

Brigitte E. Martin

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EDUCATION

- May 2017 Doctor of Philosophy, Veterinary Medical Science
Mississippi State University College of Veterinary Medicine, Starkville, MS, GPA: 4.0
- May 2012 Bachelor of Science, Biochemistry
Mississippi State University, Starkville, MS
Overall Undergraduate GPA: 3.7 *Magna Cum Laude*
- May 2010 Associates of Science, Biology
Pearl River Community College, Poplarville, MS, GPA: 3.67

RESEARCH EXPERIENCE

- August 2020-present Postdoctoral Research Fellow
University of Mississippi Medical Center, Physiology and Biophysics, Jackson, MS
- July 2017-July 2020 Postdoctoral Research Associate
University of Illinois, Urbana-Champaign, Molecular and Cellular Biology, Urbana, IL
- June 2012-May 2017 Graduate Research Assistantship
Mississippi State University College of Veterinary Medicine, Basic Science, Mississippi State, MS
- February-May 2012 Undergraduate Researcher
Mississippi State University College of Veterinary Medicine, Basic Science, Mississippi State, MS

AWARDS and HONORS

- August 2020 T32 Training Grant Fellowship from the National Heart, Lung, and Blood Institute
- June 2020 American Society for Virology Postdoctoral Scholar Travel Award (meeting canceled due to COVID-19 pandemic)
- October 2019 Midwest Virology Symposium, Travel Award and Oral Presentation
- March 2017 College Hall of Fame Scholar for the College of Veterinary Medicine
- October 2016 C. Edward Couvillion, DVM, PhD Endowed Graduate Scholarship
- April 2016 3rd place, Graduate Student Research Symposium, Oral Presentation
- August 2014 2nd place, CVM Research Day, Oral Presentation
- August 2010-May 2012 Shackhouls Honor College
- August 2010-May 2012 Phi Theta Kappa Alumni Scholarship

MENTORING ACTIVITIES

- January 2020-May 2020 English as a Second Language Mentor
*General Education, University of Illinois, Urbana-Champaign,
Urbana, IL*
- September 2018-July 2020 Undergraduate Researcher Mentor
*Molecular and Cellular Biology, University of Illinois, Urbana-
Champaign, Urbana, IL*

CERTIFICATION/SPECIAL TRAINING

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| Working with the IACUC, UMMC | August 2020 |
| Working with Mice in Research Settings, UMMC | August 2020 |
| Working with Rats in Research Settings, UMMC | August 2020 |
| Post-Procedure Care of Mice and Rats in Research, UMMC | August 2020 |
| Animal Biosafety, UMMC | August 2020 |
| Biomedical Responsible Conduct of Research, UMMC | August 2020 |

PROFESSIONAL AFFILIATIONS

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| Theme Member Infection Genomics for One Health | |
| Carl R. Woese Institute for Genomic Biology | September 2018-July 2020 |
| Member of American Society of Virology | April 2018-present |
| Phi Kappa Phi | October 2014-present |
| Golden Key | October 2013-present |
| Member of American Society for Microbiologists | December 2012-present |

SERVICE

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| Public Outreach Volunteer | August 2019-May 2020 |
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- Carl R. Woese Institute for Genomic Biology
Urbana-Champaign, IL*
- Genome Day; educate the K-12 youth about infection genomics and beneficial microbes with a microbiology-themed board game.
 - Game Day Genomics; guide University of Illinois football tailgaters of all ages in a genomic-themed escape game.
 - Trick-or-Treating with the Stars; guide elementary-aged children in a jack-o-lantern murder mystery by extracting pumpkin DNA to detect the “murderer” from a panel of pumpkin “suspects”.

PUBLICATIONS

1. **Martin BE**, Harris JD, Sun J, Koelle K, Brooke CB. Cellular co-infection can increase the efficiency of influenza A virus production and shape the interferon response in a cell-type dependent fashion. Submitted to PLOS Pathogens June 2020.
2. Dardir K, Wang H, **Martin B**, Atzampou M, Brooke C, Fabris, L. A SERS Accepted January 2020. Nanoprobe for Intracellular Monitoring of Viral Mutations. The Journal of Physical Chemistry.

3. Alnaji FG, Holmes J, Fields C, Vera JC, Rendon G, **Martin BE**, Brooke CB. 2019. Sequencing Framework for the Sensitive Detection and Precise Mapping of Defective Interfering Particle-Associated Deletions across Influenza A and B Viruses. *Journal of Virology* 93:11: e00354-19
4. **Martin BE**, Brooke CB. Flu Shows the Power of Diversity. 2019. *Cell*. 176:1:9-10.
5. Showmaker KC, Sanders WS, Eves-van den Akker S, **Martin BE**, Callahan FE, Peterson DG, Wubben MJ. 2018. Five life stage-specific transcriptome assemblies for the reniform nematode, *Rotylenchulus reniformis* Linford & Oliveira. *Journal of Nematology* 4:50: 529-530.
6. **Martin BE**, Sun H, Carrel M, Cunningham FL, Baroch JA, Young SG, Schmit B, Nolting J, Yoon KY, Lutman MW, Pedersen K, Lager K, Bowman A, Slemmons R, Smith DR, DeLiberto T, Wan XF. 2017. US feral swine were exposed to both avian and swine influenza A viruses. *Applied and Environmental Microbiology* 01346-17.
7. Showmaker KC, Arick MA, Hsu C, **Martin BE**, Wang X, Jia J, Wubben MJ, Allen T, Lu S, Peterson DG. 2017. The genome of the cotton bacteria blight pathogen *Xanthomonas citri* pv. *malvacearum* strain MSCT1. *Standards in Genomic Science*. 12:42.
8. **Martin BE**, Bowman A, Li L, Nolting J, Smith D, Hanson L, Wan XF. 2017. Detection of Antigenic Variants of Swine Subtype H3 Influenza A Viruses from Clinical Samples. *Journal of Clinical Microbiology*. 55:4.
9. Zhao N, **Martin BE**, Yang CK, Luo F, Wan XF. 2015. Association of analyses of large-scale glycan microarray data reveal novel host-specific substructures in influenza A virus binding glycans. *Scientific Reports*. 5:15778.
10. Xu Y, Cao H, Liu H, Sun H, **Martin B**, Zhao Y, Wang Q, Deng G, Xue J, Zong Y, Zhu J, Wen F, Long LP, Wong SS, Zhao N, Fu X, Liao M, Hu G, Webby R, Gao GF, Wan XF. 2015. Identification of the source of A (H10N8) virus causing human infection. *Infect Genet and Evol*. 30: 159-63.
11. **Martin BE**, Kun J, Sun H, Ye J, Hall C, Ware D, Wan XF. 2015. Detection of influenza antigenic variants directly from clinical samples using polyclonal antibody based proximity ligation assays. *Virology*, 476: 151-8.
12. Feng Z, Gomez J, Bowman AS, Ye J, Long LP, Nelson SW, Yang J, **Martin B**, Kun J, Nolting JM, Cunningham F, Cardona C, Zhang J, Yoon KJ, Slemmons RD, Wan XF. 2013. Antigenic characterization of H3N2 Influenza A viruses from Ohio agricultural fairs. *Journal of Virology*, 87(13): 7655-67.

PRESENTATIONS

1. **Martin BE**, Harris JD, Alnaji FG, Koelle K, Brooke CB. Defining the phenotypic effects of cellular co-infection by influenza virus. American Society for Virology Abstract Accepted as Flash Talk + Poster Presentation (meeting canceled due to COVID-19 pandemic). June 13-17, 2020. Fort Collins, CO.
2. **Martin BE**, Harris JD, Alnaji FG, Koelle K, Brooke CB. The functional consequences of cellular co-infection and viral heterogeneity during influenza virus infection. Midwest Virology Symposium the 1st Annual Meeting, Oral Presentation, October 12, 2019, Columbus, OH.

3. **Martin BE**, Harris JD, Alnaji FG, Sun J, Koelle K, Brooke CB. Defining the phenotypic consequences of cellular co-infection during influenza virus infection. American Society of Virology the 37th Annual Meeting, Oral Presentation, July 23, 2019, Minneapolis, MN.
4. **Martin BE**, Harris JD, Koelle K, Brooke CB. In-depth analysis of the effects of MOI on influenza A virus replication dynamics. American Society of Virology the 36th Annual Meeting, Oral Presentation, June 15, 2018, College Park, MD.
5. **Martin BE**, Li L, Li T, Lin X, Ware D, Jarman, RG, and Wan XF. Genetic and antigenic variations among subtype H3N2 influenza A viruses in human nasopharyngeal swabs and viral isolates. American Society of Virology the 36th Annual Meeting, Oral Presentation, June 23, 2017, Madison, WI.
6. **Martin BE**, Baroch JA, Schmit B, Nolting J, Yoon KY, Bowman A, Slemons R, DeLiberto T, Wan XF. The feral swine of the United States have predominant exposures to endemic influenza A virus in domestic swine rather than those in migratory waterfowl. American Society of Virology the 35th Annual Meeting, Oral Presentation, June 20, 2016, Blacksburg, VA.
7. **Martin BE**, Baroch JA, Schmit B, Nolting J, Yoon KY, Bowman A, Slemons R, DeLiberto T, Wan XF. The feral swine of the United States have predominant exposures to endemic influenza A virus in domestic swine rather than those in migratory waterfowl. Graduate Student Research Symposium, Oral Presentation, April 2, 2016, Starkville, MS.
8. **Martin, B.**, K Jia, H Sun, C Hall, D Ware, and X-F Wan. Detection of influenza antigenic variants directly from clinical samples using polyclonal antibody based proximity ligation assays. CVM Research Day, Oral Presentation, August 14, 2014, Starkville, MS.
9. **Martin, B.**, K Jia, H Sun, C Hall, D Ware, and X-F Wan. A novel method to detect influenza antigenic variant directly from clinical samples. American Society of Virology the 33rd Annual Meeting, Poster Presentation, June 21 - 25, 2014, Fort Collins, CO.
10. **Martin, B.**, K Jia, H Sun, C Hall, D Ware, and X-F Wan. Direct antigenic detection of influenza from clinical samples using a novel method. Graduate Student Research Symposium, Poster Presentation, March 22, 2014, Starkville, MS.
11. **Martin, B.**, K Jia, H Sun, C Hall, D Ware, and X-F Wan. Influenza antigenic variant detection using quantitative PCR based approximate ligation assays. Options for the Control of Influenza VIII, Poster Presentation, September 5-10, 2013, Cape Town, South Africa.