

Jesus A. Romo, M.S., Ph.D.
Email: Jesus.Romo@UTSA.edu
Phone: 210-458-7016

EDUCATION AND TRAINING

Tufts IRACDA Postdoctoral Fellow 2018 & 2020-2022
Tufts MERGE-ID Postdoctoral Fellow 2019

Tufts University School of Medicine, Boston, MA

Advisor: Dr. Carol A. Kumamoto

- Characterized the role that fungal colonizers of the gastrointestinal tract such as *Candida glabrata* play during infection by the bacterium *Clostridioides difficile*.
- Gained expertise in murine models of gastrointestinal colonization and *C. difficile* infection, anaerobe biology, bioinformatics for microbiota analyses, advanced microscopy techniques, tissue culturing techniques using patient derived colonoids and Caco-2 cell lines, polymicrobial biofilms, and molecular biology.
- Identified that the presence of specific fungi exacerbates *C. difficile* infection.

Doctoral Research 2014 – 2018

The University of Texas at San Antonio, San Antonio, TX

Advisors: Dr. Jose L. Lopez-Ribot and Dr. Stephen Saville

Doctoral Dissertation: *In vivo and In vitro Characterization of Novel Small Molecule Inhibitors of Filamentation and Biofilm Formation by Candida albicans.*

- Identified and characterized small molecule inhibitors of *C. albicans* filamentation and biofilm formation.
- Gained experience in *Candida* filamentation and biofilm assays, drug screening and development, three distinct pre-clinical animal models, and tissue culturing using macrophage cell lines.

Masters Research 2010 – 2012

The University of Texas at San Antonio, San Antonio, TX

Advisor: Dr. Janakiram Seshu

Thesis: *Polyamine Uptake and Utilization and Characterization of potA (bb0642) and potD (bb0639) in Borrelia burgdorferi.*

- Characterized a polyamine transporter in *B. burgdorferi*.
- Identified polyamine “sensing” as a signal for transitioning from an invertebrate to a vertebrate host.
- Gained experience in molecular biology, protein purification, and *B. burgdorferi* culturing techniques.

ACADEMIC APPOINTMENTS

Assistant Professor Fall 2022-present

Department of Molecular Microbiology and Immunology
The University of Texas at San Antonio

RESEARCH SUPPORT

San Antonio-Based Coccidioidomycosis Collaborative Research Center (Sa-CCRC) Pilot Project Grants, UTSA U19, Romo J.A. (Principal Investigator), 01/01/2023-12/31/2023, \$40,000.

Project Synopsis: Coccidiomycosis is an environmentally acquired fungal infection that can be self-limited (requiring no medical care) or chronic (years of treatment and lifelong symptoms) and the exact mechanisms behind the host-pathogen interactions are largely unknown. *Coccidioides* species have a highly complex life cycle consisting of environmental forms that can be inhaled (arthroconidia) and host adapted pathogenic forms (spherules). Currently, there are no approved vaccines for coccidiomycosis, and the antifungal repertoire is limited. During the spherule lifestyle in the human host lung, *Coccidioides* species encounter a variety of conditions, including hypoxic and anaerobic environments, conditions which have not been explored to date. Characterizing the anaerobic lifestyle of *Coccidioides* species holds valuable information related to novel host-pathogen biology, identification of novel vaccine epitopes, and antifungal drug targets. We plan to achieve this by 1) characterizing growth and susceptibility to antifungals in anaerobic conditions and 2) conducting transcriptomic analyses to better understand fungal responses to anaerobic environments. With the successful completion of these studies, we will generate a detailed characterization of fungal growth in anaerobic environments and a transcriptional landscape map of these responses.

Lastly, these findings will serve to inform the development novel therapeutics as well as the development of more relevant environments for the study of fungi.

PUBLICATIONS

ORIGINAL RESEARCH

Romo J.A., Tomihiro M., Kumamoto C.A. (2023) Pre-colonization with the fungus *Candida glabrata* exacerbates infection by the bacterial pathogen *Clostridioides difficile* in a murine model. *mSphere* <https://journals.asm.org/doi/10.1128/msphere.00122-23>

McMahon C.L., Esqueda M., Yu J.J., Wall G., **Romo J.A.**, Vila T., Chaturvedi A., Lopez-Ribot J.L., Wormley F., Hung C.Y., Development of a High Throughput Imaging Flow Cytometry Method for Fungal Cytological Profiling and Antifungal Drug Discovery. *Journal of Fungi* <https://www.mdpi.com/2309-608X/9/7/722>

Romo J.A., Arsenault A.B., Laforce-Nesbitt S.S., Bliss J.M., and Kumamoto C.A. (2022) Minimal Effects of Medium Chain Triglyceride Supplementation on the Intestinal Microbiome Composition of Premature Infants: A Single-Center Pilot Study. *Nutrients* <https://www.mdpi.com/2072-6643/14/10/2159>

Romo J.A., Markey L., Kumamoto C.A. (2020) Lipid species in the GI tract are increased by the commensal fungus *Candida albicans* and decrease the virulence of *Clostridioides difficile*. *Journal of Fungi* <https://www.mdpi.com/2309-608X/6/3/100>

Banerjee M., Lazzell A., **Romo J.A.**, Lopez-Ribot J., Kadosh D. (2019) Filamentation is Associated with Reduced Pathogenicity of Multiple Non-*albicans* *Candida* Species. *mSphere* <https://msphere.asm.org/content/4/5/e00656-19>

Romo J.A., Zhang H, Cai H, Kadosh D, Koehler JR, Saville SP, Wang Y, Lopez-Ribot JL. (2019) Global transcriptomic analysis of the *Candida albicans* response to treatment with a novel inhibitor of filamentation. *mSphere* <https://msphere.asm.org/content/4/5/e00620-19>

Romo J.A., Pierce C. P., Esqueda M., Hung C.Y., Saville S. P., Lopez-Ribot J. (2018) *In vitro* Characterization of an anti-Virulence Compound Targeting *Candida albicans* Filamentation and Biofilm Formation. *Frontiers in Cellular and Infection Microbiology*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6048184/>

Romo J.A., * Pierce C. P., * Chaturvedi A. K., Lazzell A. L., McHardy S.F., Saville S. P., Lopez-Ribot J. (2018) Towards the Development of Anti-virulence Approaches for Candidiasis: a Novel Series of Small Molecule Inhibitors of *Candida albicans* Filamentation. *mBio* **Note:** Manuscript was recommended on F1000Prime as being of special significance to the field of mycology **doi:** 10.3410/f.732234524.793540212 (* These authors contributed equally to this work) <https://mbio.asm.org/content/8/6/e01991-17.long>

Lin Y.H*, **Romo J.A.**,* Reyes A.N., Smith, T.C., Karna, S.L., Miller, C.L., Van Laar T., Yendapally, R., Chambers, J.P., and J. Seshu. (2017) Spermine and spermidine alter gene expression and antigenic profile of *Borrelia burgdorferi*. *Infection and Immunity*. (* These authors contributed equally to this work). <https://iai.asm.org/content/85/3/e00684-16.long>

METHODS AND PROTOCOLS

Romo J.A. and Kumamoto C.A., (2022) Characterization of the effects of *Candida* gastrointestinal colonization on *Clostridioides difficile* infection in a murine model. *Methods in Molecular Biology: Candida Species Methods and Protocols*. ISBN: 978-1-0716-2549-1 DOI: 10.1007/978-1-0716-2549-1_20 https://link.springer.com/protocol/10.1007/978-1-0716-2549-1_20

REVIEWS, EDITORIALS, AND BOOK CHAPTERS

Ajetunmobi O.H., Badali H., **Romo J.A.**, Ramage G., Lopez-Ribot J.L. Antifungal Therapy of *Candida* Biofilms: Past, Present, and Future. *Biofilm* <https://doi.org/10.1016/j.biofilm.2023.100126>.

Rodrigues C.F. and **Romo J.A.** (2021) Fungal Biofilms 2020. *Journal of Fungi*. <https://www.mdpi.com/2309-608X/7/8/603>

Kumamoto C.A. and **Romo J.A.** (2021) *Debaryomyces*, the Achilles heel of wound repair. Cell Host & Microbe <https://pubmed.ncbi.nlm.nih.gov/33984275/>

Romo J.A. and Kumamoto C.A. (2020) On commensalism of *Candida*. Journal of Fungi. <https://www.mdpi.com/2309-608X/6/1/16>

Stewart D*, **Romo J.A.***, Lamendella R., Kumamoto C.A. (2019) The role of fungi in *C. difficile* infection: An unappreciated transkingdom interaction. Fungal Genetics and Biology. (* These authors contributed equally to this work). <https://www.sciencedirect.com/science/article/pii/S108718451830330X?via%3Dihub>

Mangan D. F., Cloyd E. T., **Romo J.A.**, Wessner D.R., Westenberg D. J., Adukwu E., Menninger H., Gardy J. (2018) Introducing the JMBE Themed Issue on Science Communication. J. Microbiol. Biol. Educ. 19(1): <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5969450/>

Vila T*, **Romo J.A.***, Pierce C.P., Saville S.P., Lopez-Ribot J. L. (2017) Targeting *Candida albicans* filamentation for antifungal drug development. Virulence. (* These authors contributed equally to this work). <https://www.tandfonline.com/doi/full/10.1080/21505594.2016.1197444>

Pierce C.G., Vila T., **Romo J.A.**, Montelongo-Jauregui D., Wall G., Ramasubramanian A., Lopez-Ribot J.L. (2017) The *Candida albicans* Biofilm Matrix: Composition, Structure and Function. Journal of Fungi. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5431293/>

Vila T., Montelongo-Jauregui D., **Romo J.A.**, Wall G.M., Pierce C.P., Lopez-Ribot J. L. (2017) Reference Module in Life Sciences, Elsevier Book Chapter: Mycology: Fungal Biofilms. doi:10.1016/B978-0-12-809633-8.12092-8

SCIENCE EDUCATION PUBLICATIONS

Romo J.A. and Rokop M.E., (2022) A novel undergraduate Honors seminar course celebrating scientific contributions by scientists from historically marginalized communities. ASM Journal of Microbiology and Biology Education (JMBE) <https://journals.asm.org/doi/10.1128/jmbe.00123-22>

Romo J.A., Pierce C, Chaturvedi A, Saville S and Lopez-Ribot J. (2019) Disarming A Transformer Fungus. Front. Young Minds. 7:47. <https://kids.frontiersin.org/article/10.3389/frym.2019.00047>

Kumamoto C.A. and **Romo J.A.** (2019) A frenemy fungus provides clues about a new deadly one. The Conversation. <https://theconversation.com/a-frenemy-fungus-provides-clues-about-a-new-deadly-one-115110>

Romo J.A. (2018) Temperature Adaptation as a Virulence Determinant for Fungal Pathogens. ASM's Microbial Sciences blog. <https://asm.org/Articles/2018/November/Temperature-Adaptation-as-a-Virulence-Determinant>

Romo J.A. (2018) Science Communication for All: Perspectives and Tools for Implementation in Research, the Classroom, and the Community. Teaching Microbiology, ASM's education blog. <https://asm.org/Articles/2018/March/Teaching-Microbiology>

HONORS AND AWARDS *(Selected; full list available upon request)*

ASM William A. Hinton Award for Advancement of a Diverse Community of Microbiologists	2024
Peggy Cotter ASM Travel Award	2023
Recognized as an Outstanding Tufts University School of Medicine instructor	2021-2022
Fred Hutch's Dr. Eddie Mendez Scholar Award https://www.fredhutch.org/en/about/about-the-hutch/office-of-diversity-equity-inclusion/eddie-mendez-award.html	2021
Intersections Science Fellows Symposium Associate https://www.intersectionsciencefellows.com/inaugural-fellows-1-1	2021

Cornell PACE Rising Star Fellow https://blogs.cornell.edu/pace/rising-stars/	2020
Postdoctoral Poster Competition 1st Place Winner (Junior Postdoc Category), Tufts University	2019
Tufts Institutional Research and Career Development Award (IRACDA) Postdoctoral Fellowship, NIH/NIGMS K12 Award	2018 & 2020-present
Tufts Postdoctoral Research Training Program in Microbial Pathogenesis of Infectious Diseases (MERGE-ID) Fellowship, NIH T32	2019
Excellence in <i>in vivo</i> research at the Molecular Mycology of Pathogenic Fungi course, Woods Hole, MA	2018
UTSA Ronald E. McNair Scholars Program Faculty Mentor of the Year, San Antonio, TX	2018
Medical Mycological Society of the Americas (MMSA) Milton Huppert Graduate Student Award recipient, ASM Microbe, Atlanta, GA	2018
Yale Ciencia Academy Trainee https://www.cienciapr.org/en/yale-ciencia-academy-career-development	2018
UTSA College of Sciences Best Graduate Presentation in Infectious Diseases and Immunology, College of Science Research Conference, San Antonio, TX	2017
SACNAS Conference Travel Award, Salt Lake City, UT	2017
Medical Mycological Society of the Americas (MMSA) IMMY travel award recipient, ASM Microbe, New Orleans, LA	2017
ASM Texas branch meeting Charlie Guantt Award (Best Graduate Oral presentation), New Braunfels, TX	2017
American Society for Microbiology Science Teaching Fellow https://www.asm.org/index.php/science-teaching-fellows-course	2016
SACNAS Conference Graduate Oral Presentation Winner (Biomedical Research), Long Beach, CA	2016
SACNAS Conference Travel Award, Long Beach, CA	2016
University Life Awards: Outstanding Graduate Student in the College of Science, The University of Texas at San Antonio, San Antonio, TX	2016
3MT (Three-minute thesis) First Place and Crowd Favorite Winner, University of Texas at San Antonio, San Antonio, TX	2016
NIH/NIGMS UTSA RISE (Research Initiative for Scientific Enhancement) Fellow	2015-2018

ORAL PRESENTATIONS (Selected; full list including posters available upon request)

- Romo J.A.** Characterizing the role of *Candida* species during gastrointestinal infection by *Clostridioides difficile* (**Invited Oral**), ASM Microbe, Houston, TX (June 15th- 19th).
- Romo J.A.** Characterizing the role of *Candida* species during gastrointestinal infection by *Clostridioides difficile* (**Oral**), *Candida* and Candidiasis meeting, Montreal, Canada (May 13th- 17th).
- Romo J.A.** Characterizing the role of *Candida* species during gastrointestinal infection by *Clostridioides difficile* (**Oral**), South Central Medical Mycology Meeting, Memphis, TN (November 18th-19th).
- Romo J.A.** Characterizing the role of *Candida* species during gastrointestinal infection by *Clostridioides difficile* (**Invited Oral**), 2022 ASM Texas Fall Meeting, Houston, TX (November 10th-12th).
- Romo J.A.** Experimental Design: Questions, Methodologies, and Analyses (**Invited Oral**), 1er Congreso Internacional de Ingeniería en Gestión Empresarial, Technical Institute of Tehuacan, Mexico (Virtual).
- Romo J.A.**, and Kumamoto C.A. Effects of *Candida* species colonization on *Clostridioides difficile* infection. (**Invited Oral**), Molecular Mycology: Current Approaches to Fungal Pathogenesis 25th Anniversary Symposium, Marine Biological Laboratory, Woods Hole, MA (November 8th-11th).

Romo J.A., and Kumamoto C.A. Effects of *Candida* species colonization on *Clostridioides difficile* infection. (**Oral**) Fred Hutch Eddie Mendez Symposium, virtual (October 4-6th, 2021).

Romo J.A., and Kumamoto CA. Effects of *Candida* species colonization on *Clostridioides difficile* infection. (**Oral**) Medical Mycology Trainee Seminar Series, virtual (July 8th, 2021).

Romo J.A., and Rokop M. Celebrating the contributions of underrepresented scientists throughout history: A novel undergraduate Honors seminar course emphasizing primary literature and community building. (**Oral**) IRACDA 2021 National Conference, Virtual (June 28th-July 1st, 2021).

Romo J.A., and Kumamoto C.A. Effects of *Candida* species colonization on *Clostridioides difficile* infection. (**Oral**) Candida and Candidiasis Meeting, Virtual (March 21st-27th, 2021).

Romo J.A., and Kumamoto C.A. Effects of *Candida* species colonization on *Clostridioides difficile* infection. (**Oral**) Cold Spring Harbor Laboratory Microbial Pathogenesis and Host Response Meeting, Cold Spring Harbor, NY (September 10th, 2019).

Romo J. A., Pierce C. P., Esqueda M., Lazzell A. L., Chaturvedi A. K., Hung CH., Saville S. P., Lopez-Ribot J. Novel Biaryl Amide Compound with Inhibitory Activity against *Candida albicans* Filamentation and Biofilm Formation as an Anti-virulence Agent for the Treatment of Candididasis. (**Oral**), ASM Microbe MMSA Travel Award Presentation, New Orleans, LA, (June 1st-5th, 2017).

Romo J. A., Pierce C. P., Lazzell A. L., Chaturvedi A. K., Saville S. P., Lopez-Ribot J. A Novel Biaryl Amide Compound with Inhibitory Activity against *Candida albicans* Filamentation and Biofilm Formation as an Anti-virulence Agent for the Treatment of Candididasis. (**Oral**), ASM Texas branch meeting, New Braunfels, TX (March 23-25th, 2017).

Romo J. A., Pierce C. P., Lazzell A. L., Chaturvedi A. K., Saville S. P., Lopez-Ribot J. An Anti-virulence Approach for Antifungal Drug Development: Preclinical Studies of a Novel Small Molecule Inhibitor of *Candida albicans* Filamentation and Biofilm Formation. (**Oral**), South Central Medical Mycology Annual Conference, Memphis, TN (November 18-19th, 2016).

Romo J. A., Pierce C. P., Lazzell A. L., Chaturvedi A. K., Saville S. P., Lopez-Ribot J. An Anti-virulence Approach for Antifungal Drug Development: Preclinical Studies of a Novel Small Molecule Inhibitor of *Candida albicans* Filamentation and Biofilm Formation. SACNAS Conference, (**Oral**), Long Beach, CA (October 13th-15th, 2016).

Romo J. A., Pierce C. P., Chaturvedi A. K., Saville S. P., Lopez-Ribot J. L. Targeting Virulence for Antifungal Drug Development: a Novel Small Molecule with Inhibitory Activity against *Candida albicans* Filamentation and Biofilm Formation. (**Oral**). South Central Medical Mycology Annual Conference. Albuquerque, NM (November 20th-21st, 2015).

UNDERGRADUATE AND GRADUATE MENTORING

UTSA Mentoring as an Assistant Professor in MMI

Senior Scientists

Paola Zucchi, PhD (Senior Scientist V and Lab Manager, Fall 2022-Present)

Doctoral students

Nawal Abdul-Baki (MMI Rotation student Fall 2022-Spring 2023)

Armando Mendez (MMI Rotation student Fall 2022-Spring 2023)

Megan Medrano (MMI Rotation student Spring 2023)

Irvin Rivera (MMI Rotation student Spring 2023)

Master's students

Alvaro Ortola Tortosa (Biology M.S. student, Fall 2022-Present)

Kendall Esparrago (Biotechnology M.S. student, Summer 2023-Present)

Undergraduates

Elizabeth Negron (UTSA Honors College and COS Honors, ESTEEMED Scholar, Fall 2022-Present)

Alec Solis (UTSA COS Honors, MARC Scholar, Fall 2022-Present)

Evan Garcia (Northwest Vista College STEM+Plus Visiting Scholar, Spring 2023)

Tufts University School of Medicine Mentoring as a Postdoctoral Scholar

Tufts University School of Medicine, Molecular Biology and Microbiology Graduate Program

- Mentored Pola Kuhn during a 6-week PhD rotation in the Kumamoto lab (Spring 2021)
- Trained student in confocal microscopy, *Candida* infection models, biofilm assays, anaerobic techniques, and molecular biology techniques
- Guided student in experimental design planning

Tufts University School of Medicine, Molecular Biology and Microbiology Graduate Program

- Mentored Sylvia Rivera during a 6-week PhD rotation in the Kumamoto lab (Spring 2021)
- Trained student in confocal microscopy, *Candida* infection models, biofilm assays, anaerobic techniques, and molecular biology techniques
- Guided student in experimental design planning

UC Merced First-Generation Mentorship Program

- Mentored Diana Rodriguez-Ortega during the completion of her PhD in the Nobile lab at UC Merced (Fall 2020-Present)
- During monthly meetings, I provided advice and guidance to Diana about being a first-gen in academia, navigating and successfully completing her PhD, and finding postdoctoral positions.
- Provided professional development support (*i.e.* writing and science communication).

University of Massachusetts Boston, Honors College

- Advised Yordanos Abebe in the completion of an Honor's Thesis project (Fall 2020-Spring 2021)
- Held regular meetings with Yordanos to provide guidance on developing a thesis question, compiling literature, and developing a thesis proposal.
- Advised on data collection, analysis, and thesis writing in Spring 2021
- Honors Thesis title: Impact of COVID-19 on the Education of Underrepresented Groups (URGs).

Tufts University School of Medicine, Molecular Biology and Microbiology Graduate Program

- Mentoring Andrew Day during completion of PhD in the Kumamoto lab (2019-Present)
- Training student in confocal microscopy, culturing Caco-2 cells for 2D monolayer formation, *Candida* infection models, biofilm assays, anaerobic techniques, and molecular biology techniques
- Guided student in experimental design planning

Tufts University School of Medicine, Molecular Biology and Microbiology Graduate Program

- Mentored Elizabeth Tan during an 8-week PhD rotation in the Kumamoto lab (2019)
- Trained student in confocal microscopy, culturing Caco-2 cells for 2D monolayer formation, and molecular biology techniques
- Guided student in experimental design planning and lab meeting presentations

Tufts University School of Medicine, Molecular Biology and Microbiology Graduate Program

- Mentored Rich Lavin during an 8-week PhD rotation in the Kumamoto lab (2019)
- Trained student in culturing Caco-2 cells for 2D monolayer formation

Tufts University School of Medicine, Postbaccalaureate Research Education Program (PREP)

- Mentored Aneesa Valentine during her one-year PREP training in the Kumamoto lab (2019-2020)
- Trained student in confocal microscopy, culturing Caco-2 cells for 2D monolayer formation, fungal culturing techniques, anaerobic techniques, molecular biology techniques, and data analysis
- Provided career advising and professional development training (*i.e.* grant writing, oral and poster presentations)

- Provided guidance on graduate school applications

Tufts University, Undergraduate and High School Researchers

- Mentored and currently mentoring high school and undergraduate students in the Kumamoto lab
- Trained students in confocal microscopy, biofilm formation assays, animal models, anaerobic techniques, tissue culturing, and microbiota analyses using the QIIME2 pipeline.
- Provided professional development training (*i.e.* grant writing, oral and poster presentations)
 - Sabrina Hernandez Fall 2021-Spring 2022 (UMass Boston, Biology Junior)
 - Molly Ruggles Summer 2021 (DePauw University, Biology and Biochemistry Senior)
 - Makenzie Tomihiro Fall 2019-Spring 2020 (Tufts University, Biology Junior)
 - Leah Kaster Summer 2019 (High School, Rising Senior)
 - Habtom Habertegergis Spring 2019 (Roxbury Community College, Biotechnology Senior)

UTSA Mentoring as a Doctoral Student

The University of Texas at San Antonio, McNair Scholars Program

- Mentored Sandra Ramos during a two-year research experience in the Lopez-Ribot lab (2016-2018)
- Trained student in fungal culturing techniques, drug screening, and biofilm assays
- Provided career advising and professional development training (*i.e.* grant writing, oral and poster presentations)
- Provided guidance on graduate school applications

San Antonio Texas High School students

- Mentored hundreds of local high school students over 8 years
- Trained students in the laboratory and provided guidance with science fair projects

TEACHING EXPERIENCE (Selected; full list available upon request)

Associate Lecturer

Fall 2020 & Spring 2022

Honors College, University of Massachusetts Boston

- Honors Colloquium: Science in all Colors: Diversity in Scientific Fields (15 students)
 - Developed and taught a course focused on highlighting the contributions of underrepresented sciences in a political and historical context while teaching students how to read scientific literature
 - Utilized question/answer, small group and peer-led team-teaching (PLTL) strategies to engage student participation and gauge comprehension
 - Incorporated biographies and guest speakers to enhance student experience
 - Taught course in an online format due to COVID-19 pandemic

Medical Microbiology Lab Instructor

School of Medicine, Tufts University

Fall 2019- Spring 2022

- Microbiology laboratory for Medical Students (12 students)
 - Led interactive small group sessions based on medical case studies related to important aspects of microbiology
 - Taught medical students basic microbiological techniques and led them through the identification of “unknown” pathogens

Biology Faculty

Galen College of Nursing, San Antonio, TX

2012 – 2019

- Microbiology Lecture and Laboratory (50 students per quarter)
 - Designed and taught medical microbiology lecture and laboratory
 - Used hybrid course techniques, technology, small group discussions, and peer-led team-teaching
 - Taught basic microbiological techniques including culturing, isolation, microscopy, and identification of microorganisms with selective and differential media as well as biochemical tests
 - Held weekly review sessions for students
- Anatomy and Physiology Lecture (50 students per quarter)
 - Taught anatomy and physiology lecture fully online
 - Used small group discussions and peer-led team-teaching

STEM Outreach Coordinator

Department of Biology, Center of Excellence in Infection Genomics (CEIG) and South Texas Center for Emerging Infectious Diseases (STCEID), The University of Texas at San Antonio 2010-2018

- Directed microbiology outreach efforts in the community
- Designed microbiology activities for elementary, middle, and high school classrooms
- Designed and delivered microbiology summer workshops for high school teachers
- Helped develop curricula and established microbiology courses at local high schools
- Established Science Fairs and supported existing Science Fairs at local high schools
- Mentored hundreds of high school students with Science Fair projects
- Regularly visited high school classrooms and taught lectures and labs
- Supported high school teachers with educational grants
- Advised undergraduate and graduate students in outreach efforts

Teaching Assistant

Department of Biology, The University of Texas at San Antonio 2010 – 2012

- Microbiology Laboratory (BIO 3722) (15-20 students per semester)
 - Developed full course lectures, quizzes, and exams
 - Supervised students in the development of their laboratory techniques
 - Aided students in problem solving in the laboratory
 - Proctored and graded exams, notebooks, and lab reports

SERVICE TO PROFESSION

- UTSA MMI Undergraduate Curriculum Committee Member Fall 2022-Present
- Guest Editor for the Journal of Fungi Special Issue: Fungal Biofilms 2020 2019 – 2020
- Ad hoc reviewer, Assorted journals including *PLoS Genetics*, *FEMS Microbiology Reviews*, *Journal of Microbiology and Biology Education (JMBE)*, and *Journal of Fungi* 2017-present
- Guest Editor for ASM's Journal of Microbiology and Biology Education (JMBE) Special Issue: Science Communication 2017-2018

THESIS COMMITTEES

Doctoral

Nathan Kilgore, MMI PhD, Mentor: Dr. Janakiram Seshu (2023-Present)

Courtney Smith, MMI PhD, Mentor: Dr. Soo Chan Lee (2023-Present)

Sarah Saeger, MMI PhD, Mentor: Dr. Chiung-Yu Hung (2023-Present)

Master's

Cassidy Graham, UTSA Biology, Mentor: Dr. Stephen Saville

Joel H. Salinas Jr., UTSA Biomedical Engineering (BME), Mentor: Dr. Nehal Abu-Lail

PROFESSIONAL DEVELOPMENT AND TRAINING (*Selected; full list available upon request*)

- CIMER Mentoring Workshop: Optimizing Mentoring Relationships (virtual; 6 hours), University of Wisconsin-Madison Summer 2021
- Future Faculty Workshop (virtual; 1 day), Northeastern University Summer 2020
- Introduction to POGIL: The Fundamentals 2020 Virtual Workshop (5 hours), The POGIL project Spring 2020
- Python for Data Analytics Boot Camp (virtual; 20 hours), Data Intensive Studies Center (DISC) Tufts University Spring 2020
- Page One Specific Aims Grant Writing Workshop, Tufts University Spring 2020
- Culturally Sensitive Mentoring Workshop, Tufts University Spring 2019
- Marine Biological Laboratory course "Molecular Mycology: Current Approaches to Fungal Pathogenesis", Woods Hole, MA Summer 2018

LEADERSHIP, DEI, AND MENTORING *(Selected; full list available upon request)*

- University of Puerto Rico METAS+ mentor 2022-present
- Tufts University Building Diversity in the Biomedical Sciences (BDBS) Advisory Board member, Boston, MA 2021- 2022
- Tufts University Molecular Biology and Microbiology Department Diversity, Equity, and Inclusion Committee Member, Boston, MA 2020 – 2022
- Science Advisory Board Member, Roxbury Community College, Boston MA 2019 – 2022
- Tufts IRACDA Chairperson, Tufts University School of Medicine, Boston, MA 2019 – 2022
- Yale Ciencia Academy Advisory Committee member, Yale Ciencia Initiative/Ciencia Puerto Rico, Yale School of Medicine 2019 – 2020
- Tufts SPINES Leadership, Tufts University School of Medicine, Boston, MA 2018 – 2022
- UTSA SACNAS Chapter President, University of Texas at San Antonio, San Antonio, TX 2015 – 2017
- Curriculum Development Committee member, Galen College of Nursing, San Antonio, TX 2012 – 2014

PROFESSIONAL MEMBERSHIPS

- Medical Mycological Society of the Americas 2016-present
American Society for Microbiology 2013-present
Society for Advancement of Chicanos and Native Americans in Science 2015-present

OUTREACH EXPERIENCE *(Selected; full list available upon request)*

- SPINES Anti-Oppression and Active Bystander Workshop Organizer, Tufts University School of Medicine, Boston, MA Fall 2019
- Tufts University Pathway to PhD undergraduate program: Communicating your science workshop facilitator, Tufts University School of Medicine, Boston, MA 2019-2022
- STEM Microbiology Outreach Coordinator, The University of Texas at San Antonio, San Antonio, TX 2010-2018
- UTSA McNair Science Communication Workshop facilitator. The University of Texas at San Antonio, San Antonio, TX Spring 2018

SCIENCE COMMUNICATION *(Selected; full list available upon request)*

- Co-host, ASM microTalk podcast series, University of Texas at San Antonio, San Antonio TX 2017-2019 and 2022-Present