WA
International Veterinary Forensic Science Association Dark, M.J. Necropsy Technique for Forensic Scientists	May 2010 Orlando, FL
Fifth International Meeting on Rickettsia and Rickettsial Diseases Dark, M.J. Characterization of genes implicated in rickettsial tick transmission	May 2008 Marseille, France
Western Conference of Veterinary Diagnostic Pathologists Dark, M.J. Severe combined immunodeficiency in Arabian foals	October 2006 Pullman, WA
American Society for Rickettsiology Dark, M.J. Comparative genomics of <i>Anaplasma marginale</i> strains	September 2006 Asilomar, CA

Washington State University Showcase Dark, M.J., L. S. Kappmeyer, D. R. Herndon, G. H. Palmer, D. P. Knowles, and K. A. Brayton Using comparative genomics to investigate tick transmissibility in the rickettsial pathogen <i>Anaplasma marginale</i>	March 2005 Pullman, WA
Western Conference of Veterinary Diagnostic Pathologists Dark, M.J. Intravascular lymphosarcoma	September 2004 Saskatoon, SK
Western Conference of Veterinary Diagnostic Pathologists Dark, M.J. <i>Mycobacterium bovis</i> infection in cattle	September 2003 Lethbridge, AB
39th Annual North Central Conference of Veterinary Laboratory Diagnosticians Dark, M.J., P. Venta, T.G. Bell, and K.A. Meek Single nucleotide polymorphism-based analysis of a SCID Defect in a Family of Jack Russell terriers	June 2000 East Lansing, MI
42nd Annual Meeting of the American Association of Veterinary Laboratory Diagnosticians Dark, M.J., J. Kaneene, T. Bell, R. Walker, M. Bowman, and B. Steficek An epidemiological study of <i>Mycobacterium paratuberculosis</i> in Michigan livestock	October 1999 San Diego, CA

LICENSURE

Veterinarian, State of Florida (VM10814)	2009-Current
Veterinarian, State of Washington (VT00006950)	2002-2008
Veterinarian, State of Michigan (6901008638)	2001-2002

PROFESSIONAL SERVICE

Ad-hoc Peer-Reviewer for:

- Vaccine
- Veterinary Parasitology
- Equine Veterinary Journal
- Molecular Biology Reports
- Parasites and Vectors
- Vaccines: Benefits and Risks
- PLoS ONE
- Revista Brasileira de Parasitologia Veterinária (Brazilian Journal of Veterinary Parasitology)
- American Journal of Veterinary Research
- BMC Bioinformatics

- International Journal Of Biotechnology
- British Microbiology Research Journal
- BMC Research Notes
- Journal of Emerging Investigators
- Parasites and Vectors
- Epidemiology and Infection
- Veterinary Medicine: Research and Reports
- Drug Design, Development and Therapy
- Biotechnic & Histochemistry
- International Journal of Molecular Sciences

Ad-hoc grant reviewer for:

- US/ Israel Binational Agricultural Research and Development Fund
- Horserace Betting Levy Board Veterinary Advisory Committee (UK)

Editorial Peer Review Board Member :

- Today's Veterinary Practice

GRANTS

Co-Investigator for NIH grant AI042792, 5% FTE "Tick Mammal Interface of Human Granulocytic Anaplasmosis" Ulrike Munderloh PI, \$3,083,868 total cost	2015-2020
Co-Investigator for Department of Defense grant PR130999, 5% FTE "Gene Therapy for Prost-traumatic Osteoarthritis" Steve Ghivizzani PI, \$500,000 direct costs per year	2014-2017
Primary investigator for USDA TSTAR grant "Improved surveillance and control for the tropical bont tick <i>Amblyomma americanum</i> "	2010-2012
Primary investigator for NIH grant K08-AI064162 "Anaplasma marginale genes determining tick transmission." Direct costs - \$380,381	2005-2008
Trainee under NIH T32-AI07025 Immunology Training Grant	2004 – 2005

UNIVERSITY SERVICE

- University Infrastructure Committee 2016–Present
- University Student Technology Fee Grant Committee 2016
- College Research Committee 2009–2012
- College Information Technology Committee 2010–Present
 - Committee Chair 2015–Present
- Anatomic Pathology Resident Research Coordinator 2010–Present
- Awards and Scholarship Committee 2012–Present
- University Faculty Senate Information Technology Advisory Subcommittee 2013–Present
- University Faculty Senator 2015–Present
- Anatomic Pathology Resident Coordinator 2015–Present
- Class of 2018 Faculty Advisor

OTHER CONTINUING EDUCATION / DEVELOPMENT

- Institute for Healthcare Communication Veterinary Communication Project Faculty Development Program 2016