

Yumary Vasquez

Ph.D. Candidate

yumaryvasquez.github.io

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EDUCATION

PhD, Quantitative and Systems Biology

University of California Merced

May 2024 (Expected)

BS, Biotechnology

California State University San Marcos

June 2018

- Minor in Computer Science
- Cum Laude

PROFESSIONAL RESEARCH EXPERIENCE

Graduate Student Researcher / UC Merced (Bennett Lab)

Mar 2019 - Current

- Analyzing genomic data to understand the complex genetic interaction between host and symbiont. My research includes the use of genome assembly, bayesian phylogenetics, Unix scripting and R statistical programming.

Research Assistant - Sethuraman Lab / CSU San Marcos

Sept 2016 - May 2018

- Images and analyzed measurements from lady beetle populations along with their parasitic wasp partner using R statistical programming (Biological Control, 2017). Extracted genomic DNA from parasitic wasps to build genome (G3, 2021)

Summer Scholars Program - Research Assistant / CSU San Marcos

June 2017 - Aug 2017

- Interpreted and analyzed publicly available genomes of lady beetles in the United States using bioinformatic tools (Insect Science, 2017).

Undergraduate Student Researcher / CSU San Marcos (Jameson Lab)

Dec 2014 - Dec 2015

- Maintained mice populations for the study of Alopecia Areata and assisted graduate students in various projects that included molecular skills such as dissection, imaging, and genotyping.

Summer Scholars Program - Research Assistant/ CSU San Marcos

June 2015 - Aug 2015

- Dissected mice and identified T-cells within intestinal tissue using microscopy and fluorescent imaging

MOLECULAR/ COMPUTER SKILLS

- | | | |
|-----------------------------|-------------------------|------------------------------|
| • Coding in Unix | • Use of Micropipette | • Fluorescent Microscopy |
| • R Statistical Computing | • PCR | • Immunofluorescent staining |
| • Coding in C++ | • Genomic DNA Isolation | • Mouse Dissection |
| • Coding in Python | • RNA Isolation | • Mouse Care |
| • Coding in Java | • Barcode Library Prep | • Cryostat Microtome Cutting |
| • Computer Animation (Maya) | • Gel Electrophoresis | • OCT Embedding |
| • Imaging (ImageJ) | • Genotyping | • Autoclave |
| | • Solution Preparation | |

HONORS/AWARDS

- **The Ford Foundation Predoctoral Fellowship Honorable Mention** 2020
- **NSF-NRT Training Program in Intelligent Adaptive Systems Fellowship,**
U. of California, Merced 2019
- **NSF-NRT Interdisciplinary Computational Graduate Education Fellow,** School of Natural Sciences,
U. of California, Merced 2019
- **Cum Laude,** College of Science and Mathematics, California State University San Marcos 2018
- **Eugene V. Cota-Robles Fellowship (declined),** U. of California, Los Angeles 2018
- **Biotechnology Outstanding Faculty Student Collaboration Award,** College of Science and Mathematics
California State University San Marcos 2018
- **Louis Stokes Alliance for Minority Participation (LSAMP) Fellowship,** Office for Training, Research and
Education in the Sciences (OTRES) 2017

PUBLICATIONS

Waneka, G., Vasquez, Y.M., Bennett, G.M. and Sloan, D.B., 2020. Mutational pressure drives differential genome conservation in two bacterial endosymbionts of sap feeding insects. *Genome Biology and Evolution*.

Vansant, H., *Vasquez, Y.M., Obrycki J.J., Sethuraman A. (2019), Coccinellid host morphology dictates diversity of the parasitoid wasp *Dinocampus coccinellae*. *Biological Control*. <https://doi.org/10.1016/j.biocontrol.2019.02.015>

Sethuraman, A., Janzen, F. J., Rubio, M. A., Vasquez, Y. and Obrycki, J. J. (2017), Demographic histories of three predatory lady beetles reveal complex patterns of diversity and population size change in the United States. *Insect Science*. doi:10.1111/1744-7917.12481

* = first authorship papers

CONFERENCES/POSTERS

Student Poster Showcase / The California State University San Marcos

December 2017, San Marcos

- Vasquez, Y., Vansant, H. Sethuraman, A. (2017) “Morphological and Genetic Diversity of the Parasitoid Wasp (*Dinocampus coccinellae*) in the United States”

UCLA Grad Fair and CSU Symposium / University of California, Los Angeles

August 2017, Los Angeles

- Vasquez, Y., Vansant, H. Sethuraman, A. (2017) “Morphological and Genetic Diversity of the Parasitoid Wasp (*Dinocampus coccinellae*) in the United States”

Summer Research Poster Showcase / The California State University San Marcos

August 2017, San Marcos

- Vasquez, Y., Vansant, H. Sethuraman, A. (2017) “Morphological and Genetic Diversity of the Parasitoid Wasp (*Dinocampus coccinellae*) in the United States”

CSU Program for Education & Research in Biotechnology Symposium / The California State University

January 2017, Santa Clara

- Vasquez, Y., Rubio, M., Sethuraman, A. (2016) “Population Genomics of Predatory Lady in the United States”

Student Poster Showcase / The California State University San Marcos

December 2016, San Marcos

- Vasquez, Y., Rubio, M., Sethuraman, A. (2016) “Population Genomics of Predatory Lady in the United States”

Summer Research Poster Showcase / The California State University San Marcos

August 2015, San Marcos

- Vasquez, Y., Park, C., Cheung, K., Barba, C., Mendoza, G., Jameson, J., (2016) “Identifying how inflammation impacts the intestinal immune system in obesity”

SERVICE

RadioBio /U. of California, Merced

President: May 2021 - current

Vice President: May 2020 - May 2021

Treasurer: May 2019 - May 2020

Member: September 2018 - May 2019

Quantitative and Systems Biology Representative: Graduate Student Association/ U. of California, Merced
March 2020 - May 2021

Quantitative and Systems Biology: Diversity, Equity and Inclusion committee/ U. of California, Merced
September 2020 - current

Reflecting on Anti-Racist Pedagogy Virtual Dialogue Series: Participant / U. of California, Merced
September 2020 - December 2020

Data Carpentry Workshop: “Helper”/ U. of California, Merced
August 2020

Lead STEM Ambassador/ California State University San Marcos
September 2014 - May 2018, STEM Center

Louis Stokes Alliance for Minority Participant/ California State University San Marcos
September 2015 - May 2018, Office for Training, Research and Education in the Sciences

College of Science and Mathematics Representative / California State University San Marcos
May 2016 - May 2017, Associated Students Inc

Learning Assistant / California State University San Marcos
September 2014 - December 2014, September 2015 - December 2015, STEM Center

TEACHING

Undergraduate Research Opportunities Center (UROC) Summer Grad Mentor/ U. of California, Merced
Summer 2021

Evolution Lab/ U. of California, Merced
Summer 2019, Fall 2020, Spring 2021, Fall 2021

Intro to Molecular Biology Lab/ U. of California, Merced
Fall 2018, Spring 2019

Guest Presenter: Evolution/ U. of California, Merced
Fall 2018, Spring 2019, Fall 2020

CERTIFICATIONS/WORKSHOPS

Anti-Racist Pedagogy Discussion Series Center for Engaged Teaching and Learning/ U. of California, Merced
Anti-Racist Pedagogy Fall 2020, Spring 2021

CETL Workshop Series Center for Engaged Teaching and Learning/ U. of California, Merced
Preparing to Teach in the Online Environment Summer 2020
Institute for Evidence-based Teaching Practices Spring 2021

Instructional Internship Program Center for Engaged Teaching and Learning/ U. of California, Merced
Mastering the Classroom with 1st Generation College Students series:

Setting Expectations Workshop 9/2018

Classroom Challenges Workshop 9/2018

Grading Effectively Workshop 9/2018

The TA and the IOR Roles: Working Together Workshop 9/2018