

VITA

1. Don Thushara Galbadage

2. Contact information

2901 Stadium Drive
TCU Box 298615
Fort Worth, TX 76129
817-257-1750
d.t.galbadage@tcu.edu

3. Academic Background

a. Education

Ph.D. in Medical Sciences (May 2017)
Texas A&M University, College of Medicine, Bryan, TX
Research Emphasis: Molecular Microbiology & Pathogenesis
Dissertation: Characterization of *Caenorhabditis elegans* as
a *Mycobacterium marinum* Virulence Model
Dissertation Advisor: Jeffrey D. Cirillo, Ph.D.

M.P.H. in Epidemiology (August 2008)
The University of Texas, School of Public Health, Houston, TX
Practicum: Quality Control in a CAP-Certified Clinical Laboratory
Thesis: Increased sensitivity of ETEC detection in stool cultures
by increasing the number of *E. coli* colonies tested
Thesis Advisor: Herbert L. DuPont, M.D.

B.S. in Biology (May 2007)
Minors in Chemistry and Mathematics
Texas Christian University, Fort Worth, TX
Graduated Cum Laude, TCU Scholar Award
Research: Temperature-dependent lifespan in *C. elegans*
Research Advisor: Philip S. Hartman, Ph.D.

b. Professional certifications

Academy for Future Faculty (AFF), CIRTL Associate – Fellow (2019)
Faculty Assessment Fellow, Biola University (2023-24)

c. Present rank

Associate Professor

- d. Year of appointment to the University and rank
August 2024 Associate Professor

- e. Year of last promotion
NA

- f. Previous teaching and/or research appointments other than TCU
Associate Professor of Public Health (August 2019 – July 2024)
Department of Kinesiology and Public Health,
Biola University, La Mirada, CA

Post-Doctoral Research Fellow (June 2017 – August 2019)
Department of Microbial Pathogenesis & Immunology,
Texas A&M University, College of Medicine, Bryan, TX

- g. Previous professional positions
Director of Public Health Programs (August 2020 – July 2024)
Department of Kinesiology and Public Health,
Biola University, La Mirada, CA

- h. Formal continuing education associated with professional development
NA

- i. Honors and Awards
Steward Research Faculty Fellow, Biola University, La Mirada (2023)

4. Teaching

- a. Courses taught
APHS 20003 Global Healthcare Systems
APHS 20103 Introduction to Public Health
PHLT 505 Principles of Epidemiology
PHLT 610 Public Health Integrative Experience
PHLT 620 Public Health Practicum
PHLT 640 Global Communicable Disease Control
PHLT 654 Epidemiology of Chronic Disease
KNES 107 Lifetime Wellness
KNES 200 Public Health Principles and Practice
KNES 355 Health Care Systems
KNES 458 Health Science Practicum
KNES 475 Public Health Capstone Practicum

GNST 102 First Year Seminar: The Biola Experience - Exploring Health
BIOS 236 Principles of Human Anatomy and Physiology
BIOS 282 Microbiology Lab
MPIM 601 Microbial Pathogenesis of Human Disease Guest Lecturer (Spring 2019)
Clinical Synthesis and Integration Exercise (CSIE) Co-Facilitator (August 2018 – May 2019)

- b. Courses developed at TCU
APHS 20003 Global Healthcare Systems
- c. Honors projects directed, or committee service
NA
- d. Graduate theses (recitals) and dissertations directed, or committee service
NA
- e. External support received or pending for academic work
NA
- f. Internal support for academic work received
NA
- g. Academic Advising
NA

5. Research and Creative Activity

- a. Refereed publications
De Mel, S., Gruenler, J., Khoury, L., Heynes, A., Fazekas, J., Damaske, K., **Galbadage, T.**, Gunasekera, R. S., & Anderson, R. S. (2025). Green synthesis of silver nanoparticles using Magnolia alba leaf extracts and evaluating their antimicrobial, anticancer, antioxidant, and photocatalytic properties. *Scientific reports*, 15(1), 23709. <https://doi.org/10.1038/s41598-025-08468-3>

Galbadage, T., Liu, D., Tour, J.M., Cirillo, J.D., & Gunasekera R.S. (2025). Microbicidal Mechanisms for Light-Activated Molecular Nanomachines in Mycobacterium smegmatis: A Model for Pathogenic Bacteria. *OpenNano*, 100240. <https://doi.org/10.1016/j.onano.2025.100240>

Park, J. Y., Peterson, B. M., Kim, J., **Galbadage, T.** (2024) Driving Under the Influence of Alcohol in People With Major Depressive Episodes and Alcohol Use

Disorder. *Substance Use & Addiction Journal*. 2024;0(0).
doi:10.1177/29767342241265876

Gunasekera, R. S., Raja K. K. B., Hewapathirana S., Tundrea, E., Gunasekera V.,
Galbadage, T., Nelson, P. A. (2023). ORFanID: A Web-Based Search Engine for the
Discovery and Identification of Orphan and Taxonomically Restricted Genes.
PLoS One; doi: 10.1371/journal.pone.0291260

Park, J. Y., **Galbadage, T.**, Lee H., Wang, D. C., Peterson, B. M. (2023). Mental
health, substance use, and the importance of religion during the COVID-19 pandemic.
Mental Health, Religion & Culture doi: 10.1080/13674676.2023.2202382

Holt A., Cahill J., Ramsey J., Martin C., O'Leary C., Moreland R., Maddox L.T.,
Galbadage T., Sharan R., Sule R., Cirillo J.D., Young R. (2021). Phage-Encoded
Cationic Antimicrobial Peptide Required for Lysis. *Journal of Bacteriology* JB.
00214-21. doi: 10.1128/JB.00214-21

Galbadage, T., Peterson, B. M., Wang, D. C., Wang, J. S., & Gunasekera, R. S.
(2020). Biopsychosocial and Spiritual Implications of Patients with COVID-19 Dying
in Isolation. *Frontiers in Psychology* 11:588623. doi: 10.3389/fpsyg.2020.588623

Galbadage, T., Peterson, B. M., Wang, J. S., Jayasekara, A., Ramirez, D. A., Awada,
J., Walsh, J. P., & Gunasekera, R. S. (2020). Molecular Mechanisms Lead to Sex-
Specific COVID-19 Prognosis and Targeted Therapies. *Frontiers in Medicine*
(Lausanne) 7:589060. doi: 10.3389/fmed.2020.589060

Jalali, A. M., Peterson, B. M., & **Galbadage, T.** (2020). Early COVID-19
Interventions Failed to Replicate 1918 St. Louis vs. Philadelphia Outcomes in the
United States. *Frontiers in Public Health* 8:579559. doi: 10.3389/fpubh.2020.579559

Galbadage, T., Peterson, B. M., Awada, J., Buck, A. S., Ramirez, D. A., Wilson, J., &
Gunasekera, R. S. (2020). Systematic Review and Meta-Analysis of Sex-Specific
COVID-19 Clinical Outcomes. *Frontiers in Medicine (Lausanne)*, 7, 348. doi:
10.3389/fmed.2020.00348

Galbadage, T., Peterson, B. M. & Gunasekera, R. S. (2020). Does COVID-19 Spread
through Droplets Alone? *Frontiers in Public Health*, 8, 163. doi:
10.3389/fpubh.2020.00163

Gunasekera, R. S., **Galbadage, T.**, Ayala Orozco, C., Liu, D., García-López, V., Troutman, B. E., Tour, J. J., Pal, R., Krishnan, S., Cirillo, J. D. & Tour, J. M. (2020). Molecular Nanomachines Can Destroy Tissue or Kill Multicellular Eukaryotes. *ACS Applied Materials & Interfaces*, 12, 13657-13670. doi: 10.1021/acsami.9b22595

Bartzatt, R., Sule, P., **Galbadage, T.**, & Cirillo, J. D. (2019). Aromatic Hydrazone Compounds That Inhibit the Growth of *Mycobacterium tuberculosis*. *Journal of Advances in Medical and Pharmaceutical Sciences*, 1-11. doi: 10.9734/jamps/2019/v21i430148

Galbadage, T., Liu, D., Alemany, L. B., Pal, R., Tour, J. M., Gunasekera, R. S., & Cirillo, J. D. (2019). Molecular Nanomachines Disrupt Bacterial Cell Wall Increasing Sensitivity of Extensively Drug-Resistant *Klebsiella pneumoniae* to Meropenem. *ACS nano*, 13, 14377-14387. doi: 10.1021/acsnano.9b07836

Worstell, N. C., Singla, A., Saenkham, P., **Galbadage, T.**, Sule, P., Lee, D., Mohr, A., Kwon, J.S.I., Cirillo, J.D. & Wu, H. J. (2018). Hetero-multivalency of *Pseudomonas aeruginosa* lectin LecA binding to model membranes. *Scientific reports*, 8(1), 1-11. doi: 10.1038/s41598-018-26643-7

Galbadage, T., Shepherd, T. F., Cirillo, S. L., Gumienny, T. L., & Cirillo, J. D. (2016). The *Caenorhabditis elegans* p38 MAPK Gene plays a key role in protection from mycobacteria. *Microbiologyopen*, 5(3), 436-452. doi: 10.1002/mbo3.341

Vigil, K. J., Jiang, Z. D., Chen, J. J., Palumbo, K. L., **Galbadage, T.**, Brown, E. L., Yiang, J., Koo, H., DuPont, M.W., Ericsson, C. & Adachi, J. A. (2009). Coliform and *Escherichia coli* contamination of desserts served in public restaurants from Guadalajara, Mexico, and Houston, Texas. *The American journal of tropical medicine and hygiene*, 80(4), 606-608. doi: 10.4269/ajtmh.2009.80.606

Galbadage, T., Jiang, Z. D., & DuPont, H. L. (2009). Improvement in detection of enterotoxigenic *Escherichia coli* in patients with travelers' diarrhea by increasing the number of E. coli colonies tested. *The American journal of tropical medicine and hygiene*, 80(1), 20-23. doi: 10.4269/ajtmh.2009.80.20

Galbadage, T., & Hartman, P. S. (2008). Repeated temperature fluctuation extends the life span of *Caenorhabditis elegans* in a daf-16-dependent fashion. *Mechanisms of ageing and development*, 129(9), 507-514. doi: 10.1016/j.mad.2008.04.012

b. *Book Chapters*

Payton, C., **Galbadage, T.**, Martinez, J. (In Press). Assessing and Monitoring Population Health Status (EPHS 1). In *Health Equity and Systems Thinking in Public Health* (Chapter 3). Kendall Hunt Publishing Company

Sharan, R., **Galbadage, T.**, Saenkham, P., Moule, M., Sule, P., Kong, Y., Cirillo, J. D. (2019). Optical In Vivo Imaging in Tuberculosis Research. In *Tuberculosis Host-Pathogen Interactions* (pp. 155-200). Springer, Cham.

Preprint Publications

Jalali, A. M., Khoury, S. G., See, J., Gulsvig, A. M., Peterson, B. M., Gunasekera, R. S., Buzi, G., Wilson, J., & **Galbadage, T.** (2020). Delayed Interventions, Low Compliance, and Health Disparities Amplified the Early Spread of COVID-19. *medRxiv* 2020.07.31.20165654. doi: 10.1101/2020.07.31.20165654

c. NA

d. *Research Poster Presentations*

Steinhubel S., Galbadage T. (2022, November). *The Patient is a Vital Stakeholder in the Success of Hospital Antibiotic Stewardship Programs*. Student poster presented at Children's Hospital of Orange County (CHOC) Research Institute 2022 Research Week, Scientific Poster Symposium, Virtual Platform.

Arthur M., Galbadage T., Gunasekera R.S. (2022, February). *Killing Viruses (Bacteriophages) By Molecular Nanomachines*. Student poster presented at the American Association for the Advancement of Science (AAAS) Annual Meeting, Virtual Platform.

Galbadage T., Sharan R., Sule P., Eijk M., Lin J. S., Didwania M., Jenssen H., Haagsman H. P., Seo J., Kirshenbaum K., Schepers U., Barron A. E., Cirillo J.D. (2018, September). *Efficacy of peptides and peptoids against pan-resistant K. pneumoniae*. Poster presented at the 3rd Annual Texas A&M Postdoctoral Association (PDA) Research Symposium, College Station, TX.

Galbadage T., Dongdong L., Pal R., Tour J. M., Cirillo J. D., Gunasekera R.S. (2018, February). *Light-activated molecular machines cause cell death in bacteria and C. elegans*. Poster presented at the Molecular Basis of Infectious Diseases (MBD) Retreat, Houston, TX.

Research Oral Presentations

- Galbadage T., Ayala-Orozco C., Dongdong L., Troutman B., Pal R., Liopo A., Cirillo J. D., Krishnan S., Tour J. M., Gunasekera R. S. (2018, March). *In vivo action of molecular nanomachines increases mortality in eukaryotes and destroys prokaryotes*. Texas Genetic Society (TGS) Platform presentation at the Annual Meeting, College Station, TX.
- Galbadage T., Dongdong L., Pal R., Tour J. M., Cirillo J. D., Gunasekera R.S. (2018, February). *Light-activated molecular machines cause cell death in bacteria and C. elegans*. Post-doctoral presentation at the Molecular Basis of Infectious Diseases (MBID) Retreat, Houston, TX.
- e. Frontiers Topic Editor, Biofilm Dynamics: Interdisciplinary Insights into Microbial Interactions within the Context of Microbiomes and Host Health, Frontiers in Bacteriology Journal (2024 – Present)
Review Editor, Frontiers in Cellular and Infection Microbiology Journal (2018 – Present)
Review Editor, Frontiers in Bacteriology Journal (2022 – Present)
Peer-Reviewer, Journal of Medical Microbiology (2018 - Present)
Peer-Reviewer, Access Microbiology Journal (2019 – Present)
- f. External support received or pending
(1) Microbial Redox Control of a-Synuclein Neurotoxicity in *C. elegans* (Pending). (October 2025 - Present). NIH R15 Grant Application
(2) Microbe-Induced Metabolic Signaling Across Tissues: Mechanisms of Gut-Mediated Stress Modulation in *C. elegans* (Pending). (July 2025 - Present). NSF 22-586 (CAREER) Grant Application
- g. Internal grants received
NA
- h. Other research or creative activities
NA
- 6. Service**
- a. Departmental service
APHS Curriculum Committee (2024 – Present)
- b. College service
HCNHS Curriculum Committee (2024 – Present)

- c. University service
Koehler Center Faculty Advisory Board (FAB) (2025 – Present)

- d. Community activities directly related to professional skills
NA

- e. Professional service
American Public Health Association (APHA) Member (2020 – Present)
Council on Undergraduate Research (CUR) Member (2025 – Present)

- f. Academic Advising
NA

- g. Other Service activity
NA