

**Curriculum Vitae**  
**Meredith Curtis, Ph.D.**

**CONTACT INFORMATION**

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**ACADEMIC BACKGROUND**

**Education**

- Ph.D., Immunology, University of Washington, Seattle, WA (2009)
- B.A., Biology, Baylor University, Waco, TX (2001)

**Professional Experience**

- Texas Christian University, Department of Biology, Instructor II (2015-present)
- Texas Christian University, Pre-Health Professions Institute, Associate Director (2017-present)
- Brookhaven College, Department of Biology, Adjunct Faculty (2012-2015)
- UT Southwestern Medical Center, Department of Microbiology, Postdoctoral Researcher (2009-2015)
- UT Southwestern Medical Center, Department of Immunology, Research Technician (2001-2003)

**Honors and Awards**

- Wassenich Award for Mentoring in the TCU Community Nominee (2020 & 2021)
- Award for Excellence in Postdoctoral Research (1 of 5 Finalists), UT Southwestern Medical Center (2015)
- National Institutes of Health (NIH) Institutional Research T32 Training Grant, UT Southwestern Medical Center (2011-2014)
- Bill and Melinda Gates' Foundation Scholarship, Immunologic Memory Keystone Symposia (2007)
- NIH-funded Institutional Research T32 Training Grant, University of Washington (2005-2007)
- National Cancer Institute Training Grant, University of Washington (2004)
- Magna Cum Laude, Baylor University (2001)
- Phi Beta Kappa, Baylor University (2001)

**TEACHING EXPERIENCE**

**Courses Taught at TCU**

- BIOL 50910 (Oncology and Community Health Seminar) (TCU – 2019 to present)
- BIOL 30304 (Microbiology) (TCU – 2017, 2019 to present)
- BIOL 40203 (Histology) (TCU – 2016 to present)
- BIOL 40332 (Teaching of Advanced Biology) (TCU – 2015 to present)
- BIOL 20234 (Microbiology of Human Disease) (TCU – 2015, 2018 to present)

**Courses Taught outside of TCU**

- BIOL 2420 (Microbiology for Non-Science Majors) (Brookhaven – 2012 to 2015)
- BIOL 1406 (Intro to Biology I for Majors) (Brookhaven – 2012)
- Lecturer in Principles of Microbiology (UT Southwestern – 2012 to 2014)
- Laboratory Assistant in Medical Microbiology (UT Southwestern – 2010 to 2012)
- Teacher's Assistant in Immunology 441 (University of Washington – 2004)

**SERVICE CONTRIBUTIONS**

**Department-level contributions (Biology Department at TCU)**

- Member of eleven MS in Biology Thesis advisory committees (Hailey Hayes, Morgan Thompson, Ryan Madigan, Jacob Malmquist, Christopher Hagen, Christine Hurd, Lynsey Malin, Lang Zou, Vuong Do, Kyle Gallegos, Salina Hona) (TCU – 2015 to present)
- Member of seventeen Senior Honors Thesis advisory committees (Meriel LeSeuer, Rachel Butler, Haley Moore, Michaela O'Connor, Rachel Jordan, Claire Munster, Maddie Posz, Abby Thorne, Miranda Finch, Iman Ali, Mady Witcher, Olivia Spears, Sarah Jennings, Ashlyn Laidman, Caroline Farroll, Bella Kouretas, Liam Claton) (TCU – 2017 to present)
- Member of five faculty/staff search committees
  - Adjunct Biology Lecturer for Anatomy & Physiology (start date January 2018)
  - Biology Lab Coordinator (start date August 2018)
  - Pre-Health Professions Institute Academic Program Specialist (start date August 2018)
  - Instructor I of Pre-Health Professions Institute (start date January 2020)
  - Biology Instructor for Cell, Molecular, & Developmental Biology (start date of August 2023)
- Member of the Departmental Advisory Committee (Fall 2021 to present)
- Member of the Instructor Promotion Policy Review Committee (Fall 2021 to present)
- Participant in the Neurobiology of Aging Journal Club (Fall 2015-Fall 2018)
- Judge for the TCU Biology Department at the College of Science and Engineering Student Research Symposium (2017-2019)

### **College-level contributions (College of Science and Engineering at TCU)**

- Member of the Health Professions Advisory Committee (HPAC) (2015-present)
- Member and Chair of the Pre-Health Professions Scholarship Committee (2015-present)
- Pre-health advisor
  - 2015: Advised 31 pre-health students
  - 2016: Advised 74 pre-health students
  - 2017: Advised 110 pre-health students
  - 2018: Advised 170 pre-health students
  - 2019: Advised 162 pre-health students
  - 2020: Advised 162 pre-health students
  - 2021: Advised 198 pre-health students
  - 2022: Advised 180 pre-health students
- Conduct “mock” interviews for students applying to professional school (medical, dental, vet, PA, pharmacy) school
  - 2016: Conducted 8 “mock” interviews
  - 2017: Conducted 15 “mock” interviews; wrote 15 HPAC committee letters
  - 2018: Conducted 23 “mock” interviews; wrote 23 HPAC committee letters
  - 2019: Conducted 23 “mock” interviews; wrote 23 HPAC committee letters
  - 2020: Conducted 20 “mock” interviews; wrote 20 HPAC committee letters
  - 2021: Conducted 19 “mock” interviews; wrote 19 HPAC committee letters
  - 2022: Conducted 20 “mock” interviews; wrote 19 HPAC committee letters
- Presentations on behalf of TCU Pre-Health Professions Institute
  - 2017: Four Freshman Orientation sessions; one Transfer Orientation session; two Monday at TCU sessions
  - 2018: Three Freshman Orientation sessions; one Transfer Orientation session; two Monday at TCU sessions; “The Talk” (information session on how to prepare for application to professional school); “The Talk—Physician Assistant version” (geared for preparation to PA programs)
  - 2019: Four Freshman Orientation sessions; two Monday at TCU sessions; “The Talk” (information session on how to prepare for application to professional school)
  - 2020: Three Freshman Orientation sessions (virtual)
  - 2021: Three First-Year Orientation sessions; two Monday at TCU sessions; three “Destination TCU” virtual sessions
  - 2022: Three First-Year Orientation sessions; two Monday at TCU sessions; two “Destination TCU” virtual sessions
- Plan, coordinate, and execute “mock” Multiple Mini Interview (MMI) events

- May 18, 2019: Hosted 48 TCU pre-health students & alumni applying to professional school; presented an in-person applicant information session to prepare applicants for the event
- September 19, 2020: Hosted 69 TCU pre-health students & alumni applying to professional school (transitioned to a virtual event due to the pandemic); created an applicant information video to prepare applicants for the event; served as an MMI “rater” and interviewed 16 applicants and provided feedback on their performance
- August 14, 2021: Hosted 72 TCU pre-health students & alumni applying to professional school; assisted in moderating one of three Zoom links for the virtual event
- August 13, 2022: Hosted 67 TCU pre-health students & alumni applying to professional school; served as an MMI “rater” and interviewed 15 applicants and provided feedback on their performance
- Faculty advisor of the Pre-Health Professions Institute Summer Research Fellowship
  - Summer 2022: Ten students selected for participation in the fellowship; organized and led three workshops to improve students’ science communication and to highlight the connection between basic research and a career in the health professions

### **University-level contributions (TCU)**

- Faculty leader for Frog Camp Casa Nueva E (August 2016)
- Member of the Scholarships and Financial Aid Committee
  - 2019: Reviewed 165 scholarship appeals
  - 2020: Reviewed 79 scholarship appeals
  - 2021: Reviewed 138 scholarship appeals
- Presented a Teaching and Learning Conversation through the Koehler Center for Instruction, Innovation, and Engagement on “Improving Scientific Teaching” (February 2019)
- Faculty leader for TCU Common Reading (August 2021, August 2022)

### **Professional Service**

- Presented “Using a Backward Design Approach to Create an Effective Syllabus and a Learner-Centered Classroom” to the Future Leaders in Pedagogy (FLiP) organization at UT Southwestern Medical Center (March 22, 2019)

### **Community Service**

- Board member, Parent Teacher Association (PTA) at Westcliff Elementary, Fort Worth, TX
  - Chair, Scholastic Book Fair at Westcliff Elementary (2017-2019)
  - Presented at Westcliff Elementary Career Day (2019, 2022)
  - Volunteered at multiple events throughout the school year at Westcliff Elementary (2015-2019)

## **PROFESSIONAL DEVELOPMENT**

- Attended the Team-Based Learning workshop offered by the Koehler Center for Instruction, Innovation, and Engagement in conjunction with the UT Tyler School of Pharmacy (May 30-June 1, 2017)
- Attended the Gulf Coast Summer Institute on Scientific Teaching at Louisiana State University from July 17-21, 2017
  - Provided training in areas of inclusivity, mentoring, active learning, and assessment
- Attended the Faculty Bystander Intervention training on April 26, 2019 to learn strategies on how to recognize and prevent sexual violence on TCU’s campus
- Attended the Texas Association of Advisors for the Health Professions (TAAHP) Annual Conference in January 2020 (Galveston, TX) and in February 2022 (San Antonio, TX)
- Participated in training led by TCU Human Resources on “Unconscious Bias” (October 2, 2020)
- Attended the “Moving Forward through Activism & Advocacy” keynote lecture by Bakari Sellers in the Diversity Day workshop (October 7, 2021)
- Attended the Inclusive Excellence Speaker Series with Mandy Price, founder of Canaries, a consulting company that evaluates DEI practices in the workplace (October 29, 2021)
- Participated in training led by TCU Human Resources on “Interrupting Microaggressions” (November 11, 2021)

- Graduate of the TCU R.I.S.E. (Responsible Inclusivity and Sustaining Excellence) Certification Program to develop and implement skills in advocacy and social change on campus and within the community (October 2021-May 2022)

## RESEARCH AND CREATIVE ACTIVITY

### Refereed publications (\*Prior to 2009, all publications were under the name Mathis MA)

- Peterman JL, White JD, Calcagno A, Hagen C, Quiring M, Paulhus K, Gurney T, Eimerbrink MJ, **Curtis M**, Boehm GW, Chumley MJ. Prolonged isolation stress accelerates the onset of Alzheimer's disease-related pathology in 5xFAD mice despite running wheels and environment enrichment. *Behav Brain Res*. 2020; 379:112366.
- Cameron EA, **Curtis MM**, Kumar A, Dunny GM, Sperandio V. Microbiota and pathogen proteases modulate type III secretion activity in enterohemorrhagic *Escherichia coli*. *MBio*. 2018; 9(6): pii e02204-18.
- Pifer R, Russell RM, Kumar A, **Curtis MM**, Sperandio V. Redox, amino acid, and fatty acid metabolism intersect with bacterial virulence in the gut. *Proc Natl Acad Sci USA*. 2018; 115(45):E10712-E10719.
- Moreira CG, Russell R, Mishra AA, Narayanan S, Ritchie JM, Waldor MK, **Curtis MM**, Winter SE, Weinshenker D, Sperandio V. Bacterial adrenergic sensors regulate virulence of enteric pathogens in the gut. *Mbio*. 2016; 7(3): pii. e00826-16.
- **Curtis MM**, Hu Z, Klimko C, Narayanan S, Deberardinis R, Sperandio V. The gut commensal *Bacteroides thetaiotaomicron* exacerbates enteric infection through modification of the metabolic landscape. *Cell Host Microbe*. 2014;16(6):759-69.
- **Curtis MM**, Russell R, Moreira C, Wang C, Williams N, Taussig R, Stewart D, Zimmern P, Falck JR, Sperandio V. QseC inhibitors as an anti-virulence approach for Gram-negative pathogens. *MBio*. 2014;5(6):e02165-14.
- Chen C, Blumentritt CA, **Curtis MM**, Sperandio V, Torres AG, Dudley EG. Restrictive streptomycin-resistant mutations decrease the formation of attaching and effacing lesions in *Escherichia coli* O157:H7 strains. *Antimicrob Agents Chemother*. 2013; epub ahead of print.
- Pacheco AR, **Curtis MM**, Ritchie JM, Munera D, Waldor MK, Moreira CG, Sperandio V. Fucose sensing regulates bacterial intestinal colonization. *Nature*. 2012;492(7427):113-117.
- Njoroge JW, Nguyen Y, **Curtis MM**, Moreira CG, Sperandio V. Virulence meets metabolism: Cra and KdpE gene regulation in enterohemorrhagic *Escherichia coli*. *MBio*. 2012; 3(5):e00280-12.
- **Curtis MM**, Sperandio V. A complex relationship: the interaction among symbiotic microbes, invading pathogens, and their mammalian host. *Mucosal Immunol*. 2011;4(2):133-138. Review.
- **Curtis MM**, Rowell E, Shafiani S, et al. Fidelity of pathogen-specific CD4+ T cells to the Th1 lineage is controlled by exogenous cytokines, interferon-gamma expression, and pathogen lifestyle. *Cell Host Microbe*. 2010;8(2):163-173.
- **Curtis MM**, Way SS, Wilson CB. IL-23 promotes the production of IL-17 by antigen-specific CD8 T cells in the absence of IL-12 and type-I interferons. *J Immunol*. 2009;183(1):381-387.
- **Curtis MM**, Way SS. Interleukin-17 in host defence against bacterial, mycobacterial and fungal pathogens. *Immunology*. 2009;126(2):177-185. Review.
- Orgun NN, **Mathis MA**, Wilson CB, Way SS. Deviation from a strong Th1-dominated to a modest Th17-dominated CD4 T cell response in the absence of IL-12p40 and type I IFNs sustains protective CD8 T cells. *J Immunol*. 2008;180(6):4109-4115.
- Orr MT, **Mathis MA**, Lagunoff M, Sacks JA, Wilson CB. CD8 T cell control of HSV reactivation from latency is abrogated by viral inhibition of MHC class I. *Cell Host Microbe*. 2007;2(3):172-180.
- Pitcher LA, **Mathis MA**, Young JA, et al. The CD3 gammaepsilon/deltaepsilon signaling module provides normal T cell functions in the absence of the TCR zeta immunoreceptor tyrosine-based activation motifs. *Eur J Immunol*. 2005;35(12):3643-3654.
- Pitcher LA, **Mathis MA**, Subramanian S, et al. Selective expression of the 21-kilodalton tyrosine-phosphorylated form of TCR zeta promotes the emergence of T cells with autoreactive potential. *J Immunol*. 2005;174(10):6071-6079.
- \*Sozio MS, \***Mathis MA**, Young JA, et al. PTPH1 is a predominant protein-tyrosine phosphatase capable of interacting with and dephosphorylating the T cell receptor zeta subunit. *J Biol Chem*. 2004;279(9):7760-7769. (\*co-first authors)

- Pitcher LA, Young JA, **Mathis MA**, Wrage PC, Bartok B, van Oers NS. The formation and functions of the 21- and 23-kDa tyrosine-phosphorylated TCR zeta subunits. *Immunol Rev.* 2003;191:47-61. Review.

#### **Oral Presentations at Scholarly Meetings**

- **Curtis MM**, Hu Z, Klimko C, Narayanan S, Deberardinis R, Sperandio V. "*B. thetaiotaomicron*, a member of the gut microbiota, exacerbates enteric infection." The American Society for Microbiology 2014 Annual Meeting, Boston, MA
- **Curtis MM**, Way SS, Rowell EA, Urdahl K, Wilson CB. "Th1 fidelity vs. Th1/Th17 plasticity are dictated in vivo by pathogen lifestyle, exogenous cytokines and prior expression of IFN-gamma." American Association of Immunologists 2009 Annual Meeting, Seattle, WA
- **Mathis MA**, Sozio MS, Young JA, et al. "PTPH1 is a predominant protein-tyrosine phosphatase capable of interacting with and dephosphorylating the T cell receptor zeta subunit." American Association of Immunologists 2003 Annual Meeting, Denver, CO

#### **Posters Presented at Scholarly Meetings**

- **Curtis MM**, Hu Z, Klimko C, Narayanan S, Deberardinis R, Sperandio V. "*Bacteroides thetaiotaomicron*, a member of the gut microbiota, exacerbates enteric infection." Microbial Toxins & Pathogenicity Gordon Research Conference 2014, Waterville Valley, NH
- **Curtis MM**, Sperandio V. "*Bacteroides thetaiotaomicron* Regulation of the Virulence of the Human Pathogen Enterohemorrhagic *E. coli* O157:H7." *Cell Symposia Microbiome and Host Health* 2013; Lisbon, Portugal
- **Curtis MM**, Sperandio V. "The role of quinones in enterohemorrhagic *E. coli* (EHEC) virulence." 8<sup>th</sup> International Symposium on Shiga Toxin (Verocytotoxin) Producing *Escherichia Coli* Infections 2012; Amsterdam, The Netherlands
- **Curtis MM**, Sperandio V. "The role of quinones in enterohemorrhagic *E. coli* (EHEC) virulence." American Society for Microbiologists 2011 Annual Meeting; New Orleans, LA
- **Curtis MM**, Way SS, Rowell EA, Urdahl K, Wilson CB. "Th1 fidelity vs. Th1/Th17 plasticity are dictated in vivo by pathogen lifestyle, exogenous cytokines and prior expression of IFN-gamma." American Association of Immunologists 2009 Annual Meeting; Seattle, WA
- **Mathis MA**, Schoenborn J, Wilson CB. "Stability of commitment of memory CD4 T cells to an effector lineage." 13<sup>th</sup> International Congress of Immunology 2007, Rio de Janeiro, Brazil
- **Mathis MA**, Schoenborn J, Wilson CB. "Stability of memory CD4 and CD8 T cell effector lineage commitment in the presence or absence of innate signals." Keystone Symposia, Immunologic Memory 2007; Santa Fe, NM
- **Mathis MA**, Way SS, Schoenborn J, Wilson CB. "Stability of Th1/Tc1 commitment to an effector lineage" 2006 Midwinter Conference of Immunologists at Asilomar; Monterey, CA

#### **Memberships Held in Professional Organizations**

- Texas Association of Advisors for the Health Professions
- National Association of Advisors for the Health Professions

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