

## Contact Information

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## Education

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**PhD in Entomology**, Texas A&M University, College Station, Texas, 2014 – Expected 2020

**BS in Entomology**, University of California, Riverside, California, 2010 – 2014

## Research & Teaching Experience

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Texas A&M University, Department of Entomology, College Station, TX

Dr. Edward L. Vargo Lab, 2014 – Present

Dissertation: *The relationship between subterranean termites and soilborne pathogens*

- The effects of genetic diversity on termite disease resistance
- Characterization of microbial communities and pathogen pressure in termite colonies
- Colony behavioral responses to diseased individuals

Undergraduate mentorship (Koehl, J), Spring 2018

Teaching assistant, 2015 – 2016

ENTO322 Evolution of Insect Structure, Fall 2016

ENTO403 Urban Entomology, Spring 2016

ENTO305 Insects in Human Society, Spring/Summer/Fall 2015

University of California, Department of Entomology, Riverside, CA

Dr. Richard Stouthamer Lab, 2013 – 2014

Dr. Dong-Hwan Choe Lab, 2012 – 2014

Dr. Christiane Weirauch Lab, 2012 – 2014

## Publications & Presentations

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### Publications accepted in peer-reviewed journals

1. **Agüero CM**, Eyer P-A, Vargo EL. 2020. Increased genetic diversity from colony merging in termites does not improve survival against a fungal pathogen. *Scientific Reports* 10: 4212. DOI: <https://doi.org/10.1038/s41598-020-61278-7>

### Publications in preparation

1. **Agüero CM**, Crippen TL, Vargo EL. Reduced environmental microbial diversity on the cuticle and in the galleries of a subterranean termite compared to surrounding soil.
2. **Agüero CM**, Eyer P-A, Martin J, Bulmer MS, Vargo EL. Natural variation in the susceptibility of a subterranean termite to a fungal pathogen is not related to colony inbreeding.

3. Eyer P-A, **Agüero CM**, Helms A, Vargo EL. Distinct royal pheromones in primary and secondary reproductives of the subterranean termite species, *Reticulitermes flavipes*.

#### Oral presentations

1. **Agüero CM**. 2020. Investigations of subterranean termite immune defenses. *Urban Pest Management Conference and Workshop*, Texas A&M University, College Station, TX.
2. **Agüero CM**, Eyer P-A, Vargo EL. 2019. Does increased group diversity improve social immunity in the subterranean termite, *Reticulitermes flavipes*? *Entomological Society of America*, St. Louis, MO.
3. **Agüero CM**, Crippen TL, Vargo EL. 2019. Pathogen prevalence outside and within subterranean termite foraging galleries. *Termite Course 2019 Graduate Student Symposium*, University of Florida FLREC, Davie, FL.
4. **Agüero CM**. 2019. Cleaning house and staying healthy: The termite way. *Urban Pest Management Conference and Workshop*, Texas A&M University, College Station, TX.
5. **Agüero CM**, Crippen TL, Vargo EL. 2018. Characterization of microbial communities outside and within subterranean termite colonies. *ESA, ESC, and ESBC Joint Annual Meeting*, Vancouver, BC, Canada.
6. **Agüero CM**. 2018. Diseases of *Reticulitermes flavipes*: Investigations into the more effective use of termite pathogens. *Urban Pest Management Conference and Workshop*, Texas A&M University, College Station, TX.
7. **Agüero CM**, Martin J, Bulmer MS, Vargo EL. 2017. The effects of soilborne pathogens on the colony structure of the eastern subterranean termite, *Reticulitermes flavipes*. *Entomological Society of America*, Denver, CO.
8. **Agüero CM**, Martin J, Bulmer MS, Vargo EL. 2017. The effects of soilborne pathogens on the colony structure of the eastern subterranean termite, *Reticulitermes flavipes*. *Ecological Integration Symposium*, Texas A&M University, College Station, TX.
9. **Agüero CM**, Martin J, Bulmer MS, Vargo EL. 2017. The effects of soilborne pathogens on the colony structure of the eastern subterranean termite, *Reticulitermes flavipes*. *Entomological Society of America Southwestern Branch Meeting*, Austin, TX.
10. **Agüero CM**. 2017. Colony structure and fungal resistance of subterranean termites. *Urban Pest Management Conference and Workshop*, Texas A&M University, College Station, TX.
11. **Agüero CM**, Crippen TL, Martin J, Bulmer MS, Vargo EL. 2016. An investigation of the factors influencing the colony structure of the eastern subterranean termite, *Reticulitermes flavipes*. *International Congress of Entomology*, Orlando, FL.
12. **Agüero CM**, Choe D-H. 2016. Insecticidal effects of plant essential oil volatiles on adult bed bug, *Cimex lectularius* L. *Urban Pest Management Conference and Workshop*, Texas A&M University, College Station, TX.

#### Poster presentations

1. **Agüero CM**, Crippen TL, Vargo EL. 2019. Characterization of microbial communities outside and within subterranean termite colonies. *South Texas Evolutionary Genetics and Genomics Conference*, Texas A&M University, College Station, TX.

2. **Agüero CM**, Vargo EL. 2018. Colony response of the eastern subterranean termite (*Reticulitermes flavipes*) to soilborne pathogens. *Congress of the International Union for the Study of Social Insects 2018*, Guarujá, Brazil.
3. **Agüero CM**, Choe D-H. 2013. Insecticidal Effects of Plant Essential Oil Volatiles on Adult Bed Bug, *Cimex lectularius* L. *Urban Pest Management Conference*, University of California, Riverside, CA.

## Awards

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Department of Entomology, TAMU, Travel award, 2019.....	\$600
Travel award to attend IUSSI Congress, 2018.....	\$1,500
Excellence Fellowship, TAMU, 2014, 2015.....	\$22,800

## Associations & Activities

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Reviewer for Ecology and Evolution

Texas Science & Engineering Fair

*Fair Award Judge 2019*

Pi Chi Omega

*Graduate Student Member 2018-2020*

International Union for the Study of Social Insects

*Member 2014-2020*

Entomology Graduate Student Association, Texas A&M

*Member 2014-2020*

Botany and Entomology Undergraduate Student Association, UC Riverside

*President 2013 – 2014*

*Vice-President 2012 – 2013*

*Member 2010-2014*