

David L. Erickson, Ph.D.

Curriculum Vitae

Brigham Young University
Department of Microbiology and Molecular Biology
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Dr. Erickson is an Associate Professor in the Department of Microbiology and Molecular Biology at Brigham Young University. His areas of expertise include bacterial pathogenesis, innate immunity, antimicrobials and resistance, virulence factors, *Yersinia*, *Escherichia coli*, and zoonotic disease transmission. His responsibilities include:

- 1) Teaching/mentoring undergraduate and graduate students in microbiology and molecular biology courses.
- 2) Directing a productive research program investigating bacterial pathogens that trains and mentors student researchers.
- 3) Service to the Department, College, University, and the wider microbiology community.

Education and Training

University of Lethbridge	BS	1999	Biochemistry
University of Calgary	Ph.D.	2003	Bacterial Pathogenesis
NIH/NIAID, Rocky Mountain Laboratories	Post-doctoral fellow	2006	Bacterial Pathogenesis

Positions and Honors

Employment

1998-1999	Research associate, Agriculture Canada, Lethbridge, AB Canada
1999-2003	Graduate student, University of Calgary, Calgary, AB Canada
2003-2006	Postdoctoral fellow, Rocky Mountain Laboratories (NIH/NIAID)
2006-2012	Assistant Professor, Brigham Young University
2012-present	Associate Professor, Brigham Young University
2024-present	Professor, Brigham Young University

Awards

2001-2003	Canadian Cystic Fibrosis Foundation graduate scholar
2019-2020	Graduate Mentoring Award, Faculty of Graduate Studies, Brigham Young University
2025-present	Skagg Mentoring Fellowship, College of Life Sciences, Brigham Young University

Teaching Expertise

Courses Include:

1. MMBIO 221: General Microbiology – introductory microbiology course for non-majors, part of BYU General Education curriculum.
2. MMBIO 261: Infection and Immunity – intermediate course for microbiology majors introducing concepts of immunology, virology, bacteriology, mycology, and parasitology.
3. MMBIO 364: Bacterial Pathogenesis – advanced course for microbiology majors covering concepts of host-pathogen interactions, antibiotics and resistance, and vaccines.
4. MMBIO 365: Bacterial Pathogenesis Laboratory – advanced laboratory course investigating bacterial pathogens using molecular approaches.
5. MMBIO 390R: Readings in Molecular Biology – intermediate/advanced course covering broader societal impacts of microbiology and molecular biology.
6. MMBIO 528: Scientific Literacy – graduate course developing skills of hypothesis generation, experimental design, and effective reading of scientific literature.
7. MMBIO 660: Microbiology and Immunology – graduate course covering principles of immunology, virology, and bacteriology.
8. MMBIO 663: Articulating Science – graduate course developing scientific writing and presentation skills.

Graduate Student Mentoring:

Name	Role	Graduation date	Degree	Thesis/Dissertation
Yuet Ching Law	Member	2008	MS	Specific Compartmentalization of Immunoglobulin A Antibody Secreting Cells in Mouse Salivary Glands via the Differential Expression of Chemokines and Chemokine Receptors
Wei Zhou	Chair	2010	MS	Gene Expression Patterns in Flea Vectors of <i>Yersinia pestis</i>
Bin Liu	Member	2012	PhD	Partial Characterization of the Antimicrobial Activity of CCL28
Cynthia Lew	Member	2012	MS	Loss of the Lipopolysaccharide Core Biosynthesis <i>rfaD</i> Gene Increases Antimicrobial Chemokine Binding and Bacterial Susceptibility to CCL28 and Polymyxin: A Model for Understanding the Interface of Antimicrobial Chemokines and Bacterial Host Defense Avoidance Mechanisms
Matthew Crook	Member	2013	PhD	Modulators of symbiotic outcome in <i>Sinorhizobium meliloti</i>
Ryan VanYpren	Member	2015	PhD	Gene Networks Involved in Competitive Root Colonization and Nodulation in the <i>Sinorhizobium meliloti</i> – <i>Medicago truncatula</i> Symbiosis
Kyle Jensen	Member	2015	MS	Isolation and Host Range of <i>Staphylococcus aureus</i> Bacteriophages and Use for Decontamination of Fomites

Lauren Johnson	Chair	2016	MS	The <i>pmrHFIJKLM</i> Operon in <i>Yersinia pseudotuberculosis</i> Enhances Resistance to CCL28 and Promotes Phagocytic Engulfment by Neutrophils
Jared Hoffman	Chair	2016	MS	The role of the transcriptional antiterminator <i>rfaH</i> in lipopolysaccharide synthesis, resistance to antimicrobial peptides, and virulence of <i>Yersinia pseudotuberculosis</i> and <i>Yersinia pestis</i>
Rhonda Chronis	Member	2017	MS	Assessing the ability of the mouse model to study mastitis at the high-risk periparturient time
Devan Bursey	Member	2019	MS	Ribosomally synthesized and post-translationally modified peptides as potential scaffolds for peptide engineering
Shalee Carlson	Member	2020	MS	Metal acquisition in mastitic mammary glands
Michael Olson	Chair	2020	PhD	Identification of Genes that Determine Fitness, Virulence, and Disease Outcomes in Mastitis-Associated <i>Escherichia coli</i>
Ashley Ball	Member	2022	MS	Biofilm Characterization and the Potential Role of eDNA in Horizontal Gene Transfer in Hospital and Meat Isolates of <i>Staphylococcus aureus</i> and Their Biofilms
Weston Hutchison	Chair	2022	MS	The Role of Chitinase A in Mastitis-Associated <i>Escherichia coli</i> Pathogenesis

Research Expertise

Funding Support

Current

2022-2025 AREA R15 Award National Institutes of Health, NIAID

Role: Principal Investigator

Title: Investigating virulence functions of mastitis-associated Extraintestinal pathogenic *Escherichia coli* relevant to human disease

NIH# 1R15AI159847-01A1

\$378,750

Completed

2020-2021 Marcus E. Jensen Poultry Disease Research Endowment, BYU

Role: Principal Investigator

Title: Improving gallium efficacy against avian-associated *Escherichia coli*

\$10,000

2019-2020 Faculty of Graduate Studies Mentoring Award, BYU

Role: Principal Investigator

Title: Understanding diversity in *Escherichia coli* susceptibility to gallium
\$14,040

2016-2018 Marcus E. Jensen Poultry Disease Research Endowment, BYU

Role: Principal Investigator

Title: Sabotaging iron scavenging: a new treatment for turkey diseases caused by *Escherichia coli*
\$7500

2012-2016 AREA R15 Award National Institutes of Health, NIAID

Role: Co-Principal Investigator

Title: Identification of Bacterial Resistance Mechanisms to Antimicrobial Chemokines
NIH# 1R15AI1958-01
\$375,000

2011-2013 Mentoring Environment Grant, BYU

Role: Principal Investigator

Title: *Yersinia pestis* Strategies to Resist Oxidative Killing during Flea Infections
\$20,000

2009-2011 Mentoring Environment Grant, BYU

Role: Principal Investigator

Title: Gene losses in the evolution of plague transmission
\$20,000

2008-2010 Mentoring Environment Grant, BYU

Role: Principal Investigator

Title: Characterizing the Normal Flora of Fleas
\$20,000

2007-2009 Mentoring Environment Grant, BYU

Role: Principal Investigator

Title: Gene Expression patterns in flea vectors of bubonic plague
\$20,000

Research Publications

Preprints and Manuscripts in Preparation

1. Collado-Silva A., LeBaron R., Olson M.A., David-Prince R.J., Wilson E., **Erickson D.L.** Identification of genes affecting Group 3 Capsule Synthesis in Extraintestinal Pathogenic *Escherichia coli*. (in preparation)

Peer-reviewed Publications

1. Olson M.A., Cullimore C., Hutchison W.D., Grimsrud A., Nobrega D., De Buck J., Barkema H.W., Wilson E., Pickett B., **Erickson D.L.** 2024. Genes associated with fitness and disease severity in the pan-genome of mastitis-associated *Escherichia coli* Frontiers in Microbiology 29;15:1452007. doi: 10.3389/fmicb.2024.1452007
2. Gahlot D.K., Wai S.N., **Erickson D.L.**, Francis M.S. 2022. Cpx-signalling facilitates Hms-dependent biofilm formation by *Yersinia pseudotuberculosis*. NPJ Biofilms and Microbiomes 8: 13. [PMID: 35351893](#)
Citations: 1 (Google Scholar), Role: (Co-author)
Contribution: helped design project, collected and analyzed data, co-wrote the manuscript
3. Craft J., Eddington H., Christman N.D., Pryor W., Chaston J.M., **Erickson D.L.**, Wilson E. 2022. Increased Microbial Diversity and Decreased Prevalence of Common Pathogens in the Gut Microbiomes of Wild Turkeys Compared to Domestic Turkeys. Appl Environ Microbiol 8;88(5):e0142321 [PMID: 35044852](#)
Citations: 7 (Google Scholar), Role: (Co-author)
Contribution: designed project, collected and analyzed data, co-wrote the manuscript
4. Olson M.A., Grimsrud A., Richards A.C., Mulvey M.A., Wilson E., **Erickson D.L.** 2021. Bile Salts Regulate Zinc Uptake and Capsule Synthesis in a Mastitis-Associated Extraintestinal Pathogenic *Escherichia coli* Strain. Infect Immun Sep 16;89(10):e0035721 [PMID:34228495](#)
Citations: 8 (Google Scholar), Role: (Corresponding author)
Contribution: designed project, collected and analyzed data, wrote the manuscript
5. Calder J.C., Christman N.C., Hawkins J.M., **Erickson D.L.** 2020. A trimeric autotransporter enhances biofilm cohesiveness in *Yersinia pseudotuberculosis* but not in *Yersinia pestis*. J. Bacteriol. 202(20):e00176-20. [PMID: 32778558](#)
Citations: 9 (Google Scholar), Role: (Corresponding author)
Contribution: designed project, collected and analyzed data, wrote the manuscript
6. Carlson S., **Erickson D.L.**, Wilson E. 2020. *Staphylococcus aureus* Metal Acquisition in the Mastitic Mammary Gland. Microbial Pathogenesis 144:104179 [PMID: 32244043](#)
Citations: 4 (Google Scholar), Role: (Co-author)
Contribution: co-wrote the manuscript
7. Schachterle J.K., Stewart R.M., Schachterle M.B., Calder J.T., Kang H., Prince J.T., **Erickson D.L.** *Yersinia*

pseudotuberculosis BarA-UvrY Two-Component Regulatory System Represses Biofilms via CsrB. 2018. Front. Cell. Infect. Microbiol. 18(8):323 PMID: [30280093](#)

Citations: 9 (Google Scholar), Role: (Corresponding author)

Contribution: designed project, collected and analyzed data, wrote the manuscript

8. Olson MA, Siebach TW, Griffiths JS, Wilson E, **Erickson DL**. 2018. Genome-wide identification of fitness factors in mastitis-associated *Escherichia coli*. Appl Environ Microbiol 84(2):e02190-17 PMID: [29101196](#)

Citations: 30 (Google Scholar), Role: (Corresponding author)

Contribution: designed project, collected and analyzed data, wrote the manuscript

9. Hoffman JM, Sullivan S, Wu E, Wilson E, **Erickson DL**. 2017. Differential impact of lipopolysaccharide defects caused by loss of RfaH in *Yersinia pseudotuberculosis* and *Yersinia pestis*. Sci Rep. 7(1):10915. PMID: [28883503](#)

Citations: 2 (Google Scholar), Role: (Corresponding author)

Contribution: designed project, collected and analyzed data, wrote the manuscript

10. **Erickson DL**, Lew CS, Kartchner B, Porter NT, McDaniel SW, Jones NM, Mason S, Wu E, Wilson E. 2016. Lipopolysaccharide Biosynthesis Genes of *Yersinia pseudotuberculosis* Promote Resistance to Antimicrobial Chemokines. PLoS One 11(6):e0157092. PMID: [27275606](#)

Citations: 20 (Google Scholar), Role: (Corresponding author)

Contribution: designed project, collected and analyzed data, wrote the manuscript

11. Pallister KB, Mason S, Nygaard TK, Liu B, Griffith S, Jones J, Linderman S, Hughes M, **Erickson D.L.**, Voyich JM, Davis MF, Wilson E. 2015. Bovine CCL28 Mediates Chemotaxis via CCR10 and Demonstrates Direct Antimicrobial Activity against Mastitis Causing Bacteria. PLoS One 10(9):e0138084. PMID: [26359669](#)

Citations: 11 (Google Scholar), Role: (Co-author)

Contribution: collected and analyzed data, assisted in writing the manuscript

12. Zhou W., Johnson K.L., Mortensen R.D, **Erickson D.L.** 2012. Gene expression analysis of *Xenopsylla cheopis* fleas suggests a role for reactive oxygen species in response to *Yersinia pestis* infection. J. Med. Entomol 49(2):363-70 PMID: [22493856](#)

Citations: 30 (Google Scholar), Role: (Corresponding author)

Contribution: Designed project, collected and analyzed data, wrote the manuscript

13. **Erickson D.L.**, Russell C.W., Johnson K.L., Hileman T., Stewart R.M. 2011. PhoP and OxyR transcriptional regulators contribute to *Yersinia pestis* virulence and survival within *Galleria mellonella*. Microbial Pathogenesis 51:389-95 PMID: [21964409](#)

Citations: 39 (Google Scholar), Role: (Corresponding author)

Contribution: Designed project, collected and analyzed data, wrote the manuscript

14. Vogt S.L., Green C., Stevens K.M., Day B., **Erickson D.L.**, Woods D.E. and Storey D.G. 2011. The stringent response is essential for *Pseudomonas aeruginosa* virulence in the rat lung agar bead and *Drosophila melanogaster* feeding models of infection. *Infect. Immun.* **79**:4094-104 [PMID: 21788391](#)
Citations: 94 (Google Scholar), Role: (Co-author)
Contribution: collected and analyzed data, assisted in writing the manuscript
15. **Erickson D.L.** Anderson N.A., Cromar L.M., Jolley A. 2009. Bacterial Communities Associated with Flea Vectors of *Yersinia pestis*. *J. Med. Entomol.* **46**:1532-1536 [PMID: 19960708](#)
Citations: 33 (Google Scholar), Role: (Corresponding author)
Contribution: Designed project, collected and analyzed data, wrote the manuscript
16. **Erickson D.L.** and Hinnebusch B.J. 2008. *Yersinia pestis* biofilm in the flea vector and its role in the transmission of plague. *Curr. Top. Microbiol. Immunol.* **322**:229-48 [PMID: 18453279](#)
Citations: 151 (Google Scholar), Role: (First author)
Contribution: co-wrote the manuscript
17. **Erickson D.L.**, Jarrett C.O., Callison J.A., Fischer E.R., Hinnebusch B.J. 2008. Loss of a biofilm- inhibiting glycosyl hydrolase during the emergence of *Yersinia pestis*. *J. Bacteriol.* **190**:8163-70. [PMID: 18931111](#)
Citations: 67 (Google Scholar), Role: (First author)
Contribution: Designed project, collected and analyzed data, co-wrote the manuscript
18. **Erickson D.L.**, Waterfield N.R., Vadyvaloo V., Long, D., Fischer E.R., Ffrench-Constant R.H., Hinnebusch B.J. 2007. Acute oral toxicity of *Yersinia pseudotuberculosis* towards *Xenopsylla cheopis*: implications for the evolution of flea-borne transmission of *Yersinia pestis*. *Cell. Microbiol.* **9**:2658-66 [PMID: 17587333](#)
Citations: 64 (Google Scholar), Role: (Co-first author)
Contribution: Designed project, collected and analyzed data, co-wrote the manuscript
19. **Erickson D.L.**, Jarrett C.O., Wren B.W., Hinnebusch B.J. 2006. Serotype differences and lack of biofilm formation characterize *Y. pseudotuberculosis* infection of the *Xenopsylla cheopis* flea vector of *Yersinia pestis*. *J. Bacteriol.* **188**:1113-1119 [PMID: 16428415](#)
Citations: 84 (Google Scholar), Role: (First author)
Contribution: Designed project, collected and analyzed data, co-wrote the manuscript
20. **Erickson D.L.**, Lines L.J., Pesci E.C., Venturi V., and Storey D.G. 2004. The *Pseudomonas aeruginosa relA* contributes to virulence in *Drosophila*. *Infect. Immun.* **72**:5638-5645. [PMID: 15385461](#)
Citations: 155 (Google Scholar), Role: (First author)
Contribution: Designed project, collected and analyzed data, co-wrote the manuscript

21. **Erickson D.L.**, Endersby R., Kirkham A., Stuber K., Vollman D.D., Mitchell I., Rabin H.R., and Storey D.G. 2002. *Pseudomonas aeruginosa* quorum-sensing systems may control virulence factor expression in the lungs of patients with cystic fibrosis. *Infect. Immun.***70**:1783-1790. [PMID: 11895939](#)

Citations: 335 (Google Scholar), Role: (First author)

Contribution: Designed project, collected and analyzed data, co-wrote the manuscript

22. **Erickson D.L.**, Nsereko V.L., Morgavi D.P., Selinger L.B., Rode L.M., and Beauchemin K.A. 2002. Evidence of quorum sensing in the rumen ecosystem: detection of N-acyl homoserine lactone autoinducers in ruminal contents. *Can J Microbiol* **48**:374-378 [PMID: 12030712](#)

Citations: 75 (Google Scholar), Role: (First author)

Contribution: Designed project, collected and analyzed data, co-wrote the manuscript

Book Chapters

Erickson D.L. and Hinnebusch B.J. 2005. Pneumonic Plague *In* I. Freidman (ed) *Microbial Infections and Bioterrorism*, Kluwer Academic/Plenum Publishers

Scientific Presentations

1. Allen K., Cline C., DeMarco A., Potts E., Wiley M., Williams J., Erickson D.L. 2022. Genetic changes associated with gallium resistance and reduced virulence in an extraintestinal pathogenic *Escherichia coli* strain. American Society for Microbiology Intermountain Branch Annual Meeting, Provo UT
2. Erickson D.L., Durrant S., Wilson E. 2022. Consequences of gallium resistance in *Escherichia coli*. Wind River Conference on Prokaryotic Biology, Estes Park CO
3. Durrant S., Erickson D.L. 2021. Investigation of the resistance pathways of Extraintestinal Pathogenic *Escherichia coli* to gallium nitrate using next-gen sequencing of resistant mutants. American Society for Microbiology Intermountain Branch Annual Meeting, Ogden UT
4. Olson M.A. Christman N.D., Wilson E., Erickson D.L. 2021. The genomic landscape of mastitis-associated *Escherichia coli*. Wind River Conference on Prokaryotic Biology
5. LeBaron R., Olson M.E., Kingrey M., Erickson D.L. 2021. The membrane lipid asymmetry pathway is required for Group 3 capsule synthesis and regulates antimicrobial susceptibility in a mastitis-associated extraintestinal pathogenic *Escherichia coli* strain. Wind River Conference on Prokaryotic Biology
6. Olson M.A., Wilson E., Erickson D.L. 2019. High-affinity zinc transport enhances the growth of *Escherichia coli* in bile salts and regulates capsule expression. Wind River Conference on Prokaryotic Biology, Estes Park CO
7. Carlson S., Erickson D.L., Wilson E. 2019. Metal Acquisition is Essential for *Staphylococcus aureus* Survival in Milk and the Mastitic Mammary Gland. Wind River Conference on Prokaryotic Biology, Estes Park CO
8. Calder J., Erickson D.L. A new trimeric autotransporter protein required for *Yersinia pseudotuberculosis* biofilm cohesion. 2019. Wind River Conference on Prokaryotic Biology, Estes Park CO
9. Erickson D.L. 2019. Extraintestinal pathogenic *Escherichia coli* from livestock - new roles for metal ion acquisition systems. Microbial Pathogenesis Seminar Series, University of Utah School of Medicine

10. West B., Olson M.A., Erickson D.L. 2018. Comparing the role of curli fimbriae in mastitis and avian-pathogenic *Escherichia coli*. American Society for Microbiology Tri-Branch Meeting, Durango CO
11. West G., Olson M.A., Erickson D.L. 2018. Can Gallium be used to treat Avian pathogenic *Escherichia coli* Infections? American Society for Microbiology Tri-Branch Meeting, Durango CO
12. Calder J., Erickson D.L. 2018. How does the BarA/UvrY/CsrB regulatory system control Biofilm Stability in *Yersinia pseudotuberculosis*? American Society for Microbiology Tri-Branch Meeting, Durango CO
13. Baker M., Frampton C., Wagner C., Walker K., Olson M.E., Erickson D.L. 2018. Investigating virulence and drug susceptibility of *Escherichia coli* from poultry in Utah. American Society for Microbiology Tri-Branch Meeting, Durango CO
14. Antola M., Drennan T., Dyer N., Rasmussen T., Siebach T., Olson M.A., Erickson D.L. 2016. Genomic comparative study of mastitis-associated *Escherichia coli*: Discovery of MPEC virulence genes. American Society for Microbiology Intermountain Branch Annual Meeting, Salt Lake City, UT
15. Olson M.A., Wilson E., Erickson D.L. 2016. The role of citrate receptors in *Escherichia coli* that cause mastitis. American Society for Microbiology Intermountain Branch Annual Meeting, Salt Lake City, UT
16. Johnson L., Wu E., Mason S., Wilson E., Erickson D.L. 2016. A Double-Edged Sword: aminoarabinose addition in *Yersinia pseudotuberculosis* helps and hinders survival. American Society for Microbiology Intermountain Branch Annual Meeting, Salt Lake City, UT
17. Hoffman J., Sullivan S., Wu E., Wilson E., Erickson D.L. 2016. You'd think it would matter but it doesn't: RfaH and virulence in *Yersinia pseudotuberculosis*. American Society for Microbiology Intermountain Branch Annual Meeting, Salt Lake City, UT
18. Olson M.A., Siebach T., Wilson E., Erickson D.L. 2016. Establishing a *Galleria mellonella* model to study *Escherichia coli*-mediated mastitis. Wind River Conference on Prokaryotic Biology, Estes Park CO
19. Olson M.A., Chronis R., Siebach T., Wilson E., Erickson D.L. 2015. Characterization of 20 *Escherichia coli* mastitis isolates in *Galleria mellonella* and murine infection models. American Society for Microbiology Tri-Branch Meeting, Durango CO
20. Johnson L., Wilson E., Erickson D.L. 2015. Describing L-ara4N addition via the *pmrHFIJKLM* operon as the defense against antimicrobial chemokines in *Yersinia pseudotuberculosis*. American Society for Microbiology Tri-Branch Meeting, Durango CO
21. Hoffman J., Sullivan S., Schachterle B., Wilson E., Erickson D.L. 2015. RfaH regulates lipopolysaccharide synthesis in *Yersinia pestis* and *Yersinia pseudotuberculosis* and is required for resistance to antimicrobial chemokines. American Society for Microbiology Tri-Branch Meeting, Durango CO
22. Moffatt J., Medina K., Kartchner B., Wilson E., Erickson D.L. 2014. Genetic screen for Co-Targets Involved in CCL28 Binding to *Yersinia pseudotuberculosis*. American Society for Microbiology Intermountain Branch Annual Meeting, Pocatello ID
23. Kartchner B., Mason S., Wilson E., Erickson D.L. 2013. Identifying potential targets of the antimicrobial chemokine CCL28 in regulating bacterial colonization of mucosal tissues. 55th Wind River Conference on Prokaryotic Biology, Estes Park CO
24. Schachterle J.K., Trent B.J., Erickson D.L. How does the BarA/UvrY system control exopolysaccharide production in *Yersinia pseudotuberculosis*? 2013. 55th Wind River Conference on Prokaryotic Biology, Estes

Park CO

25. Wilson E., Porter N., Lew C., Zagioboylo L., Sullivan S., **Erickson D.L.** 2012. Loss of the lipopolysaccharide core biosynthesis *rfaD* gene increases antimicrobial chemokine binding and bacterial susceptibility to CCL28 and polymyxin: A model for understanding the interface of antimicrobial chemokines and bacterial host defense avoidance mechanisms. Keystone Symposium (Chemokines and Leukocyte Trafficking in Homeostasis and Inflammation), Beckenridge CO
26. Russell C.W., **Erickson D.L.** 2011. The OxyR transcriptional regulator contributes to reactive oxygen defense and is required for *Yersinia pestis* insect infection. American Society for Microbiology Intermountain Branch Annual Meeting, Ogden UT
27. Porter N., Liu B., Jones M., Wilson E., **Erickson D.L.** 2010. Bacterial factors that affect interactions with the antimicrobial chemokine CCL28. American Society for Microbiology Intermountain Branch Annual Meeting, Ogden UT
28. **Erickson D.L.**, Johnson K., Gehen S., Hileman T. 2010. *Galleria mellonella* as a Model for Studying *Yersinia* sp. Interaction with Insects Reveals Species-specific Adaptations to Different Invertebrate Hosts. American Society for Microbiology Annual General Meeting, San Diego, CA
29. Stewart R., **Erickson D.L.** 2010. Identification of *Yersinia pseudotuberculosis* genes that affect congo- red binding. American Society for Microbiology Intermountain Branch Annual Meeting, Provo UT
30. Whipple N., Zhou W., Conley C., **Erickson D.L.** 2010. Gene expression analysis of *Xenopsylla cheopis* fleas reveals a role for reactive oxygen species in controlling *Yersinia pestis* infection. American Society for Microbiology Intermountain Branch Annual Meeting, Provo UT
31. Bird B., Gehen S., **Erickson D.L.** 2010. Investigating the function of the Yersinia Murine Toxin in flea infections. American Society for Microbiology Intermountain Branch Annual Meeting, Provo UT
32. Johnson K., **Erickson D.L.** 2009. Characterization of a novel antimicrobial peptide, defensin, and its actions against the causative agent of bubonic plague, *Yersinia pestis*. Utah Conference on Undergraduate Research, Salt Lake City, UT
33. Zhou W., Mortensen R., Mitchell V., Johnson K., **Erickson D.L.** 2008. Gene expression patterns in flea vectors of *Yersinia pestis*. Entomological Society of America 58th Annual Meeting, Reno, NV
34. Sobieski L., Anderson N., **Erickson D.L.** 2007. Comparison of the normal microbial flora of two flea species that transmit *Yersinia pestis*. 62nd International Conference on Diseases of Nature Communicable to Man. Madison, WI

Service to the University Community

Microbiology and Molecular Biology Honors Coordinator (2021-present)

BYU Institutional Biosafety Committee (2019-present)

Microbiology and Molecular Biology Graduate Committee (2011-present)

Chair, Microbiology and Molecular Biology Faculty Search Committee (2022-2023)

Reviewer, College of Life Sciences Undergraduate Research Awards (2008-2022)

Reviewer, College of Life Sciences Graduate Mentoring Awards (2018-2019)

Reviewer, College of Life Sciences Mentoring Environment Grants (2008-2011)

Microbiology and Molecular Biology Resource Committee (2006-2011)

Research Instrumentation Core Facility Advisory Committee (2008-2009)

Service to the Microbiology Community

Intermountain Branch of the American Society for Microbiology, President (2009-2010), Treasurer (2012-2013)

Editorial board member, *Canadian Journal of Microbiology* (2019-present)

External Grant Reviewer for the following scientific funding agencies:

- NIAID (NIH) R15 Study Section
- Israeli Science Foundation
- Agence Nationale de la Recherche (France)
- National Science Foundation

Ad-hoc reviewer for the following journals:

- *Animal Diseases*
- *Applied and Environmental Microbiology*
- *Canadian Journal of Microbiology*
- *Developmental and Comparative Immunology*
- *Elife*
- *Frontiers in Cellular and Infection Microbiology*
- *Infection and Immunity*
- *Journal of Applied Microbiology*
- *Journal of Bacteriology*
- *Journal of Medical Entomology*
- *Journal of Vector Ecology*
- *mBio*
- *Microbes and Infection*
- *Microbial Pathogenesis*
- *Nature Biofilms and Microbiomes*
- *Nature Communications*
- *PLoS Pathogens*
- *Virulence*