



BRIAN CONLON

CANDIDATE STATEMENT

I am an Associate Professor of Microbiology & Immunology at UNC Chapel Hill. I am deeply committed to developing a better understanding of how antibiotics work in the infection microenvironment and using the resulting knowledge to develop new therapeutic strategies to improve antibiotic efficacy and curb the development and spread of antibiotic resistance. I am currently PI on multiple awards from NIAID and I am a Burroughs Wellcome Fund Investigator in the Pathogenesis of Infectious Disease. My work bridges two of COMS communities, Antimicrobial Agents and Resistance (AAR) and Host-Microbe Biology (HMB). If elected to COMS, I will be proud to represent these communities and to help develop innovative ways to move these areas forward.

ASM-RELATED ACTIVITIES

- Editor, *Microbiology Spectrum*, 2022-2025
- Editorial Board, *Infection and Immunity*, 2021-2023

Brian P. Conlon

Curriculum Vitae

1. PERSONAL INFORMATION

Brian P. Conlon
6209 Marsico Hall,
125 Mason Farm Road,
Chapel Hill,
NC 27599,
617-415-8667.

2. EDUCATION

- 2011-2014 Postdoctoral Training, Antimicrobial Discovery Center,
Northeastern University, Boston, MA
- 2006-2010 Ph.D. in Microbiology, University College Dublin, Dublin, Ireland
- 2002-2006 B.S. in Microbiology, National University of Ireland, Galway, Galway, Ireland.

3. PROFESSIONAL EXPERIENCE – EMPLOYMENT HISTORY

- 2021 - Associate Professor with tenure, Department of Microbiology & Immunology,
University of North Carolina at Chapel Hill
- 2017- 2021 Assistant Professor, Department of Microbiology & Immunology,
University of North Carolina at Chapel Hill
- 2016-2017 Research Assistant Professor, Department of Microbiology & Immunology,
University of North Carolina at Chapel Hill
- 2014-2016 Senior Research Scientist and Charles A. King Fellow, Antimicrobial Discovery Center
Northeastern University, Boston, MA
- 2011-2014 Postdoctoral Research Associate, Antimicrobial Discovery Center,
Northeastern University, Boston, MA

4. HONORS

- 2021 Future leader in host-pathogen interactions – *ASM Infection & Immunity*
- 2020 Burroughs Wellcome Fund Investigator in the Pathogenesis of Infectious Disease
- 2016 NCTracs pilot and feasibility award recipient
- 2014 Charles A King Fellowship – postdoctoral fellowship awarded to biomedical researchers in the state of Massachusetts

2006 Dunican Medal – awarded to student graduating top of his/her class in BSc in Microbiology at National University of Ireland Galway

2006 EMBARK postgraduate research scholarship – Scholarship awarded to leading candidates for pursuit of a postgraduate degree by research in Ireland

E. BIBLIOGRAPHY

Book chapters

1. Rowe SE, **Conlon BP**, Keren I, and Lewis K (2015) Bacterial Persistence. *Methods in Molecular Biology*. Pages 17-28. Springer
2. **Conlon BP**, Rowe SE, Lewis K (2014) Persister cells in biofilm associated infection. *Biofilm-based Healthcare Associated Infections*. Pages 1-9. Springer
3. Lewis K, **Conlon BP**, LaFleur MD. (2014) Eradication of Dormant Pathogens. *Antibiotics: Current Innovations and Future Trends*. Page 95-109. Caister Academic Press
4. Sidders A, Radlinski L, Rowe SE and **Conlon BP** (In print) Stimulating aminoglycoside uptake to kill *Staphylococcus aureus* persisters. *Methods in Molecular Biology*. Springer. Submitted 2020.

Refereed Papers

1. Antibiotic-induced accumulation of lipid II sensitizes bacteria to antimicrobial fatty acids. Sidders AE, Kedziora KM, Beam JE, Bui D, Parsons JB, Rowe SE, and **Conlon BP**. Bioarchives.
2. The use of acute immunosuppressive therapy to improve antibiotic efficacy against intracellular *Staphylococcus aureus*, Beam JE, Wagner NJ, Rowe SE, Bahnson EM, **Conlon BP** *mSpectrum*. (2022).
3. Negrón O, Hur WS, Prasad J, Paul DS, Rowe SE, Degen JL, Abrahams SR, Antoniak S, **Conlon BP**, Bergmeier W, Höök M, Flick MJ. Fibrin(ogen) engagement of *S. aureus* promotes the host antimicrobial response and suppression of microbe dissemination following peritoneal infection. *PLoS Pathogens*. (2022).
4. Beam JE, Wagner NJ, Shook JC, Bahnson SM, Fowler VG, Rowe SE and **Conlon BP**. Macrophage-Produced Peroxynitrite Induces Antibiotic Tolerance and Supersedes Intrinsic Mechanisms of Persister Formation, *Infection & Immunity*, IAI0028621, (2021).
5. Beam JE, Rowe SE, **Conlon BP**. Shooting yourself in the foot: how immune cells induce antibiotic tolerance in microbial pathogens. Accepted, *1*, 1-9 *PLoS Pathog*. 17(7): e1009660 (2021).
6. Durham PG, Sidders AE, Beam JE, Kedziora KM, Dayton PA, **Conlon BP**, Papadopoulou V, Rowe SE. Harnessing Ultrasound-Stimulated Phase Change Contrast Agents to Improve Antibiotic Efficacy Against Methicillin-Resistant *Staphylococcus aureus* Biofilms., *Biofilms* **03**, 1000049, (2021).

7. Rowe SE, Beam JE and **Conlon BP**. Recalcitrant *Staphylococcus aureus* Infections: Obstacles and Solutions. *Infection and Immunity* Mar 17;89(4):e00694-20, (2021).
8. Rowe SE, Wagner N, Li L, Beam JE, Wilkinson AD, Radlinski LR, Zhang Q, Miao EA and **Conlon BP**. Reactive oxygen species induce persister formation during systemic *Staphylococcus aureus* infection. *Nature Microbiology* Feb;5(2):282-290, (2020).
9. Griffith, E ; Zhao, Y; Singh, A; **Conlon, BP**; Tangallapally, R; Shadrick, W; Liu, J; Wallace, M; Yang, L; Elmore, J; Li, Y; Zheng, Z; Miller, D ; Cheramie, M; Lee, R; LaFleur, M D.; Lewis, K ; Lee, R., Ureadepsipeptides as ClpP Activators, *ACS Infectious Diseases*, 5(11):1915-1925. (2019).
10. Zalis E, Nuxoll A, Manuse S, Clair G, Radlinski L, **Conlon BP**, Adkins JA, and Lewis K. Stochastic variation in expression of the TCA cycle produces persister cells. *mBio*, 17;10(5). e01930-19, (2019).
11. Gilbertie JM, Schnabel LV, Hickok NJ, Jacob ME, **Conlon BP**, Shapiro IM, Parvizi J, Schaer TP. Equine or porcine synovial fluid as a novel *ex vivo* model for the study of bacterial free-floating biofilms that form in human joint infections. *PLoS One*. 14(8):e0221012. (2019).
12. Radlinski L., Rowe SE., Brzozowski R., Wilkinson A., Huang R., Eswara, P., and **Conlon BP**. Chemical Induction of Aminoglycoside Uptake Overcomes Antibiotic Tolerance and Resistance in *Staphylococcus aureus*. *Cell Chemical Biology*, S2451-9456(19)30240-5, (2019).
13. Radlinski L, Rowe SE, Kartchner L, Maile R, Cairns BA, Vitko NP, Gode CJ, Lachiewicz AM, Wolfgang MC and **Conlon BP**. *Pseudomonas aeruginosa* exoproducts determine antibiotic efficacy against *Staphylococcus aureus*. *PLoS Biology*, 15(11) e2003981, (2017).
14. Radlinski L and **Conlon BP**, Antibiotic susceptibility in the complex infection environment. *Current Opinions in Microbiology*, 42: 19–24, (2017).
15. Bui LM, **Conlon BP**, Kidd SP. Antibiotic tolerance and the alternative lifestyles of *Staphylococcus aureus*. *Essays in Biochemistry*, 61(1)71-79, (2017).
16. Shan Y, Brown-Gandt A, Rowe SE, Deisinger JP, **Conlon BP**, Lewis K. ATP-Dependent Persister Formation in *Escherichia coli*. *MBio*. 8(1) e02267-16, (2017).
17. Waters EM, Rowe SE, O’Gara JP, **Conlon BP**. Convergence of *Staphylococcus aureus* persister and biofilm research: Can biofilms be defined as communities of adherent persister cells? *PLoS Pathogens*. 12(12), e1006012, (2016).
18. Homma T, Nuxoll A, Brown Gandt A, Ebner P, Engels I, Schneider T, Götz F, Lewis K and **Conlon BP**. Dual targeting of cell wall precursors by teixobactin leads to cell lysis. *Antimicrobial Agents & Chemotherapy*. 60(11), 6510-6517, (2016).
19. **Conlon BP**, Rowe SE, Brown-Gandt AV, Nuxoll AS, Clair G, Donegan NP, Adkins JN, Cheung AL, Lewis K. Persister formation by ATP depletion. *Nature Microbiology*. 1, 16051, (2016).

20. Ling LL, Schneider T, Peoples AJ, Spoering AL, Engels I, **Conlon BP**, Hughes DE, Epstein S, Jones M, Poullenc K, Steadman V, Cohen DR, Felix CR, Fetterman KA, Millett WP, Nitti AG, Zullo AM, Chen C, Lewis K Killing of pathogens by teixobactin without associated resistance. *Nature*. **517**, 455-459, (2015).
21. **Conlon BP**, Geoghegan JA, Waters EM, McCarthy H, Rowe SE, Davies JR, Schaeffer CR, Foster TJ, Fey PD, O'Gara JP. A role for the A domain of unprocessed accumulation associated protein (Aap) in the attachment phase of the *Staphylococcus epidermidis* biofilm phenotype. *Journal of Bacteriology*. **196**, 4268-4275, (2014).
22. **Conlon BP** *Staphylococcus aureus* chronic and relapsing infections: Evidence of a role for persister cells. *Bioessays*. **36**, 991-996, (2014).
23. **Conlon BP**, Nakayasu EN, Fleck LE, LaFleur MD, Isabella VM, Coleman K, Leonard SN, Smith RD, Adkins JN, Lewis K. Activated ClpP kills persisters and eradicates a chronic biofilm infection. *Nature*. **503**, 365-370, (2013).
24. Holland LM, **Conlon BP**, O'Gara JP Mutation of *tagO* reveals an essential role for wall teichoic acids in *Staphylococcus epidermidis* biofilm development. *Microbiology*. **157**, 408-418, (2010).

Manuscripts in Revision

1. Inflammasome-mediated glucose limitation induces antibiotic tolerance in *Staphylococcus aureus*, Beam JE, Wagner NJ, Lu KY, Rowe SE, **Conlon BP**, *Cell Reports*. Pre-print available <http://dx.doi.org/10.2139/ssrn.4029037>

Invited Seminars & Talks

Vanderbilt Institute of Chemical Biology (VICB) – Invited seminar speaker, October 2021.

Pittsburgh Area Microbial Pathogenesis Meeting – Carnegie Melon and University of Pittsburgh. Invited seminar speaker, February 2021, (Virtual meeting).

Focus on Infection seminar at Royal College of Surgeons, Dublin Ireland, Invited speaker and panelist, November 2020, (Virtual meeting).

University of Alabama at Huntsville, Invited seminar speaker, November 2020, (Virtual meeting).

Dublin Academy of Pathogenomics and Infection (DAPI), Dublin, Ireland, January 2020 – Invited Keynote Speaker.

East Carolina University, Invited Seminar Speaker, September 2019.

Gordon Research Conference on Staphylococcal Diseases, Invited Speaker, Barcelona, August 2019.

20th International Conference on Bacilli and Gram-Positive Bacteria, Speaker, Selected from abstracts, Washington DC, July 2019

Mid-Atlantic Microbial Pathogenesis Meeting (MAMPM), Speaker, Selected from abstracts, Virginia, February 2019.

Dartmouth University, Invited seminar Speaker, Dartmouth, New Hampshire, May 2018.

The European Federation of Biotechnology meeting on Microbial Stress, Invited Speaker. Kinsale, Co. Cork, Ireland. April 2018.

Duke Innate Immunology Group (DIIG) Seminar Series, Invited Speaker. Durham, NC. March 2018.

Northeastern University, Biology Department colloquium speaker. Boston, MA. March 2018.

University of Southern Florida, CMMB Invited Seminar Speaker. Tampa, FL. October 2017.

Triangle Microbial Iterations (TMI), Invited speaker. Chapel Hill, NC. May 2017.

North Carolina State University (NCSU), Invited Seminar Speaker. Raleigh, NC. March 2017.

University of North Carolina, Infectious Disease Grand Rounds. Chapel Hill, NC. March 2017.

Duke University, Infectious Disease Grand Rounds. Duke University, Durham NC. November 2016.

University of Tübingen, Microbiological Colloquium, Invited Speaker. Tuebingen, Germany. November 2016.

University of Melbourne, Invited Speaker, Melbourne, Australia. July 2016.

University of Adelaide, Invited seminar speaker, Adelaide, Australia. July 2016.

Australian Society of Microbiology General Meeting, Plenary Speaker, Perth, Australia. July 2016.

32nd Annual Meeting of Nordic Society of Clinical Microbiology and Infectious Diseases (NSCMID). Invited Speaker, Umeå, Sweden. September 2015.

Gordon Research Conference (GRC) on Staphylococcal Diseases. Invited Speaker. Lucca, Italy. July 2015.

Haverford College, Invited speaker and Distinguished Visitor. Haverford PA. April 2015.

Harvard Technology Assessment Group, Invited Speaker, Harvard University. Cambridge, MA. March 2015.

Boston Area Antimicrobial Research Network (BAARN), Invited Speaker, Broad Institute. Cambridge, MA. March 2015.

American Society of Microbiology (ASM) General Meeting, Invited speaker. Boston MA. May 2014.

Network on Antimicrobial Resistance in *Staphylococcus aureus* (NARSA). Invited speaker, National Institutes of Health (NIH), Bethesda, MD. March 2014.

Dublin Academy of Pathogenomics and Infection Biology (DAPI). Speaker. **Awarded Best Oral Presentation**. UCD, Dublin. December 2010.

Posters (selection)

Gordon Research Conference on Biology of Acute Respiratory Infection, Ventura, CA. March 2018.

Gordon Research Conference on Staphylococcal Diseases. Waterville Valley, NH. August 2017.

Boston Bacterial Meeting (BBM), Cambridge, MA. June 2014.

Gordon Research Conference, New Antibacterial Discovery and Development. Ventura, CA. March 2014.

The European Congress of Microbial Biofilms. Rome, Italy, September 2009.

6. TEACHING ACTIVITIES

At UNC Chapel Hill

2020 – present - Course director for graduate level course – MCRO635 – Microbial Pathogenesis. 8 – 12 students per year.

2018 – present - Lecturer for graduate level course – DENT115 – Microbial Pathogenesis (1 lecture in each of 2018 and 2019). Around 50 students per year.

2018 and 2020 - Lecturer for graduate level course – MCRO710 2018 (led a block of 4 classes). 10 - 12 students per year.

2016 – 2020 - Lecturer for graduate level course – MCRO635 – Microbial Pathogenesis (2 lectures annually). 8-12 students per year.

2017 – 2019 - Faculty reviewer and lecturer for the M&I writing class MCRO795 for 2nd year graduate students. 10-12 students per year.

Postdoctorate associates supervised: Dr. Joshua Parsons MD, PhD (2021), Dr. Kuan-Yi Lu, PhD (2021).

Graduate students supervised: Lauren Radlinski (completed PhD January 2020) Thesis title: Harnessing Interspecies Antagonism to Enhance Antibiotic Efficacy. Lauren was awarded an F31 fellowship from NIAID and the Manire Award for most significant and impressive doctoral research project in the M&I department at UNC. Currently a postdoc with Dr. Andreas Baumler in UC Davis.

Current students: Amanda Velez (2021), John Shook (2019), Ashelyn Sidders (2018), Jenna Beam (2018) (Young Investigator Award winner at the Society for Redox Biology and Medicine Annual Conference).

Hosted rotation students: Jilarie Santos (2019), John Shook (2019), Amanda Velez (2019), Sarah Barr (2018), Taylor Tibbs (2018), Natalia Maldonado Vazquez (2018), Ashelyn Sidders (2018), Jenna Beam (2018), Dominika Tsilova (2017), Tia Morgan (2017).

Mentored 4 undergraduate students for BIOL395: Jaden Skelly (2019-2020), Emma Kikerov (2018-2019), Seth McKenzie (2016 – 2017), Priscilla Radu (2016-2017).

Mentored the following students for completion of Honors Undergraduate theses:
Jaden Skelly, *Staphylococcus aureus* Virulence Factors (2021).
Seth Alexander McKenzie, Identifying the Mechanism of Rifampicin Mediated Cell Death in *Staphylococcus aureus* (2018).

Mentored Dr. Nour Akil for completion of clinical research fellowship (2017 – 2019).

Mentored local high school student, Rennica Huang, for summer research project 2017. Rennica went on to win 1st Place in High School Advanced Biological Sciences at NCSAS Regionals and compete at the state competition in 2018.

Hosted Carolina Summer fellowship Student, Joseph Kim in my lab in 2019 and Duyen Bui in 2021.

Member of thesis committees for PhD students

Matthew Greenwald – Wolfgang lab (2021-present)
Ying Wang – Liu lab (2021-present)
Gabi Gentile – Nicholas lab (2020-present)
Lilli Lowry – Cotter lab (2021 – present)
Megan Fredericks – Miao lab (2020-present) **Chair**
Christian Xander – Braunstein lab (2018-present)
Sara May Yannarrell – Shank lab (graduated 2021)
Dominika Tsilova – Tamayo lab (graduated 2021)
Andrew Perault – Cotter lab (graduated 2020)
Elizabeth Garrett – Tamayo lab (graduated 2020)
Susanna Harris – Shank lab (graduated 2020)
Mary Ashley Bone – Cotter lab (graduated 2019)
Kara Eichelberger – Goldman lab (graduated 2019)
Jessica Gilbertie – Schnabel lab, NC State University (graduated 2019)
Laurel Karchner – Cairns lab (graduated 2018)

Completed 10 part, weekly, course in effective mentoring at UNC Chapel Hill (2016).

Completed 1-day course on Culturally Aware Mentoring at UNC Chapel Hill (2018).

Previous to UNC Chapel Hill

Course Director/Lecturer of Basic Microbiology (78 students), Department of Biology, Northeastern University, 2015.

Completed American Society of Microbiology teaching fellowship course in 2015

Course Director/Lecturer of Genetics and Molecular Biology (170 students), Department of Biology, Northeastern University, 2014.

7. GRANTS

Ongoing Research Support

1. R56AI158511 from NIAID

08/22/2022-07/31/2023

Title: The contribution of respiratory burst to antibiotic failure in *Staphylococcus aureus* bacteremia.

Description: The aim of this project is to assess the contribution of host phagocytes to antibiotic treatment failure and to develop interventions to make antibiotics work better.

Role: PI

Amount (Direct costs): \$275,000

2. R21159369 from NIAID

04/01/2021- 03/31/2023

Title: Identifying the contribution of zinc limitation to antibiotic tolerance during *S. aureus* infection

Description: The aim of this project is to examine the role of zinc sequestration in the induction of antibiotic tolerance of *S. aureus* during infection.

Role: PI

Amount (Direct costs): \$265,489

3. Burroughs Wellcome Trust

11/01/2020-10/31/2025

Title: Antibiotic tolerance induced by the innate immune response

Description: The aim of this project is to determine the location of persister cells in vivo and their mechanism of formation. The fellowship is awarded to a handful of early career infectious disease investigators in the US annually.

Role: PI

Amount (Direct costs): \$500,000

4. NIH contract to R. Baric from NIAID

12/01/2020-04/31/2022

Task 24A; Establishment of Chronic Bacterial Infection Models in Mouse Models of Cystic Fibrosis with *Pseudomonas aeruginosa* and *Staphylococcus aureus*. The overall goal of task order A24 is to test and refine currently available mouse models of CF chronic lung infections for *P. aeruginosa* and *Staphylococcus aureus*. This will include: 1) screening existing clinical isolates to identify bacterial strains with increased likelihood of establishing chronic lung infections; 2) establishing reproducible delivery routes for bacterial infection and 3) testing the impact of *cftr* mutation in infection outcomes.

Role: Contributor

5. R01 AI137273 from NIAID

01/01/2018-12/31/2022

Title: Antibiotic activities against *S. aureus* during *P. aeruginosa* co-infection

Description: The goal of this project is to determine the role of interspecies interaction in modulating antibiotic susceptibility of *S. aureus* during polymicrobial infection.

Role: PI

Amount (Direct costs): \$1,465,000

Pending Research Support

1. R01AI173004-A1 NIAID

A0 in 28th percentile - awaiting IRG

09/01/2022-08/31/2027

Title: Application of antibiotics and fatty acids to destabilize bacterial membranes

Description: The aim of this project is to examine the mechanism of how vancomycin and unsaturated fatty acids synergize to kill *S. aureus* in vitro and in vivo.

Amount (Direct Costs): \$1,250,000

Role: PI

2. R01AI167958 from NIAID

6th percentile - awaiting council

09/01/2022-08/31/2027

Title: Diabetes and Antibiotic Treatment Failure

Description: We aim to determine how diabetes impacts antibiotic susceptibility of *S. aureus* during infection.

Amount (Direct Costs): \$2,249,848

Role: PI

Completed Research Support

Cystic Fibrosis Foundation Research Grant

11/1/20 - 10/31/21

Title: Quorum Sensing-Dependent Aggregation Influences Aminoglycoside Susceptibility of *Pseudomonas aeruginosa* in Cystic Fibrosis Sputum

Description: Investigation of a novel mechanism of mucin dependent aggregation and antibiotic tolerance in *P. aeruginosa*.

Role: Co-PI

Amount (Direct costs): \$250,000

Cystic Fibrosis Foundation Clinical Research Grant

02/1/20 - 01/31/22

Title: Persistence of Incident MRSA in Cystic Fibrosis

Description: The aim of this project is to determine the frequency of high persister mutants of *Staphylococcus aureus* in CF patients, their role in recalcitrance of infection and the mechanism of increased persister formation.

Role: Co-PI

Amount (Direct costs): \$475,971

R03 AI148822-01 to Sarah Conlon from NIAID

09/01/2019-08/31/2021

Title: Engineering *Staphylococcus aureus* to sense and record oxidative stress

Description: Creation of a novel genetic toll that will sense oxidative stress to examine if antibiotic tolerance in vivo is associated with respiratory burst.

Role: Co-Investigator

F31-AI140520 to L. Radlinski from NIAID

08/01/2018-07/31-2020

Title: Interspecies interaction and antibiotic tolerance in *S. aureus*

Description: Fellowship awarded to Lauren Radlinski to study microbial interaction and antibiotic susceptibility.

Role: PI

Amount (Direct Costs): \$65,392

Effort: NA

K22 AI125501 from NIAID

11/1/2017-10/31/2018

Title: Examining *Staphylococcus aureus* persister formation under physiological conditions

Description: The goal of this study is to determine the mechanism of *S. aureus* persister cell formation in response to stimuli in the infection environment.

Role: PI

Amount (Direct costs): \$250,000

NCTracs Pilot Grant Program

03/01/2017-02/28/2018

Title: Identification of novel compounds to kill *Staphylococcus aureus* persisters

Description: This interdisciplinary study aims to identify novel compounds with activity against persister cells

Role: Co-PI

Amount (Direct costs): \$50,000

Charles A. King Postdoctorate Fellowship

07/01/2014-06/31/2016

Description: The goal of this study was to elucidate the mechanism of persister formation in *S. aureus* under normal growth conditions.

Role: PI

Amount (Direct costs): \$100,000

8. PROFESSIONAL SERVICE AND MEMBERSHIPSPatents

Conlon BP, Radlinski L, Rowe SE, Potentiation of antibiotic effect, US20210023101, published 28/01/2021.

Conlon BP, Conlon SE, Dayton P, Papadopoulou V, Methods And Systems For Enhancing Delivery Of Therapeutic Agents to Biofilms Using Low Boiling Point Phase Change Contrast Agents. International patent WO 2021/247544, published December 9th 2021.

Advisory boards

Scientific advisory board member - CC4CARB – Chemistry Center for Combating Antibiotic-Resistant Bacteria (CC4CARB) is a project funded by a contract from NIAID focused on the synthesis and delivery of rationally designed compound libraries to the scientific community.

Scientific advisory board member – Synoxa Biosciences - Synoxa Sciences, Inc. is a Raleigh, NC based discovery-stage startup company working to develop novel small molecule antibiotics that are effective against multidrug-resistant bacterial infections.

UNC service

Chair of the BBSP Microbiology & Immunology admissions committee, 2021 – current.

Member of M&I faculty recruitment committee – 2021.

Chair of the UNC M&I Departmental Seminar Series Organizing Committee, 2020 – 2021.

Member of the Microbiology & Immunology Departmental Retreat Organizing Committee, 2021.

Member of the BBSP admissions committee to evaluate applicants to the BBSP PhD program. 2016 – 2021.

Organizer of local scientific meeting - Triangle Microbial Iterations (TMI) that brings together microbiologists from Duke, UNC and NC State to share their research interests in an informal setting 3 times a year. 2016 – current.

Editorial appointments

Editorial board member – *Infection and Immunity* – 2021 - 2023.

Invited editor – *MBio* – May 2021.

Ad Hoc Reviewer

PNAS (2021), *Plos Biology* (2021), *Nature Microbiology* (2020 – 2021), *Journal of Antimicrobial Chemotherapy* (2017 – 2021), *Infection & Immunity* (2019 – 2021), *Journal of Bacteriology* (2017 – 2021), *mBio* (2018 – 2021), *mSphere* (2016 – 2021), *Plos Pathogens* (2018 – 2020), *Nature Communications* (2020), *FEMS* (2020), *Microbiology Open* (2019), *Plos One* (2019), *Molecular Microbiology* (2018), *Journal of Infectious Diseases* (2018), *Journal of Medical Microbiology* (2017),

Grant reviewer

2019 – Graduate women in science (GWIS) fellowship reviewer, East Carolina University

2018 - NIAID Study Section Member – Special Emphasis Panel – Broad Agency Announcement – Research Area 01

2018 - Reviewer of NSERC discovery grant, Research Council of Canada

2017 - Reviewer of Research Council UK, MRC grant

2016 - External Reviewer of Developmental Research Pilot Project, part of the Nebraska INBRE project

2015 - Reviewer of Grant Proposal for Strategic Basic Research Program for IWT, Belgian Government Agency

Professional Societies

American Society of Microbiology (ASM) – member (2010 – present).