# Kelli L. Barr, PhD

Assistant Professor Dept. of Biology, Baylor University

# I. EDUCATION

University of Missouri, Division of Plant Sciences, Columbia, Missouri
Ph.D. Plant, Insect, and Microbial Sciences

Iowa State University, College of Liberal Arts and Sciences, Ames, Iowa 1996 - 2002

Bachelor of Science- English

Bachelor of Science - Classical Studies

### II. RESEARCH

#### A. Associate Professor

Global Health and Infectious Disease

2021 - Present

College of Public Health

University of South Florida

**Impact:** Developed a human brain organoid model for studying neurological viral infections. Expanded research to include microbial and chemical exposures of first responders and infection control. Expanded research to explore disease transmission and microbial infections in the built environment.

#### **B.** Assistant Professor

Department of Biology

2018-2021

**Baylor University** 

**Impact:**. Developed a human cell co-culture model to investigate viral congenital infections. Expanded research in Pakistan to include animals, vectors, tick-borne diseases, infection control, nosocomial and hospital acquired infections.

### C. Assistant Research Professor

Department of Comparative, Diagnostic, and Population Medicine

2015 - 2018

College of Veterinary Medicine, University of Florida

**Impact:** Validated the emergence of Chikungunya virus in Pakistan. Provided technologies and training that translated to a 40% reduction in antibiotic usage in individuals admitted to the hospital with a febrile illness.

#### **D. Scientific Consultant**

Ocala, FL 2013 - 2015

**Project Title:** *Salival mRNA for Gene Expression Research* 

**Impact:** Illustrated the positive effects of the Emotional Freedom Technique on inducible gene expression. Developed a protocol for isolating high quality mRNA from samples stored at room temperature using the Oragene<sup>TM</sup> collection device.

#### E. Postdoctoral Research Associate

Department of Environmental and Global Health Emerging Pathogens Institute, University of Florida

2010 - 2013

**Impact:** Published a highly cited study describing a device that allowed for room temperature storage of many viruses. Determined that dengue transmission in Key West, Florida was persisting at a local level well past the outbreak period in 2012.

#### F. Postdoctoral Research Associate

Department of Biological Sciences, Florida Gulf Coast University

2008 - 2010

**Impact**: Investigated the mechanisms of the development of drug resistance in Flaviviruses. Generated and characterized infectious clones with genetic mutations that conferred drug resistance.

#### G. Graduate Research Assistant

Division of Plant Sciences, University of Missouri Columbia

2003 - 2008

Project Title: Associations among Maize, Diabrotica virgifera virgifera and Wolbachia.

**Impact:** Showed that insects infected with *Wolbachia* are able to silence the defense response in plants. This work continues to be highly cited.

### H. Laboratory Technician

Department of Entomology, University of Missouri Columbia

2002 - 2003

### I. Laboratory Technician

Department of Plant Pathology, Iowa State University

1998 - 2002

#### III. TEACHING

#### A. Formal Classes

- 1. Department of Biology, Baylor University, Virology 4312 Viruses and Global Health
- 2. Department of Biology, Baylor University, Virology 5300 Viruses and Global Health
- 3. Department of Biology, Baylor University, Virology 5302 AVG Teaching Effectiveness 5.5/6
- 4. Department of Biology, Baylor University, Independent Study 3V90 not evaluated
- **5.** Department of Biology, Baylor University, **Research Rotations 6101** AVG Teaching Effectiveness **5.6/6**
- **6.** Department of Biology, Baylor University, **Modern Concepts of Biology 1305-** AVG Teaching Effectiveness **5.71**/6
- 7. Department of Science, College of Central Florida, Integrated Principles of Biology I
- 8. Department of Science, College of Central Florida, Integrated Principles of Biology Laboratory I
- **9.** Department of Environmental and Global Health, College of Public Health and Health Professions, University of Florida, **Advanced Supervised Research** not evaluated

### **B.** Assistantships

- 1. Department of Biology, Florida Gulf Coast University, Cellular Biology
- 2. Department of Physics, University of Missouri, Concepts in Physics
- 3. Department of Biological Sciences, University of Missouri, General Genetics

#### C. Mentoring

#### **Graduate students**

- 1. H. Hopkins Current
- **2.** E. Travers Current

- 3. BD Anderson MPH, PhD
- 4. AS Messenger MPH, PhD
- 5. MB Robinson PhD

### Undergraduate students

- 1. EM Schultz: Current Goldwater, Fulbright, Churchill
- 2. R Bruggeman: Current McNair
- 3. M Zheng: Current Marching Band
- 4. C Mencken: Current Science Research Fellow
- **5.** TJ Jones: Graduate School
- 6. HL Clamp: Medical School
- 7. A Barcan: Physician's Assistant
- 8. C Nicholson: Postdoc NIH
- 9. D Rowe: DVM, PhD

### E. Professional Development

- 1. Baylor Academy for Teaching and Learning Seminar Series 2018-present
- 2. NIH Master Mentor Academy –2018
- **3.** Teaching Enhancement Symposium 2017
- 4. From Management to Engagement Workshop- 2014
- 5. Teach Like a Champion Workshop- 2014
- 6. Series on Highly Effective Teaching Practices 2014

# IV. SUPPORT

### **Current Support**

1. Barr KL (PI), 2020-2025. Defense Threat Reduction Agency. Capacity Building for Diagnosis and Defining the Epidemiology of Crimean Congo Hemorrhagic Fever Virus in Pakistan.

Total Award: \$2,616,921

- 2. Subcontract Barr KL (PI), 10/01/2020 to 09/30/2021 (renewable). Department of Defense, Henry M. Jackson Foundation. Prospective Evaluation of Adverse Events After Immunization. **Total Award: \$1,415**
- **3.** Subcontract Barr KL (PI), 10/01/2020 to 09/30/2021 (renewable). Department of Defense, Henry M. Jackson Foundation. Novel Use of Existing Vaccine Alliance.

**Total Award: \$95,152** 

# **Pending Support**

1. Barr KL (Co-PI), 09/01/2021 to 08/30/23. NIH-CDC-NIOSH. Firefighter Exposure to Pathogens and the Use of Disinfectants that may have Residual Benefit.

**Total Costs: \$347,623** 

2. Barr, KL (Co-PI), 09/01/2021 to 08/30/23. NIH NIAID. Alternative Models of Arboviral Encephalitis.

**Total Costs: \$382,000** 

### Completed Support (\*\*Primary Proposal Author)

1. Subcontract – Barr KL\*\* (PI), 01/01/2019–08/30/2019. Defense Threat Reduction Agency. The role of arboviruses as a cause of febrile disease in Pakistan.

**Total Award: \$30,138** 

**2.** Barr KL\*\* (Co-PI), 3/8/2017 to 3/31/2020. Florida Dept. of Health. Identification of potent neutralizing Zika virus antibodies using single-cell analysis technology.

**Total Award: \$868,744** 

**3.** Barr KL (Co-I), 12/30/2016–12/29/2021. Center for Diseases Control. Zika Gateway Program—Core Diagnostic Laboratory. P00028100

Total Award: \$9,999,628

- **4.** Barr KL (Co-I), 10/1/2016–9/30/2019 Penta Foundation: European Union Zika Action Network. Development of a sheep model to investigate vertical transmission of ZIKV. **Total Award: \$900,000**
- **5.** Barr KL\*\* (Co-I), 09/1/2015–03/09/2019. Defense Threat Reduction Agency. The role of arboviruses as a cause of febrile disease in Pakistan.

**Total Award: \$1,250,479** 

**6.** Barr KL\*\* (Co-I/Study Coordinator), 01/04/2010 to 01/03/2013. Department of Homeland Security, Center for Excellence in Emerging, Zoonotic, and Arboviral Diseases. Epidemiological Study of Persons with Intense Exposure to Ruminants for Rift Valley Fever Virus Infection.

**Total Award: \$300,000** 

7. Barr KL\*\* (PI) 9/1/2010-9/1/2012. University of Florida, Emerging Pathogens Institute Seed Fund. Identification of alternate hosts for dengue and chikungunya virus.

**Total Award: \$66,000** 

# **V. PUBLICATIONS**

### A. Manuscripts

- **1. Barr KL**, Ronca SE, Sturdivant RX, Harris D. Decon7 Inactivates Coronaviruses within One Minute. *PLoSOne*, In Review.
- **2.**Schultz, E.; Jones, T.; Xu, S.; Dean, D.; Zechmann, B.; **Barr, KL**. Cerebral Organoids Derived from a Parkinson's Patient Exhibit Unique Pathogenesis from Chikungunya Virus Infection when Compared to a Non-Parkinson's Patient. Preprints 2021, 2021010552
- **3.**Schultz EM, Jones TJ, Xu S, Dean DD, Zenchmann B, Ronca SE, **Barr KL**. Differences between cerebral organoids derived from a healthy and a Parkinson's patient. *Biology*, under revisions. doi: 10.20944/preprints202101.0480.v1
- **4.** Travers EM, Hopkins HK, Vaidhyanathan V, Barr KL. Cardiomyopathy and Death Following Chikungunya Infection: An Increasingly Common Outcome. *Trop. Med. Infect. Dis.* 2021, 6(3), 108; https://doi.org/10.3390/tropicalmed6030108
- **5.**Ronca SE, Sturdivant RX, **Barr KL**, Harris D. SARS-CoV-2 Viability on 16 Common Indoor Surface Finish Materials. *HERD*. 2021 Jul;14(3):49-64. doi: 10.1177/1937586721991535.
- **6.**Schultz EM, Jones TJ, **Barr KL**. Post-Vaccination Yellow Fever Antibodies Enhance Zika Virus Infection in Embryoid Bodies. *Vaccines*, 2020 Dec 11;8(4):752. doi: 10.3390/vaccines8040752.
- 7. Prakoso D, **Barr KL**, Imtiaz K, Farooqi J, Khan E, Long M. (2020). Chikungunya outbreak in Karachi Pakistan 2016-2017: an analysis of viral isolates. *Journal of the Pakistan Medical Association*, 1-11. https://doi.org/10.47391/JPMA.1287
- **8.**Khan E, Prakoso D, Imtiaz K, Malik F, Long MT, **Barr KL**. The Clinical Features of Co-Circulating Dengue Viruses and Absence of Hemmorhagic Fever in Pakistan. *Front Public Health*. 2020;8:287. doi: 10.3389/fpubh.2020.00287.

- **9.** K. Imtiaz, Z. Azizullah, J. Farooqi, D. Prakoso, F. Mehmood, B. Jamil, **KL. Barr**, M. Long, E. Khan. Is dengue the only arbovirus circulating in Pakistan? Report from southern region of the country. International Journal of Infectious Diseases. 2020; 101 Suppl. 1. https://doi.org/10.1016/j.ijid.2020.09.1344.
- **10.** Schwarz ER, Oliveira LJ, Bonfante F, Pu R, Pozor MA, Maclachlan NJ, Beachboard S, **Barr KL**, Long MT. Experimental Infection of Mid-Gestation Pregnant Female and Intact Male Sheep with Zika Virus. *Viruses*. 2020 Mar 7;12(3). pii: E291. doi: 10.3390/v12030291.
- **11.** U. Shahid, J. Farooqi, **K.L. Barr**, F. Mehmood, B. Jamil, K. Imtiaz, Z. Azizullah, F. Malik, Prakoso, D., M. Long, E. Khan. Comparison of clinical presentation and out-comes of Chikungunya and Dengue virus infections in patients with acute undifferentiated febrile illness from the Sindh region of Pakistan. *PLoS Negl Trop Dis.* 2020 Mar 23;14(3):e0008086. doi: 10.1371/journal.pntd.0008086.
- **12. Barr KL**, Schwarz E, Pu R, Prakoso D, Morris JG, Khan E, Long MT. Strain-Dependent Activity of Zika Virus and Exposure History in Serological Diagnostics. *Trop Med Infect Dis.* 2020 Mar 3;5(1). pii: E38. doi: 10.3390/tropicalmed5010038.
- **13.** Schultz EM, Jones TJ, **Barr KL**. Antibodies for Venezuelan Equine Encephalitis Virus Protect Embryoid Bodies from Chikungunya Virus. *Viruses*. 2020 Feb 27;12(3). pii: E262. doi: 10.3390/v12030262.
- **14.** Schwarz ER, Pozor MA, Pu R, **Barr KL**, Beachboard SE, MacLachlan NJ, Prakoso D, Long MT. Experimental Infection of Pregnant Female Sheep with Zika Virus During Early Gestation. *Viruses*. 2019 Aug 29;11(9). pii: E795. doi: 10.3390/v11090795.
- **15. Barr KL**, and Vaidhyanathan V. Chikungunya in Infants and Children: Is Pathogenesis Increasing? Viruses. 2019 Mar 23;11(3). pii: E294. doi: 10.3390/v11030294.
- **16.** Prakoso D, Dark MJ, Barbet AF, Salemi M, **Barr KL**, Liu JJ, Wenzlow N, Waltzek TB, Long MT. Viral Enrichment Methods Affect the Detection but not Sequence Variation of West Nile virus in Equine Brain Tissue. *Front. Vet. Sci.*, 18 December 2018 https://doi.org/10.3389/fvets.2018.00318
- 17. Barr KL, Khan E, Farooqi J, Imtiaz K, Prakoso D, Malik F, Long MT. Evidence of Chikungunya Virus Disease in Pakistan Since 2015 With Patients Demonstrating Involvement of the Central Nervous System. *Front Public Health.* 2018 Jul 10;6:186. doi: 10.3389/fpubh.2018.00186.
- **18.** Khan E, **Barr KL**, Zain A, Ashi S, Farooqi J, Imtiaz K, Prakoso d, Malik F, Lednicky J, Long MT. Human West Nile Virus Disease Outbreak in Pakistan 2015-2016. *Front Public Health*. 2018 Feb 27;6:20. doi: 10.3389/fpubh.2018.00020. eCollection 2018.
- **19.** Brunson KJ, Henry LG, Walden HS, Wenzlow N, Beachboard SE, **Barr KL**, Long MT. Comparison of Six Commercial Antigen Kits for Detection of Dirofilaria immitis Infections in Canines with Necropsy-confirmed Heartworm Status. *Vet Parasitol.* 2018 Apr 30;254:178-182. *doi:* 10.1016/j.vetpar.2018.02.037..
- **20. Barr KL**. Vertical Transmission of Positive-Sense Single-Stranded RNA Viruses in Plants as a Model for Arboviral Induced Teratogenesis. *Curr Opin Virol.* 2017 Dec;27:42-47. doi: 10.1016/j.coviro.2017.11.010..
- **21.** Delcambre GH, Liu J, Streit WJ, Shaw GPJ, Vallario K, Herrington JM, Wenzlow N, **Barr KL**, Long MT (2017). Phenotypic Characterization of Cell Populations in the Brains of Horses Experimentally Infected with West Nile Virus. *Equine Veterinary Journal*: 10.1111/evj. 12697.
- **22.** Khan E, Farooqi J, **Barr KL**, Prakoso D, Nasir A, Kanji A, Shakoor S, Malik F, Hasan R, Lednicky JA, Long MT. Flaviviruses as a Cause of Undifferentiated Fever in Sindh Province,

- Pakistan: A Preliminary Report. *Front Public Health*. 2016 Feb 16;4:8. doi: 10.3389/fpubh.2016.00008.
- **23. Barr KL**, Anderson BD, Prakoso D, Long MT. Working with Zika and Usutu Viruses In Vitro. *PLoS Negl Trop Dis.* 2016 Aug 19;10(8):e0004931. doi: 10.1371/journal.pntd.0004931.
- **24.** Messenger AM, **Barr KL**, Weppelmann TA, Barnes AN, Anderson BD, Okech BA, Focks DA. Serological evidence of ongoing transmission of dengue virus in permanent residents of Key West, Florida. *Vector Borne Zoonotic Dis.* 2014 Nov;14(11):783-7. doi: 10.1089/vbz.2014.1665.
- **25. Barr KL**, Anderson BD. Dengue virus host susceptibility is strain specific in vitro. *Virus Adapt.Treat*. 2013;2013:1-9
- **26.** Anderson BD, **Barr KL**, Heil GL, Friary JA, Gray GC. A comparison of viral fitness and virulence between emergent adenovirus 14p1 and prototype adenovirus 14p strains. *J Clin Virol*. 2012 Jul;54(3):265-8.
- **27. Barr KL**, Messenger, AM, Anderson BD, Friary JA, Heil GL, Reece K, Gray GC. Recovery of Live Virus after Storage at Ambient Temperature Using ViveST<sup>TM</sup>. *J. Clin. Virol.* 2013 Jan;56(1):57-61. doi: 10.1016/j.jcv.2012.09.005. Epub 2012 Oct 6.
- **28. Barr KL**, Anderson BD, Heil GL, Friary JA, Gray GC, Focks DA. Dengue Serotypes 1-4 Exhibit Unique Host Specificity In Vitro. *Virus Adapt. Treat.* 2012; 2012:65-73
- **29. Barr KL**, Hearne LB, Briesacher S, Davis GE, Clark TL. Microbial symbionts in insects influence down-regulation of defense genes in maize. *PLoS One*. 2010 Jun 28;5(6):e11339.

# **B.** Book Chapters

1. Long MT and Barr KL. Ch. 28: Interpretation of Testing for Common Mosquito Transmitted Diseases: West Nile Virus and Eastern and Western Equine Encephalitis. In Pusterla and Higgins, eds., *Interpretation of Equine Laboratory Diagnostics*. John Wiley & Sons, Inc. 2017.

# C. Research Abstracts and Presentations (\*\*Presenter)

- **1. Barr KL\*\*.** Chikungunya infection in cerebral organoids. American Society of Tropical Medicine and Hygiene. Selected Poster Presentation. November 20, 2020.
- **2.**Schultz EM, **Barr KL**. Yellow Fever Vaccination Antibodies Neutralize Zika Infection In Embryoid Bodies when Placental Cells are Present. American Society of Tropical Medicine and Hygiene. Selected Poster Presentation. November 20, 2020.
- **3.Barr KL\*\*.** Chikungunya infection in cerebral organoids. American Society for Virology: Togavirus Workshop. June 18, 2020.
- **4.Barr KL\*\*.** Chikungunya infection in cerebral organoids. American Society for Virology: Selected Oral Presentation. 2020.
- **5.Barr KL\*\*.** The clinical characteristics of co-circulating dengue viruses in Pakistan. American Society for Virology: Selected Poster Presentation. 2020.
- **6.**Schultz EM, **Barr KL**. Yellow Fever Vaccination Antibodies Enhance Zika Infection In Embryoid Bodies. American Society for Virology: Selected Poster Presentation. 2020.
- **7.**Schultz EM, **Barr KL**. Previous Exposure to Venezuelan Equine Encephalitis Protects Against Chikungunya Infection in Embryoid Bodies. American Society of Tropical Medicine and Hygiene. Selected Poster Presentation. November 20, 2019.
- **8. Barr KL\*\***. Chikungunya Infection in Cerebral Organoids: The Consequences of Neuroinvasive Disease in Normal and Neurodegenerative Hosts. American Society of Tropical Medicine and Hygiene. Selected Poster Presentation. November 20, 2019.
- **9.Barr KL\*\***, Schwarz E, Pu R, Prakoso D, Morris JG, Khan E, Long MT. Cross-Reactivity of

- Zika and Other Flaviviruses in Serological Diagnostics. American Society for Virology Annual Meeting. Minneapolis, MN 2019.
- **10.** Barr KL\*\*, Schwarz E, Pu R, Prakoso D, Morris JG, Khan E, Long MT. *Cross-Reactivity of Zika and Other Flaviviruses in Serological Diagnostics*. Gordon Research Conference on Tropical Diseases. Galveston, TX 2019.
- 11. Khan E, Barr KL\*\*, Farooqi J, Prakoso D, Nasir A, Kanji A, Shakoor S, Malik F, Hasan R, Long MT. 2018. *Arboviral Disease in Pakistan 2015-2017*. American Society for Tropical Medicine and Hygeine Annual Meeting New Orleans, LA 2018.
- 12. Schwarz, E., Pozor, M., Pu, R., Barr, K., Beachboard, S., Prakoso, D., Long, M. 2018. American Society of Tropical Medicine and Hygiene, "Development of a Pregnant Ovine ZIKV Infection Model," American Society for Tropical Medicine and Hygeine Annual Meeting New Orleans, LA 2018.
- **13.** Schwarz, E., Pu, R., **Barr, KL**., Beachboard, S., Long, M. 2018. Feasibility of an Ovine Model of Male ZIKV Infection. American Society for Tropical Medicine and Hygeine Annual Meeting New Orleans, LA 2018
- **14. Barr KL\*\***, Schwarz E, Pu R, Prakoso D, Morris JG, Khan E, Long MT. The Practical Use of Monoclonal Antibodies for Zika Virus Research and Diagnostics. EPI Research Day, Gainesville FL, 2018.
- **15.** Khan E, **Barr KL**\*\*, Zain A, Ashi S, Farooqi J, Imtiaz K, Prakoso D, Malik F, Lednicky J, Long MT. 2018. *Human West Nile Virus Disease Outbreak in Pakistan 2015-2016*. EPI Research Day, Gainesville FL, 2018.
- **16.** Barr KL\*\*, Anderson BD, Heil GL, Friary JA, Gray GC. 2012. Dengue Serotypes 1-4 Exhibit Unique Host Specificity In Vitro. EPI Research Day, Gainesville FL, 2012.
- 17. Barr KL\*\*, Focks DG, Messenger AL. 2011. Cryptic Breeding: A potential cause of local dengue transmission in Key West, Florida. Selected speaker, American Society for Tropical Medicine and Hygiene, Philadelphia, PA. December 2011.
- **18.** Barr, KL\*\*, Graham AS, Costin JM, Michael SF, Isern S. 2010. *In vitro selection and characterization of dengue virus monoclonal antibody escape mutants*. Selected speaker, International Symposium on Plus Strand RNA Viruses. Atlanta, GA, May 17, 2010.
- **19.** Barr,KL\*\*, Graham AS, Costin JM, Michael SF, Isern S. 2010. *In vitro selection and characterization of dengue virus entry inhibitor escape mutants*. Selected speaker, American Society for Virology meeting. Bozeman, MT, July 17, 2010.
- **20. Barr KL**<sub>2</sub> Anderson BD, Prakoso D, Long MT\*\*. Working with Zika and Usutu Viruses In Vitro. American Society for Tropical Medicine and Hygiene, Atlanta, GA. December 2016.
- 21. Messenger AL\*\*, Barr KL, Focks DG. 2011. Documenting the Potential Introduction of Dengue Virus into Key West through Airline and Cruise Ship Passengers from Dengue-Endemic Locations. American Society for Tropical Medicine and Hygiene, Philadelphia, PA. December 2011.
- **22. Barr KL\*\***, Healy M. Gray GC. 2011. *Recovery of Live Virus from a Synthetic Matrix After Storage at Ambient Temperature*. University of Florida Emerging Pathogens Institute Research Day, Gainesville, FL. March 2011.
- **23.** Barr,KL\*\*, Graham AS, Rowe DK, Costin JM, Michael SF, Isern S. 2010. *DN57opt: A broad-spectrum inhibitor if flaviviruses and alphaviruses*. Florida Gulf Coast University Research Day, Fort Myers, FL. April 2010.
- **24.** Barcan A\*\*, **Barr KL**, Michael SF, Isern S. *Characterization and Efficacy of a Retro-inverso Peptide Against Dengue Virus*. Florida Gulf Coast University Research Day, Fort Myers, FL.

- April 2010.
- **25.** Barr,KL\*\*, Graham AS, Costin JM, Michael SF, Isern S. 2009. *Virus Ping-Pong: Simulating the transmission of drug-resistant dengue viruses between vertebrate and mosquito hosts*. Florida Gulf Coast University Research Day, Fort Myers, FL. April 2009.
- **26.** Graham AS\*\*, **Barr KL**, Costin JM, Michael SF, Isern S. 2009. *Genetic analysis of dengue virus structural genes in the presence of a peptide inhibitor*. Florida Gulf Coast University Research Day, Fort Myers, FL. April 2009.
- **27. Barr KL\*\***, Costin JM, Hrobowski YM, Haislip AM, Garry RF, Isern S, Michael SF. 2008. *In Vitro Selection for Resistance to Dengue Virus E Protein Inhibitors*. American Society for Tropical Medicine and Hygiene, New Orleans, LA. December 2008.
- **28.** Barr KL\*\*, Hearne LB, Hibbard BE, Davis GE. 2007. A Novel Role for Wolbachia in Plant-Insect Interactions. International Arthropod Genomics Meeting, Manhattan, KS. February 2007.
- **29.** Barr KL\*\*, Hearne LB, Hibbard BE, Davis GE. 2007. *A Novel Role for Wolbachia in Plant-Insect Interactions*. International Maize Genome Meeting, Chicago, IL. January 2007.
- **30.** Barr KL\*\*, Clark TL. 2005. *Molecular Systematics: A New Direction for Phylogenetics*. Abstract submitted for platform presentation, Department of Entomology departmental seminar series, Columbia, MO. March 2005.
- **31.** Barr KL\*\*, Clark TL, Hibbard BE. 2005 Native Resistant Maize Interactions with Seed Treatments for Control of the Western Corn Rootworm. Abstract submitted for platform presentation, Entomological Society of America National Meeting, Salt Lake City, UT. March 2005.

# D. Webinars, Seminars, and Training Presentations

- 1. Viruses and You. Mayborne Museum, Meet the Scientist Seminar Series. Webinar April 27, 2020
- **2.** Strategies for Specimen Handling for Downstream Molecular Assays. National Academy of Sciences: PCR Training Series. Training Webinar; November 17, 2019.
- **3.** West Nile Virus Biology, Ecology, Pathology, Control. Department of Defense, Department of Defense Trans-boundary Diseases Along the Silk Road, Odessa Ukraine. Seminar; October 9, 2019.
- **4.** Arboviral Pathogenesis Studies Using 3D Cell Culture and Human Stem Cells. Baylor University: Biology Working Group. Seminar; September 9, 2019.
- **5.** Student Arbovirus Research in the Barr Lab. TriBeta Biological Society. Seminar; April 1, 2019.
- **6.** Arboviral Pathogenesis Studies Using 3D Cell Culture and Human Stem Cells. Baylor College of Medicine, National School of Tropical Medicine. May 05, 2019, Seminar
- **7.** Organoid cultures to study the pathogenesis of vector-borne diseases. Texas 6 Vector Mix. Texas A&M University. Seminar; January 11, 2019.
- **8.** Biology and Morphological Features of Mosquito Vectors of Human Disease. Aga Khan University. Training Webinar April 30<sup>th</sup>, 2018.
- **9.** The Plaque Reduction Neutralization Test. Aga Khan University. Training Webinar April 30<sup>th</sup>, 2018.

### VI. SERVICE

A. University Service (Abridged)

- 1. Biology Department Diversity Committee 2020
- 2. Biology Department Undergraduate Awards Committee 2020
- 3. BU-NSTM Global Health Steering Committee 2020
- 4. Baylor Invitation to Excellence, Code Red: Faculty Advisor 2018-Present
- 5. Baylor Invitation to Excellence, Climate Change: Faculty Advisor 2019-Present
- 6. McNair Scholars Program: Mentor and Evaluator 2019-Present
- 7. Baylor URSA Grant: Reviewer 2018-Present
- 8. Baylor Science Research Fellows: Mentor 2018-Present
- 9. Department Seminar: Speaker Host 2019-Present

#### **B.** Public Service

- 1. Central Texas Science and Engineering Fair: Judge 2018-Present
- 2. Baylor Round Table: Member 2018-Present
- 3. Cub Scouts of America: Den Leader 2013-2014
- 4. Cub Scouts of America: Pack Leader 2014-2015
- 5. Marion County Public Schools: Volunteer 2013-2018

#### C. Professional Service

- 1. NIH CRFS Study Section, 2021
- 2. Section Editor: Emerging Tropical Diseases, Current Tropical Medicine Reports 2019-Present
- 3. Topic Editor: Emerging Viruses, Tropical Medicine and Infectious Disease 2020-Present
- 4. Department of Defense NDSEG Fellowship Reviewer 2018-Present

#### D. Professional and Honor Societies

- 1. American Society of Tropical Medicine and Hygiene
- **2.** American Society for Virology
- 3. Eta Sigma Psi Classical Languages Honor Society