

Kelli L. Palmer - Curriculum Vitae

Kelli L. Palmer
The University of Texas at Dallas
School of Natural Science and Mathematics
Department of Biological Sciences

Educational History

Doctor of Philosophy, December 2008, University of Texas at Austin (Austin, Texas), Molecular Genetics and Microbiology

- Dissertation: "Nutritional modeling of bacterial infections: Physiology and metabolism of *Pseudomonas aeruginosa* during growth in cystic fibrosis sputum," Advisor: Marvin Whiteley, Ph.D.

Certificate in Microbial Diversity, August 2008, Marine Biological Laboratory (Woods Hole, Massachusetts), Microbial Diversity

- Course project: "Modeling the effect of diet on microbial symbiotic populations"

Bachelor of Science, August 2003, University of Oklahoma (Norman, Oklahoma), Microbiology, minor in Chemistry

Employment History – principal positions since the Bachelor's degree:

Associate Professor, September 2018 - present, University of Texas at Dallas (Richardson, Texas).

Assistant Professor, August 2012 - present, University of Texas at Dallas (Richardson, Texas).

Postdoctoral Research Fellow, July 2010 - May 2012, Massachusetts Eye and Ear Infirmary and Harvard Medical School Departments of Ophthalmology, and of Microbiology and Immunobiology (Boston, Massachusetts)

Teaching Fellow in Organismic and Evolutionary Biology, August 2010 - January 2011, Harvard University (Cambridge, Massachusetts)

Postdoctoral Research Fellow, September 2008 - July 2010, Schepens Eye Research Institute and Harvard Medical School Departments of Ophthalmology, and of Microbiology and Immunobiology (Boston, Massachusetts)

Teaching Fellow in Organismic and Evolutionary Biology, August 2009 - January 2010, Harvard University (Cambridge, Massachusetts)

Teaching Fellow in Molecular and Cellular Biology, August 2008 - January 2009, Harvard University (Cambridge, Massachusetts)

Graduate Research and Teaching Assistant, August 2006 - August 2008, University of Texas at Austin Department of Microbiology (Austin, Texas)

Graduate Research Assistant, August 2004 - July 2006, University of Oklahoma College of Medicine Department of Microbiology and Immunology (Oklahoma City, Oklahoma)

Graduate Research Assistant, August 2003 - July 2004, University of Oklahoma Department of Botany and Microbiology (Norman, Oklahoma)

Employment History – concurrent temporary or visiting appointments, consultantships:

Consultant, 2016 - 2017, Synereca Pharmaceuticals

Consultant, 2010 - 2011, Cubist Pharmaceuticals

Professional recognitions and honors (study, teaching, research, service):

2020, FRIENDS of the UT-Dallas Office of Research Award; recognizes UT-Dallas researchers who have achieved a cumulative level of federal research expenditures exceeding \$500,000 in the previous fiscal year

2018, Fellow, Cecil H. and Ida Green Chair in Systems Biology Science

2017 UTD School of Natural Sciences and Mathematics Outstanding Teaching Award for Tenure-Track Faculty

2015 Inspiring Women in STEM Award, *INSIGHT Into Diversity* magazine

Certificate of Distinction in Teaching for Fall 2009, Awarded Spring 2010, Harvard University.

Lola Ellis Robertson Scholarship, Marine Biological Laboratory, Summer 2008. Provided partial tuition for the 2008 Microbial Diversity course at the Marine Biological Laboratory, Woods Hole, Massachusetts.

Lois Pfiester Women in Science Scholarship, April 2005, University of Oklahoma Department of Botany and Microbiology.

Transatlantic Environmental Biotechnology Fellowship, September 2004, European Union-United States Taskforce on Biotechnology Research. Provided travel and living costs for one month training at the Technical University of Denmark on bacterial biofilm growth methods.

Student Travel Grant for the American Society of Microbiology Conference on Cell-Cell Communication 2004, July 2004, American Society for Microbiology.

Student Travel Grant for the American Society of Microbiology Conference on Biofilms 2003, November 2003, American Society of Microbiology.

University of Oklahoma Foundation Fellowship, Fall 2003-2006, University of Oklahoma Graduate College. Award based on merit. Provided graduate income supplement of \$5000 per year.

Harrison L. Chance Scholarship, University of Oklahoma Department of Botany and Microbiology, 2003. Award based on merit and intentions of a career in microbiology.

National Merit Finalist, Spring 1999, National Merit Corporation.

- National Merit Scholar, 1999-2003, The University of Oklahoma. Provided funding for tuition, books, room and board.
- Corporate National Merit Scholarship, 1999-2003, Union Pacific Corporation. Provided supplemental funding for undergraduate studies at the University of Oklahoma.

Professional memberships:

American Society for Microbiology, 2003-present

Society for Healthcare Epidemiology of America, 2013-2015

Achievements in original investigation:

Articles in refereed journals: [*=articles where I am corresponding or co-corresponding author]

1. Palacios Araya D, **Palmer KL***, Duerkop BA*. CRISPR-based antimicrobials to obstruct antibiotic-resistant and pathogenic bacteria. PLoS Pathog. 2021 Jul;17(7): e1009672. eCollection 2021 Jul. PubMed PMID: 34237097; PubMed Central PMCID: PMC8266055.
2. Joyce LR, Guan Z*, **Palmer KL***. *Streptococcus pneumoniae*, *S. pyogenes*, and *S. agalactiae* membrane phospholipid remodeling in response to human serum. Microbiology (Reading). 2021 May;167(5). doi: 10.1099/mic.0.001048. PubMed PMID: 33983874; PubMed Central PMCID: PMC8290102.
3. Wu X, Shen WJ, Deshpande A, Olaitan AO, **Palmer KL**, Garey KW, Hurdle JG. The integrity of heme is essential for reproducible detection of metronidazole-resistant *Clostridioides difficile* by agar dilution susceptibility tests. J Clin Microbiol. 2021 Jun 16;:JCM0058521. doi: 10.1128/JCM.00585-21. [Epub ahead of print] PubMed PMID: 34132582.
4. Sara Ping, Nancy Mayorga-Reyes, Valerie J. Price, Michelle Onuoha, Pooja Bhardwaj, Marinelle Rodrigues, Jordan Owen, Dennise Palacios Araya, Ronda L. Akins, **Kelli L. Palmer***. Characterization of presumptive vancomycin-resistant enterococci recovered during infection control surveillance in Dallas, Texas, USA. Access Microbiology. 2021. <https://doi.org/10.1099/acmi.0.000214>.
5. Bhardwaj P, Islam MZ, Kim C, Nguyen UT, **Palmer KL***. *ddcP*, *pstB*, and excess D-lactate impact synergism between vancomycin and chlorhexidine against *Enterococcus faecium* 1,231,410. PLoS One. 2021;16(4):e0249631. doi: 10.1371/journal.pone.0249631.
6. Wei Y, Joyce LR, Wall AM, Guan Z*, **Palmer KL***. *Streptococcus pneumoniae*, *S. mitis*, and *S. oralis* Produce a Phosphatidylglycerol-Dependent, *ItaS*-Independent Glycerophosphate-Linked Glycolipid. mSphere. 2021 Feb 24;6(1). doi: 10.1128/mSphere.01099-20.
7. Jain SS, Siddiqui DA, Wheelis SE, **Palmer KL**, Wilson TG Jr, Rodrigues DC. Mammalian cell response and bacterial adhesion on titanium healing abutments: effect of multiple implantation and sterilization cycles. Clin Oral Investig. 2020 Sep 18;. doi: 10.1007/s00784-020-03574-0. [Epub ahead of print]
8. Jain SS, Schramm STJ, Siddiqui DA, Huo W, **Palmer KL**, Wilson TG Jr, Rodrigues DC. Effects of multiple implantations of titanium healing abutments: Surface characteristics and microbial colonization. Dent Mater. 2020 Sep;36(9):e279-e291. doi: 10.1016/j.dental.2020.05.016. Epub 2020 Jun 24.
9. Deshpande A, Wu X, Huo W, **Palmer KL**, Hurdle JG. Chromosomal Resistance to Metronidazole in *Clostridioides difficile* Can Be Mediated by Epistasis between Iron Homeostasis and Oxidoreductases. Antimicrob Agents Chemother. 2020 Jul 22;64(8). doi: 10.1128/AAC.00415-20. Print 2020 Jul 22.

10. Chatterjee A, Willett JLE, Nguyen UT, Monogue B, **Palmer KL**, Dunny GM, Duerkop BA. Parallel Genomics Uncover Novel Enterococcal-Bacteriophage Interactions. *mBio*. 2020 Mar 3;11(2). doi: 10.1128/mBio.03120-19.
11. Shen WJ, Deshpande A, Hevener KE, Endres BT, Garey KW, **Palmer KL**, Hurdle JG. Constitutive expression of the cryptic vanGCd operon promotes vancomycin resistance in *Clostridioides difficile* clinical isolates. *J Antimicrob Chemother*. 2019 Dec 24. pii: dkz513. doi: 10.1093/jac/dkz513. [Epub ahead of print]
12. Luke Joyce, Ziqiang Guan*, and **Kelli Palmer***. 2019. Phosphatidylcholine biosynthesis in *Mitis* group streptococci via host metabolite scavenging. *Journal of Bacteriology*. Oct 21;201(22). pii: e00495-19. doi: 10.1128/JB.00495-19. Print 2019 Nov 15.
 - Selected by the Editors as a Spotlight Article for the issue
13. Marinelle Rodrigues, Sara McBride, Karthik Hullahalli, **Kelli Palmer***, and Breck Duerkop*. 2019. Conjugative delivery of CRISPR-Cas9 for the selective depletion of antibiotic-resistant enterococci. *Antimicrobial Agents and Chemotherapy* Oct 22;63(11). pii: e01454-19. doi: 10.1128/AAC.01454-19. Print 2019 Nov.
 - Editor's Pick for the issue
14. Neugent ML, Gadhvi J, **Palmer KL**, Zimmern PE, De Nisco NJ. 2019. Detection of tissue-resident bacteria in bladder biopsies by 16S rRNA fluorescence *in situ* hybridization. *J Vis Exp*. Oct 18;(152). doi: 10.3791/60458.
15. Silvia I. Gallegos, Shaída Parsaei, Danyal A. Siddiqui, Claudia C. Biguetti, **Kelli L. Palmer**, and Danieli C. Rodrigues. 2019. Can dental cement composition affect dental implant success? *ACS Biomater. Sci. Eng.* 5:5116-5127.
16. Valerie J Price, Sara W McBride, Karthik Hullahalli, Anushila Chatterjee, Breck A Duerkop*, and **Kelli L Palmer***. *Enterococcus faecalis* CRISPR-Cas Is a Robust Barrier to Conjugative Antibiotic Resistance Dissemination in the Murine Intestine. *mSphere* 2019 Jul 24; 4(4). Pii: e00464-19.
17. Chatterjee A, Johnson CN, Luong P, Hullahalli K, McBride SW, Schubert AM, **Palmer KL**, Carlson PE Jr, Duerkop BA. 2019. Bacteriophage resistance alters antibiotic-mediated intestinal expansion of enterococci. *Infect Immun*. 2019 May 21;87(6). pii: e00085-19. doi: 10.1128/IAI.00085-19. Print 2019 Jun.
18. De Nisco NJ, Neugent M, Mull J, Chen L, Kuprasertkul A, de Souza Santos M, **Palmer KL**, Zimmern P, Orth K. Direct Detection of Tissue-Resident Bacteria and Chronic Inflammation in the Bladder Wall of Postmenopausal Women with Recurrent Urinary Tract Infection. *Journal of Molecular Biology* 2019 Apr 17 pii: S0022-2836(19)30202-5.
19. Sridhar S, Wang F, Wilson TG, **Palmer K**, Valderrama P, Rodrigues DC. The role of bacterial biofilm and mechanical forces in modulating dental implant failures. *J Mech Behav Biomed Mater*. 2019 Apr;92:118-127. doi: 10.1016/j.jmbbm.2019.01.012. Epub 2019 Jan 17.
20. Wenwen Huo, Hannah M Adams, Cristian Trejo, Rohit Badia, and **Kelli L Palmer***. A Type I restriction-modification system associated with *Enterococcus faecium* subspecies separation. *Appl Environ Microbiol*. 2019 Jan 9;85(2). pii: e02174-18. doi: 10.1128/AEM.02174-18.

21. Sridhar S, Wang F, Wilson TG Jr, Valderrama P, **Palmer K**, Rodrigues DC. Multifaceted roles of environmental factors towards dental implant performance: Observations from clinical retrievals and *in vitro* testing. *Dent Mater*. 2018 Nov;34(11):e265-e279. doi: 10.1016/j.dental.2018.08.299.
22. Quiram G, Montagner F, **Palmer KL**, Stefan MC, Washington KE, Rodrigues DC. Novel chlorhexidine-loaded polymeric nanoparticles for root canal treatment. *J Funct Biomater*. 2018 Apr 17;9(2). pii: E29. doi: 10.3390/jfb9020029.
23. Khang Ho, Wenwen Huo, Savannah Pas, Ryan Dao, and **Kelli L. Palmer***. Loss-of-Function mutations in *epaR* confer resistance to phiNPV1 infection in *Enterococcus faecalis* OG1RF. *Antimicrob Agents Chemother*. 2018 Sep 24;62(10). pii: e00758-18.
24. Karthik Hullahalli, Marinelle Rodrigues, Uyen Nguyen, and **Kelli L. Palmer***. 2018. An attenuated CRISPR-Cas system in *Enterococcus faecalis* permits DNA acquisition. *mBio* 2018 May 1;9(3). pii: e00414-18.
25. Farry Li and **Kelli L. Palmer***. 2018. The ABC transporter EfrEF and transcription regulator ChlR are required for chlorhexidine stress response in *Enterococcus faecalis* V583. *Antimicrobial Agents and Chemotherapy* 2018 May 25;62(6). pii: e00267-18.
26. Pooja Bhardwaj, Amrita Hans, Kinnari Ruikar, Ziqiang Guan, and **Kelli L. Palmer***. 2018. Reduced chlorhexidine and daptomycin susceptibility arises in vancomycin-resistant *Enterococcus faecium* after serial chlorhexidine exposure. *Antimicrobial Agents and Chemotherapy* 62(1): e01235-17.
 - Featured in a January 2018 commentary in the *New England Journal of Medicine* 'Journal Watch' (<https://www.jwatch.org/na45877/2018/01/22/chlorhexidine-exerts-selective-pressure-daptomycin>)
27. Ismael Leou Banla, Sushma Kommineni, Michael Hayward, Marinelle Rodrigues, **Kelli L Palmer**, Nita H Salzman, Christopher J Kristich. 2018. Modulators of *Enterococcus faecalis* cell envelope integrity and antimicrobial resistance influence stable colonization of the mammalian gastrointestinal tract. *Infection and Immunity* 86(1): e00381-17.
28. Karthik Hullahalli, Marinelle Rodrigues, and **Kelli L Palmer***. 2017. Exploiting CRISPR-Cas to manipulate *Enterococcus faecalis* populations. *eLife* pii: e26664. doi:10.7554/eLife.26664.
29. Hannah M Adams, Luke Joyce, Ziqiang Guan, Ronda Akins, and **Kelli L Palmer***. 2017. *Streptococcus mitis* and *S. oralis* lack a requirement for CdsA, the enzyme required for synthesis of major membrane phospholipids in bacteria. *Antimicrobial Agents and Chemotherapy* 61(5): e02552-16.
30. Shelley L Pringle, **Kelli L Palmer**, and Robert J McLean. 2017. Indole production provides limited benefit to *Escherichia coli* during co-culture with *Enterococcus faecalis*. *Arch Microbiol* 199(1):145-153.
31. Ronda L Akins, Katie E Barber, and **Kelli L Palmer**. 2016. Pronounced heterogeneity observed in high-level daptomycin-resistant viridans group streptococci. *J Glob Antimicrob Resist* 7:159-166.
32. Breck A Duerkop, Wenwen Huo, Pooja Bhardwaj, **Kelli L Palmer***, and Lora V Hooper (co-corresponding author). 2016. Molecular basis for lytic bacteriophage resistance in enterococci. *mBio* 7(4). pii: e01304-16.
33. Valerie J Price, Wenwen Huo, Ardalan Sharifi, and **Kelli L Palmer***. 2016. CRISPR-Cas and restriction-modification act additively against conjugative antibiotic resistance plasmid transfer in *Enterococcus faecalis*. *mSphere* 1:e00064-16.
 - Editor's pick; featured in an associated commentary.

34. Haseeb R, Lau M, Sheah M, Montagner F, Quiram G, **Palmer K**, Stefan MC, Rodrigues DC. 2016. Synthesis and characterization of new chlorhexidine-containing nanoparticles for root canal disinfection. *Materials* 9:452.
35. Pooja Bhardwaj, Elizabeth Ziegler, and **Kelli L Palmer***. 2016. Chlorhexidine induces VanA-type vancomycin resistance genes in enterococci. *Antimicrobial Agents and Chemotherapy* 60:2209-2221.
36. Sridhar S, Zain A, Wilson TG Jr, Valderrama P, Wadhwani C, **Palmer K**, Rodrigues DC. 2016. In vitro evaluation of the effects of multiple oral factors on dental implants surfaces. *J Oral Implantol* 42:248-257.
37. Gindri IM, **Palmer KL**, Siddiqui DA, Aghyarian S, Frizzo CP, Martins MAP, Rodrigues DC. 2016. Evaluation of mammalian and bacterial cell activity on titanium surface coated with dicationic imidazolium based ionic liquids. *RSC Advances* 6:36475-36483.
38. Karthik Hullahalli, Marinelle Rodrigues, Brendan D Schmidt, Xiang Li, Pooja Bhardwaj, and **Kelli L Palmer***. 2015. Comparative analysis of the orphan CRISPR2 locus in 242 *Enterococcus faecalis* strains. *PLoS ONE* 10:e0138890.
39. Hannah M Adams, Xiang Li, Carmela Mascio, Laurent Chesnel, and **Kelli L Palmer***. 2015. Mutations associated with reduced surotomycin susceptibility in *Clostridium difficile* and *Enterococcus* species. *Antimicrobial Agents and Chemotherapy* 59:4139-4147.
40. Wenwen Huo, Hannah M Adams, Michael Q Zhang (co-corresponding author), and **Kelli L Palmer***. 2015. Genome Modification in *Enterococcus faecalis* OG1RF Assessed by Bisulfite Sequencing and Single-Molecule Real-Time Sequencing. *Journal of Bacteriology* 197:1939-1951.
41. Sathyanarayanan Sridhar, Thomas G Wilson Jr, **Kelli L Palmer**, Pilar Valderrama, MT Mathew, Shalini Prasad, M Jacobs, Izabelle Gindri, and Danieli C Rodrigues. 2015. In Vitro Investigation of the Effect of Oral Bacteria in the Surface Oxidation of Dental Implants. *Clinical Implant Dentistry and Related Research* 17:e562–e575
42. Lucas C Rodriguez, **Kelli Palmer**, Francisco Montagner, and Danieli C Rodrigues. 2015. A novel chlorhexidine-releasing composite bone cement bone cement: Characterization of antimicrobial effectiveness and cement strength. *Journal of Bioactive and Compatible Polymers: Biomedical Applications* 30: 30-34.
43. Izabelle M Gindri, Danyal A Siddiqui, Pooja Bhardwaj, Lucas C Rodriguez, **Kelli L Palmer**, Clarissa P Frizzo, Marcos AP Martins, Danieli C Rodrigues. 2014. Dicationic imidazolium-based ionic liquids: a new strategy for biocompatible and antimicrobial materials *RSC Advances* 4: 62594-62602.
44. A Sadaka, **K Palmer**, T Suzuki, and M Gilmore. 2014. In vitro and in vivo models of *Staphylococcus aureus* endophthalmitis implicate specific nutrients in ocular infection" *PLoS ONE* 9:e110872
45. N Teixeira, S Varahan, MJ Gorman, **KL Palmer**, A Zaidman-Remy, R Yokohata, J Nakayama, LE Hancock, A Jacinto, MS Gilmore, M de Fátima Silva Lopes. 2013. *Drosophila* host model reveals new *Enterococcus faecalis* quorum-sensing associated virulence factors. *PLoS ONE* 8:e64740.
46. DC Rodrigues, P Valderrama, TG Wilson, **K Palmer**, A Thomas, S Sridhar, A Adapalli, M Burbano, C Wadhwani. 2013. Titanium corrosion mechanisms in the oral environment: a retrieval study. *Materials* 6:5258-5274.

47. VN Kos, CA Desjardins, A Griggs, G Cerqueira, A Van Tonder, MTG Holden, P Godfrey, **KL Palmer**, K Bodi, EF Mongodin, J Wortman, M Feldgarden, T Lawley, SR Gill, BJ Haas, B Birren, and MS Gilmore. 2012. "Comparative genomics of vancomycin resistant *Staphylococcus aureus*, and their position within the leading clade of US hospital MRSA." *mBio* 3:e00112-12.
 - Editors' pick, May/June 2012 issue
48. **K Palmer**, P Godfrey, A Griggs, V Kos, J Zucker, C Desjardins, G Cerqueira, D Gevers, S Walker, J Wortman, M Feldgarden, B Haas, B Birren, and MS Gilmore. 2012. Comparative genomics of enterococci: Variation in *E. faecalis*, clade structure in *E. faecium*, and defining characteristics of *E. gallinarum* and *E. casseliflavus*. *mBio* 3:e00318-11.
 - Editors' pick, January/February 2012 issue
 - One of the top 20 most cited *mBio* papers as of February 2020
49. **KL Palmer**, A Daniel, CA Hardy, JA Silverman, and MS Gilmore. 2011. Genetic basis for daptomycin resistance in enterococci. *Antimicrobial Agents and Chemotherapy* 55:3345-56.
50. **KL Palmer (co-first author)**, VN Kos, and MS Gilmore. 2010. Horizontal gene transfer and the genomics of enterococcal antibiotic resistance. *Current Opinions in Microbiology* 13:632-639.
51. **KL Palmer** and MS Gilmore. 2010. Multidrug resistant enterococci lack CRISPR-cas. *mBio* 1(4):e00227-10.
 - Featured in the American Society for Microbiology blog "Small Things Considered" on May 3, 2012
 - One of the top 20 most cited *mBio* papers as of February 2020
52. GC Palmer, **KL Palmer (co-first author)**, PA Jorth, and M Whiteley. 2010. Characterization of the *Pseudomonas aeruginosa* transcriptional response to phenylalanine and tyrosine. *Journal of Bacteriology* 192:2722-2728.
53. **KL Palmer**, K Carniol, JM Manson, D Heiman, T Shea, S Young, Q Zeng, D Gevers, M Feldgarden, B Birren, and MS Gilmore. 2010. High quality draft genome sequences of 28 *Enterococcus* sp. isolates. *Journal of Bacteriology* 192:2469-70.
54. Brown, SA, **KL Palmer (co-first author)** and M Whiteley. 2008. Revisiting the host as a growth medium. *Nature Reviews Microbiology* 6:657-66.
55. **KL Palmer**, LM Aye, and M Whiteley. 2007. Nutritional cues control *Pseudomonas aeruginosa* multi-cellular behavior in cystic fibrosis sputum. *Journal of Bacteriology* 189:8079-8087.
56. **KL Palmer**, SA Brown, and M Whiteley. 2007. Membrane-bound nitrate reductase is required for anaerobic growth in cystic fibrosis sputum. *Journal of Bacteriology* 189:4449-55.
57. Moreira, CG, **K Palmer**, M Whiteley, MP Sircili, LR Trabulsi, AF Castro, and V Sperandio. 2006. Bundle-forming pili and EspA are involved in biofilm formation by enteropathogenic *Escherichia coli*. *Journal of Bacteriology* 188:3952-61.
58. Aspedon, A, **K Palmer**, and M Whiteley. 2006. Microarray analysis of the osmotic stress response in *P. aeruginosa*. *Journal of Bacteriology* 188:2721-5.
59. **KL Palmer**, LM Mashburn, PK Singh, and M Whiteley. 2005. Cystic fibrosis sputum supports growth and cues key aspects of *Pseudomonas aeruginosa* physiology. *Journal of Bacteriology* 187:5267-77.

Articles appearing as chapters in edited volumes:

1. BA Duerkop, **KL Palmer**, and MJ Horsburgh. 2014. Enterococcal bacteriophages and genome defense. In *Enterococci: From Commensals to Leading Causes of Drug Resistant Infection* edited by D. Clewell, N. Shankar, Y. Ike, M. Gilmore, Boston: Massachusetts Eye and Ear Infirmary.
2. **KL Palmer***, W. van Schaik, R. Willems, and MS Gilmore. 2014. Enterococcal Genomics. In *Enterococci: From Commensals to Leading Causes of Drug Resistant Infection*, edited by D. Clewell, N. Shankar, Y. Ike, M. Gilmore, Boston: Massachusetts Eye and Ear Infirmary.
3. A Hatoum-Aslan, **KL Palmer**, MS Gilmore, and LA Marraffini. 2013. Type III CRISPR-Cas Systems and the Roles of CRISPR-Cas in Bacterial Virulence. In *CRISPR-Cas Systems*, edited by R. Barrangou and J. van der Oost, 201-219. Springer-Verlag Berlin Heidelberg.
4. **KL Palmer** and MS Gilmore. 2011. Selfish elements and self-defense in the enterococci. In *Genome Plasticity and Infectious Diseases*, edited by J. Hacker, U. Dobrindt, J. Kaper, and R. Kurth. Washington, DC: ASM Press.

Other Articles (not including pre-prints and conference abstracts):

1. **KL Palmer** and M Whiteley. 2011. DMS3-42: The secret to CRISPR-dependent biofilm inhibition in *Pseudomonas aeruginosa*. *Journal of Bacteriology*. 193:3431-2. [Commentary]

Presentations: Invited

1. Uniformed Services University of the Health Sciences Department of Microbiology and Immunology, Bethesda, MD (online seminar). September 28, 2020. Title: "New insights into the streptococcal cell membrane."
2. PhDDay at the University of Copenhagen, Copenhagen, Denmark (online seminar). November 12, 2020. Title: "Using CRISPR against antibiotic-resistant bacteria."
3. University of Texas at Arlington Department of Biology. January 30, 2020. Title: "Using CRISPR against antibiotic-resistant bacteria."
4. Lucian Symposium at Saint Edward's University. September 27, 2019. Title: "Using CRISPR against antibiotic-resistant bacteria."
5. CRISPR2019, Quebec City, Canada. June 2019. Title: "CRISPR-Cas defense against conjugative plasmids *in vitro* and *in vivo*."
6. University of Oklahoma Health Sciences Center Department of Microbiology and Immunology. Oklahoma City, Oklahoma. November 7, 2017, Title: "How CRISPR-Cas Impacts Antibiotic Resistance Emergence in *Enterococcus faecalis*."
7. University of Texas at Tyler Department of Biology. Tyler, Texas. November 3, 2017, Title: "How CRISPR-Cas Impacts Antibiotic Resistance Emergence in *Enterococcus faecalis*."

8. University of Texas Southwestern Medical Center Department of Microbiology. Dallas, Texas. September 26, 2017, Title: "How CRISPR-Cas Impacts Antibiotic Resistance Emergence in *Enterococcus faecalis*."
9. Ohio University Department of Molecular and Cellular Biology. Athens, Ohio. April 17, 2017, Title: "'Omics Investigations of Multidrug-Resistant *Enterococcus faecalis*."
10. State University of New York at Binghamton Department of Biological Sciences. Binghamton, New York. March 17, 2017, Title: "'Omics Investigations of Multidrug-Resistant *Enterococcus faecalis*."
11. Center for Antimicrobial Resistance and Microbial Genomics at McGovern Medical School. Houston, Texas. March 2nd, 2017, Title: "Omics Studies in MDR Enterococci."
12. Ferris State University. Big Rapids, Michigan. October 21st, 2016. Title: "Dude, Where's My CRISPR? Memory Loss in *Enterococcus faecalis*."
13. Bertinoro Computational Biology 2016: Bacterial Genome Evolution. Bertinoro, Italy. October 4th, 2016. Title: "Dude, Where's My CRISPR? Memory Loss in *Enterococcus faecalis*."
14. American Society for Microbiology Microbe 2016. Boston, Massachusetts. June 17th, 2016. Title: "Dude, Where's My CRISPR? Memory Loss in *Enterococcus faecalis*."
15. Defense Threat Reduction Agency. Fort Belvoir, Maryland. April 13th, 2016, Title: "Novel Strategies to Treat Rogue Enterococci: New Techniques and Old Drugs."
16. *Clostridium difficile* Gulf Coast Collaborative Meeting. Houston, Texas. December 4th, 2015, Title: "Omics Investigations of Multidrug-Resistant Enterococci."
17. Oklahoma State University Department of Microbiology. Stillwater, Oklahoma. September 28th, 2015. Title: "Selfish Elements and Self-Defense in the Enterococci."
18. Southern Methodist University Department of Biology. Dallas, Texas. January 30th, 2015. Title: "Antibiotic Resistance and the Emergence of Immune-Compromised Enterococci"
19. American Society for Microbiology Texas Branch Fall 2014 meeting, November 4, 2014. Title: "Antibiotic resistance and the emergence of immune-compromised enterococci."
20. University of Texas at Arlington Department of Biology seminar series, November 7, 2013. Title: "Selfish elements and self-defense in the enterococci."
21. American Society of Microbiology Michigan Branch Fall 2013 meeting, October 19, 2013. Title: "Selfish elements and self-defense in the enterococci."
22. University of Oklahoma Department of Botany and Microbiology seminar series, September 13, 2013. Title: "Selfish elements and self-defense in the enterococci."
23. Canadian Society of Microbiologists 2013 Annual Conference, June 18, 2013. Title: "Selfish elements and self-defense in the enterococci."
24. American Society of Microbiology Texas Branch Fall 2012 meeting. October 2012. Title: "Horizontal gene transfer and antibiotic resistance in the enterococci."

25. 2011 Gordon Research Conference on Microbial Adhesion and Signal Transduction. July 2011. Title: "Comparative genomic insights into enterococcal evolution."
26. 2011 Gordon Research Conference on Microbial Population Biology. July 2011. Title: "Selfish elements and self-defense in the enterococci."
27. Texas State University Department of Biology departmental seminar series. January 2011. Title: "Enterococci, multidrug resistance, and the prokaryotic immune system: where have all the CRISPRs gone?"
28. Harvard Microbial Sciences Initiative (MSI) Friday morning chalktalk. Cambridge, Massachusetts. October 2009. Title: "Antibiotic resistance and mobile DNA in *Enterococcus faecalis*: where have all the CRISPRs gone?"
29. Instituto de Tecnologia Química e Biológica (ITQB), Oeiras, Portugal. October 2009. Title: "Mobile DNA and multiple drug resistance in *Enterococcus faecalis*: how did it come to this?"

Presentations: Abstracts Submitted

1. Oral presentation at Plasmid Biology 2018. Seattle, Washington. August 2018. Title: "CRISPR-Cas is a robust barrier to *in vivo* antibiotic resistance plasmid transfer in *Enterococcus faecalis*"
2. Poster presentation at the 2017 Gordon Research Conference on Microbial Population Biology. Andover, NH. July 2017. Title: "Transient tolerance to chromosomal damage by the native *Enterococcus faecalis* CRISPR-Cas system."
3. Oral presentation at the 2017 American Society for Microbiology Microbe conference. New Orleans, LA. June 2017 Title: "Reduce chlorhexidine and daptomycin susceptibility in *Enterococcus faecium* after serial chlorhexidine exposure."
4. Oral presentation at the 2016 American Society for Microbiology Conference on Streptococcal Genetics. Washington, DC, August 2016. Title: "Antibiotic Selection Results in CRISPR Memory Loss in *Enterococcus faecalis*."
5. Poster presentation at the 2016 American Society for Microbiology Conference on Streptococcal Genetics. Washington, DC, August 2016. Title: "How *Enterococcus faecium* responds to chlorhexidine."
6. Oral presentation at the American Society for Microbiology Conference on Enterococci. Portland, Oregon. July-August 2010. Title: "Multidrug resistant enterococci lack CRISPR defense."
7. Poster presentation at the American Society for Microbiology Conference on Enterococci. Portland, Oregon. July-August 2010. Title: "Comparative genomic insights into enterococcal evolution in the age of antibiotics."
8. Poster presentation at the 4th European Conference on Prokaryotic Genomics, Goettingen, Germany. October 2009. Title: "Comparative genome analysis of *Enterococcus faecalis* isolates."
9. Oral presentation at the 5th International Conference on Gram-Positive Microorganisms, San Diego, CA. June 2009. Title: "Comparative genome analysis of *Enterococcus faecalis* isolates."

10. Poster presentation at the American Society of Microbiology Conference on Cell-Cell Communication 2007, Austin, Texas. October 2007. Title: "Nutritional cues control *Pseudomonas aeruginosa* multi-cellular behavior in cystic fibrosis sputum."
11. Poster presentation at Pseudomonas 2005, Marseille, France. August 2005. Title: "The *Pseudomonas aeruginosa* membrane-bound nitrate reductase is required for anaerobic growth in cystic fibrosis sputum."
12. Oral presentation at the University of Oklahoma Health Sciences Center Graduate Research Education and Technology (GREAT) Symposium 2005, March 2005, Title: "The *Pseudomonas aeruginosa* membrane-bound nitrate reductase is required for anaerobic growth in cystic fibrosis sputum."
13. Oral and poster presentations at the American Society of Microbiology Conference on Cell-Cell Communication 2004, Banff, Alberta. July 2004. Title: Cell-cell signaling by *Pseudomonas aeruginosa* in cystic fibrosis sputum."
14. Poster presentation at the American Society of Microbiology Conference on Biofilms 2003, Victoria, British Columbia. November 2003. Title: "A transcriptome analysis of sputum-grown *Pseudomonas aeruginosa*."
15. Oral presentation at the Lost Pines Molecular Biology Conference 2003, Smithville, Texas. October 2003. Title: "A transcriptome analysis of sputum-grown *Pseudomonas aeruginosa*."

Presentations by Mentees: Abstracts Submitted (Presenter underlined; not chronological. Student awards in bold.)

1. Luke R. Joyce, Ziqiang Guan, and Kelli L. Palmer. Oral presentation at the Virtual Streptococcal Trainee Symposium. Online. Sept 2020. Title: "Phosphatidylcholine biosynthesis in Mitis group streptococci via a host metabolite scavenging pathway."
2. Luke R. Joyce, Ziqiang Guan, and Kelli L. Palmer. Oral presentation at the Prokaryotic Pathogens Online Seminar Series. Online. May 2020. Title: "Phosphatidylcholine biosynthesis in Mitis group streptococci via a host metabolite scavenging pathway."
3. Luke R. Joyce, Ziqiang Guan, and Kelli L. Palmer. Virtual flash talk presentation at the Boston Bacterial Meeting. Online: Boston, MA. July 2020. Title: "Phosphatidylcholine biosynthesis in Mitis group streptococci via a host metabolite scavenging pathway."
4. Moutusee Islam, Ada Abaragu, Harita Sistu, Kelli Palmer. Oral presentation at Texas Branch American Society for Microbiology Virtual Fall Meeting. November 2020. Title: "Molecular characterization of VREfm isolates from Dallas, Texas". **Received the Sulkin Award for best oral presentation in the Medical Microbiology.**
5. Belle M. Sharon, Dennise Palacios Araya, Moutusee Islam, Amber Nguyen, Philippe Zimmern, Kelli Palmer, Nicole De Nisco. Poster presentation at Texas Branch American Society for Microbiology Virtual Fall Meeting. November 2020. Title: "Comparative genomics of *Enterococcus faecalis* to identify genetic determinants of fitness in the urinary environment."
6. Uyen Thy Nguyen, Karthik Hullahalli, Marinelle Rodrigues, Kelli Palmer. Poster presentation at the 2019 CRISPR meeting. Quebec City, Quebec. July 2019. Title: "A CRISPR-Cas9 genome editing system in *Enterococcus faecalis*."

7. Moutusee Islam, Harita Sistu, Ronda Akins and Kelli Palmer. Poster Presentation at the 2019 Annual Weeks of Welcome poster competition, The Office of Research, The University of Texas at Dallas. Title: "Molecular characterization of Vancomycin Resistant Enterococci (VRE) in Dallas." **Won 2nd place award**
8. Yahan Wei, Luke R. Joyce, Ashley M. Wall, Ziqiang Guan, Kelli L. Palmer. Poster presentation at the 2019 Texas Branch Meeting of the American Society for Microbiology. San Antonio, TX, Nov. 2019. Title:" Lipoteichoic acid synthesis in *Streptococcus mitis*."
9. Yahan Wei, Luke R. Joyce, Ashley M. Wall, Ziqiang Guan, Kelli L. Palmer. Poster presentation at the 2019 Cold Spring Harbor Laboratory Meeting of Microbial Pathogenesis & Host Response meeting. Cold Spring Harbor, NY, Sep. 2019. Title:" Lipoteichoic acid synthesis in *Streptococcus mitis*."
10. Yahan Wei, Luke R. Joyce, Ashley M. Wall, Ziqiang Guan, Kelli L. Palmer. Poster presentation at the 2019 20th International Conference on Bacilli and Gram-Positive Bacteria. University of Maryland, Baltimore, MD, July 2019. Title:" Lipoteichoic acid synthesis in *Streptococcus mitis*."
11. Luke. R Joyce, Ziqiang Guan, and Kelli L. Palmer. Oral presentation at the 20th International Conference on Bacilli and Gram-Positive Bacteria. Washington, District of Columbia. July 2019. Title: "Phosphatidylcholine biosynthesis in Mitis group streptococci via a host metabolite scavenging pathway."
12. Luke. R Joyce, Ziqiang Guan, and Kelli L. Palmer. Oral presentation at the Texas ASM Branch Meeting. San Antonio, Texas. November 2019. Title: "Phosphatidylcholine biosynthesis in Mitis group streptococci via a host metabolite scavenging pathway." **Won the O.B. Williams award for best talk in general microbiology.**
13. Luke. R Joyce, Ziqiang Guan, and Kelli L. Palmer. Poster presentation at the Cold Spring Harbor Laboratories: Microbial Pathogenesis and Host Response. Cold Spring Harbor, New York. September 2019. Title: "Phosphatidylcholine biosynthesis in Mitis group streptococci via a host metabolite scavenging pathway."
14. Jordan F. Owen, Michael L. Neugent, Julian G. Hurdle and Kelli L. Palmer. Poster presentation at the 2019 American Society for Microbiology: Texas Branch fall meeting. San Antonio, TX. November, 2019. Title: "Gas chromatography-mass spectrometry analysis of metronidazole degradation by *Enterococcus faecalis*."
15. Dennise Palacios, Marinelle Rodrigues, Sara W. McBride, Karthik Hullahalli, Ronda Akins, Sara Ping, Breck Duerkop, and Kelli L. Palmer. Poster presentation at the CRISPR 2019. Québec, Canada. June 2019. Title:" Employing CRISPR-Cas as an antimicrobial to eliminate antibiotic resistance from *Enterococcus faecalis*."
16. Dennise Palacios, Marinelle Rodrigues, Sara W. McBride, Karthik Hullahalli, Ronda Akins, Sara Ping, Breck Duerkop, and Kelli L. Palmer. Poster presentation at the 20th International Conference on Bacilli and Gram-Positive Bacteria. Washington, DC. July 2019. Title:" Employing CRISPR-Cas as an antimicrobial to eliminate antibiotic resistance from *Enterococcus faecalis*."
17. Christi Kim, Pooja Bhardwaj, and Kelli L. Palmer. PowerPoint presentation at the 2019 Fall Undergraduate Research Symposium at the University of Texas at Austin. Austin, Texas. September 2019. Title: "Effect of DdcP on synergy between vancomycin and chlorhexidine against *Enterococcus faecium*."
18. Christi Kim, Pooja Bhardwaj, and Kelli L. Palmer. Poster presentation at the 2019 ASBMB North Texas Regional Conference. October 2019. Dallas, Texas. Title: "Effect of DdcP on synergy between vancomycin and chlorhexidine against *Enterococcus faecium*."

19. Christi Kim, Pooja Bhardwaj, and Kelli L. Palmer. Poster presentation at the 2019 American Society of Microbiology. San Antonio, Texas. November 2019. Title: "Effect of DdcP on synergy between vancomycin and chlorhexidine against *Enterococcus faecium*."
20. Vincentia Onuegbulem and Kelli L. Palmer. Poster presentation at the 2019 Texas ASM Branch Fall Conference. San Antonio, Texas. November 2019. Title: "Resensitizing vancomycin-resistant enterococci (VRE) to vancomycin by implementing synergy tests."
21. Vincentia Onuegbulem, Uyen Thy Nguyen, and Kelli L. Palmer. Poster presentation at the University of Texas at Dallas Workshop on Antimicrobial Resistance. Richardson, Texas. April 2019. Title: "Resensitizing vancomycin-resistant enterococci (VRE) to vancomycin by implementing synergy tests."
22. Emily K. DeCurtis, Breck Duerkop, and Kelli L. Palmer. Poster Presentation at The 63rd Annual Wind River Conference on Prokaryotic Biology. Estes Park, Colorado June 2019. Title: "*In vitro* co-evolution of *Enterococcus faecalis* and bacteriophage VPE25."
23. Emily K. DeCurtis, Kelli L. Palmer, and Breck A. Duerkop. Poster Presentation at The 23rd Biennial Evergreen International Phage Meeting. Olympia, Washington August 2019. Title: "The Elucidating *in vitro* Co-evolutionary Adaptations of *Enterococcus faecalis* SF28073 and Bacteriophage VPE25."
24. Emily K. DeCurtis, Breck A. Duerkop and Kelli L. Palmer. Oral Presentation at The 2019 Fall Texas ASM Branch Meeting. San Antonio, Texas November 2019. Title: "Investigating the *in vitro* co-evolutionary interactions and adaptations of *Enterococcus faecalis* SF28073 and Bacteriophage VPE25."
25. Michael Neugent, Neha Hulyalkar, Vivian Nguyen, Amanda Arute, Amy Kurasertkul, Ashwani Kumar, Chao Xing, Phillippe E. Zimmern, Kelli L Palmer, Nicole J. De Nisco. Poster presentation at The Cold Spring Harbor Lab Microbiome Conference. Cold Spring Harbor, New York. July 2019. Title: "Shotgun Metagenomic Characterization of Microbiota Associated with Recurrent UT."
26. Michael Neugent, Neha Hulyalkar, Vivian Nguyen, Amanda Arute, Amy Kurasertkul, Ashwani Kumar, Chao Xing, Phillippe E. Zimmern, Kelli L Palmer, Nicole J. De Nisco. Poster presentation at FASEB Microbial Pathogenesis Conference. Snowmass, Colorado. July 2019. Title: "Shotgun Metagenomic Characterization of Microbiota Associated with Recurrent UT."
27. Michael Neugent, Neha Hulyalkar, Vivian Nguyen, Amanda Arute, Amy Kurasertkul, Ashwani Kumar, Chao Xing, Phillippe E. Zimmern, Kelli L Palmer, Nicole J. De Nisco. Poster presentation at The American Society of Microbiology Branch Meeting. San Antonio, Texas. November, 2019. Title: "Shotgun Metagenomic Characterization of Microbiota Associated with Recurrent UT."
28. Sareda T.J. Schramm. Oral presentation at the 63ed Annual Wind River Conference. Estes Park, Colorado. June 2019. Title: "Elucidating the healthy rat oral bacteriome and mycobioime."
29. Sareda T.J. Schramm, Emily DeCurtis, Sutton Whelis, Danieli C. Rodrigues, and Kelli L. Palmer. Poster presentation at the Cold Springs Harbor Laboratory Microbiome conference. Cold Springs Harbor, New York. July 2019. Title: "The oral microbiome of the Lewis rat."
30. Moutusee Islam and Kelli Palmer. Poster presentation at the 2018 Wind River Conference on Prokaryotic Biology. Estes Park, Colorado. June 2018. Title: "Structural characterisation of CRISPR-Cas in *Enterococcus faecium*."

31. Khang Ho, Wenwen Huo, Savannah Pas, Ryan Dao, and Kelli L. Palmer. Poster presentation at the 2018 Molecular Genetics of Bacteria and Phages. Madison, Wisconsin. August 2018. Title: "Spontaneous resistance to phage NPV1 through *epaR* confers increased daptomycin sensitivity in *Enterococcus faecalis* OG1RF."
32. Karthik Hullahalli, Marinelle Rodrigues, Sara McBride, Breck Duerkop, and Kelli Palmer. Oral presentation at the Molecular Genetics of Bacteria and Phages meeting in Madison, Wisconsin. August 2018. Title: "Depleting antibiotic resistance with CRISPR probiotics."
33. Karthik Hullahalli, Marinelle Rodrigues, Uyen Nguen, and Kelli Palmer. Poster presentation at the American Society for Microbiology Microbe Meeting in Atlanta, Georgia. June 2018. Title: "An attenuated CRISPR-Cas system permits DNA acquisition in *Enterococcus faecalis*."
34. Smriti Verma, Valerie Price, and Kelli L. Palmer. Poster Presentation at 2018 Texas Branch ASM Conference. Corpus Christi, TX. November 2018. Title: "Production of Competitive Factors by Enterococci."
35. Smriti Verma, Valerie Price, and Kelli L. Palmer. Poster Presentation at 2018 American Society of Biochemistry and Molecular Biology Regional Conference. Richardson, TX. September 2018. Title: "Production of Competitive Factors by Enterococci."
36. Cong Zhang and Kelli L. Palmer. Poster presentation and lightning talk at the 62nd Annual Wind River Conference on Prokaryotic Biology. Estes Park, CO. June 2018. Title: "Replicon Analysis of Plasmids from Enterococci."
37. Dennise Palacios Araya, Marinelle Rodrigues, Sara W. McBride, Karthik Hullahalli, Ronda L. Akins, Sara Ping, Breck A. Duerkop, and Kelli Palmer. Poster presentation at the 62nd Annual Wind River Conference on Prokaryotic Biology. Estes Park, CO. June 2018. Title: "Employing CRISPR-Cas as antimicrobials against antibiotic-resistant *Enterococcus faecalis*."
38. Uyen Thy Nguyen, Karthik Hullahalli, and Kelli Palmer. Poster presentation at the Annual Biomedical Research Conference for Minority Students (ABRCMS) in Indianapolis, Indiana. November 2018. Title: "The role of carbon metabolism pathways in levofloxacin resistance in *Enterococcus faecalis*."
39. Uyen Thy Nguyen, Karthik Hullahalli, and Kelli Palmer. Poster presentation at the Texas Branch ASM Conference in Corpus Christi. November 2018. Title: "The role of carbon metabolism pathways in levofloxacin resistance in *Enterococcus faecalis*"
40. Wenwen Huo, Sareda T.J. Schramm, Danieli C. Rodrigues, Kelli L. Palmer. Poster presentation at the 2018 Wind River Conference on Prokaryotic Biology, Estes Park, Colorado, June 2018. Title: "Race for the surface: the tug-o-war that influences dental implant success."
41. Luke R Joyce, Ziqiang Guan and Kelli L Palmer. Oral presentation at the 62nd Annual Wind River Conference on Prokaryotic Biology. Estes Park, Colorado. June 2018. Title: "The curious case of phosphatidylcholine in *Streptococcus mitis*."
42. Luke R Joyce, Ziqiang Guan and Kelli L Palmer. Poster presentation at the 2018 Gordon Research Conference on Streptococcal Biology. Newry, Maine. August 2018 Title: "The curious case of phosphatidylcholine in *Streptococcus mitis*."

43. Luke R Joyce, Ziqiang Guan and Kelli L Palmer. Poster presentation at the 2018 International Conference on Gram-Positive Pathogens. Omaha, Nebraska. October 2018. Title: "The curious case of phosphatidylcholine in *Streptococcus mitis*."
44. Sareda T. J. Schramm, Emily K. DeCurtis, Kelli Palmer, Danieli B.C. Rodrigues. Poster presentation at the American Society of Microbiology Texas Branch 2018 Fall Meeting. Corpus Christi, Texas. November 2018. Title: "The Fate of Dental Implant Osseointegration Compromised by Microbial Infection."
45. Khang Ho, Wenwen Huo, and Kelli Palmer. Oral presentation at the 2017 Texas Phage Symposium. College Station, Texas. October 2017. Title: "φNPV1 resistance is accompanied by susceptibility to daptomycin and osmotic stress."
46. Khang Ho, Wenwen Huo, and Kelli Palmer. Oral presentation at the 2017 Texas Branch American Society for Microbiology Fall Meeting. College Station, Texas. October 2017. Title: "φNPV1 resistance is accompanied by susceptibility to daptomycin and osmotic stress."
47. Luke R. Joyce, Sai A. Kamma, and Kelli L. Palmer. Talk at the 2017 Gulf Coast Undergraduate Research Symposium. Houston, Texas. November 2017. Title: "Transposon Mutagenesis in *Streptococcus mitis* and *Streptococcus oralis*."
48. Luke R. Joyce, Sai A. Kamma, and Kelli L. Palmer. Poster presentation at the 2017 Texas Branch American Society for Microbiology Fall Meeting. College Station, Texas. October 2017. Title: "Transposon Mutagenesis in *Streptococcus mitis* and *Streptococcus oralis*."
49. Rohit Badia, Cristian Trejo, Hannah Adams, and Kelli Palmer. Poster presentation at the 2017 Texas Branch American Society for Microbiology Fall Meeting. College Station, Texas. October 2017. Title: "Characterization of An Orphan DNA Methyltransferase in *Enterococcus faecium* 1,141,733."
50. Hannah Adams, Luke Joyce, Ziqiang Guan, Ronda Akins, and Kelli Palmer. Oral presentation at the 2017 Texas Branch ASM Spring Meeting. New Braunfels, Texas. March 2017. Title: "*Streptococcus mitis* and *Streptococcus oralis* mutate an 'essential' gene upon exposure to daptomycin."
51. Hannah Adams, Luke Joyce, Ziqiang Guan, Ronda Akins, and Kelli Palmer. Oral presentation at the 2017 Experimental Biology Meeting. Chicago, Illinois. April 2017. Title: "*Streptococcus mitis* and *Streptococcus oralis* mutate an 'essential' gene upon exposure to daptomycin."
52. Hannah Adams, Luke Joyce, Ziqiang Guan, Ronda Akins, and Kelli Palmer. Poster presentation at the 2017 Experimental Biology Meeting. Chicago, Illinois. April 2017. Title: "*Streptococcus mitis* and *Streptococcus oralis* mutate an 'essential' gene upon exposure to daptomycin."
53. Marinelle Rodrigues, Karthik Hullahalli and Kelli L. Palmer. Poster presentation at the 2017 American Society for Biochemistry and Molecular Biology Annual Meeting. Chicago, Illinois April 2017. Title: "CRISPR-mediated removal of antibiotic resistance genes from *Enterococcus faecalis* populations "
54. Marinelle Rodrigues, Karthik Hullahalli and Kelli L. Palmer. Poster presentation at the 2017 Gordon Research Conference and Seminar on Microbial Adhesion and Signal Transduction. Newport, Rhode Island. July 2017. Title: "CRISPR-mediated removal of antibiotic resistance genes."

55. Hannah M. Adams, Luke R. Joyce, Ziqiang Guan, Ronda L. Akins, and Kelli L. Palmer. Poster presentation at the 61st Annual Wind River Conference on Prokaryotic Biology. Estes Park, Colorado. June 2017. Title: "*Streptococcus mitis* and *Streptococcus oralis* mutate an 'essential' gene upon exposure to daptomycin."
56. Karthik Hullahalli, Marinelle Rodrigues, and Kelli Palmer. Oral presentation at the 2017 Wind River Conference for Prokaryotic Biology. Estes Park, Colorado. June 2017. Title: "Transient tolerance to chromosomal damage by the native *Enterococcus faecalis* CRISPR-Cas system."
57. Karthik Hullahalli, Marinelle Rodrigues, and Kelli Palmer. Poster presentation at the 2017 American Society for Microbiology Microbe Meeting. New Orleans, Louisiana. June 2017. Title: "Exploiting CRISPR-Cas to manipulate *Enterococcus faecalis* populations."
58. Karthik Hullahalli, Marinelle Rodrigues, and Kelli Palmer. Poster presentation at the 2017 Undergraduate Research Day at the Texas Capitol. Austin, Texas. Title: "Exploiting CRISPR-Cas to manipulate *Enterococcus faecalis* populations."
59. Karthik Hullahalli, Marinelle Rodrigues, and Kelli Palmer. Poster presentation at the 2016 Undergraduate Research Poster Contest at UT Dallas. Richardson, Texas, March 2016. Title: "Restarting the broken CRISPR immune system of *Enterococcus faecalis*."
60. Karthik Hullahalli, Marinelle Rodrigues, and Kelli Palmer. Poster presentation at the 2016 Molecular Genetics of Bacteria and Phages conference. Madison, Wisconsin, August 2016. Title: "Exploiting Antibiotic Selection and CRISPR-Cas to Alter *Enterococcal* Population Structure."
61. Karthik Hullahalli, Marinelle Rodrigues, and Kelli Palmer. Oral Presentation at the 2016 Gulf Coast Undergraduate Research Symposium. Houston, Texas, October 2016. Title "CRISPR mediated alteration of population structure in *Enterococcus faecalis*." **Received award for Outstanding Presentation in biosciences.**
62. Karthik Hullahalli, Marinelle Rodrigues, and Kelli Palmer. Oral Presentation at the 2016 Texas Branch American Society for Microbiology conference. Richardson, Texas, November 2016. Title "Exploiting Antibiotic Selection and CRISPR-Cas to Alter *Enterococcal* Population Structure."
63. Pooja Bhardwaj, Kinnari Ruikar, and Kelli Palmer. Oral presentation at the 2016 Texas Branch American Society of Microbiology (ASM) Fall meeting. The University of Texas at Dallas, November 2016. Title: "Chlorhexidine exposure impacts daptomycin antibiotic resistance in *Enterococcus faecium*." **S.E. Sulkin Oral Presentation Award, First Prize**
64. Pooja Bhardwaj and Kelli Palmer. Oral presentation at the 2016 Wind River Conference. Estes Park, Colorado, June 2016. Title: "How *Enterococcus faecium* responds to chlorhexidine."
65. Pooja Bhardwaj and Kelli Palmer. Poster presentation at the 2016 Gordon Conference on Microbial Stress Responses. South Hadley, MA, July 2016. Title: "How *Enterococcus faecium* responds to chlorhexidine."
66. Sara Ping, Nancy Mayorga-Reyes, Valerie Price, Ronda Akins, and Kelli Palmer. Poster presentation at the 2016 Annual Fall Meeting for the American Society of Microbiology - Texas Branch. Richardson, Texas, October 2016. Title: "Determining the Prevalence of Vancomycin Resistant *Enterococci* in Routine Fecal Surveillance Cultures." **2nd place in medical microbiology undergraduate poster session.**

67. Marinelle Rodrigues, Karthik Hullahalli, and Kelli Palmer. Poster presentation at the 2016 American Society of Microbiology Texas Branch Meeting. The University of Texas at Dallas, Dallas, Texas, November 2016. Title: "An *rnc*-independent orphan CRISPR locus in *Enterococcus faecalis*."
68. Marinelle Rodrigues, Karthik Hullahalli, and Kelli Palmer. Poster presentation at the 2016 Molecular Genetics of Bacteria and Phages Meeting. The University of Wisconsin at Madison, August 2016. Title: "An *rnc*-independent orphan CRISPR locus in *Enterococcus faecalis*."
69. Marinelle Rodrigues, Karthik Hullahalli, and Kelli Palmer. Oral presentation at the 2016 Wind River Conference on Prokaryotic Biology. Estes Park, Colorado, June 2016. Title: "Assessing the role of the orphan CRISPR locus of *Enterococcus faecalis* in genome defense."
70. Khang Ho, Wenwen Huo, and Kelli Palmer. Oral presentation at the 2016 Texas Branch Meeting of the American Society of Microbiology. Richardson, Texas, November 2016. Title: "Characterization of phiNPV1, a bacteriophage with activity against *Enterococcus faecalis*."
71. Valerie Price, Wenwen Huo, Ardalan Sharifi and Kelli Palmer. Oral presentation at the 60th Wind River Conference on Prokaryotic Biology. Estes Park, Colorado, June 2016. Title: "Plasmid maintenance results in CRISPR memory loss in *E. faecalis*."
72. Valerie Price, Wenwen Huo, Ardalan Sharifi and Kelli Palmer. Oral presentation at the Evolution General Meeting. Austin, Texas, June 2016. Title: "Plasmid maintenance results in CRISPR memory loss in *E. faecalis*."
73. Valerie Price, Wenwen Huo, Ardalan Sharifi and Kelli Palmer. Poster presentation at the Evolution General Meeting. Austin, Texas, June 2016. Title: "Plasmid maintenance results in CRISPR memory loss in *E. faecalis*."
74. Valerie Price, Wenwen Huo, Ardalan Sharifi and Kelli Palmer. Poster presentation at the Texas Branch of the American Society of Microbiology Fall Meeting. Richardson, Texas, November 2016. Title: "Plasmid maintenance results in CRISPR memory loss in *E. faecalis*." **Samuel Kaplan Award for Outstanding Scientific Achievement in Molecular Microbiology for a Poster given by a Graduate Student**
75. Hannah Adams, Luke Joyce, Ronda Akins, and Kelli Palmer. Poster presentation at the 2016 Wind River Conference on Prokaryotic Biology. Estes Park, CO, June 2016. Title: "One-step daptomycin resistance: A widespread concern or a unique phenomenon?"
76. Hannah Adams, Luke Joyce, Ronda Akins, and Kelli Palmer. Poster presentation at the 2016 American Society of Microbiology conference on Streptococcal Genetics. Washington, D.C., August 2016. Title: "One-step daptomycin resistance in viridans group streptococci."
77. Luke Joyce and Kelli Palmer. Poster presentation at the 2016 American Society of Microbiology Texas Branch Meeting. Richardson, Texas, November 2016. Title: "Genome defense systems in *Streptococcus mitis* and *Streptococcus oralis* infective endocarditis isolates." **Samuel Kaplan award for 1st place poster in Genomic Microbiology**
78. Wenwen Huo, Valerie Price, Michael Zhang and Kelli Palmer. Oral presentation at the 2016 ASM/ICAAC meeting. Boston, Massachusetts, June 2016. Title: "Genome defense systems compromise for beneficial MGE acquisition in *E. faecalis*."

79. Wenwen Huo, Valerie Price, Michael Zhang and Kelli Palmer. Oral presentation at the 2016 Molecular Genetics of Bacteria and Phages Meeting. Madison, Wisconsin, August 2016. Title: "Genome defense systems compromise for beneficial MGE acquisition in *E. faecalis*."
80. Ardalan Sharifi, Valerie Price, and Kelli Palmer. Poster presentation at the 2015 American Society of Microbiology General Meeting. New Orleans, Louisiana, May 2015. Title: "Antibiotic Resistance and the Emergence of Immune-Deficient Bacteria."
81. Valerie Price, Ardalan Sharifi, Wenwen Huo, and Kelli Palmer. Poster presentation at the 2015 Gordon Research Seminar on Microbial Population Biology. Andover, New Hampshire, July 18th-19th 2015. Title: "Evolutionary studies of CRISPR-Cas defense in *Enterococcus faecalis*."
82. Valerie Price, Ardalan Sharifi, Wenwen Huo, and Kelli Palmer. Poster presentation at the 2015 Gordon Research Conference on Microbial Population Biology. Andover, New Hampshire, July 19th-24th 2015. Title: "Evolutionary studies of CRISPR-Cas defense in *Enterococcus faecalis*."
83. Valerie Price, Ardalan Sharifi, Wenwen Huo, and Kelli Palmer. Poster presentation at the 2015 Molecular Genetics of Bacteria and Phages Meeting. Madison, Wisconsin. August 2015. Title: "Evolutionary studies of CRISPR-Cas defense in *Enterococcus faecalis*."
84. Pooja Bhardwaj, Elizabeth Zeigler, and Kelli Palmer. Poster Presentation at the 2015 ICAAC/ICC meeting 2015. San Diego, CA. September 2015. Title: "Chlorhexidine induces VanA-type vancomycin resistance genes in enterococci."
85. Xiang Li and Kelli Palmer. Poster Presentation at the 2015 ICAAC/ICC meeting 2015. San Diego, CA. September 2015. Title: "Expression and regulation of a predicted membrane transport system impact chlorhexidine gluconate stress response in *Enterococcus faecalis*."
86. Marinelle Rodrigues, Karthik Hullahalli, and Kelli Palmer. Oral Presentation at the 2015 American Society for Microbiology Texas Branch Meeting. Huntsville, Texas. October 2015. Title: "Assessing the role of the orphan CRISPR locus of *Enterococcus faecalis* in genome defense." **OB Williams Oral Presentation Award 1st Place.**
87. Karthik Hullahalli, Marinelle Rodrigues, and Kelli Palmer. Poster presentation at the 2015 American Society for Microbiology Meeting. Huntsville, Texas. October 2015. Title: "CRISPR2 as a rapid tool for small scale epidemiological investigations in *Enterococcus faecalis*." **Joan Abramowitz Award for Undergraduate Molecular Microbiology, 1st Place**
88. Brendan Schmidt, Xiang Li, Karthik Hullahalli, and Kelli Palmer. Oral presentation at the Fall 2015 Texas Branch ASM Meeting. Huntsville, Texas. October 2015. Title: "Characterization of two ST179 *Enterococcus faecalis* bloodstream infection isolates".
89. Pooja Bhardwaj, Elizabeth Zeigler, and Kelli Palmer. Poster Presentation at the 2015 American Society for Microbiology Texas Branch Fall Meeting. Huntsville, Texas. October 2015. Title: "Chlorhexidine induces VanA-type vancomycin resistance genes in enterococci." **Sam Kaplan Award for Graduate Medical/Environmental Poster Presentation, 1st Place**
90. Hannah Adams, Cristian Trejo, and Kelli L. Palmer. Poster presentation at the 47th Annual Fall Meeting of the Texas Branch American Society for Microbiology. Huntsville, Texas. October 2015. Title: "Clade-specific

modification systems in commensal and clinical *Enterococcus faecium*." **Sam Kaplan Award for Graduate Molecular Microbiology Poster Presentation, 3rd place**

91. Cristian Trejo, Hannah Adams, Wenwen Huo, and Kelli Palmer. Poster presentation at the 2014 Texas Branch American Society for Microbiology Fall Meeting. Houston, Texas. November 2014. Title: "Clade specific restriction-modification systems in *Enterococcus faecium*."
92. Ardalan Sharifi, Valerie Price, and Kelli Palmer. Poster presentation at the 2014 Texas Branch American Society for Microbiology Fall Meeting. Houston, Texas. November 2014. Title: "Antibiotic resistance and the emergence of immune-deficient bacteria." **Won 1st place in undergraduate poster competition, among 21 competitors.**
93. Wenwen Huo, Hannah Adams, Michael Zhang, and Kelli Palmer. Oral presentation at the 2014 Molecular Genetics of Bacteria and Phages Meeting. Madison, Wisconsin. August 2014. Title: "Restriction-modification is a barrier to horizontal gene transfer in *Enterococcus faecalis* OG1RF."
94. Hannah Adams, Cristian Trejo, and Kelli Palmer. Poster presentation at the 2014 Molecular Genetics of Bacteria and Phages Meeting. Madison, Wisconsin. August 2014. Title: "Clade-specific restriction-modification systems in *Enterococcus faecium*."
95. Valerie Price, Ardalan Sharifi, and Kelli Palmer. Poster presentation at the 2014 Molecular Genetics of Bacteria and Phages Meeting. Madison, Wisconsin. August 2014. Title: "CRISPR-Cas defense and acquired antibiotic resistance in *Enterococcus faecalis*."
96. Pooja Bhardwaj and Kelli Palmer. Poster presentation at the 2014 Molecular Genetics of Bacteria and Phages Meeting. Madison, Wisconsin. August 2014. Title: "Transcriptional responses of *Enterococcus faecium* to the antiseptic chlorhexidine gluconate."
97. Karthik Hullahalli, Marinelle Rodrigues, Kelli Palmer. Poster Presentation, Clark Summer Research Program. UT-Dallas. August 2014. Title: "A novel typing system for the rapid identification of multidrug-resistant *Enterococcus faecalis*."
98. Cristian Trejo, Hannah Adams, Wenwen Huo, and Kelli Palmer. LSAMP (Louis Stokes Alliance for Minority Participation) Fellowship, AVS Conference. UT-Dallas. August 2014. Title: "Clade specific restriction-modification systems in *Enterococcus faecium*."
99. Ardalan Sharifi and Kelli Palmer. Poster presentation, Undergraduate Research Scholar Program. UT Dallas. April 2014. Title: "Antibiotic resistance and the emergence of immune-deficient bacteria."
100. Marinelle Rodrigues and Kelli Palmer. Poster presentation at the 2013 ASM Annual Meeting South Central and Texas Branch. New Orleans, Louisiana. October 2013. Title: "Assessing alternative roles for the orphan CRISPR locus of *Enterococcus faecalis*." **Samuel Kaplan Award for Poster Presentation, Honorable Mention**
101. Pooja Bhardwaj and Kelli Palmer. Oral presentation at the 2013 ASM Annual Meeting South Central and Texas Branch. New Orleans, Louisiana. October 2013. Title: "Transcriptional responses of *Enterococcus faecium* to the antiseptic chlorhexidine gluconate."

102. Valerie Price and Kelli Palmer. Poster presentation at the 2013 ASM Annual Meeting South Central and Texas Branch. New Orleans, Louisiana. October 2013. Title: "CRISPR-Cas defense and acquired antibiotic resistance in *Enterococcus faecalis*."
103. Hannah Adams, and Kelli Palmer. Poster presentation at the 2013 Annual ASM Meeting South Central and Texas Branch. New Orleans, Louisiana. October 2013. Title: "Genomic analysis of restriction-modification systems in *Enterococcus faecium*."
104. Wenwen Huo, Hannah Adams, Michael Zhang, and Kelli Palmer. Oral presentation at the 2013 ASM Annual Meeting South Central and Texas Branch. New Orleans, Louisiana. October 2013. Title: "Restriction-modification is a barrier to horizontal gene transfer in *Enterococcus faecalis* OG1RF."
105. Xiang Li, Quan Nguyen, and Kelli Palmer. Poster presentation at the 2013 Annual ASM Meeting South Central and Texas Branch. New Orleans, Louisiana. October 2013. Title: "Transcriptional responses of *Enterococcus faecalis* to chlorhexidine."
106. Ardalan Sharifi and Kelli Palmer. Poster presentation, LSAMP (Louis Stokes Alliance for Minority Participation) Conference. Odessa, TX. September 2013. Title: "Collecting 'wild' enterococci."

Additional External Presentations:

1. Co-leader of open discussion at the Spring Meeting 2008 of the American Society of Microbiology Texas Branch, New Braunfels, Texas. March 2008. Title: "Adventures as a Graduate Student."
2. Guest lecturer in Molecular Biology course, Texas State University. Spring 2007.
3. Guest lecturer in core graduate Microbiology course, University of Texas at Austin, Spring 2012.

External funding for original investigations:

Grants/contracts awarded:

Harnessing the Bacterial Immune System to Understand Antibiotic Resistance Gene Exchange

K. Palmer (PI)

USDA/ARS, 58-3042-0-012

06/16/2020 – 12/16/2021, \$78,800

Adaptive Lipid Alterations in Mitis Group Streptococci

K. Palmer (co-PI), Ziqiang Guan (co-PI)

National Institutes of Health, R01 AI148366-01A1

2020/09/01 - 2025/08/31, \$2,581,923

Adaptive alterations of lipids in *Streptococcus mitis*

K. Palmer (co-PI), Ziqiang Guan (co-PI)

National Institutes of Health, R56 AI139105

2019/09/02 - 2020/08/31, \$478,792

Decoding the clinical impact of the recent evolution of metronidazole resistance on *Clostridium difficile* infection

Julian Hurdle (PI; Texas A&M Health Sciences Center), **K. Palmer (co-investigator)**, other co-investigators
National Institutes of Health, R01 AI139261-01
2018/08/20 - 2022/07/31, \$3,367,240

Mechanistic basis of bacteriophages for the decolonization of vancomycin resistant enterococci in the intestine.

Breck Duerkop (PI; University of Colorado at Denver), **K. Palmer (co-investigator)**, other co-investigators
National Institutes of Health, R01 AI141479-01
2018/09/14 - 2023/-8/31, \$2,248,925

Genetic basis for virulence in *Streptococcus mitis* and *S. oralis*

K. Palmer (PI), Caitlin Pepperell (co-I), Katie Barber (co-I), Ronda Akins (paid consultant)
National Institutes of Health, R21 AI130666-01A1
2018/05/01 - 2020/04/30, \$439,550

Relationships among metronidazole resistance, pharmacodynamics, and treatment outcomes in *Clostridium difficile* infection

Julian Hurdle (PI; Texas A&M Health Sciences Center); **K. Palmer (co-investigator)**; Kevin Garey (co-investigator)
National Institutes of Health, R56 AI126881
August 2017 - July 2018, \$607,554

Multifunctional ionic liquids coatings for dental implants surfaces

Danieli Rodrigues (PI); **K. Palmer (co-investigator)**; Allison Case (co-investigator); Pankaj Choudhary (co-investigator)
National Institutes of Health, R01 DE026736
July 2017 - August 2022, \$1,816,875

Understanding potential failure modes of zirconia dental implants

Danieli Rodrigues (PI), **K. Palmer (co-investigator)**, Pilar Valderrama (co-investigator), Thomas G. Wilson Jr. (co-investigator)
International Team for Implantology (ITI)
January 2017 - January 2019, \$49,444

Genome Sequencing to identify putative mechanisms for colistin potentiation in *Acinetobacter baumannii*

K. Palmer (PI)
Synereca Pharmaceuticals
April 2016 - April 2017, \$15,287

Genome defense and acquired antibiotic resistance in *Enterococcus faecalis* and *Enterococcus faecium*

K. Palmer (PI); Michael Zhang (co-investigator)
National Institutes of Health, R01 AI116610
April 2015 - March 2020, \$1,912,500

Evaluation of genomic sequencing and cell membrane function/structure for potential mechanisms of rapid, high-level daptomycin resistance emergence in viridans streptococci

K. Palmer (PI)
Cubist Pharmaceuticals
February 2015 - January 2016, \$32,127 [Funds awarded post-completion of project]

The effect of bacterial biofilm and micromotion on corrosion of dental implants

Danieli Rodrigues (PI), **K. Palmer (co-investigator)**, Pilar Valderrama (co-investigator), Thomas G. Wilson Jr. (co-investigator)

American Academy of Implant Dentistry Foundation (AAIDF)

January 2014 – December 2015, \$20,000

Whole genome sequencing to identify putative mechanisms for resistance to the cyclic lipopeptide antibiotic CB-183,315

K. Palmer (PI)

Cubist Pharmaceuticals, Inc.

March 2013 - March 2015, \$30,611

CRISPR defense and acquired antibiotic resistance in *Enterococcus faecalis*

K. Palmer (PI)

National Institutes of Health, K22 AI099088

December 2012 - November 2014, \$264,486

Novel strategy for endophthalmitis drug targets

K. Palmer (trainee), Michael Gilmore (mentor)

National Institutes of Health, F32 EY020734

September 2010 - May 2012, \$98,080

Postdoctoral Training Program in the Molecular Bases of Eye Diseases

K. Palmer (trainee), Michael Gilmore (mentor)

National Institutes of Health, T32 EY007145

January 2009 - January 2010, one year salary support

Teaching:

Doctoral advisement/direction:

Dr. Wenwen Huo, Spring 2017 (defense date: February 22, 2017)

Title: *Enterococcus faecalis* Genome Defense Systems and Their Impact on Conjugative Antibiotic Resistance Plasmid Transfer

Dr. Pooja Bhardwaj, Summer 2017 (defense date: July 7, 2017)

Title: Transcriptional and adaptive responses of *Enterococcus faecium* to the antiseptic chlorhexidine

Dr. Hannah Adams, Summer 2017 (defense date: July 7, 2017)

Title: Mechanisms of resistance to lipopeptide antibiotics in Gram-positive pathogens

Dr. Valerie Price, Fall 2017 (defense date: October 6, 2017)

Title: The impact of genome defense systems on antibiotic resistance dissemination in the opportunistic pathogen *Enterococcus faecalis*

Dr. Farry Li, Fall 2017 (defense date: October 23, 2017)

Title: Genomic and transcriptomic analysis of *Enterococcus faecalis* responses to cationic antimicrobials

Dr. Marinelle Rodrigues, Spring 2018 (defense date: March 22, 2018)

Title: CRISPR-Cas systems in *Enterococcus faecalis* and their application in probiotics for the removal of antibiotic resistance

Dr. Michael Neugent (co-mentored with Dr. Nicole De Nisco), Spring 2020 (defense date: March 25, 2020)

Title: Discovery and targeting of strict glucose reliance in lung squamous cell carcinoma & Taxonomic and genomic ecology of recurrent urinary tract infection

Dr. Luke Joyce, Fall 2020 (defense date: October 22, 2020)

Title: Lipidomic analysis of the streptococcal cellular membrane

Dr. Cong Zhang (co-mentored with Dr. Min Chen and Dr. Michael Zhang), Fall 2020 (defense date: November 10, 2020)

Title: Tracking dissemination of plasmids in the murine gut using Hi-C sequencing & Bayesian landmark-based shape analysis of tumor pathology images

Dr. Moutusee Islam, Spring 2021 (defense date: March 22, 2021)

Title: Genomic analyses of *Enterococcus faecium*: vancomycin-resistant isolates from Dallas, Texas, and occurrence of CRISPR-Cas

Classroom teaching at UT-Dallas:

2020, Fall, BIOL3520, Microbiology with Lab

2020, Spring, BIOL6252, Current Research in Molecular Biology

2019, Fall, BIOL3520, Microbiology with Lab

2018, Fall, BIOL3303, Introduction to Microbiology

2018, Fall, BIOL5303, Introduction to Microbiology for Graduate Students

2017, Fall, BIOL3V00, Introduction to Microbiology

2017, Fall, BIOL5V95, Advanced Topics in Molecular and Cell Biology: Microbiology

2016, Fall, BIOL3V00, Introduction to Microbiology

2016, Fall, BIOL5V95, Advanced Topics in Molecular and Cell Biology: Microbiology

2016, Spring, BIOL6337, Regulation of Gene Expression

2015, Fall, BIOL3V00, Introduction to Microbiology

2015, Fall, BIOL5V95, Advanced Topics in Molecular and Cell Biology: Microbiology

2015, Spring, BIOL6337, Regulation of Gene Expression

2014, Fall, BIOL3V00, Introduction to Microbiology

2014, Fall, BIOL5V95, Advanced Topics in Molecular and Cell Biology: Microbiology

2014, Spring, BIOL6337/BIOL4V95, Regulation of Gene Expression

2014, Spring, BIOL6V02, Art of Scientific Presentation

2013, Fall, BIOL3V00, Introduction to Microbiology
2013, Fall, BIOL5V95, Advanced Topics in Molecular and Cell Biology: Microbiology

2013, Spring, BIOL6337/BIOL4V95, Regulation of Gene Expression
2013, Spring, BIOL6V02, Art of Scientific Presentation

Other (Teaching fellow/assistant positions prior to joining UT-Dallas):

Fall 2010: **Teaching Fellow in Organismic and Evolutionary Biology, Harvard University.** OEB 290. Microbial Sciences: Chemistry, Ecology, and Evolution. Received high student evaluation scores (average 5 of 5 on overall instructor score).

Fall 2009: **Teaching Fellow in Organismic and Evolutionary Biology, Harvard University.** OEB 290. Microbial Sciences: Chemistry, Ecology, and Evolution. Received high student evaluation scores (average 4.8 of 5 on overall instructor score). **Received the Harvard University Certificate of Distinction in Teaching for Fall 2009.**

Fall 2008: **Teaching Assistant in Molecular and Cellular Biology, Harvard University.** LS 190r. Diverse Microbial Strategies for Metabolism, Pathogenesis, and Chemical Signaling. Received high student evaluation scores (average 4.5 of 5 on overall instructor score).

Spring 2008: **Graduate Teaching Assistant, University of Texas School of Biological Sciences.** BIO 368L. Techniques in Molecular Genetics. No student evaluations performed.

Fall 2007: **Graduate Teaching Assistant, University of Texas School of Biological Sciences.** BIO 226R. General Microbiology: Cell Structure/Genetics. Received high student evaluation scores (average 4.6 of 5 on overall instructor score).

Service:

Departmental Service:

2014, Faculty search committee
2017-2018, Faculty search committee
2018, Ad hoc tenure committee
2019, Ad hoc tenure committee
2020, Ad hoc tenure committee
2020-2021, Chair, faculty search committee

School Service:

2020, Search committee member for Dean of School of Natural Sciences and Mathematics
•Member, job ad subcommittee

University Service and Mentorship:

2014 - present, Radiation Safety Committee member
2018 - present, Institutional Biosafety and Chemical Safety Committee member
2017 - present, Genome Core advisory board
2020 - present, UTD Advisory Committee on Research

2020, Member, Stakeholder committee for UTD-UTSW new research building
 2020, Member, NSF ADVANCE proposal, Faculty retention working group
 2020, Hosted a table at the National Merit Scholars Program Annual Gala Dinner
 2020, Hosted and supported travel of potential transfer student from Del Mar College
 2020, Reviewer, UTD Master's Research Fellowship Program (MRFP)- 9 proposals
 2020, Panel member for Office of Research virtual event on mentoring during the pandemic
 2020, Mentor, Undergraduate Research Scholar Award (Christi Kim)
 2020, HPAC interviewer (2 interviews)
 2020, Reader for two undergraduate honors theses
 2020, Flash research talk for Department of Biological Sciences virtual graduate student orientation event
 2020, Presenter, UTD-Agrilife collaborative research symposium/meet and greet
 2020, Member, faculty focus group on research space utilization
 2020, Beckman Mentor for 2021 Beckman Scholars application led by Dr. Bernine Khan

2019, Ad hoc tenure committee for Department of Mathematics
 2019, Organized UTD-UTSW workshop on Antimicrobial Innovation
 2019, Reviewer and panel chair, UTD MEGA proposals
 2019, Reviewer and panel chair, UTD SCI proposals
 2019, Reviewer, core facility voucher program
 2019, Roundtable discussion and pizza lunch with Clark Scholars
 2019, Panel member for discussion on The Underprepared Student; UTD Center for Teaching and Learning
 2019, Guest lecture on antibiotic resistance in Summer BIOL3520
 2019, Guest lecture on antibiotic resistance in Fall BIOL3303
 2019, Met with National Merit recruit and family
 2019-2020, Interviewee and Mentor, Frisco Independent School District Independent Study and Mentorship program

2018, Dean of Graduate Studies search committee
 2018, Interviewee and Mentor, Frisco Independent School District Independent Study and Mentorship program
 2018, Health Professions Advising Center (HPAC) interviewer for medical school application committee letters
 2018, Met with National Merit Finalist recruit to UT-Dallas
 2018, Moderated public event hosting Margot Shetterly, the author of *Hidden Figures: The American Dream and the Untold Story of the Black Women Who Helped Win the Space Race*
 2018, Attended Small World Initiative training to implement a course-based undergraduate research experience at UT-Dallas; training held July 2018 at the University of Connecticut.
 2018-present, faculty mentor for Dr. Nicole De Nisco (Assistant Professor in Biological Sciences)
 2018, participated in Honors Night Out event
 2018, roundtable discussion and pizza lunch with Clark Scholars
 2018, workshop on supervising RAs and TAs for the New Faculty Mentoring program
 2018, interviewed by student with Mayor's internship program
 2018, research talk to Honors College students
 2018, mentored two high school graduates (Savannah Pas and Hannah Bovermann) in summer research

2017, Mentor, Louis Stokes Alliances for Minority Participation internship program
 2017, Interviewee and co-mentor (with Karthik Hullahalli), Frisco Independent School District Independent Study and Mentorship program
 2017, Health Professions Advising Center (HPAC) interviewer for medical and dental school application committee letters
 2017, Clark Scholars program summer research mentor (with Dr. Wenwen Huo)
 2017, Mentor, UT-Dallas-Mexico Research Summer Program 2017

2016, Mentor, Clark Scholars program
 2016, Faculty advisor, Undergraduate Biological Sciences Association
 2016, Mentor, American Society for Microbiology Undergraduate Research Fellowship program (awarded to Karthik Hullahalli)
 2016, Reviewer and Interviewer, UT-PACT program admissions
 2016, Mentor, UT-Dallas-Mexico Research Summer Program 2016
 2016-2017, Capstone Research Mentor, UT-PACT program (Kinnari Ruikar)
 2016, Panelist, Undergraduate Student Research Panel at the 5th Annual Exhibition of Excellence in Undergraduate Research
 2016, Interviewee, Frisco Independent School District Independent Study and Mentorship program

2015-2016, Chair, Conference Organizing Committee for the Texas Branch American Society for Microbiology Fall 2016 conference, held at UT-Dallas in November 2016 (~180 attendees)

2015, Mentor, Clark Scholars program
 2015, Mentor, Frisco Independent School District Independent Study and Mentorship program
 2015, Reviewer, Founders Fellowship program
 2015, Reviewer and Interviewer, UT-PACT program admissions
 2015, Mentor, Green Fellows program
 2015, Presenter, UTDDiscover class
 2015, Faculty advisor, Undergraduate Biological Sciences Association

2014-2015, Capstone Research Mentor, UT-PACT program (Amrita Hans)
 2014, Mentor, Clark Scholars program
 2014, Mentor, American Society for Microbiology Undergraduate Research Fellowship program (awarded to Ardalan Sharifi)
 2014, Mentor, Louis Stokes Alliances for Minority Participation summer internship program
 2014, Mentor, Frisco Independent School District Independent Study and Mentorship program
 2014, Faculty ambassador at new faculty orientation

2013, Mentor, Young Women in Science and Engineering Investigators program
 2013, Mentor, Louis Stokes Alliances for Minority Participation summer internship program
 2013, Faculty ambassador at new faculty orientation
 2013, Working group member, UTD Council on the Status of Women Faculty
 2013, Advisor, UTD iGEM team
 2013, Developed a subproject proposal for use in a NSF grant proposal, UTD Science and Engineering Education Center

Outside Service – Reviewer, editorial, media:

Invited referee (journals):

Journal of Bacteriology, Applied and Environmental Microbiology, Journal of Clinical Microbiology, Journal of Applied Microbiology, FEMS Microbiology Letters, Bioorganic and Medicinal Chemistry, Virulence, BMC Microbiology, Microbiology, PLoS ONE, Infection and Immunity, PNAS, Scientific Reports, Environmental Science and Technology, Molecular Microbiology, Antimicrobial Agents and Chemotherapy, mBio, BMC Biochemistry, BMC Infectious Diseases, Microbial Drug Resistance, Frontiers in Cellular and Infection Microbiology, BMC Genomics, PLoS Pathogens, PLoS Genetics, Anaerobe, Philosophical Transactions of the Royal Society B, Journal of Molecular Biology, Plasmid, MMBR, Microbial Genomics, Nucleic Acids Research

Invited referee (proposals/grants):

Canadian Foundation for Innovation, 2013

UK Medical Research Council, 2014

NIH Early Career Reviewer for Prokaryotic Cell and Molecular Biology [PCMB] section, Feb. 2015

NIGMS SCORE Reviewer, November 2016

Human Frontier Science Program, 2016

Netherlands Organisation for Scientific Research (NWO/ZonMw) Grant program, 2017

CDMRP Peer Reviewed Medical Research Program Antimicrobial Resistance Pre-Proposal Reviewer, 2017

Ohio University Research Committee, 2018

NIH Special Emphasis panel: Exploration of Antimicrobial Therapeutics and Resistance, June 2018

American Society for Microbiology Texas Branch Goldschmidt Award Review Committee, 2018

CDMRP PRMRP Discovery Award-Antimicrobial Resistance panel reviewer, 2019

American Society for Microbiology Texas Branch Goldschmidt Award Review Committee, 2019 (Committee Chair)

National Medical Research Council, Ministry of Health, Singapore, 2019

CDMRP PRMRP Discovery Award-Antimicrobial Resistance panel reviewer 2019

NIH/NIAID Combating Antibiotic-Resistant Bacteria Interdisciplinary Research Units (CARBIRU) U19 (2020)

American Society for Microbiology Texas Branch Goldschmidt Award Review Committee, 2020 (Committee Chair)

National Medical Research Council, Ministry of Health, Singapore (reviewed one proposal), 2020

Wellcome Trust Sir Henry Dale Fellowship, UK (reviewed one proposal), 2020

French National Research Agency, France (reviewed one proposal), 2020

Panel Member for Drug Discovery and Mechanisms of Antimicrobial Resistance Study Section [DDR] section, July 2021

Editorial service:

Microbiology, Editor (2018 - 2023)

mBio, Guest Editor (1 manuscript in 2020)

Editorial Board service (essentially, a dedicated reviewer):

Applied and Environmental Microbiology Editorial Board (2016-2021)

Antimicrobial Agents and Chemotherapy Editorial Board (2020-2022)

Media interviews outside University:

Wired, 2019

St. Mark's science journal, 2019

Outside Service - Outreach:

2019, Spoke at meeting of North Dallas Mensa, October 20th, 2019

2014-2018, Mentor, high school student for science fair competitions (Savannah Pas)

2014, Presenter, American Association of University Women (AAUW) Expanding Your Horizons in Science and Mathematics Conference for Middle School Young Women in Houston, Texas

2013, Presenter, Girl Scouts UT-Dallas College Journey 4 Girls program

Outside Service - Other Professional Service:

2019-present, President-Elect, American Society for Microbiology Texas Branch

2020, Session chair, 2020 Texas Branch American Society for Microbiology Fall Meeting

2019, Session chair, 2019 Texas Branch American Society for Microbiology Fall Meeting, San Antonio, Texas

2019, Poster judge, 2019 Texas Branch American Society for Microbiology Fall Meeting, San Antonio, Texas

2015, Poster judge, 2015 Texas Branch American Society for Microbiology Fall Meeting, Huntsville, Texas

2014, Poster judge, 2014 Molecular Genetics of Bacteria and Phage, Madison, Wisconsin

2013, Poster judge, 2013 Texas Branch American Society for Microbiology Fall Meeting, New Orleans, Louisiana