

## CURRICULUM VITAE

### PERSONAL INFORMATION

**Melissa B. Miller, Ph.D.**

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### EDUCATION

- 2004      Medical and Public Health Microbiology Post-Doctoral Fellowship  
University of North Carolina Hospitals, Chapel Hill, NC
  
- 2002      Doctorate of Philosophy, Molecular Biology  
Princeton University, Princeton, NJ  
Dissertation research: Identification and analysis of multiple quorum sensing systems  
in *Vibrio cholerae*
  
- 1995      Bachelor of Science, Medical Technology  
Jacksonville University, Jacksonville, FL

### CERTIFICATION AND LICENSURE

- 2005      Diplomate, American Board of Medical Microbiology, #971  
Renewed 2008, 2011, 2014, 2017
- 1995      Medical Technologist, American Society for Clinical Pathology

## **PROFESSIONAL EXPERIENCE**

### ***Current***

- 2015-present Professor (with tenure)  
Department of Pathology and Laboratory Medicine  
University of North Carolina, School of Medicine, Chapel Hill, NC
- 2004-present Director, Clinical Molecular Microbiology, Mycobacteriology and Mycology  
Laboratories  
Associate Director, Clinical Microbiology-Immunology Laboratory  
McLendon Clinical Laboratories  
UNC Hospitals, Chapel Hill, NC

### ***Past Experience***

- 2011-2016 Laboratory Technical Consultant  
Durham County Health Department, Durham, NC
- 2010-2015 Associate Professor (with tenure)  
Department of Pathology and Laboratory Medicine  
University of North Carolina, School of Medicine, Chapel Hill, NC
- 2004-2010 Assistant Professor  
Department of Pathology and Laboratory Medicine  
University of North Carolina, School of Medicine, Chapel Hill, NC
- 1997 Medical Technologist  
Helene Fuld Medical Center, Trenton, NJ
- 1996 Senior Medical Technologist  
Children's Hospital of Alabama, Birmingham, AL
- 1995 Medical Technologist  
Children's Hospital of Alabama, Birmingham, AL

## **HONORS**

- Elected Fellow of the American Academy of Microbiology, 2016
- Philip M. Blatt Award for Excellence in Teaching in Clinical Pathology, Department of Pathology and Laboratory Medicine, UNC, 2015
- Association for Professionals in Infection Control and Epidemiology (APIC)/ American Journal of Infection Control (AJIC) Award for Publication Excellence, 2012
- Young Investigator Award, Pan American Society for Clinical Virology, 2012
- Siemens Healthcare Diagnostics Young Investigator Award, American Society for Microbiology, 2009
- Philip M. Blatt Award for Excellence in Teaching in Clinical Pathology, Department of Pathology and Laboratory Medicine, UNC, 2009
- Porter Ogden Jacobus Honorific Fellowship (Most Outstanding Science Thesis), Princeton University, July 2001 – June 2002
- Harold M. Weintraub Graduate Student Award, Fred Hutchinson Cancer Research Center, May 2002

- Outstanding Teaching Award, Princeton University, 2000
- Summa Cum Laude, Jacksonville University, 1995
- Graduation with University Honors, Jacksonville University, 1995
- Phi Beta Kappa Scholarship, Jacksonville University, 1994
- Phi Kappa Phi Honorary Fraternity, Jacksonville University, 1993
- Civitan's Service to Community Award, 3 years (1991,1992,1993)

## **BIBLIOGRAPHY AND PRODUCTS OF SCHOLARSHIP**

### ***Books, Author/Editor***

1. **Miller MB.** Manual of Clinical Microbiology, 12<sup>th</sup> edition, ASM Press, Washington, DC, 2018, in press, Role: Section Editor of 10 Chapters in Bacteriology Section
2. Persing DH, Tenover FC, Hayden RT, Ieven M, **Miller MB**, Nolte FS, Tang Y-W, Van Belkum A, (eds). Molecular Microbiology: Diagnostic Principles and Practice, 3<sup>rd</sup> edition, ASM Press, Washington, DC, 2016, 835 pages. Role: Co-Editor of 2 Sections (15 chapters)
3. **Miller MB.** Manual of Clinical Microbiology, 11<sup>th</sup> edition, ASM Press, Washington, DC, 2015, 2571 pages. Role: Section Editor of 9 Chapters in Bacteriology Section
4. Gilligan PH, Shapiro DS and **Miller MB.** Cases in Medical Microbiology and Infectious Diseases, 4<sup>th</sup> edition, ASM Press, Washington, DC, 2014, 604 pages. Role: Author (1/3 of book) and Co-Editor

### ***Book Chapters***

1. Plongla R and **Miller MB.** Molecular Testing for Diseases Associated with Bacterial Infections in Diagnostic Molecular Pathology: A Guide to Applied Molecular Testing, Coleman WB and Tsongalis GJ (eds). Elsevier, Cambridge, MA, 2017, pp.139-150.
2. Alby K and **Miller MB.** Bacterial Infections in Molecular Pathology in Clinical Practice, 2<sup>nd</sup> edition, Leonard DGB (ed). Springer, New York, NY, 2016, pp. 695-706.
3. Alby K and **Miller MB.** Multiplex Technologies in Molecular Microbiology: Diagnostic Principles and Practice, 3<sup>rd</sup> edition, Persing DH, Tenover FC, Hayden RT, Ieven M, Miller MB, Nolte FS, Tang Y-W, Van Belkum A, (eds). ASM Press, Washington, DC, 2015, pp. 102-114.
4. Alby K and **Miller MB.** Mechanisms of Antimicrobial Resistance in Principles and Practice of Pediatric Infectious Diseases, 5<sup>th</sup> edition, Long, Pickering and Prober (eds), Churchill-Livingstone, New York, NY, 2015.
5. **Miller MB** and Gilligan PH. Mechanisms of Antimicrobial Resistance in Principles and Practice of Pediatric Infectious Diseases, 4<sup>th</sup> edition, Long, Pickering and Prober (eds), Churchill-Livingstone, New York, NY, 2012, pp. 1421-1433.
6. **Miller MB.** Solid and Liquid Phase Array Technologies in Molecular Microbiology: Diagnostic Principles and Practice, 2<sup>nd</sup> edition, Persing, Tenover, Versalovic, Tang, Unger, Relman and White (eds), ASM Press, Washington DC, 2011, pp. 275-297.
7. Goodrich JS and **Miller MB.** Molecular Techniques Applied to Infectious Diseases in Handbook of Human Immunology, 2<sup>nd</sup> edition, O'Gorman and Donnenberg (eds), CRC Press, Boca Raton, FL, 2008, pp. 441-494.

8. **Miller MB** and Gilligan PH. Mechanisms of Antimicrobial Resistance in Principles and Practice of Pediatric Infectious Diseases, 3<sup>rd</sup> edition, Long, Pickering and Prober (eds), Churchill-Livingstone, New York, NY, 2008, pp. 1392-1403.
9. **Miller MB** and Bassler BL. Quorum Sensing in The Prokaryotes. Dworkin, Falkow, Rosenberg, Schleifer and Stackebrandt (eds), Springer Verlag Press, Electronic edition, 2001; 17 pages.

**Refereed Manuscripts (\*products of interdisciplinary scholarship) - [My NCBI collection](#)**

1. Popowitch EB and **Miller MB**. A comparison of the Xpert Flu/RSV XC and Xpress Flu/RSV assays. J Clin Microbiol. 2018, 56(8). pii: e00278-18.
2. \*Leal SM, Popowitch EB, Levinson KJ, John TM, Lehman B, Bueno Rios M, Gilligan PH, **Miller MB**. Quantitative thresholds enable accurate identification of *Clostridium difficile* infection by the Luminex xTAG GI pathogen panel. J Clin Microbiol. 2018, 56(6). Pii: e01885-17.
3. Forbes BA, Hall GS, **Miller MB**, Novak SM, Rowlinson MC, Salfinger M, Somoskövi A, Warshauer DM, Wilson ML. Practice Guidelines for Clinical Microbiology Laboratories: Mycobacteria. Clin Microbiol Rev. 2018, 31(2). pii: e00038-17.
4. \*Marx A, Daniels L, **Miller MB**, Weber DJ. Vancomycin Minimum Inhibitory Concentration Is Not a Substitute for Clinical Judgment: Response to Healthcare-Associated Ventriculitis and Meningitis. Clin Infect Dis. 2017 Oct 15;65:1428-1429.
5. \*Muhlebach MS, Beckett V, Popowitch E, **Miller MB**, Baines A, Mayer-Hamblett N, Zemanick ET, Hoover WC, VanDalfsen JM, Campbell P, Goss CH; STAR-too study team. Microbiological efficacy of early MRSA treatment in cystic fibrosis in a randomised controlled trial. Thorax. 2017, 72:318-326.
6. Burnham CD, Kwon JH, Burd EM, Campbell S, Iwen PC, **Miller MB**. Are We There Yet? Laboratory Preparedness for Emerging Infectious Diseases. Clin Chem. 2017, 63:807-811.
7. Lange Berit, Khan PY, Kalmambetova G, Al-Darraji H, Alland D, Antonenka U, Brown T, Balcells ME, Blakemore R, Denkinger C, Dheda K, Hoffmann H, Kadyrov A, Lemaitre N, **Miller MB**, Nikolayevskyy V, Ntinginya NE, Ozkutuk N, Palacios JJ, Popowitch E, Porcel JM, Teo J, Theron G, Kranzer K. Diagnostic accuracy of the Xpert MTB/RIF cycle threshold level to predict smear positivity: a meta-analysis. Int J Tuberc Lung Dis. 2017, 21:493-502.
8. \*Hauck CG, Chong PP, **Miller MB**, Jamieson K, Fine JP, Foster MC, Shea TC, van Duin D. Increasing rates of fluoroquinolone resistance in *Escherichia coli* isolated from the blood and urine of patients with hematologic malignancies and stem cell transplant recipients. Pathog Immun. 2016 Fall-Winter, 1:234-242.
9. \*Teal LJ, Schultz KM, Weber DJ, Gergen MF, **Miller MB**, DiBiase LM, Sickbert-Bennett EE, Rutala WA. Invasive Cutaneous Rhizopus Infections in an Immunocompromised Patient Population Associated with Hospital Laundry Carts. Infect Control Hosp Epidemiol. 2016, 37:1251-3.
10. \*Shea S, Kubota KA, Maguire H, Gladbach S, Woron A, Atkinson-Dunn R, Couturier MR, **Miller MB**. Clinical Microbiology Laboratories' Adoption of Culture Independent Diagnostic

- Tests Are a Threat to Food-Borne Disease Surveillance in the United States. *J Clin Microbiol.* 2016, 55:10-19.
11. \*Hatcher SM, Myers KW, Heaney CD, Larsen J, Hall D, **Miller MB**, Stewart JR. Occurrence of methicillin-resistant *Staphylococcus aureus* in surface waters near industrial hog operation spray fields. *Sci Total Environ.* 2016 Sep 15;565:1028-36. doi: 10.1016/j.scitotenv.2016.05.083. PubMed PMID: 27261430.
  12. Caliendo AM, Couturier MR, Ginocchio CC, Hanson KE, **Miller MB**, Walker KE, Frank GM; Infectious Diseases Society of America; the American Society for Microbiology; and the Pan-American Society for Clinical Virology. Maintaining Life-saving Testing for Patients with Infectious Diseases: Infectious Diseases Society of America, American Society for Microbiology, and Pan American Society for Clinical Virology Recommendations on the Regulation of Laboratory-developed Tests. *Clin Infect Dis.* 2016, 63:151-154.
  13. Gilligan PH, **Miller MB**. Will regulatory and financial considerations dampen innovation in the clinical microbiology laboratory? *MBio.* 2016, 7:e02178-15.
  14. Long MD, Onyiah JC, **Miller MB**, Herfarth HH. Cytomegalovirus viral load in the colon and risk of colectomy in hospitalized patients with inflammatory bowel diseases. *Inflamm Bowel Dis.* 2016, 22:E21-2.
  15. Gonzalez MD, Langley LC, Buchan BW, Faron ML, Maier M, Templeton K, Walker K, Popowitch EB, **Miller MB**, Rao A, Liebert UG, Ledebner NA, Vinjé J, Burnham CD. Multi-Center Evaluation of the Xpert Norovirus Assay for Detection of Norovirus GI and GII in Fecal Specimens. *J Clin Microbiol.* 2016, 54:142-147.
  16. Sharp SE, **Miller MB**, Hindler J. Individualized Quality Control Plan (IQCP): Is it value added for clinical microbiology? *J Clin Microbiol.* 2015, 53:3719-3722.
  17. \*Heltshel SL, Saiman L, Popowitch EB, **Miller MB**, Kloster M, Thompson V, Ferkol TW, Hoover WC, Schechter MS, Muhlebach MS. Outcomes and treatment of chronic methicillin-resistant *Staphylococcus aureus* differs by SCCmec type in children with cystic fibrosis. *J Pediatric Infect Dis Soc.* 2015, 4:225-231.
  18. Popowitch EB, **Miller MB**. Performance characteristics of Xpert Flu/RSV XC assay. *J Clin Microbiol.* 2015, 53:2720-2721.
  19. \*Muhlebach MS, Heltshel SL, Popowitch EB, **Miller MB**, Thompson V, Kloster M, Ferkol T, Hoover WC, Schechter MS, Saiman L; the STAR-CF Study Team. Multicenter observational study on factors and outcomes associated with different MRSA types in children with cystic fibrosis. *Ann Am Thorac Soc.* 2015, 12:864-871.
  20. \*Lippincott, CK, **Miller MB**, Van Rie A, Weber DJ, Sena AC, Stout JE. The complexities of Xpert MTB/RIF interpretation. *Int J Tuberc Lung Dis.* 2015, 19:273-275.
  21. \*Roshdy DG, Tran A, Lecroy N, Alby K, Zeng D, Ou F-S, Daniels LM, Weber DJ, **Miller MB**. Impact of microarray-based assay for the identification of positive blood cultures for treatment optimization for patients with streptococcal and enterococcal bacteremia. *J Clin Microbiol.* 2015, 53:1411-1414.
  22. Nelson JAE, Hawkins JT, Schanz M, Mollan K, **Miller MB**, Schmitz JL, Fiscus SA. Comparison of the GenProbe Aptima HIV-1 and Abbott HIV-1 qualitative assays with the Roche Amplicor HIV-1 DNA assay for early infant diagnosis using dried blood spots. *J Clin Vir.* 2014, 60:418-421.

23. Dunn JJ and **Miller MB**. Emerging respiratory viruses other than influenza. *Clin Lab Med*, 2014, 34:409-430.
24. Lachiewicz AM, Cianciolo R, **Miller MB**, Derebail VK. Adenovirus causing fever, upper respiratory infection, and allograft nephritis complicated by persistent asymptomatic viremia. *Transpl Infect Dis*, 2014, 16:648-652.
25. \*Lippincott CK, **Miller MB**, Popowitch EB, Hanrahan CF, Van Rie A. Xpert MTB/RIF shortens airborne isolation for hospitalized patients with presumptive tuberculosis in the United States. *Clin Infect Dis*, 2014, 59:186-192.
26. \*Hoots BE, Klein PW, Martin IB, Leone PA, Quinlivan EB, Larson JL, Young JE, **Miller MB**, Gay CL. Implementation of a collaborative HIV testing model between an emergency department and infectious disease clinic. *J Acquir Immune Defic Syndr*, 2014, 66:67-70.
27. \*Esther CR Jr, Lin FC, Kerr A, **Miller MB**, Gilligan PH. Respiratory viruses are associated with common respiratory pathogens in cystic fibrosis. *Pediatr Pulmonol*, 2014, 49:926-931.
28. \*Nicolson NC, Lecroy N, Alby K, Martin KE, Laux J, Lin FC, Daniels L, Weber DJ, **Miller MB**. Clinical outcomes with rapid detection of methicillin-resistant and methicillin-susceptible *Staphylococcus aureus* from routine blood cultures. *J Clin Microbiol*, 2013, 51:4126-4129.
29. \*Champion EA, **Miller MB**, Popowitch EB, Hobbs MM, Saiman L, Muhlebach MS; for the STAR-CF Study Team. Antimicrobial susceptibility and molecular typing of MRSA in cystic fibrosis. *Ped Pulmonol*, 2014, 49:230-237.
30. \*Alby K, Daniels LM, Weber DJ, **Miller MB**. Development of a treatment algorithm for streptococci and enterococci from positive blood cultures identified with the Verigene BC-GP assay. *J Clin Microbiol*, 2013, 51:3869-3871.
31. Alby K, Gilligan PH, **Miller MB**. Comparison of matrix-assisted laser desorption ionization-time of flight (MALDI-TOF) mass spectrometry platforms for the identification of gram-negative rods from patients with cystic fibrosis. *J Clin Microbiol*, 2013, 51:3852-3854.
32. \*Culton DA, Lachiewicz AM, Miller BA, **Miller MB**, MacKuen C, Groben P, White B, Cox GM, Stout JE. Nontuberculous mycobacterial infection after fractionated carbon dioxide laser resurfacing. *Emerg Infect Dis*, 2013, 19:365-370.
33. Popowitch EB, O'Neill SS, **Miller MB**. Comparison of the BioFire FilmArray RP, Genmark eSensor RVP, Luminex xTAG RVPv1 and Luminex xTAG RVP FAST multiplex assays for the detection of respiratory viruses. *J Clin Microbiol*, 2013, 51:1528-1533.
34. Alby K, Popowitch EB, **Miller MB**. Comparative evaluation of the Nanosphere Verigene RV+ assay with the Simplexa Flu A/B & RSV Kit for the detection of influenza and respiratory syncytial viruses. *J Clin Microbiol*, 2013; 51:352-353.
35. \*Balakrishnan N, Jawanda JS, **Miller MB**, Breitschwerdt EB. *Bartonella henselae* infection in a man with hypergammaglobulinemia, splenomegaly and polyclonal plasmacytosis. *J Med Microbiol*, 2013, 62:338-341.
36. \*Heil EL, Daniels LM, Long DM, Rodino KG, Weber DJ, **Miller MB**. Impact of a rapid peptide nucleic acid fluorescence in situ hybridization assay on treatment of *Candida* infections. *Am J Health Syst Pharm*, 2012, 60:1910-1914.

37. \*Moss HB, Chavala S, Say E, **Miller MB**. Ganciclovir-resistant CMV retinitis in a patient with wild-type CMV in her plasma. *J Clin Microbiol*, 2012; 50:1796-1799.
38. \*Stout JE, Gadkowski LB, Rath S, Alspaugh JA, **Miller MB**, Cox GM. Pedicure-associated rapidly growing mycobacterial infection: an endemic disease. *Clin Infect Dis*, 2011; 53:787-792.
39. **Miller MB**, Popowitch EB, Backlund MG, Ager EP. Performance of Xpert MTB/RIF RUO assay and IS6110 real-time PCR for *Mycobacterium tuberculosis* detection in clinical samples. *J Clin Microbiol*, 2011, 49:3458-3462.
40. Popowitch EB, Rogers E, **Miller MB**. Retrospective and prospective verification of the Cepheid Xpert Flu assay. *J Clin Microbiol*, 2011, 49:3368-3369.
41. Alexander TS and **Miller MB**. Point-Counterpoint: Should interferon gamma release assays become the standard method for screening patients for *Mycobacterium tuberculosis* infections in the United States? *J Clin Microbiol*, 2011; 49:2086-2092.
42. \*Muhlebach MS, Miller M, LaVange L, Goodrich JS, **Miller MB**. Treatment intensity and characteristics of MRSA infection in CF. *J Cyst Fibros*, 2011; 10:201-206.
43. \*Wertman R, **Miller MB**, Groben P, Morrell DS, Culton DA. *Mycobacterium bolletii/massiliense* furunculosis associated with pedicure footbaths: a report of three cases. *Arch Dermatol*, 2011; 147(4):454-8.
44. \***Miller MB**, Weber DJ, Goodrich JS, Popowitch EB, Poe MD, Nyugen V, Shope TR, Foster DT, Miller JR, Kotch J. Prevalence and risk factors for MRSA colonization in children attending child care centers. *J Clin Microbiol*, 2011; 49:1041-1047.
45. \*Weber DJ, Rutala WA, **Miller MB**, Huslage K, Sickbert-Bennett, E. Role of hospital surfaces in the transmission of emerging health care-associated pathogens: Norovirus, *Clostridium difficile*, and *Acinetobacter* species. *Am J Infect Con*, 2010; 38:S25-33.
46. \*Weber DJ, Consoli S, Sickbert-Bennett E, **Miller MB**, Rutala WA. Susceptibility to measles, mumps, and rubella in newly hired healthcare workers (2006-2008) born before 1957. *Infect Control Hosp Epidemiol*, 2010; 31(6):655-7.
47. \*Peppercorn AF, **Miller MB**, Fitzgerald D, Weber DJ, Groben PA, Cairns BA. High-level human herpesvirus-6 viremia associated with onset of Stevens-Johnson Syndrome: report of two cases. *J Burn Care Res*, 2010; 31(2): 365-8.
48. \*Herfarth HH, Long MD, Rubinas TC, Sandridge M, **Miller MB**. Evaluation of a non-invasive method to detect cytomegalovirus (CMV)-DNA in stool samples of patients with inflammatory bowel disease (IBD): a pilot study. *Dig Dis Sci*, 2010; 55(4): 1053-8.
49. \*Weber DJ, **Miller MB**, Brooks RH, Brown VM, Rutala WA. Healthcare worker with “pertussis”: consequences of a false-positive polymerase chain reaction test result. *Infect Control Hosp Epidemiol*, 2010; 31(3): 306-7.
50. **Miller MB** and Tang Y-W. Basic concepts of microarrays and potential applications in clinical microbiology. *Clin Microbiol Rev*, 2009; 22(4): 611-633.
51. \*Weber DJ, Peppercorn A, **Miller MB**, Sickbert-Bennett E, Rutala WA. Preventing healthcare-associated *Aspergillus* infections: review of recent CDC/HICPAC recommendations. *Med Mycol* 2009; 47(S1):199-209.

52. Goodrich JS, Sutton-Shields TN, Kerr A, Wedd JP, **Miller MB**, Gilligan PH. Prevalence of community-associated methicillin-resistant *Staphylococcus aureus* in patients with cystic fibrosis. *J Clin Microbiol*, 2009; 47(4):1231-3.
53. **Miller MB**. The impact of molecular diagnostics on women's health. *Clin Microbiol Newsletter*. 2008; 30:15-21.
54. Gray GC, McCarthy T, Lebeck MG, Schnurr DP, Russell KL, Kajon AE, Landry ML, Leland DS, Storch GA, Ginocchio CC, Robinson CC, Demmler GJ, Saubolle MA, Kehl SC, Selvarangan R, **Miller MB**, Chappell JD, Zerr DM, Kiska DL, Halstead DC, Capuano AW, Setterquist SF, Chorazy ML, Dawson JD, Erdman DD. Genotype prevalence and risk factors for severe clinical adenovirus infection, United States 2004-2006. *Clin Infect Dis*. 2007; 45(9):1120-31.
55. **Miller MB**. Molecular diagnosis of infectious diseases. *N C Med J*. 2007 Mar-Apr; 68(2):115-8.
56. Goodrich JS and **Miller MB**. Comparison of culture and two real-time PCR assays to detect group B *Streptococcus* during antepartum screening. *Diagn Microbiol Infect Dis*, 2007; 59:17-22.
57. Goodrich JS and **Miller MB**. Comparison of Cepheid's analyte specific reagents with BD Directigen™ for detection of respiratory syncytial virus. *J. Clin. Microbiol*, 2007; 45:604-606.
58. Zedek DC and **Miller MB**. Use of galactomannan enzyme immunoassay for diagnosis of invasive aspergillosis in a tertiary-care center over a 12-month period. *J Clin Microbiol*, 2006; 44:1601.
59. \*Muhlebach MS, **Miller MB**, Wedd JP, Moore C, Drake AF, Leigh MW. Are lower airway or throat cultures predictive of sinus bacteriology in cystic fibrosis? *Pediatr Pulmonol*, 2006; 41:445-451.
60. \*Dua S, Chalermkultat W, **Miller MB**, Landers M, Aris RM. Bilateral *Pseudomonas* endophthalmitis after lung transplantation. *Am J Transplant*, 2006; 6:219-224.
61. Lenz DH, **Miller MB**, Zhu J, Kulkarni RV, Bassler BL. CsrA and three redundant small RNAs regulate quorum sensing in *Vibrio cholerae*. *Mol Microbiol*, 2005; 58:1186-202.
62. **Miller MB**, Meyer H, Rogers E, and Gilligan PH. Comparison of susceptibility testing, PBP2a latex detection, and *mecA* real-time PCR for the detection of oxacillin resistance in *Staphylococcus aureus* and coagulase-negative *Staphylococcus*. *J Clin Microbiol*, 2005; 43:3450-2.
63. **Miller MB**, Hendren R, and Gilligan PH. Post-transplantation disseminated coccidioidomycosis acquired from donor lungs. *J Clin Microbiol*, 2004; 42:2347-2349.
64. **Miller MB**, Allen SL, Mangum ME, Doutova A, and Gilligan PH. The prevalence of vancomycin-resistant *Enterococcus* in prenatal screening cultures. *J Clin Microbiol*, 2004; 42:855-857.
65. **Miller MB** and Gilligan PH. Laboratory aspects of management of chronic pulmonary infections in patients with cystic fibrosis, *J Clin Microbiol*, 2003; 41:4009-15.
66. **Miller MB**, Skorupski K, Lenz DH, Taylor RK, and Bassler BL. Parallel quorum sensing systems converge to regulate virulence in *Vibrio cholerae*, *Cell*, 2002; 110: 303-314.



67. Zhu J, **Miller MB**, Vance RE, Dziejman M, Bassler BL, and Mekalanos JJ. Quorum-sensing regulators control virulence gene expression in *Vibrio cholerae*, Proc Natl Acad Sci U S A, 2002; 99: 3129-3134.
68. **Miller MB** and Bassler BL. Quorum sensing in bacteria. Annu Rev Microbiol, 2001; 55: 165-199.
69. Surette MG, **Miller MB**, and Bassler BL. Quorum sensing in *Escherichia coli*, *Salmonella typhimurium*, and *Vibrio harveyi*: a new family of genes responsible for autoinducer production, Proc Natl Acad Sci U S A, 1999; 96: 1639-1644.

### **Other Educational Publications**

1. Dolen V, Bahk K, Carroll K, Klugman K, Ledebner N, **Miller MB**. 2017. Changing diagnostic paradigms for microbiology: report on an American Academy of Microbiology Colloquium held in Washington, DC, from 17 to 18 October 2016. American Society for Microbiology, Washington, DC. [PMID: 28796470]  
[https://www.asm.org/index.php/colloquiumreports/item/6421-changing-diagnostic-paradigms-formicrobiology?utm\\_source=Commentary&utm\\_medium=referral&utm\\_campaign=diagnostics](https://www.asm.org/index.php/colloquiumreports/item/6421-changing-diagnostic-paradigms-formicrobiology?utm_source=Commentary&utm_medium=referral&utm_campaign=diagnostics)
2. Revell P, Pentella M, Couturier MR, Relich R, Dunn J, Binnicker M, **Miller MB** for the ASM Public and Scientific Affairs Board Committee on Laboratory Practices and PASCV Public Relations Committee. Zika virus: an update on the disease and guidance for laboratory testing, 2016, 4 pages, <https://www.asm.org/images/PSAB/ZikaGuidance.pdf>.
3. Couturier MR, Relich R, **Miller MB** for the ASM Public and Scientific Affairs Board Committee on Laboratory Practices. Recommendations for Handling/Testing Specimens from Cases, or Suspected Cases, of Viral Hemorrhagic Fever for Sentinel Laboratories, 2016; 3 pages, <https://www.asm.org/images/PSAB/ASM-VHF-5-2016.pdf>.
4. Lefterova MI, Suarez CJ, Banaei N, Pinsky BA for the Association of Molecular Pathology Clinical Practice Committee (ID representative: **Miller MB**). Next-generation sequencing for infectious disease diagnosis and management: a report of the Association for Molecular Pathology. J Mol Diagn, 2015; 17:623-634.
5. Alby K, **Miller MB**. Molecular detection of respiratory viruses is superior to conventional methods. ASCP LabQ, 2015; CL6, pp. 1-13.
6. Couturier MR, **Miller MB** for the ASM Public and Scientific Affairs Board Committee on Laboratory Practices. Interim laboratory guidance for handling/testing specimens from cases or suspected cases of hemorrhagic fever virus, 2014; 3 pages, <https://www.asm.org/images/PSAB/Ebola9-10-14.pdf>.
7. Pentella M, **Miller MB** for the ASM Public and Scientific Affairs Board Committee on Laboratory Practices. A practical guidance document for the detection of Middle Eastern Respiratory Syndrome Coronavirus (MERS-CoV), 2014; 3 pages, <http://www.asm.org/images/MERSGuidance.pdf>.
8. Kwee D, **Miller MB**. Fish tapeworm infestation. Consultant for Pediatricians, 2009; 8(8):311.
9. **Miller MB**, Gilligan PH. Identification of *Burkholderia cepacia* in cystic fibrosis patient specimens, Am Soc Clin Path, Tech Sample, 2004; Microbiology No. MB-2:7-13.

***Invited Lectures and Presentations***  
***At UNC***

1. School of Nursing, Continuing Education Webinar: Pediatric Sexual Assault Nurse Training, "STI Testing in Pediatrics," March 28, 2018.
2. Department of Pathology and Laboratory Medicine, Grand Rounds, "Clinical Microbiology: the future is now!" March 9, 2017.
3. School of Nursing, Continuing Education Program: Pediatric Sexual Assault Nurse Training, "STI Testing in Pediatrics," October 20, 2016.
4. School of Medicine Academy of Educators, Pearls for Promotion on the Education Track Panelist, "Demystifying appointments, reappointments and promotions," May 27, 2016.
5. School of Nursing, Continuing Education Program: Pediatric Sexual Assault Nurse Training, "STI Testing in Pediatrics," December, 10, 2015.
6. Department of Pediatrics, Grand Rounds (co-presented with Ravi Jhaveri and Mark Heise), "Influenza: from bench to bedside," October 29, 2015.
7. Division of Infectious Diseases Conference (co-presented with Emily Sickbert-Bennett, Ashley Marx and Christopher Hurt), "Update on Influenza," October 21, 2015.
8. Department of Pathology and Laboratory Medicine, Annual CME Course, Current Molecular Tests: This is Not Your Parent's Pathology Practice, "Molecular Virology: Faster, Cheaper, Better," May 2, 2015.
9. Department of Pathology and Laboratory Medicine, Grand Rounds, "Impact of molecular infectious disease testing on clinical outcomes," December 18, 2014.
10. School of Nursing, Continuing Education Program: Pediatric Sexual Assault Nurse Training, "STI Testing in Pediatrics," November 5, 2014.
11. Department of Pediatrics, Grand Rounds, "What's new in Clinical Microbiology," December 5, 2013.
12. School of Nursing, Continuing Education Program: Pediatric Sexual Assault Nurse Training, "STI Testing in Pediatrics," November 6, 2013.
13. Division of Infectious Diseases, Immunocompromised Host Service, "A review of laboratory services for the immunocompromised host," August 14, 2013.
14. School of Nursing, Continuing Education Program: Pediatric Sexual Assault Nurse Training, "Culture and non-culture methods for detection of *Neisseria gonorrhoeae* and *Chlamydia trachomatis*," December 13, 2012.
15. Division of Infectious Diseases, Grand Rounds (co-presented with Anne Lachiewicz and Ralph Raasch), "Can  $\beta$ -lactam/ $\beta$ -lactamase inhibitor combinations be used for treatment of ESBL-producing *E coli*?" April 13, 2012.
16. Division of Infectious Diseases, Grand Rounds (co-presented with John Schmitz and Peter Gilligan), "What's new in the Clinical Microbiology-Immunology Laboratories," June 24, 2011.
17. Department of Pathology and Laboratory Medicine, Annual CME Course, Selected Topics in Pulmonary Pathology for Practicing Pathologists, "Molecular Epidemiology of Respiratory Viruses and Bacterial Superinfections," April 30, 2011.

18. Division of Infectious Diseases, Grand Rounds, “The evolving epidemiology of MRSA,” June 11, 2010.
19. School of Nursing, Continuing Education Program: The Team Approach to Child Abuse and Neglect, “Culture and non-culture methods for detection of *Neisseria gonorrhoeae* and *Chlamydia trachomatis*,” May 14, 2010.
20. UNC Health Care, McLendon Clinical Laboratories Annual Charlotte Merritt Award Lecture, “Clinical Microbiology in Pictures: Past, Present and Future,” May 4, 2010.
21. Division of Infectious Diseases, Grand Rounds (co-presented with John Schmitz and Peter Gilligan), “What’s new in the Clinical Microbiology-Immunology Laboratories,” April 30, 2010.
22. 34<sup>th</sup> Annual Internal Medicine Conference, “New Lab Tests for Infectious Diseases: Advances and Pitfalls,” April 7, 2010.
23. Division of Infectious Diseases, Grand Rounds (co-presented with David Weber), “Update on H1N1 Influenza,” October 23, 2009.
24. Department of Pathology and Laboratory Medicine, Grand Rounds, “Pandemic Influenza and MRSA: the Perfect Storm?” October 1, 2009.
25. Division of Infectious Diseases, Grand Rounds (multi-disciplinary presentation), “Update on H1N1 (Swine) Influenza,” April 29, 2009.
26. School of Nursing Continuing Education Program: Bad Bugs: Infectious Disease Update for Nurses, “Overview of Key Diagnostics and Laboratory Tests with Infection Control Implications,” September 6, 2007.
27. Department of Pathology and Laboratory Medicine, Grand Rounds, “Advances in Molecular Microbiology: Public Health Impact,” January 25, 2007.
28. Department of Medicine, Grand Rounds (multi-disciplinary presentation), “Update on Influenza in a Year of Vaccine Shortage,” October 28, 2004.
29. UNC Health Care, SARS Preparedness Conference, “Laboratory Diagnosis of SARS,” November 25, 2003.

***Outside UNC: Regional, National, and International***

1. American Society for Microbiology, Microbe 2018, “The future of molecular diagnostics in clinical microbiology,” Atlanta, GA, June 10, 2018.
2. American Society for Microbiology, 34<sup>th</sup> Annual Clinical Virology Symposium, Corporate Workshop (BioFire Diagnostics), “Reimbursement update for multiplex respiratory and GI panels,” Fort Lauderdale, FL, May 7, 2018.
3. American Society for Microbiology, 34<sup>th</sup> Annual Clinical Virology Symposium, Corporate Workshop (Curetis), “Evaluation of the Curetis Unyvero multiplex PCR lower respiratory infection panel,” Fort Lauderdale, FL, May 7, 2018.
4. Erasmus University Medical Center Rotterdam, Netherlands, Webinar, “Advantages, disadvantages and implementation issues related to microbiological point of care testing,” April 18, 2018.

5. North Carolina Point of Care Network, Spring Meeting, “Molecular POCT for infectious diseases: opportunities and challenges.” Morrisville, NC, April 13, 2018.
6. American Society for Microbiology, Southern California Branch 81<sup>st</sup> Annual Meeting, “Molecular Tests in Microbiology: What lies ahead for the Technology and the Technologist?” La Jolla, CA, October 28, 2017.
7. European Meeting on Molecular Diagnostics, “Maintaining quality for molecular point of care testing for infectious diseases,” Noordwijk, Netherlands, October 12, 2017.
8. American Society for Microbiology, Molecular Diagnostics Webinar Series, “Diagnosis of Respiratory Tract Infections,” June 14, 2017.
9. American Society for Microbiology, Microbe 2017, “Latest developments in LDT regulation,” New Orleans, LA, June 3, 2017.
10. European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), Integrated Symposium, “Analytical considerations of multiplex respiratory viral testing,” Vienna, Austria, April 24, 2017.
11. University of Iowa, Department of Pathology and Laboratory Medicine Grand Rounds, Franklin Koontz Lecture (Visiting Professorship), “Impact of molecular infectious disease testing on clinical outcomes,” Iowa City, IA, April 13, 2017.
12. University of Iowa, Department of Pathology and Laboratory Medicine Residents Lecture, Franklin Koontz Visiting Professorship, “Challenging Cases in Clinical Microbiology,” Iowa City, IA, April 12, 2017.
13. University of Iowa, Department of Pathology and Laboratory Medicine Laboratory Lecture, Franklin Koontz Visiting Professorship, “Advantages and challenges of molecular multiplex for GI pathogens,” Iowa City, IA, April 12, 2017.
14. Association for Molecular Pathology, Global Congress on Molecular Pathology, “Syndromic infectious disease testing: advantages, challenges and opportunities,” Berlin, Germany, April 4, 2017.
15. Association for Molecular Pathology Annual Meeting, Corporate Workshop Seminar, “Multiplex respiratory viral testing: analytical and clinical considerations,” Charlotte, NC, November 9, 2016.
16. Food and Drug Administration, Workshop: Coordinated development of antimicrobial drugs and antimicrobial susceptibility test devices, “Roles and resources in coordinated development: ASM perspective,” Silver Spring, MD, September 29, 2016.
17. 25<sup>th</sup> Annual Symposium on Molecular Pathology, Beaumont Health System, “The changing paradigm of the laboratory diagnosis of gastroenteritis,” Troy, MI, September 22, 2016.
18. American Society for Microbiology, Microbe 2016, “The changing paradigm of the laboratory diagnosis of gastroenteritis,” Boston, MA, June 17, 2016.
19. Pan American Society for Clinical Virology, 23<sup>rd</sup> Annual Molecular Virology Workshop, “Respiratory panels: available panels, performance and pitfalls” Daytona Beach, FL, May 18, 2016.
20. American Society for Microbiology, Hot Topics Webinar Series, “Molecular multiplex testing: respiratory and gastrointestinal pathogens,” February 1, 2016.

21. Re-entering Anti-bacterial Drug Development Summit, Cambridge Health Institute, “Practical utilization of multiplex infectious disease tests and impact on patient care,” Boston, MA, November 18, 2015.
22. E.G. Scott Microbiology Symposium, 22<sup>nd</sup> Annual Meeting, Christiana Care Health System, “Multiplex detection of respiratory pathogens: benefits and challenges,” Newark, DE, September 29, 2015.
23. Interscience Conference on Antimicrobial Agents and Chemotherapy (international), 55<sup>th</sup> Annual Meeting, Workshop, “Introduction of MALDI-ToF Mass Spectrometry and VITEK MS,” San Diego, CA, September 17, 2015.
24. Southwestern Association of Clinical Microbiology, 34<sup>th</sup> Annual Meeting, “Challenging Cases in Clinical Microbiology,” Shreveport, LA, September 16, 2015.
25. Memorial Healthcare System, Pathology Grand Rounds, “The changing paradigm of the laboratory diagnosis of gastroenteritis,” Hollywood, FL, August 11, 2015.
26. American Society for Microbiology, 115<sup>th</sup> General Meeting, Symposium, “Beyond verification: optimizing utilization, technology and workflow of molecular multiplex tests,” New Orleans, LA, June 1, 2015.
27. Society for Healthcare Epidemiology of America, Spring 2015 Conference, “Impact of molecular diagnostics on antimicrobial stewardship,” Orlando, FL, May 14, 2015.
28. Association for Molecular Pathology, 2014 Annual Meeting, “Impact of molecular infectious disease testing on clinical outcomes,” National Harbor, MD, November 15, 2014.
29. Southeastern Association for Clinical Microbiology, 36<sup>th</sup> Annual Meeting, “Molecular infectious disease testing: something for everyone,” Durham, NC, November 8, 2014.
30. Eastern Pennsylvania Branch of the American Society for Microbiology, 44<sup>th</sup> Annual Symposium, “Norovirus gastroenteritis and the use of multiplex nucleic acid amplification panels for detection of enteric viruses, parasites and bacteria,” Philadelphia, PA, November 7, 2014.
31. Interscience Conference on Antimicrobial Agents and Chemotherapy (international), 54<sup>th</sup> Annual Meeting, Meet-the-Experts Session, “MALDI-ToF Mass Spectrometry and Laboratory Workflow,” Washington, DC, September 7, 2014.
32. Interscience Conference on Antimicrobial Agents and Chemotherapy (international), 54<sup>th</sup> Annual Meeting, Workshop, “Introduction of MALDI-ToF Mass Spectrometry and VITEK MS,” Washington, DC, September 5, 2014.
33. Becton Dickinson Research Meeting, “Performance of the BD MAX Enteric Bacterial Pathogen Test compared to the Luminex xTAG Gastrointestinal Pathogen Panel,” Quebec City, Canada, August 21, 2014.
34. Nanosphere Webinar: Each Hour Counts: The Clinical and Economic Case for Rapid Sepsis Diagnostics, “Impact of the use of Verigene BC-GP on treatment optimization for patients with streptococcal and enterococcal bacteremia,” July 17, 2014.
35. American Society for Microbiology, 114<sup>th</sup> General Meeting, Workshop, “Matrix assisted laser desorption ionization time-of-flight mass spectrometry in clinical microbiology,” Boston, MA, May 17, 2014.

36. Pan American Society for Clinical Virology, 29<sup>th</sup> Annual Clinical Virology Symposium, Corporate Workshop (Becton Dickinson), “The changing paradigm of the laboratory diagnosis of gastroenteritis,” Daytona Beach, FL, April 28, 2014.
37. American Society for Microbiology, Molecular Webinar Series: Molecular Diagnosis of Infectious Diseases: Applications and Challenges, “Multiplex Gastrointestinal Pathogen Tests,” March 4, 2014.
38. American Society for Microbiology, Molecular Webinar Series: Molecular Diagnosis of Infectious Diseases: Applications and Challenges, “Multiplex Respiratory Viral Tests,” February 25, 2014.
39. American Society for Clinical Pathology, Webinar Series, “Laboratory Diagnosis of Viral Respiratory Infections,” November 5, 2013.
40. Infectious Disease Society of America, ID Week, “Diagnosis of Infection in Transplant Recipients,” Meet-the-Professor, San Francisco, CA, October 5, 2013.
41. Infectious Disease Society of America, ID Week, “New IDSA Guideline: Laboratory Diagnosis of Infectious Diseases,” Interactive Panelist, San Francisco, CA, October 3, 2013.
42. Luminex Molecular Diagnostics, Gastrointestinal Pathogen Panel Scientific Exchange, Chair, Washington, DC, September 18-19, 2013.
43. Southwestern Association of Clinical Microbiology, 32<sup>nd</sup> Annual Meeting, “Challenging Cases in Clinical Microbiology,” Dallas, TX, September 6, 2013.
44. Southwestern Association of Clinical Microbiology, 32<sup>nd</sup> Annual Meeting, “VITEK MS: Revolutionary technology that takes microbial identification from days to minutes,” Dallas, TX, September 4, 2013.
45. American Society for Microbiology, 113<sup>th</sup> General Meeting, Symposium, “Peaks and valleys: exploring clinically-relevant MALDI-TOF and molecular reporting,” Denver, CO, May 20, 2013.
46. American Society for Microbiology, 113<sup>th</sup> General Meeting, Workshop, “Matrix assisted laser desorption ionization time-of-flight mass spectrometry in clinical microbiology,” Denver, CO, May 18, 2013.
47. Pan American Society for Clinical Virology, 29<sup>th</sup> Annual Clinical Virology Symposium, Corporate Workshop (GenMark Dx), “Multiplex respiratory viral testing: analytical and clinical considerations,” Daytona Beach, FL, April 29, 2013.
48. Pan American Society for Clinical Virology, 20<sup>th</sup> Annual Molecular Virology Workshop, “What does it take to validate/verify highly multiplexed molecular assays?” Daytona Beach, FL, April 26, 2013.
49. Southeastern Association for Clinical Microbiology, Virginia Spring Meeting, “The power and promise of MALDI-TOF in the clinical microbiology laboratory,” Charlottesville, VA, April 19, 2013.
50. American Society for Microbiology, New York City Branch, Annual Spring Meeting, “Epidemiology and diagnosis of perinatal group B streptococcal disease: Where are we now?” New York, NY, April 5, 2013.

51. American Society for Microbiology, Molecular Webinar Series: Molecular Diagnosis of Infectious Diseases: A Practical Course for Practitioners, “Sequencing- the next molecular generation,” March 26, 2013.
52. American Society for Microbiology, Molecular Webinar Series: Molecular Diagnosis of Infectious Diseases: A Practical Course for Practitioners, “Use of Molecular Methods in Clinical Bacteriology,” February 26, 2013.
53. Southeastern Association for Clinical Microbiology, 34<sup>th</sup> Annual Meeting, “Hepatitis C: the Latest Update on Diagnosis and Treatment,” Charlotte, NC, November 9, 2012.
54. Eastern Pennsylvania Branch of the American Society for Microbiology, 42<sup>nd</sup> Annual Symposium, “Comparison of Expanded Multiplex PCR Assays for the Detection of Common and Emerging Viral Respiratory Pathogens,” Philadelphia, PA, November 8, 2012.
55. South Central Association for Clinical Microbiology, 2012 Audio Conference Series, “Hepatitis C: the Latest Update on Diagnosis and Treatment,” September 25, 2012.
56. 21<sup>st</sup> Annual Symposium on Molecular Pathology, Beaumont Health System, “Hepatitis C: the Latest Update on Diagnosis and Treatment,” Troy, MI, September 20, 2012.
57. Southwestern Association of Clinical Microbiology 31<sup>st</sup> Annual Meeting, “Challenging Cases in Clinical Microbiology,” St. Louis, MO, September 6, 2012.
58. American Society for Microbiology, 112<sup>th</sup> General Meeting, Corporate Workshop (bioMerieux), “The impact of MALDI-TOF on the clinical microbiology laboratory,” San Francisco, CA, June 18, 2012.
59. American Society for Microbiology, 112<sup>th</sup> General Meeting, Workshop, “Case Studies and Statistics for the Verification and Validation of Molecular Methods in the Clinical Laboratory,” San Francisco, CA, June 16, 2012.
60. Children’s Advocacy Centers of North Carolina, Child Abuse and Neglect Symposium, “Evaluating sexually transmitted infections in children,” Fayetteville, NC, May 11, 2012.
61. Pan American Society for Clinical Virology, 28<sup>th</sup> Annual Clinical Virology Symposium, Corporate Workshop (Abbott Molecular), “HCV patient management: translating molecular diagnostics into clinical care,” Daytona Beach, FL, April 23, 2012.
62. Pan American Society for Clinical Virology, 28<sup>th</sup> Annual Clinical Virology Symposium, Corporate Workshop (Idaho Technologies), “Comparison of four commercial respiratory viral panels for analytical performance and workflow,” Daytona Beach, FL, April 23, 2012.
63. First Coast Infectious Disease/Clinical Microbiology Symposium, 19<sup>th</sup> Annual Meeting, “Update on the diagnosis and treatment of hepatitis C,” St. Augustine, FL, January 28, 2012.
64. Association for Molecular Pathology, 2011 Annual Meeting, Corporate Workshop (Cepheid), “Transforming the rapid diagnosis of influenza,” Grapevine, TX, November 16, 2011.
65. Infectious Disease Society of America, 49<sup>th</sup> Annual Meeting, Interactive Session, Molecular Microbiologist Expert, “The Venn Diagram of Diagnosis: The Contribution of Histopathology, Microbiology, and Molecular Technology in the Diagnosis of Infectious Diseases,” Boston, MA, October 21, 2011.
66. Interscience Conference on Antimicrobial Agents and Chemotherapy (international), 51<sup>st</sup> Annual Meeting, Meet-the-Experts Session, “Diagnostic Considerations and Challenges for *Chlamydia trachomatis* and *Neisseria gonorrhoeae*,” Chicago, IL, September 19, 2011.

67. Becton Dickinson Continuing Education, "The Laboratory Diagnosis of Bloodstream Infections," Research Triangle Park, NC, August 31, 2011.
68. Association for Professionals in Infection Control and Epidemiology, 38<sup>th</sup> Annual Educational Conference and International Meeting, "Molecular Microbiology: Uses and Pitfalls," Baltimore, MD, June 27, 2011.
69. American Society for Microbiology, 111<sup>th</sup> General Meeting, "Best practices in the laboratory diagnosis of viral respiratory tract infections," New Orleans, LA, May 23, 2011.
70. American Society for Microbiology, 111<sup>th</sup> General Meeting, Workshop, "Case Studies and Statistics for the Verification and Validation of Molecular Methods in the Clinical Laboratory," New Orleans, LA, May 21, 2011.
71. Pan American Society for Clinical Virology, 27<sup>th</sup> Annual Clinical Virology Symposium, Corporate Workshop (Abbott Molecular), "Routine implementation of respiratory viral panels," Daytona Beach, FL, May 9, 2011.
72. 11<sup>th</sup> Annual North Carolina Tuberculosis Symposium, "Molecular Tuberculosis Diagnostics," Durham, NC, March 18, 2011.
73. Eastern Pennsylvania Branch of the American Society for Microbiology, 40<sup>th</sup> Annual Symposium, "New Molecular Approaches to Identify 21<sup>st</sup> Century Microbes Directly from Patient Specimens," Philadelphia, PA, November 18, 2010.
74. Interscience Conference on Antimicrobial Agents and Chemotherapy (international), 50<sup>th</sup> Annual Meeting, Interactive Symposium, "Best Practices in the Laboratory Diagnosis of *Neisseria gonorrhoeae* and *Chlamydia trachomatis*," Boston, MA, September 14, 2010.
75. Southwestern Association of Clinical Microbiology 29<sup>th</sup> Annual Meeting, "Challenging Cases in Clinical Microbiology," San Antonio, TX, September 2, 2010.
76. International Association of Forensic Nurses 5<sup>th</sup> Annual Educational Retreat, "Sexually Transmitted Infections: Current Trends," Atlantic Beach, NC, August 5, 2010.
77. Memorial Sloan-Kettering Cancer Center, Infectious Disease Seminar, "Clinical Microbiology in the 21<sup>st</sup> Century," New York, NY, July 14, 2010.
78. American Society for Microbiology, 110<sup>th</sup> General Meeting, Workshop, "Molecular Microbiology Methods - Statistics, Struggles and Case Studies in the Verification and Validation of Molecular Assays," San Diego, CA, May 22, 2010.
79. Pan American Society for Clinical Virology, 17<sup>th</sup> Annual Molecular Virology Workshop, "Practical Aspects of Implementing and Performing Multiplex Testing for Respiratory Viruses," Daytona Beach, FL, April 23, 2010.
80. Southeastern Association for Clinical Microbiology, NC Branch Annual Meeting, "Accurately Detecting Emerging Antimicrobial Resistance," Charlotte, NC, April 19, 2010.
81. 5<sup>th</sup> Decennial International Conference on Healthcare-Associated Infections (Society for Healthcare Epidemiology of America, the Centers for Disease Control and Prevention, the Association for Professionals in Infection Control and Epidemiology, and the Infectious Diseases Society of America), "Advances in Laboratory Technologies can Improve Infection Prevention Efforts," Atlanta, GA, March 19, 2010.



82. 15<sup>th</sup> Annual Symposium on Child Abuse and Neglect (Children's Advocacy Centers of North Carolina), "Culture and Non-culture Methods for Detection of *Neisseria gonorrhoeae* and *Chlamydia trachomatis*," Lake Junaluska, NC, September 30, 2009.
83. Southwestern Association of Clinical Microbiology 28<sup>th</sup> Annual Meeting, "Friday Afternoon in Clinical Microbiology: Challenging Cases," Fort Worth, TX, September 3, 2009.
84. American Society for Microbiology Teleconference Series, "The Rise of Community-associated MRSA," August 12, 2009.
85. Becton Dickinson Continuing Education, "The Ins and Outs of Blood Cultures in a Clinical Laboratory," Research Triangle Park, NC, June 8, 2009.
86. American Society for Microbiology, 109<sup>th</sup> General Meeting, "Case Studies in Sequencing-based Identifications in the Diagnostic Laboratory," Philadelphia, PA, May 18, 2009.
87. North Carolina Society of Pathologists Annual Meeting, "Molecular Microbiology Applications for Community Practices," New Bern, NC, April 4, 2009.
88. Society for Healthcare Epidemiology of America, 19<sup>th</sup> Annual Meeting, "The Promise and Pitfalls of Non-culture Methods," San Diego, CA, March 19, 2009.
89. Southeastern Association of Clinical Microbiology, 30<sup>th</sup> Annual Meeting, "The Rise of Community-associated MRSA," Myrtle Beach, SC, November 8, 2008.
90. American Society for Microbiology, 108<sup>th</sup> General Meeting, "Laying the Groundwork: Bringing Molecular Diagnostics to Your Lab," Boston, MA, June 2, 2008.
91. Pan American Society for Clinical Virology, 24<sup>th</sup> Annual Clinical Virology Symposium, Corporate Workshop (QIAGEN), "QIAGEN ResPlex II Respiratory Virus Panel: Comparison with Luminex xTAG Respiratory Virus Panel," Daytona Beach, FL, April 27-30.
92. Carolinas Clinical Connections 2008, "Virology Update," Wilmington, NC, March 27, 2008.
93. 25<sup>th</sup> Annual Maryland Clinical Microbiology Meeting, "Respiratory Viruses: Rapid, Traditional and Molecular Diagnostic Methodologies," March 15, 2008.
94. Laboratory Technology Issues Teleconference Series, "Advances in Molecular Microbiology: Public Health Impact," University of Texas Health Science Center at San Antonio, October 23, 2007.
95. North Carolina Laboratory Response Forum, "Estimating the Tuberculosis Infection Prevalence in a Residential Alcohol and Drug Treatment Center in Central North Carolina Using Interferon- $\gamma$  Release Assays and History of TB and Tuberculin Skin Test Positivity. Preliminary Results," Raleigh, NC, October 16, 2007.
96. Interscience Conference on Antimicrobial Agents and Chemotherapy (international), 47<sup>th</sup> Annual Meeting, "Universal HIV Testing: Implications for the Clinician and Laboratory," Meet-the-Experts Session, Chicago, IL, September 18, 2007.
97. American Society for Microbiology, 107<sup>th</sup> General Meeting, "Sequencing-based Identifications in the Diagnostic Laboratory," Toronto, Canada, May 23, 2007.
98. Public Health Training and Information Network (North Carolina Department of Health and Human Services), "Laboratory Diagnosis of Group B *Streptococcus* Colonization in Pregnant Women," Raleigh, NC, July 18, 2006.

99. American Society for Microbiology, 106<sup>th</sup> General Meeting, “Diagnosis of Acute HIV,” Orlando, FL, May 25, 2006.
100. American Society for Microbiology, 106<sup>th</sup> General Meeting, “The Impact of Molecular Diagnostics on Women’s Health,” Orlando, FL, May 24, 2006.
101. Southeastern Association for Clinical Microbiology, NC Branch Annual Meeting, “Virology and Molecular Diagnostics in the 21<sup>st</sup> Century,” Greensboro, NC, April 3, 2006.
102. Laboratory Technology Issues Teleconference Series, “Community-associated Methicillin-Resistant *Staphylococcus aureus*,” University of Texas Health Science Center at San Antonio, January 24, 2006.
103. American Society for Microbiology, 105<sup>th</sup> General Meeting, “Molecular Methods to Detect Pathogens in Complex Environments: Real-time PCR and Microarrays,” Atlanta, GA, June 2005.
104. Southeastern Association of Clinical Microbiology, “Case Studies: Molecular Applications in Infectious Disease Testing,” Greensboro, NC, April 30, 2004.

#### ***Workshops and Short Courses developed***

1. Molecular Virology Workshop, 25<sup>th</sup> Annual Workshop, Pan American Society for Clinical Virology, Co-Chair, Fort Lauderdale, FL, May 5, 2017 (6h)
2. Molecular Virology Workshop, 24<sup>th</sup> Annual Workshop, Pan American Society for Clinical Virology, Co-Chair, Daytona Beach, FL, May 6, 2017 (6h)
3. Molecular Virology Workshop, 23<sup>rd</sup> Annual Workshop, Pan American Society for Clinical Virology, Co-Chair, Daytona Beach, FL, May 18, 2016 (6h)
4. Interscience Conference on Antimicrobial Agents and Chemotherapy (international), 55<sup>th</sup> Annual Meeting, Workshop, MALDI-ToF Mass Spectrometry in Clinical Microbiology: Advanced Applications, Co-Convener, San Diego, CA, September 17, 2015 (4h)
5. Interscience Conference on Antimicrobial Agents and Chemotherapy (international), 55<sup>th</sup> Annual Meeting, Workshop, MALDI-ToF Mass Spectrometry in Clinical Microbiology: Fundamentals and Live Demonstration, Co-Convener, San Diego, CA, September 17, 2015 (4h)
6. Southwestern Association of Clinical Microbiology, 34<sup>th</sup> Annual Meeting, Workshop, Molecular Microbiology: Something for Everyone, Shreveport, LA, September 15, 2015 (4h)
7. Molecular Virology Workshop, 22<sup>nd</sup> Annual Workshop, Pan American Society for Clinical Virology, Co-Chair, Daytona Beach, FL, April 25, 2015 (6h)
8. Interscience Conference on Antimicrobial Agents and Chemotherapy (international), 54<sup>th</sup> Annual Meeting, Workshop, MALDI-ToF Mass Spectrometry in Clinical Microbiology: Advanced Applications, Co-Convener, Washington, DC, September 5, 2014 (4h)
9. Interscience Conference on Antimicrobial Agents and Chemotherapy (international), 54<sup>th</sup> Annual Meeting, Workshop, MALDI-ToF Mass Spectrometry in Clinical Microbiology: Fundamentals and Live Demonstration, Co-Convener, Washington, DC, September 5, 2014 (4h)

10. American Society for Microbiology, 114<sup>th</sup> General Meeting, Workshop, Matrix assisted laser desorption ionization time-of-flight mass spectrometry in clinical microbiology, Co-Convener, Boston, MA, May 17, 2014 (8h)
11. Molecular Virology Workshop, 21<sup>st</sup> Annual Workshop, Pan American Society for Clinical Virology, Co-Chair, Daytona Beach, FL, April 26, 2014 (6h)
12. American Society for Microbiology, 113<sup>th</sup> General Meeting, Workshop, Matrix assisted laser desorption ionization time-of-flight mass spectrometry in clinical microbiology, Co-Convener, Denver, CO, May 18, 2013 (8h)
13. Southwestern Association of Clinical Microbiology, 31<sup>st</sup> Annual Meeting, Workshop, What's New in Molecular Diagnostics for Infectious Diseases, St. Louis, MO, September 5, 2012 (4h)
14. Southwestern Association of Clinical Microbiology, 29<sup>th</sup> Annual Meeting, Workshop, Sequence-based Identifications in Microbiology, San Antonio, TX, September 1, 2010 (4h)
15. Southeastern Association for Clinical Microbiology, 31<sup>st</sup> Annual Meeting, Workshop, Molecular Microbiology 101, Greenville, SC, November 4, 2009 (4h)
16. Southwestern Association of Clinical Microbiology, 28<sup>th</sup> Annual Meeting, Workshop, Molecular Microbiology 101, Fort Worth, TX, September 2, 2009 (4h)
17. American Society for Clinical Pathology, Workshops for Laboratory Professionals, Microbiology Review and Update, Minneapolis, MN, September 14, 2007 (8h)
18. Nanosphere Preceptorship, Molecular Applications in Infectious Disease Testing, March 7 and 14, 2007 (6h)
19. American Society for Clinical Pathology, Workshops for Laboratory Professionals, Microbiology Review and Update, Chicago, IL, May, 9, 2006 (8h)
20. American Society for Clinical Pathology, Workshops for Laboratory Professionals, Microbiology Review and Update, Baltimore, MD, May 4, 2006 (8h)
21. American Society for Clinical Pathology, Workshops for Laboratory Professionals, Microbiology Review and Update, San Francisco, CA, April 6, 2005 (8h)
22. Aventis Pharmaceuticals Preceptorship, Clinical Microbiology, Spring 2004 (4h)
23. AstraZeneca Preceptorship, Clinical Microbiology, Spring 2004 (4h)

***Solicited Refereed Abstracts/Posters (\*products of interdisciplinary scholarship)***

1. Collins ME, Popowitch EB, **Miller MB**. Comparison of a multiplex PCR lower respiratory tract assay with bacterial culture. 34<sup>th</sup> Annual ASM Clinical Virology Symposium, Poster T-59, Fort Lauderdale, FL, May 8, 2018.
2. Leal SM, Popowitch EB, Levinson KJ, John TM, Lehman B, Bueno Rios M, Gilligan PH, **Miller MB**. 34<sup>th</sup> Annual ASM Clinical Virology Symposium, Poster 205, Fort Lauderdale, FL, May 8, 2018.
3. Cline A, Levinson K, Jhaveri R, **Miller MB**. Rapid detection of pediatric bacteriuria using narrow angle forward laser scattering technology (NAFLST) with Bacterioscan. ID Week, Poster #2082, San Diego, CA, October 7, 2017.

4. \*Ciccone E, Chundi V, **Miller MB**, DiBiase L, Weber D, Juliano J, Jhaveri R, Willis Z. The impact of respiratory viral testing in hospitalized adult patients at a tertiary care facility. ID Week, Poster #1627, San Diego, CA, October 6, 2017.
5. \*Williams S, **Miller MB**, Van Duin D, Carson S, Cairns B, Lachiewicz A. Gram-negative bacilli in critically ill burn patients. ID Week, Poster #394, San Diego, CA, October 5, 2017.
6. \*Somayaji R, Muhlebach MS, Ramos KJ, Beckett V, Popowitch E, **Miller M**, Baines A, Hamblett NM, Zemanick ET, Hoover W, Goss CH. Risk factors for methicillin-resistant *Staphylococcus aureus* (MRSA) persistence in persons with cystic fibrosis: analysis of the STAR-TOO cohort. 31<sup>st</sup> Annual North American Cystic Fibrosis , November 4, 2017, (published in *Pediatr Pulmonol* 2017; 52, S47:Abstract 355)
7. \*Sellers SA, Dover K, Wohl D, **Miller M**, Dittmer D, Fischer W. The burden of respiratory viral illness in HIV-infected patients. American Thoracic Society 2017 International Conference, Poster A3088, Washington, DC, May 22, 2017 (published in *American Journal of Respiratory and Critical Care Medicine* 2017;195:A3088).
8. Popowitch EB, **Miller MB**. A comparison of the Xpert FLU/RSV XC and Panther Fusion Flu A/B/RSV assays. 33<sup>rd</sup> Annual ASM Clinical Virology Symposium, Poster S19, Savannah, GA, May 7, 2017.
9. Popowitch EB, **Miller MB**. A comparison of the Xpert FLU/RSV XC and Xpress FLU/RSV Assays. 33<sup>rd</sup> Annual Clinical Virology Symposium, Poster S20, Savannah, GA, May 7, 2017.
10. Leal SM, Popowitch EB, Gilligan PH, **Miller MB**. Comparison of Luminex xTAG Gastrointestinal Panel and two-step algorithm for the diagnosis of *C. difficile* infection. Association for Molecular Pathology Annual Meeting, Poster ID63, Charlotte, NC, November 12, 2016.
11. Johnson JK, Albrecht V, Karlsson M, Robinson GL, Stevens V, Werner B, Schuetz A, Wolk D, Marlowe EM, Babady E, **Miller MB**, Culbreath KM, Butler-Wu S, Diekema D, Rasheed JK, Limbago B. Detection of carbapenem-resistant *Enterobacteriaceae* (CRE) in U.S. Clinical Laboratories. *Microbe* 2016, Boston, MA, June 16-20, 2016.
12. \*Walters E, Sickbert-Bennett EE, **Miller MB**, Weber DJ, Teal LJ, Rutala WA. Pseudo-outbreak of enteric adenovirus in immunocompromised pediatric patients. APIC Annual Conference, Charlotte, NC, June 11-13, 2016.
13. \*DiBiase LM, Weber DJ, **Miller MB**, Kanamori H, Sickbert-Bennett EE, Rutala WA. Crude mortality in patients hospitalized for viral respiratory infections. SHEA Spring 2016 Conference, Atlanta, GA, May 18-21, 2016.
14. \*DiBiase LM, Plongla R, Sickbert-Bennett EE, Dunbar SA, **Miller MB**. Impact of implementation of a molecular multiplex gastrointestinal pathogen panel. 32<sup>nd</sup> Annual Clinical Virology Symposium, Daytona Beach, FL, May 20, 2016.
15. \*Eckerle M, Mumba N, **Miller MB**, Steinhoff M. Prevalence of respiratory viruses among children hospitalized with acute respiratory illness in Malawi. American Academy of Pediatrics National Conference, Abstract 31571, Washington, DC, October 24, 2015.
16. \*Hauck CG, Chong PP, **Miller MB**, Jamieson KJ, Shea T, Foster M, Van Duin D. Fluoroquinolone resistance in *Escherichia coli* bloodstream infections in stem cell transplant and hematologic malignancy populations. ID Week 2015, Abstract ID 1191, San Diego, CA, October 9, 2015.

17. \*Cioffredi L, **Miller MB**, Jhaveri J. Outcomes of respiratory virus panel testing in pediatric patients. ID Week 2015, Abstract ID 502, San Diego, CA, October 8, 2015.
18. Popowitch EB, Evans RT, **Miller MB**. Comparison of the BD MAX Enteric Parasite Panel and the Luminex xTAG Gastrointestinal Pathogen Panel. 115<sup>th</sup> General Meeting of the American Society for Microbiology, New Orleans, LA, June 1, 2015.
19. \*Sickbert-Bennett EE, DiBiase LM, Sanza MM, **Miller MB**, Rutala WA, Weber DJ. Validation of HAI surveillance data – where do we begin? Society for Healthcare Epidemiologists of America (SHEA) Spring Conference, Orlando, FL, May 16, 2015.
20. Faron M, Beck E, Burnham CA, Gonzalez M, Liebert U, **Miller MB**, Svensson M, Templeton K, Vinje J, Rao A, Ledebor N, Buchan B. Multicenter evaluation of the Xpert norovirus assay for the detection of norovirus genogroups GI and GII from stool specimens. 31<sup>st</sup> Annual Clinical Virology Symposium, Daytona Beach, FL, April 28, 2015.
21. Popowitch EB, **Miller MB**. Performance characteristics of Xpert Flu/RSV XC assay. 31<sup>st</sup> Annual Clinical Virology Symposium, Daytona Beach, FL, April 26, 2015.
22. Hardie A, Babady E, Langley C, **Miller MB**, Popowitch EB, Rao A, Tang YW, Vinje J, Templeton K. Evaluation of Cepheid GeneXpert System for norovirus detection. 17<sup>th</sup> Annual Meeting of the European Society for Clinical Virology, Abstract ID 179, Prague, Czech Republic, September 30, 2014.
23. \*Roshdy D, Tran A, Lecroy N, Alby K, Zeng D, Daniels L, Weber D, **Miller MB**. Impact of the use of a rapid microarray assay for the identification of positive blood cultures on treatment optimization for patients with *Streptococcus* and *Enterococcus* bacteremia. 17<sup>th</sup> Annual MAD-ID (Making a Difference in Infectious Diseases) Conference, Orlando, FL, May 29-31, 2014.
24. Popowitch EB, Evans RT, **Miller MB**. Comparison of the BD MAX Enteric Bacterial panel and the Luminex xTAG Gastrointestinal Pathogen Panel. 114<sup>th</sup> General Meeting of the American Society for Microbiology, Boston, MA, May 19, 2014.
25. \*Hatcher SM, Myers K, Heaney C, Hall D, Larsen J, Wing S, **Miller MB**, Stewart J. Multi-drug and methicillin-resistant *Staphylococcus aureus* are present in surface waters near industrial hog operations in North Carolina. 2014 Water Microbiology Conference, Chapel Hill, NC, May 5-7, 2014.
26. \*Sena AC, Pasquale DK, Osborne AR, **Miller MB**, Hobbs MM. Use of the OSOM Trichomonas Rapid Test in an Emergency Room Setting. Poster P2.077, STI and AIDS World Congress 2013, Vienna, Austria, July 14-17, 2013.
27. Alby K, **Miller MB**, Gilligan PH. Performance of three mass spectrometry platforms for the identification of bacteria from cystic fibrosis patients. Poster #126, 113<sup>th</sup> General Meeting of the American Society for Microbiology, Denver, CO, May 19, 2013.
28. \*Nicolson NC, LeCroy N, Alby K, Laux J, Lin FC, Daniels L, Weber D, **Miller MB**. Clinical outcomes with rapid detection of methicillin-resistant *Staphylococcus aureus* from routine blood cultures: A new tool for stewardship? 16<sup>th</sup> Annual MAD-ID (Making a Difference in Infectious Diseases) Conference, Orlando, FL, May 9-11, 2013.
29. Alby K, **Miller MB**. Rapid identification of streptococci/enterococci from positive blood cultures using the Nanosphere Verigene BC-GP assay. Poster T-65, 29<sup>th</sup> Annual Clinical Virology Symposium, Daytona Beach, FL, April 30, 2013.

30. Alby K, Jones MC, **Miller MB**. Comparison of two MALDI-TOF systems for microbial identification, 112<sup>th</sup> General Meeting of the American Society for Microbiology, San Francisco, CA, June 18, 2012.
31. Alby K, Gilligan PH, **Miller MB**. Evaluation of the utility of using CHROMagar MRSA plates for detection of MRSA from blood culture bottles, 112<sup>th</sup> General Meeting of the American Society for Microbiology, San Francisco, CA, June 17, 2012.
32. Alby K, Popowitch EB, **Miller MB**. Analytical performance of the Nanosphere Verigene RV+ assay and the Focus Simplexa Flu A/B & RSV kit, Poster M-7, 28<sup>th</sup> Annual Clinical Virology Symposium, Daytona Beach, FL, April 23, 2012.
33. Popowitch EB, O'Neill SS, **Miller MB**. An analytical comparison of four commercial respiratory virus panels, Poster M-22, 28<sup>th</sup> Annual Clinical Virology Symposium, Daytona Beach, FL, April 23, 2012.
34. Lippincott CK, **Miller MB**, Sena AC, Stout J. Potential and pitfalls of Xpert MTB/RIF in low-incidence settings, Poster P-17, 4<sup>th</sup> Southeastern Mycobacterial Meeting, Atlanta, GA, January 14, 2012.
35. \*Heil EL, Daniels LS, Weber DJ, **Miller MB**. Impact of Peptide Nucleic Acid Fluorescence *In Situ* Hybridization-Based (PNA FISH) Identification of *Candida* Species on Patient Outcomes, Poster #1030, 49<sup>th</sup> Annual Meeting of the Infectious Disease Society of America, Boston, MA, October 21, 2011.
36. \*Muhlebach MS, Champion E, Popowitch EB, **Miller MB**, Saiman L, STAR-CF Study Team. Characteristics and sensitivities of MRSA in pediatric CF patients in the U.S. 34<sup>th</sup> European Cystic Fibrosis Conference, Hamburg, Germany, June 8-11, 2011.
37. \*Popowitch EB, Backlund MG, Tee ee mei C, Fletcher L, O'Neill S, **Miller MB**. Prevalence and Molecular Analysis of Heteroresistant Vancomycin-intermediate *Staphylococcus aureus* isolates, Poster #1626, 111<sup>th</sup> General Meeting of the American Society for Microbiology, New Orleans, LA, May 21-24, 2011.
38. \*Kidd JM, Hall WB, Campbell-Bright S, **Miller MB**, Aris RM. Clinical manifestations and impact of human metapneumovirus in health adults: a retrospective analysis of 28 patients over two years. American Thoracic Society 2011 International Conference. Denver, CO, May 13-18, 2011.
39. \*Champion EA, Popowitch E, **Miller MB**, Saiman L, Muhlebach MS and the STAR CF Group. MRSA in Cystic Fibrosis: epidemiology, molecular typing, and antimicrobial susceptibilities. American Thoracic Society 2011 International Conference. Denver, CO, May 13-18, 2011.
40. \*Heil EL, Daniels LM, **Miller MB**, Weber DJ. Impact of peptide nucleic acid fluorescence in situ hybridization (PNA-FISH) based identification of *Candida* species on antifungal therapy usage and patient outcomes. 14<sup>th</sup> Annual MAD-ID (Making a Difference in Infectious Diseases) Conference. Orlando, FL, May 12-14, 2011.
41. Nelson J, Hawkins T, Schanz M, **Miller MB**, Schmitz J, Fiscus SA. Comparison of Abbott HIV-1 total nucleic acid qualitative assay to Roche HIV-1 DNA assay using dried blood spots. 18<sup>th</sup> Conference on Retroviruses and Opportunistic Infections. Boston, MA, February 27-March 2, 2011.

42. \*Muhlebach MS, Popowitch E, **Miller MB**, Peng A, LaVange L, Saiman SL and the STAR-CF sites. Epidemiology, molecular typing and antimicrobial susceptibilities in MRSA: multicenter STAR-CF Study. 24<sup>th</sup> Annual North American Cystic Fibrosis Conference. Baltimore, MD, October 21-23, 2010.
43. \*Tee Ee Mei C, Fletcher L, O'Neill S, Popowitch E, Raasch R, **Miller MB**. Do Etest or VITEK2 MIC determinations predict for heteroresistant vancomycin-intermediate *Staphylococcus aureus* (hVISA)? 13<sup>th</sup> Annual MAD-ID (Making a Difference in Infectious Diseases) Conference. Orlando, FL, May 6-8, 2010.
44. Popowitch E, **Miller MB**. Coinfections and Cocirculating Pathogens during the H1N1 Outbreak of 2009. 26<sup>th</sup> Annual Clinical Virology Symposium. Daytona Beach, FL, April 25-28, 2010.
45. Ager E, **Miller MB**, Cordero P, Weiss M, Longshore J, Sautter RL. A comparison of viral culture, DFA and xTAG RVP assays for the detection of respiratory viral agents during the H1N1 pandemic. 26<sup>th</sup> Annual Clinical Virology Symposium. Daytona Beach, FL, April 25-28, 2010.
46. \*Sickbert-Bennett EE, Brown VM, Rutala WA, Brooks RH, **Miller MB**, Weber DJ. Utility of surveillance cultures for control of multi-drug resistant (MDR) *Acinetobacter*. Fifth Decennial International Conference on Healthcare-associated Infections. Atlanta, GA, March 18-22, 2010.
47. \*Peppercorn A, Wenink E, Jones S, Weber D, Serody J, **Miller MB**, Cairns B. Clinical Effectiveness of Voriconazole for the Prevention of Invasive Fungal Infections in Burn Patients. 47<sup>th</sup> Annual Meeting of the Infectious Diseases Society of America, Philadelphia, PA, October 29 – November 1, 2009.
48. \***Miller MB**, Jones MC, Lewis PO, Raasch R, Weber DJ. Monitoring colistin MIC values in MDR-*Acinetobacter* in an outbreak setting. American Society for Microbiology 109<sup>th</sup> General Meeting, Philadelphia, PA, May 17-21, 2009.
49. Popowitch E, Elliott AM, **Miller MB**. Prevalence of community-associated MRSA in surveillance specimens of new ICU admissions. American Society for Microbiology 109<sup>th</sup> General Meeting, Philadelphia, PA, May 17-21, 2009.
50. Culbreath K, **Miller MB**, Jones MC, Rodino K, Gilligan PH. CHROMagar *Acinetobacter* media for detection of multi-drug resistant (MDR) *Acinetobacter* in surveillance cultures. American Society for Microbiology 109<sup>th</sup> Annual Meeting, Philadelphia, PA, May 17-21, 2009.
51. Knight NK, Horton JM, **Miller MB**, Shah ZA, Cipolletti MR, Nozar TM, Sautter RL. A case of rat-bite fever after returning from Afghanistan and purchasing a pet rat. American Society for Microbiology 109<sup>th</sup> Annual Meeting, Philadelphia, PA, May 17-21, 2009.
52. \*Goodrich JS, Nguyen V, Kotch JB, Weber DJ, **Miller MB**. The Prevalence of community-associated MRSA in North Carolina child care centers. American Society for Microbiology 108<sup>th</sup> General Meeting, Boston, June 1-5, 2008.
53. Rodino K, Popowitch E, Gilligan PH, **Miller MB**. Surveillance of erythromycin and clindamycin resistance in *Streptococcus pyogenes* and *Streptococcus agalactiae*. American Society for Microbiology 108<sup>th</sup> General Meeting, Boston, June 1-5, 2008.

54. Goodrich JS, Bowen JN, **Miller MB**. Comparison of two real-time PCR methods to determine hepatitis C viral loads. American Society for Microbiology 107<sup>th</sup> General Meeting, Toronto, Canada, May 21-25, 2007.
55. Goodrich JS, Sutton-Shields TN, Wedd JP, **Miller MB**, Gilligan PH. Prevalence of community-associated methicillin-resistant *Staphylococcus aureus* in patients with cystic fibrosis. American Society for Microbiology 107<sup>th</sup> General Meeting, Toronto, Canada, May 21-25, 2007.
56. Goodrich JS, **Miller MB**. Comparison of two real-time PCR methods to detect group B *Streptococcus* in antepartum screening. American Society for Microbiology 106<sup>th</sup> General Meeting, Orlando, FL, May 21-25, 2006.
57. Goodrich JS, Makoka M, Gilligan PH, **Miller MB**. Prevalence and characterization of community-associated methicillin-resistant *Staphylococcus aureus*. American Society for Microbiology 106<sup>th</sup> General Meeting, Orlando, FL, May 21-25, 2006.
58. Hobbs MM, Rich KD, Quinlivan EB, Zeitlin R, Schmitz JL, **Miller MB**. Evaluation of real-time PCR and transcription-mediated amplification for detection of *Trichomonas vaginalis* in urine. American Society for Microbiology 106<sup>th</sup> General Meeting, Orlando, FL, May 21-25, 2006.
59. Goodrich JS, Sigel CS, **Miller MB**. Comparison of Cepheid analyte specific reagents with rapid antigen detection of RSV and influenza. 22<sup>nd</sup> Annual Clinical Virology Symposium, Clearwater Beach, FL, April 30-May 3, 2006.
60. Jawanda JS, **Miller MB**, Gilligan PH. Non-typhi Salmonellae with single point mutations in *gyrA* exhibiting resistance to nalidixic acid and reduced susceptibility to fluoroquinolones. American Society for Microbiology 105<sup>th</sup> General Meeting, Atlanta, GA, June 2005.
61. Schreckenberger P, Hsiung AY, Marnell C, Terrile L, Soto Y, **Miller MB**, Ilendo E, Nachum R, Fairbanks L, Abbey G, Luper D, Peterson G, Hardy J. Evaluation of Strep B Carrot Broth and LIM broth methods for recovery of group B *Streptococcus* (GBS): results of a multi-center trial. American Society for Microbiology 105<sup>th</sup> General Meeting, Atlanta, GA, June 2005.
62. **Miller MB**, Meyer H, Rogers E, Gilligan PH. Comparison of susceptibility testing, Oxoid MecA latex kit and *mecA* real-time PCR for the detection of oxacillin resistance in *Staphylococcus aureus* and coagulase-negative *Staphylococcus*. American Society for Microbiology 104<sup>th</sup> General Meeting, New Orleans, LA, May 2004.
63. **Miller MB**, Allen SL, Wedd JP, Gilligan PH. Misidentification of vancomycin-resistant *Enterococcus* from rectal screening cultures. American Society for Microbiology 104<sup>th</sup> General Meeting, New Orleans, LA, May 2004.
64. **Miller MB**, Boyette M, Meyer H, Jones MC, Gilligan PH. Identification of glucose-nonfermenting gram-negative rods isolated from respiratory specimens from cystic fibrosis patients: comparison of conventional biochemicals and the bioMerieux API 20NE to molecular identification. American Society for Microbiology 104<sup>th</sup> General Meeting, New Orleans, LA, May 2004.
65. Allen SL, **Miller MB**, Mangum ME, Doutova A, Gilligan PH. Prevalence of vancomycin-resistant *Enterococcus* in prenatal screening cultures. American Society for Microbiology 103<sup>rd</sup> General Meeting, Washington, D.C., May 2003.



66. **Miller MB**, Jones MC, Rogers E, Lang V, Gilligan PH. Surveillance of macrolide resistance in *Streptococcus pyogenes* and *Streptococcus agalactiae*. American Society for Microbiology 103<sup>rd</sup> General Meeting, Washington, D.C., May 2003.
67. **Miller MB**, Bassler BL. Regulation of quorum sensing in *Vibrio cholerae*. Cell-Cell Signaling in Bacteria, ASM Sponsored Meeting, Snowbird, UT, July 2001.
68. **Miller MB**, Bassler BL. Quorum sensing in *Vibrio cholerae*. Microbial Pathogenesis and Host Response Meeting, Cold Spring Harbor Laboratory, Long Island, NY, August 1999.

### ***Products of Engaged Scholarship***

1. Podcast: Meet the Microbiologist 081. Developing infectious disease diagnostics with Melissa Miller. April 26, 2018. American Society for Microbiology, Washington, DC.  
<https://www.asm.org/index.php/podcasts/meet-the-microbiologist/item/7246-developing-infectious-disease-diagnostics-with-melissa-miller-mtm-81>
2. Durham Academy Middle School, Women in STEM Lunch Series, November 1, 2017.
3. Durham Academy Third Grade Social Sciences Class, Immigration Simulation – Medical Tent, Durham, NC, March 19, 2015.
4. Durham Academy Third Grade Science Class, Take Apart Lab, Durham, NC, January 15, 2015.
5. Durham Academy Kindergarten, “Good germs and bad germs,” Durham, NC, February 17, 2012.
6. Peer Learning of Chapel Hill, Mini-Medical School, “Pandemic influenza and MRSA: a perfect storm,” Chapel Hill, NC, October 26, 2009.
7. Riverside High School Juniors/Seniors, “The role of the laboratory in diagnosing infectious diseases,” Durham, NC, annually 2004-2007.

### **TEACHING ACTIVITIES (2011-PRESENT)**

#### **UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL**

#### ***Graduate Students***

##### *Department of Pathology and Laboratory Medicine*

- PATH 723 Translational Pathology and Laboratory Medicine (5-15 students)  
Course Directors: Bill Coleman, PhD and Jonathon Homeister, MD, PhD  
Lecture (1h), 2015, 2016, 2017, 2018  
Lecture (2h), 2014  
Lecture (2h), 2013  
Lecture (1h), 2012  
Lecture and Manuscript Discussion, 2011 (2h)
- PATH 713 Mechanisms of Disease (~15-30 students)  
Course Director: Alisa Wolberg, PhD  
Lecture, Pathology of Infectious Diseases III, 2011(1 h)  
Lecture, Human Microbiome and Pathogen Discovery, 2012, 2013, 2014, 2015, 2016, 2017 (1h)

*Gillings School of Global Public Health*

- EPID 690-003/751 Emerging and Re-emerging Infectious Diseases (10-15 students)  
Course Director: Lola Stamm, PhD  
Lectures
  - Shiga-toxin producing *E. coli*, annually 2011-2016 (1h)
  - Salmonella*, annually 2011-2016 (1 h)
  - Epidemic and pandemic influenza, annually 2011-2017 (1h)
  - Molecular detection and typing of pathogens, annually 2011-2017 (1h)
- Thesis Committee Member, Sarah Hatcher, Department of Environmental Sciences and Engineering, 2013-2015
  - Title: Environmental and occupational transmission routes of antibiotic-resistant *Staphylococcus aureus* in regions of high industrial hog operation density

*School of Allied Health (Masters in Molecular Diagnostic Science)*

Project advisor (4h/wk, 3 months each)

- 2016: Sean Rankin, “Verification of HIV-1 viral load assay on Abbott m2000”
- 2015: Bradley Johnson, “Detection of HSV 1/2 in cerebrospinal fluid using Focus Diagnostics Simplexa HSV 1&2 Direct assay”
- 2014: Li Zhu, “Validation of APTIMA TV assay for the detection of *Trichomonas vaginalis*”
- 2012: Jose Sevilla, “Verification of parvovirus real-time PCR using Focus Diagnostics’ analyte specific reagents”
- 2011: Stephen Serafin, “Verification of an adenovirus quantitative real-time PCR assay”
- 2011: Ben Feldmann, “Verification of an HHV-6 quantitative real-time PCR assay”

***Medical Students***

- MS2, TEC2 Intensive: Application of Clinically-Relevant Basic Science to Clinical Care (1 group of 27 students)  
Case-based Teaching, April 15, 2016, December 2, 2016, April 20, 2018 (1.5h)
- MS1, Block 4 Microbial Pathogens and Host Defense  
Case-Based Teaching/Small Groups (~25 students), 2011 (10.5h), 2012 (6h), 2013 (7.5h), 2014 (6h)
- PATY 417 Clerkship in Laboratory Medicine (Integrative Selective)  
Course director: Yara Park, MD  
Microbiology/Molecular Microbiology contact (4-8h to 2015) (10-20h 2016 – present)  
  
When Microbiology is chosen as a 2 week rotation, the students shadow the pathology resident on service and spend time at the bench, rounding the laboratory management, and discussing cases with me.  
  
For all other students, I provide a 1h lecture on the impact of molecular testing on patient outcomes.
- PATY 410 Career Exploration in Pathology and Laboratory Medicine (2011-2015)  
Course Directors: Catherine Hammett-Stabler, PhD and William Funkhouser, MD, PhD  
Microbiology contact (2d)

I served as the Clinical Microbiology contact and coordinate the medical student’s days in the laboratory and one-on-one didactic sessions with faculty. I provide a 2-3 h didactic to the

medical students on infection control, molecular infectious disease testing, and research in clinical microbiology.

- MS4 Integrative Selective Seminar (1h)
  - April 4, 2014
  - February 7, 2014
  - August 30, 2013
  - April 12, 2013
  - October 12, 2012
  - March 21, 2011

### ***Post-Doctoral Medical Education***

#### *Pathology and Laboratory Medicine Residency Program*

- Laboratory Medicine Resident Didactic Series
  - Format: lectures, ~16 residents (1h each)
  - Topics:
    - Mycobacteriology and TB, 2016
    - Herpes Viruses, 2016, 2018
    - Mycology, 2016, 2018
    - Viral Respiratory Infections, 2015, 2018
    - Urinary Tract Infections, 2015, 2018
    - Molecular Diagnosis of STIs, 2015, 2017
    - Microbiome/Normal Flora, 2015, 2018
    - Antimicrobial Susceptibility Testing and Resistance, 2015, 2016
    - Gastrointestinal infections, 2014
    - Urinary Tract Infections, 2012
    - Respiratory Viruses, 2012
- Pathology Molecular Diagnostics Course
  - Format: lectures and case-based teaching, 6-12 residents and fellows
  - Topics: Multiplex Testing and Impact on Patient Outcomes, 2015, 2017 (1h)
  - Cases in Molecular Microbiology, 2011, Feb 2013, Oct 2013, 2015 (1.5h)
  - Bacteriology/Mycobacteriology/Antimicrobial resistance, 2011, Feb 2013, Oct 2013, 2015, 2017 (1.5h)
  - Hepatitis viruses, 2011, Feb 2013, 2015 (1h)
  - Mycology/Parasitology/Stain typing, 2011, Feb 2013, Oct 2013
  - Virology, 2011, Feb 2013, Oct 2013 (2h)
- Pathology Resident Clinical Pathology Rotations in Clinical Microbiology
  - Format: combination of lecture format and case-based teaching, research
  - 3-4 residents/year, 2 months each, 2-6h/week

#### *School of Pharmacy*

- PharmD Resident Rotations in Clinical Microbiology, annually 2011 - present
  - Rotation director and primary lecturer (1-2 residents annually; 4h/wk, one month each)
  - 2016, Wesley Kufel, PharmD
  - 2015, Whitney Davis, PharmD
  - 2014, Jaqueline Isip, PharmD

2013, Danya Roshdy, PharmD  
2012, Kelly Martin, PharmD  
2011, Emily Heil, PharmD

*Infectious Diseases Fellowship*

- Infectious Diseases Core Curriculum  
Format: lectures and laboratory demonstration, 5-10 fellows/residents (1.5h each)  
Topics: Molecular microbiology, 2012 (1h)  
Mycology, 2012 (1h)  
Mycobacteriology, 2012 (1h)  
Antimicrobial susceptibility testing, 2012 (1h)  
Introduction to AST and Molecular Microbiology (2h), annually 2012-2017

*Molecular Genetic Pathology Fellowship*

- Molecular Microbiology Rotation  
Format: direct interaction, lectures, case-based teaching, research  
1 fellow annually; 2011 – present (one month, 6-8h/week)  
2017-18, Claire Edgerly, MD  
2016-17, Nathan Montgomery, MD, PhD  
2015-16, Lynn Ferguson, MD  
2014-15, Daniel Duncan, MD  
2013-14, Amanda Treece, MD  
2012-13, Nirali Patel, MD  
2011-12, Stacey O'Neill, MD, PhD

*Medical Laboratory Immunology Fellowship*

- Clinical Molecular Microbiology Rotation and Research  
Format: direct interaction, lectures, case-based teaching, research  
1 fellow annually, 2012 – present (one month, 4-10h/week)  
2015-17, Alan Sanfilippo, PhD  
2012-14, Eric Weimer, PhD

*Medical and Public Health Microbiology Fellowship*

- Clinical Microbiology and Molecular Microbiology Rotations and Research  
Format: direct interaction, lectures, case-based teaching, research  
1-2 fellows annually, 2011 – present (4-10h/week)  
2018- Cecilia Thompson, PhD  
2017- Sheila Johnson, PhD  
2016-2018 Kara Levinson, PhD  
2015-2016, Matt Johnson, MD  
2014-2016, Rong Pong Plongla, MD  
2013-2015, Tony Tran, DrPH  
2011-2013, Kevin Alby, PhD

*Mentor, NIH KL2 award*

- Anne Lachiewicz, MD, MPH, 2015 – present

### ***Continuing Education***

- Clinical Laboratory Continuing Education  
Format: lecture, case-based teaching (45 min each)
  - Topics: Pertussis, 2013
  - Tuberculosis, 2013
  - Respiratory virus diagnosis, 2012
  - Human Microbiome Project, 2012
  - Hepatitis C, 2012
- Molecular Diagnostics Journal Club, annually 2011 – present (1h each)

### **PROFESSIONAL SERVICE**

#### ***To discipline***

##### *American Academy of Microbiology*

Chair, Colloquium Report: Changing Diagnostic Paradigms for Microbiology, June 2016 – May 2017

##### *American Society for Microbiology*

Clinical and Public Health Microbiology Committee (CPHMC), 2018 – present

Chair, CPHMC, 2018 – present

Committee on Microbial Sciences, 2017 – present

Co-chair, Advocacy, 2017 – 2018

Clinical Awards Selection Committee, 2015 – present

Chair, Clinical Awards Selection Committee, 2015

Public and Scientific Affairs Committee Strategic Planning Task Force, 2018

Presidential Transition Advisors Group, 2016 – 2017

Professional Practice Committee, 2015 – 2018 (renamed and reorganized to CPHMC in 2018)

Chair, Professional Practice Committee, 2017 – 2018

Public and Scientific Affairs Board Committee on Laboratory Practices (CLP), 2009 – 2017

Chair, Public and Scientific Affairs Board CLP, 2015 – 2017

Board of Governors, American College of Microbiology, 2007 – 2013

Scherago-Rubin Award Nominating Committee, 2009 – 2013

Professional Development Committee, 2007 – 2009

American Board of Medical Microbiology Exam Validation Committee, 2007 – 2010

##### *American Society for Clinical Pathology*

Workshops for Laboratory Professionals Committee, 2005 – 2009

##### *Antibacterial Resistance Leadership Group (NIAID, NIH)*

Diagnostics and Devices Subcommittee, 2012 – 2016

Chair, Diagnostics and Devices Subcommittee, 2015 – 2016

*Association for Molecular Pathology*

Clinical Practice Committee, Infectious Disease Subdivision Representative (elected position), 2013 – 2015  
Infectious Disease Leadership Committee, 2013 – 2015

*Clinical and Laboratory Standards Institute*

Advisor, Antimicrobial Susceptibility Tests Subcommittee, 2013 – 2017  
Vice Chair, M48 (Laboratory Detection and Identification of Mycobacteria; Approved Guideline) Revision Committee, 2015 – 2018

*Food and Drug Administration*

Microbiology Devices Panel  
Consultant, 2009-2017  
Voting Member, 2017 – present

*Pan American Society for Clinical Virology*

Co-Chair, Clinical Practice Committee, 2014 – 2018  
Co-Chair, Molecular Virology Workshop, 2013 – 2018  
Member, Council (elected position), 2013 – 2018

*Society for Healthcare Epidemiology of America*

Spring Meeting Planning Committee, 2014 – 2015

*Editor*

Journal of Clinical Microbiology (ASM Press), 2018 – present

*Editorial Boards*

Journal of Clinical Microbiology (ASM Press), 2008-2016, 2018  
Diagnostic Microbiology and Infectious Disease (Elsevier), 2010 – 2018

*Invited reviewer*

American Journal of Infection Control (Elsevier)  
European Journal of Clinical Microbiology and Infectious Diseases (Springer)  
Infection Control and Hospital Epidemiology (U Chicago Press)  
Journal of Antimicrobial Chemotherapy (Elsevier)  
Journal of Clinical Virology (Elsevier)  
Journal of Infection (Elsevier)  
Journal of Molecular Diagnostics (ASIP)  
Journal of Virological Methods (Elsevier)  
Liver Transplantation (ScholarOne)  
Medical Mycology (Informa Healthcare)  
Pediatric Infectious Disease Journal (Wolters Kluwer)  
PLoS ONE (PLOS)

*Scientific Advisory Boards*

Curetis, 2017 – present  
Luminex Molecular Diagnostics, 2016 – present  
Abbott Molecular, 2016  
Cepheid, 2011, 2015  
BioFire Technologies, 2013, 2017

***To UNC***

Pathology and Laboratory Medicine, Research Advisory Committee, April 2016 – present  
Molecular Genetic Pathology Fellowship Program, Clinical Competency Committee, July 2015 – present  
School of Medicine, Associate Professor Appointments, Promotions and Tenure Committee Member, 2012 – 2017  
Chair, October 2014 – June 2016  
Pathology and Laboratory Medicine  
Faculty Search Committee, 2011 – 2012  
Faculty Search Committee (Chair), 2018 – present  
Pathology and Laboratory Medicine, Preliminary Examination Committee, 2008 – 2010  
Molecular Diagnostic Science Master's Program Advisory Board, School of Allied Health, 2008 – present  
Molecular Diagnostic Science Certificate Program Advisory Board, School of Allied Health, 2006 – 2008

***To UNC Health Care***

Highly Communicable Disease Response Steering Committee, 2018 – present  
Antimicrobial Stewardship Program Committee, 2017 – present  
Hospital Infection Control Committee, UNC Health Care, October 2009 – present  
Anti-infective Subcommittee of the Pharmacy & Therapeutics Committee and the Department of Hospital Epidemiology, UNC Medical Center, January 2005 – present  
Anti-infective Committee, UNC Health Care System, November 2016 – present  
CLABSI/MRSA Bacteremia Prevention Core Team, April 2016 – May 2018  
Dean's Ebola Coordinating Group, UNC Health Care, October 2014 – 2015  
H1N1 Influenza Steering Committee, UNC Health Care, May 2009 – April 2010  
Pandemic Preparedness Task Force, UNC Health Care, January 2007 – May 2009

***To the State of North Carolina***

North Carolina Tuberculosis Medical Advisory Committee, NC Department of Health and Human services, 2009 – present  
North Carolina Laboratory Response Forum, NC Department of Health and Human Services, 2004 – present  
Laboratory Technical Consultant, Durham County Health Department, Durham, NC, 2011 – 2016  
Ad hoc consultant, 2016 – 2018

***Professional Memberships***

American Society for Microbiology  
American Society for Clinical Pathology  
Association for Molecular Pathology  
Pan American Society for Clinical Virology  
Southeastern Association of Clinical Microbiology  
Infectious Diseases Society of America