



Tricia Van Laar

ASSISTANT PROFESSOR OF MICROBIAL GENOMICS

Department of Biological Sciences, California State University Stanislaus

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I am an educator and scientist interested in all things microbial.

Education

The University of Texas at San Antonio

San Antonio, TX

PH.D. CELL AND MOLECULAR BIOLOGY

2012

- Dissertation Project: Role of the mevalonate pathway in the patho-physiology of *Borrelia burgdorferi*
- Major Advisor: J. Seshu, Ph.D.

University of the Pacific

Stockton, CA

MS BIOLOGY

2007

- Thesis Project: The behavior of Rad51D and XRCC2 in response to drug induced DNA damage and a continuing study of the fly Rad51 paralogs
- Major Advisor: Lisa Wrischnik, Ph.D.

California State University, Stanislaus

Turlock, CA

BS BIOLOGY

2005

- Minor in Chemistry, Concentration in Genetics
- Research Project: Speciation of *Sylvilagus bachmani riparius*
- Major Advisor: Jim Youngblom, Ph.D.

Professional Positions

California State University, Stanislaus

Turlock, CA

ASSISTANT PROFESSOR OF MICROBIAL GENOMICS

2022-Present

California State University, Fresno

Fresno, CA

ASSOCIATE PROFESSOR OF MICROBIOLOGY

2021-2022

California State University, Fresno

Fresno, CA

ASSISTANT PROFESSOR OF MICROBIOLOGY

2015-2021

St. Philip's College

San Antonio, TX

ADJUNCT INSTRUCTOR

2014-2015

US Army Institute for Surgical Research, Dental and Trauma Research Detachment

JBSA Fort Sam Houston, TX

NRC POST-DOCTORAL RESEARCH FELLOW

2012-2015

The University of Texas at San Antonio

San Antonio, TX

GRADUATE RESEARCH AND TEACHING ASSISTANT

2007-2012

University of the Pacific

Stockton, CA

GRADUATE RESEARCH AND TEACHING ASSISTANT

2005-2007

Endangered Species Recovery Program

Turlock, CA

UNDERGRADUATE RESEARCH ASSISTANT

2004-2005

Peer-Reviewed Publications (Student Authors Underlined>

2023

Whittaker, D. J., Atyam, A., Burroughs, N. A., Greenberg, J. M., Hagey, T. J., Novotny, M. V., Soini, H. A., Theis, K. R., Van Laar, T. A., & Slade, J. W. G. (2023). Effects of short-term experimental manipulation of captive social environment on uropygial gland microbiome and preen oil volatile composition. *Frontiers in Ecology and Evolution*, 10. <https://www.frontiersin.org/articles/10.3389/fevo.2022.1027399>

2022

Van Laar, T. A., Biehler, L., & Slade, J. W. G. (2022). Draft Genome Sequence of a Multidrug-Resistant Strain of *Salmonella enterica* Serovar Typhimurium Isolated from a Pine Siskin (*Spinus pinus*). Microbiology Resource Announcements, e0098222. <https://doi.org/10.1128/mra.00982-22>

2020

Osborne, C. J., Wakeman-Hill, A. J., Loa, S. E., Crosbie, P. R., & **Van Laar, T. A.** (2020). *Rickettsia* spp. In Five Tick Species Collected in Central California. Journal of Medical Entomology, 57(5), 1596–1603. <https://doi.org/10.1093/jme/tjaa080>

Avila, A. T., **Van Laar, T. A.**, Constable, J. V. H., & Waselkov, K. (2020). 16S rRNA Gene Diversity of Bacterial Endophytes in Parasitic *Cuscuta campestris* and Its *Helianthus annuus* Host. Microbiology Resource Announcements, 9(43). <https://doi.org/10.1128/MRA.00968-20>

2019

Osborne, C. J., Crosbie, P. R., & **Van Laar, T. A.** (2019). *Borrelia parkeri* in *Ornithodoros parkeri* (Ixodida: Argasidae) Collected Using Compact Dry Ice Traps in Madera County, California. Journal of Medical Entomology, 56(2), 579–583. <https://doi.org/10.1093/jme/tjy213>

Esani, S., Chen, T., Leung, K. P., & **Van Laar, T. A.** (2019). Transcriptome Sequence of Antibiotic-Treated *Pseudomonas aeruginosa*. Microbiology Resource Announcements, 8(12). <https://doi.org/10.1128/MRA.01367-18>

2018

Van Laar, T. A., Esani, S., Birges, T. J., Hazen, B., Thomas, J. M., & Rawat, M. (2018). *Pseudomonas aeruginosa* gshA Mutant Is Defective in Biofilm Formation, Swarming, and Pyocyanin Production. mSphere, 3(2). <https://doi.org/10.1128/mSphere.00155-18>

2017

Miller, C. L., **Van Laar, T. A.**, Chen, T., Karna, S. L. R., Chen, P., You, T., & Leung, K. P. (2017). Global transcriptome responses including small RNAs during mixed-species interactions with methicillin-resistant *Staphylococcus aureus* and *Pseudomonas aeruginosa*. MicrobiologyOpen, 6(3). <https://doi.org/10.1002/mbo3.427>

Lin, Y.-H., Romo, J. A., Smith, T. C. 2nd, Reyes, A. N., Karna, S. L. R., Miller, C. L., **Van Laar, T. A.**, Yendapally, R., Chambers, J. P., & Seshu, J. (2017). Spermine and Spermidine Alter Gene Expression and Antigenic Profile of *Borrelia burgdorferi*. Infection and Immunity, 85(3). <https://doi.org/10.1128/IAI.00684-16>

2016

Van Laar, T. A., Hole, C., Rajasekhar Karna, S. L., Miller, C. L., Reddick, R., Wormley, F. L., & Seshu, J. (2016). Statins reduce spirochetal burden and modulate immune responses in the C3H/HeN mouse model of Lyme disease. Microbes and Infection, 18(6), 430–435. <https://doi.org/10.1016/j.micinf.2016.03.004>

2015

Van Laar, T. A., Chen, T., You, T., & Leung, K. P. (2015). Sublethal concentrations of carbapenems alter cell morphology and genomic expression of *Klebsiella pneumoniae* biofilms. Antimicrobial Agents and Chemotherapy, 59(3), 1707–1717. <https://doi.org/10.1128/AAC.04581-14>

2013

Childers, B. M., **Van Laar, T. A.**, You, T., Clegg, S., & Leung, K. P. (2013). MrkD1P from *Klebsiella pneumoniae* strain IA565 allows for coexistence with *Pseudomonas aeruginosa* and protection from protease-mediated biofilm detachment. Infection and Immunity, 81(11), 4112–4120. <https://doi.org/10.1128/IAI.00521-13>

2012

Van Laar, T. A., Lin, Y.-H., Miller, C. L., Karna, S. L. R., Chambers, J. P., & Seshu, J. (2012). Effect of levels of acetate on the mevalonate pathway of *Borrelia burgdorferi*. PloS One, 7(5), e38171. <https://doi.org/10.1371/journal.pone.0038171>

2011

Raju, B. V. S., Esteve-Gassent, M. D., Karna, S. L. R., Miller, C. L., **Van Laar, T. A.**, & Seshu, J. (2011). Oligopeptide permease A5 modulates vertebrate host-specific adaptation of *Borrelia burgdorferi*. *Infection and Immunity*, 79(8), 3407–3420. <https://doi.org/10.1128/IAI.05234-11>

Editor Accepted Publications (Student Authors Underlined)

2017

Esani, S., Constable, J. V. H., & **Van Laar, T. A.** (2017). Draft Genome Sequence of a Multidrug-Resistant Strain of *Enterococcus faecalis*, PM01, Isolated from the Nest of an American Bushtit, *Psaltiriparus minimus*. *Genome Announcements*, 5(11). <https://doi.org/10.1128/genomeA.00017-17>

2016

Kennedy, V., **Van Laar, T. A.**, Aleru, O., Thomas, M., Ganci, M., & Rawat, M. (2016). Genome Sequences of Three Spore-Forming Bacteria Isolated from the Feces of Organically Raised Chickens. *Genome Announcements*, 4(5). <https://doi.org/10.1128/genomeA.00880-16>

Nelson, R. L., Castro, M. A., Katti, M., Eisen, J. A., & **Van Laar, T. A.** (2016). Genome Sequence of a Multidrug-Resistant Strain of *Bacillus pumilus*, CB01, Isolated from the Feces of an American Crow, *Corvus brachyrhynchos*. *Genome Announcements*, 4(4). <https://doi.org/10.1128/genomeA.00807-16>

2014

Van Laar, T. A., Chen, T., Childers, B. M., Chen, P., Abercrombie, J. J., & Leung, K. P. (2014). Genome Sequence of a Multidrug-Resistant Strain of *Klebsiella pneumoniae*, BAMC 07-18, Isolated from a Combat Injury Wound. *Genome Announcements*, 2(6). <https://doi.org/10.1128/genomeA.01230-14>

Book Chapters

Seshu, J., Smith, T. C. 2nd, Lin, Y.-H., Karna, S. L. R., Miller, C. L., & **Van Laar, T. A.** (2018). Analysis of DNA and RNA Binding Properties of *Borrelia burgdorferi* Regulatory Proteins. *Methods in Molecular Biology* (Clifton, N.J.), 1690, 155–175. https://doi.org/10.1007/978-1-4939-7383-5_13