LAUREN E. FUESS, Ph.D.

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EDUCATION

PhD, University of Texas at Arlington, Quantitative Biology	**2013-2018**
B.S., College of Charleston, Marine Biology	**2008-2012**

ACADEMIC APPOINTMENTS

Associate Professor, Texas State University	**effective Sept 1 2026**
Assistant Professor, Texas State University	**2020-2026**
Postdoctoral Research Associate, University of Connecticut	**2018-2020**
Graduate Assistant, University of Texas at Arlington	**2013-2018**
Researcher, Marine Invasive Species Lab, Discovery Bay, Jamaica	**2012-2013**

FUNDED GRANTS/CONTRACTS

total awarded ~ $4,420,000

National Institutes of Health NIGMS R35 MIRA (**2026-2031**). *Mechanisms of intergenomic epistasis and environmental context in animal-microbe symbioses*. PI: L. Fuess. **$2,056,750**.

Texas State University Research Enhancement Program (**2026-2027**). *Advancing the understanding of the genomic basis of symbiosis*. PI: R. Gonzalez-Pech; co-PI L. Fuess. **$24,000**

National Science Foundation (**2025-2030**). *CAREER: Characterizing the mechanisms linking bleaching recovery to pathogen susceptibility in a model cnidarian system*. **PI:** L. Fuess. **$676,766**.

Florida Department of Environmental Protection (**2024-2025**). *An integrative approach to identify and experimentally validate environmental variables which affect SCTLD outcomes.* PI: N. Jones (NSU), co-PI: L. Fuess. **$61,223**

Florida Department of Environmental Protection (**2024-2025**). *An integrative 'omic approach leveraging historical SCTLD data to identify predictive markers of SCTLD resistance* PI: L. Fuess, co-PIs: G. Klinges (ASU), A. Veglia (UPRM), A. Rossin (NOAA). **$178,703**

National Science Foundation (**2023-2025**). *RAPID: Leveraging a natural bleaching event to assess links between bleaching and disease*. PI: L. Fuess, co-PI: S. Gignoux-Wolfsohn (UML). **$199,134**
Supplement: GEO-REPS DCL (**2024-2025**). *Supporting one postbac student @ UML*. **$46,250**

National Science Foundation (**2024-2026**). *BRC-BIO: Establishing Astrangia poculata as a study system to understand how multi-partner symbiotic interactions affect pathogen response in cnidarians*. PI: L. Fuess, co-PI: K. Sharp (RWU). **$490,280**

National Science Foundation (**2023-2025**). *Planning: CREST center in bioinformatics*. PI: L. Fuess, co-PI: C. Gabor (TXST). **$199,960**

Florida Department of Environmental Protection (**2023-2024**). *Tracking bacterial, viral, and gene expression shifts throughout SCTLD development in the Dry Tortugas*. PI: L. Fuess, co-PIs: G. Klinges (ASU), D. Holstein (LSU), A. Veglia (UPRM). **$259,253**

MARC Instrumentation Grant (**2022**). *Acquisition of tissue processing and embedding machines to produce fixed-paraffin-embedded blocks of biological tissues.* PI: M. Huertas (TXST), co-PIs: L. Fuess, R. Peterson (TXST), G. Y. Koh (TXST), D. Garcia (TXST), Y. Lu (TXST). **$52,500**

Paul M. Angell Foundation Grant (**2021-2022**). *Investigating biomarkers of resistance to Stony Coral Tissue Loss Disease.* PI: S. Gignoux-Wolfsohn (UML); Senior Personnel: L. Fuess **$75,000**

Gulf Research Program Early Career Researcher Fellowship (**2021-2023**). PI: L. Fuess **$76,000**

TXST ORSP Research Accelerator Fund (**2021-2023**). *Effects of aquatic nitrite on maternal immune transfer and offspring development in a live-bearing species*. co-PIs: M. Huertas (TXST), L. Fuess & C. Gabor (TXST). **$16,487**

Texas State University Research Enhancement Program (**2021-2022**). *Identifying predictors of host response to a novel coral disease*. PI: L. Fuess. **$8,000**

PENDING GRANTS/CONTRACTS

total ~ $1,300,000

National Science Foundation (**2027-2031**). *Collaborative Research: Leveraging a novel disease outbreak to advance understanding of evolution in response to rapid environmental change*. PI: S. Gignoux-Wolfsohn (UML); co-PIs: L. Fuess, J. Brown (Bigelow), L. Harper (Smithsonian). **$728,791** (to LEF; $2.3mil total). *Submitted 4/17/26*

National Institutes of Health NIAID R21 (**2027-2029**). *Immune signaling and development during symbiosis establishment in a vertebrate host*. PI: A. Gould (Temple); co-PI: L. Fuess. **$58,609** (to LEF; ~$415,000 total). *Submitted 6/16/26.*

National Science Foundation (**2027-2030**). *Collaborative Research*: *Defining how microbial arrival order shapes metabolite landscapes and alters host immunity*. PI: M. Sogin (UCR); co-PI: L. Fuess,. **$523,234** (to LEF; ~$1.3mil total). *Submitted 8/6/2026*

RESEARCH FELLOWSHIPS

total awarded ~ $205,000

American Association of Immunologists, Intersect Fellowship	**2019**
National Science Foundation, Graduate Research Fellowship	**2015**
Fulbright Foundation, Full Grant- Jamaica	**2012**

PUBLICATIONS

h-index: 18; i-10 index: 19; citations: 1070

* - undergraduate author, + - graduate author, ^ - postdoc author, $ - equally contributing author

29. Borbee EM^, Changsut IV+, McAlister JS, Demarco T, Davies SW, Ianniello CF, Sanchez Garcia M, Roberson LM, Shickle A, Sneed JM, Pelose G, Wuitchik D, **Fuess LE**, Warner JF, Babonis LS, Rotjan RD, Sharp KH. *accepted*. Development of methods for spawning, fertilization, larval husbandry, and settlement in the temperate coral *Astrangia poculata*. *Frontiers in Marine Science*

28. Diaz de Villegas SC+, Abdelbaki P*, **Fuess LE**. 2026. Differential regulation of apoptosis and autophagy and changes in Symbiodiniaceae energy transfer mediate the link between bleaching and disease in *Exaiptasia diaphana*. *Molecular Ecology*. 35:e70323. DOI: 10.1111/mec.70323.

27. Borbee EM^, Changsut IV+, Bernabe K, Shickle A, Sharp KH, **Fuess LE**. 2026. Coral larvae have unique transcriptomic responses to pathogenic and probiotic bacteria. *Coral Reefs*. DOI: 10.1007/s00338-026-02830-1.

26. Fuess LE, Hund AK, Kenney ML, Maciejewski MF, Marini JM, Bolnick DI. 2026. Changes in gene regulation are associated with the evolution of resistance to a novel parasite. *Frontiers in Immunology*. 17:1697157. DOI: 10.3389/fimmu.2026.1697157.

25. Flanagan BA, **Fuess LE**, Vrtilek M, Roth-Monzon A, Bolnick DI. 2026. Macroevolutionary changes in gene expression response to an immune stimulus across the diversity of fishes. *Molecular Biology & Evolution*. 43:msaf323. DOI: 10.1093/molbev/msaf323

24. Bolnick, DI, **Fuess LE**, Graham AL, Khan I, Steinel NC, Vaziri G. 2025. Evolutionary Immunology. *Annual Review of Ecology, Evolution, and Systematics*. 56:27–51. DOI: 10.1146/annurev-ecolsys-102723-043048

23. Hu J, Weber JN, **Fuess LE**, Steinel NC, Bolnick DI, Wang M. 2025. A spectral framework to map QTLs affecting joint differential networks of gene co-expression. *PLoS Computational Biology.* 21: e1012953. DOI: 10.1371/journal.pcbi.1012953

22. Emery MA, Gutierrez-Andrade D, Changsut IV[+], Swain H, **Fuess LE**, Mydlarz LD. 2024. Immune System Components in Cnidarians. In: Reference Module in Life Sciences. Elsevier Ltd. DOI: 10.1016/B978-0-128-24465-4.00122-8

21. Diaz de Villegas SC[+$], Borbee E[^$], Abdelbaki P[*], **Fuess LE**. 2024. Prior heat stress affects pathogen susceptibility in the model cnidarian, *Exaiptasia diaphana*. *Communications Biology*. 7:1328. DOI: 10.1038/s42003-024-07005-8

20. Changsut IV[+], Borbee E[^], Womack HR[*], Shickle A, Sharp KH, **Fuess LE**. 2024. Photosymbiont density is correlated with constitutive and induced immunity in the facultatively symbiotic coral, *Astrangia poculata*. *Integrative and Comparative Biology*. icae036. DOI: 10.1093/icb/icae036

19. Villafranca N[+], Changsut IV[+], Diaz de Villegas SC[+], Womack HR[*], **Fuess LE**. 2023. Characterization of trade-offs between immunity and reproduction in *Astrangia poculata*. *PeerJ*. 11: e16586. DOI: 10.7717/peerj.16586

18. Fuess LE and Bolnick DI. 2023. Single-cell RNA sequencing of teleost immune organ reveals micro-evolution of immune system. *Genome Biology & Evolution*. 15: evad053. DOI: 10.1093/gbe/evad053.

17. Davies S. *et al.* 2023. Building consensus around the assessment and interpretation of Symbiodiniaceae diversity. *PeerJ*. 11: e15023. DOI: 10.7717/peerj.15023.

16. Changsut IV[+], Womack HR[*], Schickle A, Sharp KH, **Fuess LE.** 2022. Comparison of immune phenotypes of colonies of *Astrangia poculata* with variable symbiont densities. *Biology Letters.* 18. DOI: 10.1098/rsbl.2022.0273

15. Weber JN[$], Steinel NC[$], Peng F[$], Shim KC, Lohman BK, **Fuess LE**, Subramanian S, de Lisle S, Bolnick DI. 2022. Evolutionary gain and loss of a pathological immune response to parasitism. *Science*. 377: 1206-1211. DOI: 10.1126/science.abo3411

14. Hund AK, **Fuess LE**, Kenney ML, Maciejewski MF, Marini JM, Shim KC, Bolnick DI. 2022.. Population-level variation in parasite resistance due to differences in immune initiation and rate of response. *Evolution Letters.* 6: 162-177. DOI: 10.1002/evl3.274

13. Fuess LE, Weber JN, den Haan S, Steinel NC, Shim KC, Bolnick DI. 2021. Between-population differences in constitutive and infection-induced gene expression in threespine stickleback. *Molecular Ecology.* 30: 6791–6805. DOI: 10.1111/mec.16197.

12. Fuess LE, den Haan S, Ling F, Weber JN, Steinel NC, Bolnick DI. 2021. Immune gene expression covaries with gut microbiome composition in stickleback. *mBio*. 2: e00145-21. DOI: 10.1128/mBio.00145-21

11. MacKnight N, Cobleigh K, Lasseign, D, Chaves-Fonnegra A, Gutting A, Dimos BA, Antoine J, **Fuess LE**, Ricci CA, Butler CC[*], Muller EM, Mydlarz LD, Brandt, ME. 2021. Microbial dysbiosis reflects disease resistance in diverse coral species. *Communications Biology.* 4: 679. DOI: 10.1038/s42003-021-02163-5

10. Fuess LE, Palacio-Castro AM, Butler CC[*], Baker AC, Mydlarz LD. 2020. Increased algal symbiont density reduces host immunity in a threatened Caribbean coral species, *Orbicella faveolata*. *Frontiers in Ecology and Evolution*. 8: 369. DOI: 10.3389/fevo.2020.572942

9. Fuess LE, Butler CC[*], Brandt ME, Mydlarz LD. 2020. Investigating the roles of transforming growth factor-beta on immune response of *Orbicella faveloata*, a sceleractinian coral. *Developmental and Comparative Immunology*. 107: 103639. DOI: 10.1016/j.dci.2020.103639

8. Dimos B, Mahmud SA, **Fuess LE**, Mydlarz LD, Pellegrino MW. 2019. Uncovering a mitochondrial unfolded protein response in corals and its role in adapting to a changing world. *Proceedings of the Royal Society B: Biological Sciences* 286: 20190470. DOI: 10.1098/rspb.2019.0470

7. Ricci CA, Kamal AMH, Chakrabarty JK, **Fuess LE**, Mann WT, Jinks LR[*], Brinkhuis V, Chowdhury SM, Mydlarz LD. 2019. Proteomic investigation of a diseased gorgonian coral indicated disruption of essential cell function and investment in inflammatory and immune processes. *Integrative and Comparative Biology*. icz107. DOI: 10.1093/icb/icz107

6. Fuess LE, Mann WT, Jinks LR[*], Brinkhuis V, Mydlarz LD. 2018. Transcriptional analyses provide new insight into the late-stage immune response of a diseased Caribbean coral. *Royal Society Open Science*. 5: 172062. DOI: 10.1098/rsos.172062

5. Williams LM, **Fuess LE**, *et al.* 2018. A conserved Toll-like receptor-to-NF-κB signaling pathway in the endangered coral *Orbicella faveolata. Developmental and Comparative Immunology*. 79: 128-136. DOI: 10.1016/j.dci.2017.10.016

4. Fuess LE, Pinzon JC, Weil E, Ginshpon RD, Mydlarz, LD. 2017. Life or death: Disease resistant coral species activate autophagy following immune challenge. *Proceedings of the Royal Society B: Biological Sciences*. 284: 20170771. DOI: 10.1098/rspb.2017.0771

3. Fuess LE, Pinzon JC, Weil E, Mydlarz, LD. 2016. Associations between transcriptional changes and protein phenotypes provide insights into immune regulation in corals. *Developmental and Comparative Immunology*. 62: 17-28. DOI: 10.1016/j.dci.2016.04.017

2. Mydlarz LD, **Fuess LE**, Mann WT, Pinzon JC, and Gochfeld, DJ. 2016. Cnidarian immunity: from genomes to phenomes. In: The Cnidaria, past, present and future. The world of Medusa and her sisters. Editors: S. Goffredo and Z. Dubinsky. Springer.

1. Fuess LE[$], Eisenlord ME[$], Closek CJ[$], Tracy AM[$], Mauntz R[$], Gignoux-Wolfsohn S[$], et al. 2015. Up in arms: Immune and nervous system response to sea star wasting disease. *PLoS ONE*. 10: e0133053. DOI: 10.1371/journal.pone.0133053

In review/in prep manuscripts:

30. Rodgers ML, Subramanian S, **Fuess LE**, He W, Scarpino SV, Roth-Monzon A, Jeffries D, Seignon M, Milligan-McClellan K, Carrier R, Steinel NC, Bolnick DI. *in revision*. Rates of evolution differ between cell types identified by single-cell RNAseq in threespine stickleback. *Molecular Ecology.* (available on BioRxiv)

31. Jones NP[$], Dutton S[$], Shilling EN[+], Nowlin WH, **Fuess LE**. *in review*. Environmental conditions modulate constitutive and induced host immunity contributing to spatial patterns of coral disease susceptibility. *Ecological Monographs.* (available on BioRxiv)

FINAL REPORTS

1. **Fuess, LE,** Klinges G, Veglia A, Rossin A, Studivan M, Ushijima B. 2025. An Integrative 'Omic Approach Leveraging Historical SCTLD Data to Identify Predictive Markers of SCTLD Resistance. Florida DEP. Miami, FL. 69.
2. Jones NP, **Fuess LE**, Dutton S, Shilling EN[+]. 2025. An integrative approach to identify and experimentally validate environmental variables which affect SCTLD outcomes. Florida DEP. Miami, FL. 30.
3. Klinges G, **Fuess LE**, Veglia A, Rossin A, Holstein D. 2024. Tracking Bacterial, Viral, and Gene Expression Shifts throughout SCTLD Development in the Dry Tortugas. Florida DEP. Miami, FL. 37.

SELECTED CONFERENCE PRESENTATIONS

T- talk, P- poster, presenting author, [+]student/mentee author

89. Sienkiewicz B, Harper L, Aronson F, DeSouza C, Shilling EN[+], **Fuess LE**, Brown J, Gignoux-Wolfsohn S. 2026. The role of microbiomes in resiliency to Stony Coral Tissue Loss Disease. International Coral Reef Symposium. Auckland, NZ. (T)

88. Jones NP, Dutton S[+], Shilling EN[+], Nowlin WH, **Fuess LE**. 2026. Identifying and experimentally validating environmental drivers of disease. International Coral Reef Symposium. Auckland, NZ. (T)

87. Shilling EN[+], Harper L, Gignoux-Wolfsohn S, **Fuess LE**. 2026. Gene expression of corals throughout a stony coral tissue loss disease outbreak indicates varying mechanisms of resistance and immune response. International Coral Reef Symposium. Auckland, NZ. (T)

86. **Fuess LE,** Shilling EN[+], Rossin A, Veglia A, Klinges G. 2026. Longitudinal multi-'omics approaches reveal holobiont interactions indicative of resistance and response to stony coral tissue loss disease. International Coral Reef Symposium. Auckland, NZ. (T)

85. **Fuess LE**, Changsut IV[+], Borbee EM[+], Oviedo L[+], Acero JD[+], Martinez, AP[+], Perez AR[+], Poenisch C, Shickle A, Sharp KH. It's All in the Details: Investigating Context Dependency in *Astrangia* Immunity. Temperate Coral Research Conference, New Haven, CT. (T)

84. **Fuess LE,** Shilling EN[+], Veglia A, Klinges G. 2026. Longitudinal, multi-species approaches reveal conserved and divergent mechanisms of disease resilience. Evolution Meeting, Cleveland, OH. (T)

83. Butler CC[+], Gonzalez-Pech R, **Fuess LE**. 2026. One symbiont, two symbiont, red symbiont, green symbiont: Searching for shared mechanisms of symbiosis in two functionally convergent symbioses. Evolution Meeting, Cleveland, OH. (T)

82. Travers C[+] & **Fuess LE**. 2026. Investigating the presence of immune priming in the cnidarian model organisms *Exaiptasia diaphana*. Evolution Meeting. Cleveland, OH. (P)

81. Butler CC[+], Gonzalez-Pech R, **Fuess LE**. 2026. One symbiont, two symbiont, red symbiont, green symbiont: Searching for shared mechanisms of symbiosis in two functionally convergent symbioses. South Texas Evolutionary Genetics & Genomics Conference. Houston, TX. (T)

80. **Fuess LE,** Shilling EN[+], Veglia A, Klinges G. 2026. Repeated sampling reveals species-specific & species-independent markers of coral disease response. Society for Integrative and Comparative Biology Annual Meeting. Portland, OR. (T)

79. Jones NP, Dutton S, Shilling EN[+], Nowlin WH, **Fuess LE**. 2026. Environmental stressors exacerbate disease by impacting constitutive and induced coral immunity. Society for Integrative and Comparative Biology Annual Meeting. Portland, OR. (P)

78. Perez AR[+], Poenisch C[+], Changsut IV[+], Sharp KS, **Fuess LE**. 2026. Influence of symbiont density on coral antibacterial defense across regions in *Astrangia poculata*. Society for Integrative and Comparative Biology Annual Meeting. Portland, OR. (P)

77. Poenisch C[+], Perez AR[+], Changsut IV[+], Sharp KS, **Fuess LE**. 2026. A new method to assess host-pathogen dynamics in *Astrangia poculata*. Society for Integrative and Comparative Biology Annual Meeting. Portland, OR. (P)

76. Changsut IV[+], Sharp KS, **Fuess LE**. 2026. Investigating variations in host immunity and symbiosis across the range of *A. poculata*. Society for Integrative and Comparative Biology Annual Meeting. Portland, OR. (T)

75. **Fuess LE**. 2025. Mutually beneficial: near-peer mentoring facilitates student training while improving research impact. GRP Fellows Forum. Corpus Christi, Texas (T)- *invited short talk selected from abstracts*

74. Diaz de Villegas SC[=], Abdelbaki P[=], Tjandra N[=], Shilling EN[=], Gignoux-Wolfsohn S, Harper L, **Fuess LE.** 2025. Characterizing the impacts of environmentally induced symbiosis breakdown/recovery on pathogen defense across cnidarians. Animal-Microbe Gordon Research Conference. Portland, ME. (T)- *invited short talk selected from abstracts*

73. Tjandra N[+] & **Fuess LE.** 2025. Impacts of temperature stress on coral symbiosis and immunity using the model *Exaiptasia diaphana*. Benthic Ecology Meeting. Mobile, AL. (T)

72. Borbee EM[+], Jalil R[+], **Fuess LE**. 2025. Transcriptomics reveal energetic, immune tradeoffs associated with coral-algal symbiosis. Benthic Ecology Meeting. Mobile, AL. (T)

71. Acero JD[+], Martinez, AP[+], Changsut IV[+], **Fuess LE**. 2025. Characterizing baseline immunity across various populations in *Astrangia poculata*. Texas State Biology Department Colloquium. (T)

70. Oviedo L[+], Borbee EM[+], **Fuess LE**. 2025. Using a multi-omics approach to investigate immune regulation of host-symbiont dynamics. Texas State Biology Department Colloquium. (T)

69. Tjandra N[+] & **Fuess LE.** 2025. Investigating the impacts of temperature stress on coral-algal symbiosis and immunity using the cnidarian model *Exaiptasia diaphana*. Texas State Biology Department Colloquium. (T)

68. Shilling EN[+], Harper L, Gignoux-Wolfsohn S, **Fuess LE**. 2025. Gene expression of corals throughout a stony coral tissue loss disease outbreak indicates varying mechanisms of resistance. Texas State Biology Department Colloquium. (T)

67. Diaz de Villegas SC[+], Abdelbaki P[=], **Fuess LE**. 2025. Differential regulation of apoptosis and autophagy mediates the link between bleaching and disease in *Exaiptasia diaphana*. Texas State Biology Department Colloquium. (T)

66. Changsut IV[+], Borbee EM[+], Sharp KS, **Fuess LE**. 2025. Transcriptomic analysis of immune system ontogeny in a temperate coral. Society for Integrative and Comparative Biology Annual Meeting. Atlanta, GA. (T)

65. Borbee EN[+], Jalil R[+], **Fuess LE**. 2025. Investigation of immune, energetic tradeoffs associated with the coral-algal symbiosis. Society for Integrative and Comparative Biology Annual Meeting. Atlanta, GA. (T)

64. Acero JD[+], Martinez, AP[+], Changsut IV[+], **Fuess LE**. 2025. Variations in key immune factors across latitudinally different populations of *Astrangia poculata*. Society for Integrative and Comparative Biology Annual Meeting. Atlanta, GA. (P)

63. Martinez AP[+], Acero, JD[+], Changsut IV[+], **Fuess LE**. 2025. Prophenoloxidase as an immune indicator in geographically distinct populations of *Astrangia poculata*. Society for Integrative and Comparative Biology Annual Meeting. Atlanta, GA. (P)

62. **Fuess LE**, Shilling EN[+] , Diaz de Villegas SC[+] , Harper L, Gignoux-Wolfsohn S. 2025. Long-term sampling provides powerful insight regarding mechanisms of coral resilience. Society for Integrative and Comparative Biology Annual Meeting. Atlanta, GA. (T)

61. Flanagan B, **Fuess LE**, Vrtilek M, Monzon A, Bolnick DI. 2024. Gene expression evolution in response to an immune adjuvant across the phylogeny of ray-finned fishes. 3rd Joint Congress on Evolutionary Biology. Montreal, Canada (T)

60. Diaz de Villegas SC[+], Shilling EN[+], Harper L, Gignoux-Wolfsohn S, **Fuess LE**. 2024. Leveraging a natural bleaching event to investigate the mechanistic link between bleaching and disease in tropical corals. European Coral Reef Society Meeting. Naples, Italy. (T)

59. Shilling EN[+], Harper L, Gignoux-Wolfsohn S, **Fuess LE**. 2024. Gene expression of corals throughout a stony coral tissue loss disease outbreak indicates varying mechanisms of resistance. European Coral Reef Society Meeting. Naples, Italy. (T)

58. **Fuess LE**, Shilling EN[+], Harper L, Gignoux-Wolfsohn S. 2024. Leveraging historic data and long-term monitoring to identify markers of coral multi-stressor resilience. European Coral Reef Society Meeting. Naples, Italy. (T)

57. Tjandra, N[+], **Fuess LE**. 2024. Investigating the impacts of environmentally-induced dynamic changes in symbiont density on cnidarian immunity. Benthic Ecology Meeting. Charleston, SC. (P)

56. Diaz de Villegas SC[+], Abdelbaki P[=], **Fuess LE**. 2024. Characterizing the mechanisms linking sequential heat stress and disease susceptibility in cnidarians. Benthic Ecology Meeting. Charleston, SC. (T)

55. Shilling EN[+], Klinges G, **Fuess LE**. 2024. Gene expression of corals throughout the stony coral tissue loss disease outbreak in the Dry Tortugas National Park, Florida. Benthic Ecology Meeting. Charleston, SC. (T)

54. Changsut IV[+], Borbee EM[+], **Fuess LE**. 2024. Characterizing immunity through larval development in the temperate coral, *Astrangia poculata*. Benthic Ecology Meeting. Charleston, SC. (T)

53. Borbee EM, Oviedo L[+], **Fuess LE**. 2024. Insight on regulation of the coral-algal symbiosis using a multi-omics approach. Benthic Ecology Meeting. Charleston, SC. (T)

52. Shilling EN[+], Sienkiewicz B[+], Aaronson F, Harper L, Veglia A, Klinges G, Gignoux-Wolfsohn S, **Fuess LE**. 2024. A time series-based approach to characterize coral holobiont adaptation following SCTLD outbreaks. Benthic Ecology Meeting. Charleston, SC. (T)

51. Abdelbaki, P[+], Borbee EM[+], **Fuess LE**. 2024. Tracking symbiont uptake rates and immunity in a model anemone *Exaiptasia diaphana*. Texas State Biology Department Colloquium. (P)

50. Oviedo L[+], Borbee EM[+], **Fuess LE**. 2024. Using a facultatively symbiotic coral to investigate immune regulation of host-symbiont dynamics. Texas State Biology Department Colloquium. (P)

49. Changsut IV[+], Womack HR[+], Schickle A, Sharp KH, **Fuess LE**. 2024. Pathogen challenge reveals clear links between photo-symbiont density and host immunity in the facultatively symbiotic coral, *Astrangia poculata*. Texas State Biology Department Colloquium. (T)

48. **Fuess LE**. 2024. Facultatively symbiotic species as models for exploring immune-symbiosis interplay. Society for Integrative and Comparative Biology Annual Meeting. Seattle, WA. (T)- *symposium talk*

47. Oviedo L[+], Borbee EM[+], **Fuess LE**. 2024. Using a facultatively symbiotic coral to investigate immune regulation of host-symbiont dynamics. Society for Integrative and Comparative Biology Annual Meeting. Seattle, WA. (P)

46. Borbee EM[+], Oviedo L[+], **Fuess LE**. 2024. A multi-omics approach investigating regulation of symbiont state in a facultatively symbiotic coral. Society for Integrative and Comparative Biology Annual Meeting. Seattle, WA. (T)

45. Strike, MJ[+], Borbee EM[+], Diaz de Villegas SC[+], **Fuess LE**. 2024. Immune response to temperature and light-induced bleaching in the model anemone *Exaiptasia diaphana*. Society for Integrative and Comparative Biology Annual Meeting. Seattle, WA. (P)

44. Abdelbaki, P[+], Borbee EM[+], **Fuess LE**. 2024. Tracking symbiont uptake rates and immunity in a model anemone *Exaiptasia diaphana*. Society for Integrative and Comparative Biology Annual Meeting. Seattle, WA. (P)

43. Changsut IV[+], Ushijima B, **Fuess LE**. 2023. The potential for immunological priming in the hard coral, *Astrangia poculata*. SACNAS National Diversity in STEM Conference. Portland, OR (P)

42. **Fuess LE**. 2023. Symbiommunity lab: investigating symbiosis-immune interplay in vulnerable cnidarians. Gulf of Mexico Reefs Conference. Galveston, TX (T) *lightning talk*

41. Flanagan B, **Fuess LE**, Vrtilek M, Bolnick DI. 2023. Ray-finned fish gene expression evolution in response to an immunological adjuvant. Evolution Meeting. Albuquerque, NM. (P)

40. Shilling EN[+] & **Fuess LE**. 2023. Evolution of coral physiology and holobiont composition in response to stony coral tissue loss disease in the Caribbean. Evolution Meeting. Albuquerque, NM. (P)

39. **Fuess LE,** Hund AK, Bolnick DI. 2023. Variation in immune response entails changes in both timing and magnitude of gene expression. Evolution Meeting. Albuquerque, NM. (T)

38. Shilling EN[+] & **Fuess LE**. 2023. Evolution of the coral holobiont makeup and physiology in response to disease pressure in the Caribbean. Benthic Ecology Meeting. Miami, FL. (P)

37. Womack HR[+], Borbee EM[+], **Fuess LE.** 2023. Investigating immunity post heat stress in the model cnidarian, *Exaiptasia diaphana*. Benthic Ecology Meeting. Miami, FL. (P)

36. Changsut IV[+], Womack HR[+], Schickle A, Sharp KH, **Fuess LE**. 2023. Characterizing the induced immune response in the facultatively symbiotic coral, *Astrangia poculata*. Benthic Ecology Meeting. Miami, FL. (T)

35. Diaz de Villegas SC[+], Peyton Abdelbaki[+], **Fuess LE**. 2023. Prior heat stress affects disease susceptibility in the cnidarian model *Exaiptasia diaphana*. Benthic Ecology Meeting. Miami, FL. (T)

34. Borbee EM[+], Changsut IV[+], Bernabe K[+], Schickle A, Nelson D, Sharp KH, **Fuess LE**. 2023. Coral larvae show unique transcriptomic responses to pathogen and probiotic exposure. Benthic Ecology Meeting. Miami, FL. (T)

33. Diaz de Villegas SC[+], Peyton Abdelbaki[+], **Fuess LE**. 2023. Investigating the role of bleaching in cnidarian host disease susceptibility using the model *Exaiptasia diaphana.* Texas State Biology Department Colloquium. (T)

32. **Fuess LE,** Hund AK, Bolnick DI. 2023. Investigating mechanisms of variation in parasite resistance using experimental immune challenge. Society for Integrative and Comparative Biology Annual Meeting. Austin, TX. (T)

31. Borbee EM[+], Changsut IV[+], Bernabe K[+], Schickle A, Nelson D, Sharp KH, **Fuess LE**. 2023. New insights on immunity in temperate coral larvae in response to pathogenic and probiotic bacteria. Society for Integrative and Comparative Biology Annual Meeting. Austin, TX. (T)

30. Villafranca N[+], Diaz de Villega SC[+], Changsut IV[+], Womack HR[+], Schickle A, Sharp KH, **Fuess LE**. 2023. Investigation of trade-offs associated with immunity and reproduction in *Astrangia poculata*. Society for Integrative and Comparative Biology Annual Meeting. Austin, TX. (P)

29. Womack HR[+], Borbee EM[+], **Fuess LE**. 2023. Investigating immunity post heat stress in the model cnidarian, *Exaiptasia diaphana*. Society for Integrative and Comparative Biology Annual Meeting. Austin, TX. (P)

28. Changsut IV[+], Womack HR[+], Schickle A, Sharp KH, **Fuess LE**. 2023. A comparison of constitutive and induced immune response in coral of variable symbiont densities. Society for Integrative and Comparative Biology Annual Meeting. Austin, TX. (T)

27. Diaz de Villegas SC[+] & **Fuess LE**. 2023. Investigating the effects of bleaching on host disease susceptibility in a model Cnidarian. Society for Integrative and Comparative Biology Annual Meeting. Austin, TX. (P)

26. Villafranca N[+], Diaz de Villega SC[+], Changsut IV[+], Womack HR[+], Schickle A, Sharp KH, **Fuess LE**. 2022. Investigation of trade-offs associated with immunity and reproduction in *Astrangia poculata*. SACNAS National Diversity in STEM Conference. San Juan, PR. (P)

25. **Fuess LE.** 2022. Complex associations between immunity and symbiont density in the facultatively symbiotic coral, *Astrangia poculata*. International Symbiosis Symposium/Holobiont Joint Meeting. Lyon, France (T)

24. **Fuess LE** & Changsut IV[+]. 2022. Investigating the effects of variable symbiont density on immune response in the facultatively symbiotic coral, *Astrangia poculata*. Benthic Ecology Meeting: Portsmouth, NH (T)

23. Changsut IV[+], Schickle A, Sharp K, **Fuess LE**. 2022. Comparison of immune phenotypes of colonies of Astrangia poculata with variable symbiont densities. Benthic Ecology Meeting; Portsmouth, NH (T)

22. Changsut IV[+], Schickle A, Sharp K, **Fuess LE**. 2022. Comparison of immune phenotypes of colonies of Astrangia poculata with variable symbiont densities. Texas State Biology Department Colloquium. (T)

21. Changsut IV[+], Schickle A, Sharp K, **Fuess LE**. 2022. Comparison of immune phenotypes of colonies of Astrangia poculata with variable symbiont densities. Society for Integrative and Comparative Biology Annual Meeting. (T) *virtual due to COVID-19*

20. **Fuess LE**, Bolnick DI. 2022. Single cell transcriptomics reveal microevolution of immune cells across populations of three-spined stickleback. Society for Integrative and Comparative Biology Annual Meeting. (T) *virtual due to COVID-19*

19. **Fuess LE**. 2021. Meta-analysis reveals complex relationships between symbiosis, immunity, and the transforming growth factorβ pathway in a Caribbean coral. 14th International Coral Reef Symposium. (T) *virtual due to COVID-19*

18. **Fuess LE**. 2021. Symbiommunity Lab: Understanding symbiosis-immune interplay in Cnidarians. Temperate Coral Research Conference. (T) *virtual due to COVID-19*

17. Changsut IV[+], Pugh J[+,] Schickle A, Sharp K, **Fuess LE**. 2021. Comparison of immune phenotypes of colonies of Astrangia poculata with variable symbiont densities. Temperate Coral Research Conference. (T) *virtual due to COVID-19*

16. **Fuess LE**, Bolnick, DI. 2021. Single cell transcriptomics reveal microevolution of immune cells across populations of three-spined stickleback. Evolution. (T) *virtual due to COVID-19*

15. **Fuess LE**, den Haan S, Ling F, Weber J, Steinel NC, Bolnick DI. 2021. Immune gene expression covaries with gut microbiome composition in stickleback. American Society of Naturalists Virtual Asilomar. (T) *virtual due to COVID-19*

14. **Fuess LE**, den Haan S, Ling F, Weber J, Steinel NC, Bolnick DI. 2021. Immune gene expression covaries with gut microbiome composition in stickleback. Society for Integrative and Comparative Biology Annual Meeting. (T) *virtual due to COVID-19*

13. **Fuess LE**, Weber J, Steinel NC, den haan S, Bolnick DI. 2020. Transcriptomic analyses of *Gasterosteus aculeatus* parasite response reveal mechanisms of resistance. Society For Integrative And Comparative Biology Annual Meeting; Austin, TX (T)

12. **Fuess LE**, Palacio A, Butler CC^{+}, Brandt ME, Baker AC, Mydlarz LD. 2019. Multiple experiments reveal complex relationships between symbiosis, immunity, and the transforming growth factor-beta pathway in a Caribbean coral, *Orbicella faveolata*. Society For Integrative And Comparative Biology Annual Meeting; Tampa, FL (T)

11. **Fuess LE** & Bolnick DI. 2019. Fibroblast culture and gene editing methods to investigate evolution and cellular mechanisms of parasite resistance in *Gasterosteus aculeatus*. NSF EDGE Grant PI Meeting. Alexandria, VA (P)

10. **Fuess LE**, Webber J, Steinel N, Den Haan S, Bolnick DI. 2019 Transcriptional analysis of the effects of genetic variation on response of *Gasterosteus aculeatus* (three spined stickleback) to a cestode parasite. Evolution; Providence, RI (T)

9. **Fuess LE**, Palacio A, Butler CC^{+}, Brandt ME, Baker AC, Mydlarz LD. 2018. A multi-experiment approach to investigate the relationship between symbiosis, immunity, and the transforming growth factor-beta pathway in a Caribbean coral, *Orbicella faveolata*. International Symbiosis Society Conference; Corvalis, OR (T)

8. **Fuess LE**, Palacio A, Baker AC, Mydlarz LD. 2018. Frenemies: *Symbiodinium* density negatively affects immune response in the Caribbean coral *Orbicella faveolata*. Society For Integrative And Comparative Biology Annual Meeting; San Francisco, CA (T)

7. **Fuess LE**, Pinzon JC, Ricci CA, Weil E, Mydlarz LD. 2017. No free lunch: Implications of symbiotic relationships on the coral immune response via the transforming growth factor-beta signaling pathway. Biomedical & Comparative Immunology Symposium; Fort Lauderdale, FL (T)

6. **Fuess LE**, Mann WT, Brinkhuis V, Stacy C^{+}, Mydlarz LD. 2017. Octocorals demonstrate fitness tradeoffs associated with response to a disease outbreak. Society For Integrative And Comparative Biology Annual Meeting; New Orleans, LA (T)

5. **Fuess LE**, Pinzon JC, Ricci CA, Weil E, Mydlarz LD. 2016 No free lunch: Implications of symbiotic relationships on the coral immune response via the transforming growth factor-beta signaling pathway. International Coral Reef Symposium; Honolulu, HI (T)

4. **Fuess LE**, Pinzon JC, Weil E, Mydlarz LD. 2016. Comparison of immune phenotypes and changes in gene expression provides new insight into pathways of coral immunity. Society For Integrative And Comparative Biology Annual Meeting; Portland, OR (T)

3. **Fuess LE**, Eisenlord ME, Closek CJ, Tracy AM, Mauntz R, Gignoux-Wolfsohn S, Mortish MM, Yoshioka R. A* farewell to arms: Sea star transcriptome reveals insights into immune response. Ecology of Infectious Marine Diseases Research Coordination Network Meeting; Friday Harbor, WA (T)

2. **Fuess LE**, Jiang L. 2012. Top down and bottom up regulation of community assembly. Ecological Society of America Annual Meeting; Portland, OR (P)

1. **Fuess LE**, Shedlock AM, Wham FC, Dustan P. 2012. A molecular assay for the cause of bleaching in the temperate Atlantic coral species *Oculina arbuscula*. Society For Integrative and Comparative Biology Annual Meeting; Charleston, SC (P)

INVITED PRESENTATIONS, SEMINARS, AND WORKSHOPS

South Texas Evolutionary Genetics and Genomics Conference; Keynote	**2025**
Trinity University Biology Seminar Series; Invited Speaker	**2025**
University of South Carolina Biology Seminar Series; Invited Speaker	**2025**
UT Knoxville Microbiology Seminar Series; Invited Speaker	**2025**
University of Arizona EEB Seminar Series; Invited Speaker	**2025**
Dauphin Island Sea Lab Seminar Series; Invited Speaker	**2024**
College of Charleston Biology Seminar Series; Invited Speaker	**2024**
Ohio University Biology Seminar Series; Invited Speaker	**2024**
University of North Texas Biology Seminar Series; Invited Speaker	**2024**
Michigan State University IBIO Seminar; Invited Speaker	**2024**
SICB Symposium- Immunity in the 'Omics Age; Organizer & Speaker	**2024**
Washington State University, School of Biological Sciences Seminar; Invited Speaker	**2023**
University of Massachusetts Lowell Biology Department Seminar; Invited Speaker	**2023**
University of Houston Biology Department Seminar Series; Invited Speaker	**2022**
Symbiodineaceae Workshop; Invited Participant	**2021**
American Society of Microbiologists, Texas Branch Meeting; Invited Speaker	**2021**
College of the Holy Cross, Biology Department Seminar Series: Invited Speaker	**2019**
NSF Reintegrating Biology Workshop; Invited Participant	**2019**
University of Connecticut, EEB Departmental Seminar Series; Invited Speaker	**2018**
St. Edwards University, Biology Seminar Series: Invited Speaker	**2017**
University of Texas at Arlington Mu Sigma Society Meeting; Invited Speaker	**2017**

AWARDS AND SMALL GRANTS

TXST COSE Millionaire award	**2024 & 2025**
In recognition of >$1,000,000 research funding over the prior 3 fiscal years	
TXST COSE Achievement Award for Scholarly/Creative Activities	**2023**
SICB DEDE Lochmiller Award for Early Career Achievement	**2023**
SICB DEE Huey Award for Best Student Presentation, *Finalist*	**2018**
Outstanding Graduate Research Award	**2016**
University of Texas Arlington Dean's Award for Oral Presentation	**2016**
NSF Graduate Research Fellowship Honorable Mention	**2015**

TEACHING EXPERIENCE

Courses Designed and Taught

BIO 4424A: Microbial Symbiosis (graduate) **2026**
BIO 4351J/5351J: Comparative Immunology (undergraduate/graduate) **2021-2022; 2025**
BIO 7361F/7327: Ecoimmunology (graduate) **2021-2024**

Courses Taught

BIO 7360Y: Applied Bioinformatics **2024-2025**

TRAINEE MENTORSHIP

Postdoctoral Supervision

Caleb Butler **2025-present**
Rachel Howard **2024-2025**
Current Position: *Postdoc, UT Arlington*
Utpal Smart **2024**
Current Position: *Assistant Professor, Texas A&M San Antonio*
Erin Borbee **2021-2025**
Current Position: *Assistant Professor, Southwestern University*

Postbaccalaureate & Technician Supervision

Sydney Dutton **2025**
Sami Wright **2025**

Graduate Student Supervision at Texas State

Kara James PhD **2025-present**
Carly Tavers M.S **2025-present**
Sofia Diaz de Villegas PhD **2023-present**
Dissertation: *Characterizing the mechanisms of sequential bleaching and disease in Cnidaria*
Isabella Changsut PhD **2023-present**
Dissertation: *Establishing Astrangia poculata as a model for investigating symbiosis-immune interplay*
Erin Shilling PhD **2022-present**
Dissertation: *Evolution of coral physiology and holobiont composition in response to stony coral tissue loss disease in the Caribbean*
Noah Tjandra M.S **2023-2025**
Thesis: *Investigation of environmental impacts on cnidarian immunity using the model Exaiptasia diaphana*
Hannah Hughes M.S. (co-advised w/ Mar Huertas) **2022-2023**
Thesis: *Effect of chronic nitrite exposure on physiology and maternal transfer in Xiphophorus couchianus*
Sofia Diaz de Villegas M.S. **2021-2023**
Thesis: *Investigating the roles of symbiosis and bleaching in Cnidarian host disease susceptibility using the model Exaiptasia diaphana*

Natalie Villafranca M.S **2021-2023**
Thesis: *Disentangling the effects of symbiotic state on reproductive-immune trade-offs in a temperate coral*

Isabella Changsut M.S **2021-2022**
Thesis: *Investigating the effects of facultative symbiosis on immunity in a temperate coral*

Supervisory Committee Membership

Ireen Lin PhD; Texas State **2025-present**
Sam Godwin PhD; Texas State **2025-present**
Megan Flanagan PhD; Texas State **2025-present**
Dissertation: *Glucocorticoids, microbiomes, and immune interactions in amphibians across life stages*
Amber Busboom M.S; Texas State **2024-2025**
Thesis**:** *Quantitative analysis of aquatic polymicrobial populations on the International Space Station*

M. Maruf Billah Ph.D; Texas State **2023-present**
Dissertation: *Pathogen odors elicit distinct neurosteroid and behavioral responses in Rainbow trout (*Oncorhynchus mykiss*)*
Monica Argueta M.S; Texas State **2022-present**
Thesis*: Investigating phylogenetic relationships between intradermal mites infesting amphibians in Texas.*
Amanda Bryant Ph.D; Texas State **2021-2023**
Dissertation: *The effects of agricultural practices on the physiology and immune function of larval amphibians*
Chloe Troupe M.S.; Texas State **2021-2023**
Thesis: *Differences in gene expression responses to heat shock between warm- and cool-adapted isolates of Batrachochytrium dendrobatidis*
Chloe Reeves M.S.; Texas State **2020-2021**
Thesis: *Natural hybridization and introgression of Berberis trifoliolata and Berberis swaseyi in the Edwards Plateau.*

Undergraduate Student Research Supervised at Texas State

Claudia Cardenas **2025-present**
Chloe Poenisch **2025-present**
Adriana Velez-Brunes **2025-present**
Audrey Reynolds **2025-present**
Amelia Rae Perez **2025**
Bethany Garr (visiting student from OLU) **2025**
Kelsie Phelps de Gala **2025**
Catie Ritchey **2024-present**
Chavez Gentles **2024-2026**
Eros Baua **2024-2025**
Austin Sorenson **2024-2025**
Emily Vanderworth **2024-2025**
Jaime Acero **2024-2025**
Anabel Martinez **2024**
Hannah Urofsky **2024**
Lindsey Kastner **2023-present**
Roh-Allah Jalil **2023-2025**
Sami Wright **2023-2025**
Shelby Carrell **2023-2024**

MJ Strike (visiting student from Carleton College) **2023**

Louis Oviedo **2022-2025**

Senior Thesis: *A multi-omics approach investigating the regulation of symbiont state in a facultatively symbiotic coral*

Peyton Abdelbaki **2022-2024**

Honors Thesis: *Tracking symbiont uptake rates and immunity in a model anemone Exaiptasia diaphana*

Heaven Hernandez **2022-2023**

Haley Womack **2021-2023**

Honors Thesis: *Investigating the impacts of thermal stress on host constitutive immunity in a model Cnidarian, Exaiptasia diaphana*

Jordan Pugh **2020-2021**

Senior Project: *Examining constitutive variation in immunity in a facultatively symbiotic coral*

Undergraduate Students Supervised at Other Institutions

Sophia Aruna	University of Connecticut	**2020**
Mita Kale	University of Connecticut	**2019-2020**
Julia Meenan	University of Connecticut	**2019-2020**
Gillian McNeil	University of Connecticut	**2019**
Sarah Tsuro	University of Connecticut	**2018-2020**
Caleb Butler	University of Texas, Arlington	**2016-2018**
Margaret Park	University of Texas, Arlington	**2015**

MENTEE AWARDS

total monetary value ~ $700,000

NSF Graduate Research Fellowship	*Carly Travers*	**2026**
NSF Graduate Research Fellowship, Honorable Mention	*Kara James*	**2026**
PEO Scholars Award	*Isabella Changsut*	**2026**
NIH Texas Doctoral Bridge Fellowship	*Carly Travers*	**2025**
SICB Leadership Award	*Isabella Changsut*	**2025**
TXST 3MT Finalist	*Sofia Diaz de Villegas*	**2025**
TXST Biology Colloquium Best Undergrad Talk	*Jaime Acero*	**2025**
John P Eben and Dorothy Eben Elledge Scholarship	*Isabella Changsut*	**2025**
George H. Meyer Memorial Scholarship	*Isabella Changsut*	**2025**
Phillip M. Campbell Scholarship	*Erin Shilling*	**2025**
PEO Scholars Award	*Erin Shilling*	**2025**
Dissertation Completion Fellowship (declined)	*Erin Shilling*	**2025**
SACNAS Travel Award	*Isabella Changsut*	**2024**
SACNAS Travel Award	*Jaime Acero*	**2024**
SACNAS Travel Award	*Louis Oviedo*	**2024**
TXST Doctoral Research Support Fellowship	*Erin Shilling*	**2024**
TXST DOE-EM Fellowship	*Erin Shilling*	**2024**
Gwen S. Durrenberger Endowment Scholarship	*Isabella Changsut*	**2024**
Dorothy Coker Research Fellowship	*Erin Shilling*	**2024**
TXST Biology Colloquium, Honorable Mention	*Isabella Changsut*	**2024**
TXST Undergraduate Research Fellowship	*Louis Oviedo*	**2023**
TXST Undergraduate Research Fellowship	*Peyton Abdelbaki*	**2023**
William E. (Henry) Norris Jr. Scholarship	*Sofia Diaz de Villegas*	**2023**
Howard D. Schulze Biology Scholarship	*Sofia Diaz de Villegas*	**2023**
SACNAS Travel Award	*Isabella Changsut*	**2023**
John P Eben and Dorothy Eben Elledge Scholarship	*Isabella Changsut*	**2023**
AMLC Student Grants in Aid of Research	*Erin Shilling*	**2023**

John P Eben and Dorothy Eben Elledge Scholarship	*Erin Shilling*	**2023**
Gwen S. Durrenberger Endowment Scholarship	*Erin Shilling*	**2023**
Dorothy Coker Research Fellowship	*Erin Shilling*	**2023**
Denison-Koehn Endowed Scholarship in Science	*Erin Shilling*	**2023**
TXST Undergraduate Research Fellowship	*Haley Womack*	**2022**
SACNAS Travel Award	*Natalie Villafranca*	**2022**
NSF Graduate Research Fellowship	*Natalie Villafranca*	**2022**
NSF Graduate Research Fellowship	*Isabella Changsut*	**2022**
TXST Biology Colloquium, Honorable Mention	*Isabella Changsut*	**2022**
TXST COSE Postdoctoral Fellowship	*Erin Borbee*	**2022**
NSF Postdoctoral Fellowship in Biology	*Erin Borbee*	**2022**
NSF Graduate Research Fellowship, Honorable Mention	*Natalie Villafranca*	**2021**

SELECTED OUTREACH AND SERVICE

TXST Biology Department Strategic Planning Committee, *member*	**2026**
TXST Dissertation Completion Fellowship Review Committee, *member*	**2025**
TXST Doctoral Bridge Program, *participating faculty*	**2024-present**
Girl Scout STEM Day at TXST, *host lab (organized by I. Changsut)*	**2024-present**
UT STEM Girl Day, *host lab (in partnership w/ TX SWIMS)*	**2024-2025**
TXST Core Research Operations Steering Committee, *member*	**2024-present**
TXST Chapter TX SWIMS, *faculty mentor*	**2024-2025**
SICB Division of Ecoimmunology & Disease Ecology, *chair*	**2024-2026**
TXST Biology Aquatic Microbiologist Search Committee, *member*	**2024-2025**
TXST Presidential Commission on the Run to R1, *member*	**2024-2025**
Touch Tank Outreach in Bristol RI, *co-organizer with RWU*	**2024**
Doral Academy Middle School Campus Visit, *host lab*	**2024**
TXST Francis Rose Undergraduate Research Award Committee, *chair*	**2023-present**
ICRS Mentorship Program, *mentor*	**2023-2024**
TXST COSE Postdoc Development Working Group, *member*	**2023-present**
SICB Division of Ecoimmunology & Disease Ecology, *chair-elect*	**2023-2024**
TXST Biology Microbiology Faculty Search Committee, *member*	**2023-2024**
TXST "You, Me & IDP" Postdoctoral Mentoring Workshop	**2023**
Developed and facilitated workshop on IDP plans for postdocs & mentors (~45 attendees)	
Evolution Conference Mentorship Program, *mentor*	**2023**
TXST Biology Evolutionary Ecology Faculty Search Committee, *member*	**2023**
TXST Lamar & Marilynn Johnson Scholarship Committee, *member*	**2022-present**
TXST URISE Research Preceptor	**2021-2025**
SICB Broadening Participation Mentor Match Program, *mentor*	**2021-present**
SICB Meet an Ecoimmunologist/Disease Ecologist Program, *mentor*	**2021-present**
American Society of Microbiologists, Texas Branch Meeting, Poster Judge	**2020**
SICB Presentation Judge	**2019-present**
Skype a Scientist	**2019-2020**
EEB Mentor Match	**2019**

PROFESSIONAL ACTIVITIES

Grant Review: NSF panelist (yearly 2022-2026); NSF ad hoc reviewer (2021,2024,2026), Marsden Fund New Zealand ad hoc reviewer (2024)

External Thesis/Dissertation Review: Victoria University of Wellington, New Zealand (2026)

Manuscript Review**:** Acta Orthopaedica; Biology Letters; Comparative Biochemistry and Physiology Part D: Genomics and Proteomics; Coral Reefs; Developmental and Comparative Immunology; eLife; FEMS Microbiology Ecology; Frontiers in Marine Science; Genome Biology and Evolution; Journal of Experimental Biology; Marine Biology; Microbiome; Molecular Ecology; Proceedings of the Royal Society B: Biological Sciences; Royal Society Open Science; Scientific Reports; Science Advances

Society Membership: International Coral Reef Society; International Symbiosis Society; Society for Integrative and Comparative Biology; Beta Phi Chapter of the Phi Sigma Biological Honors Society