

# Curriculum Vitae

## Gabrielle Martinez

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Research Entomologist with a strong background in integrated pest management, biological control, and mosquito control.

### EDUCATION

**University of California Riverside** - Riverside, CA

**Bachelor of Science** - Entomology 2015

**PhD Candidate** – Entomology

### RELATED COURSEWORK

**College of Natural and Agricultural Science**

Biochemistry • Genetics • Molecular Biology • Organic Chemistry • Neuroscience • Insect Behavior • Insect Ecology • Systematics • Medical and Veterinary Entomology • General Entomology • Insect Physiology • Insect Biodiversity • Forensic Entomology

### PUBLICATIONS

Williams, G.A., McConnell, N., Hallum, T.A., Brown, M.Q., Theuret, D., Allred, J., Bill, V.D., Vasquez, M., **Martinez, G.**, Buse, C., Mian, L.S., Dhillion, M.S. 2016. West Nile Surveillance at Northwest Mosquito and Vector Control District during 2013 and 2014. *Proceedings and Papers of the Mosquito and Vector Control Association of California*. 84: 144-148.

Thaler, C.D., Stephens, K., Klezco, K., **Martinez, G.**, Hyman, B., Cardullo, R. Using the *Culex quinquefasciatus* sperm proteome to identify key elements essential for mosquito reproduction. **In preparation.**

**Martinez, G.**, Cardullo, R. Calcium Regulation Plays a Role in Sperm Motility. **In preparation.**

### PROFESSIONAL EXPERIENCE

**PhD Candidate**

**09/2017 – Current**

**University of California Riverside** – Riverside, CA

Richard Cardullo Laboratory

- Organization and maintenance of *Culex pipiens* colony.
- Knowledge of DNA extraction, RNA isolation, polymerase chain reaction, cDNA synthesis, gel electrophoresis, and immunofluorescence.
- Experience with microdissections of male mosquito reproductive tissue
- Organization and execution of sperm motility assays under varying conditions.
- Experience with darkfield microscopy (Nikon) on a high-speed camera (Edgetronic).
- Experience with image processing software ImageJ.

**ISCA Technologies**

**11/2016 – 07/2017**

**Biology Project Coordinator** - Riverside, CA

Supervised company biology department interns.

- Managed deadlines for grant funded projects.
- Renewed permits for projects.
- Designed written protocols for experiments.
- Recorded and organized data from past and present experiments.
- Organized a shared database containing past and present project data.
- Organized, prepared, and executed experiments in both a laboratory and field setting.

- Research related to mosquitoes:
  - Maintained and organized *Aedes*, *Anopheles*, and *Culex* sp. colonies.
  - Organized, prepared, and executed experiments using Vectrax and Insect Growth Regulators (IGR) in both a laboratory and field setting.
  - Organized, prepared, and executed experiments using oviposition attractants in both a laboratory and field setting.

**Timothy Paine Laboratory**

06/2014 - 11/2016

**Laboratory Assistant**

**University of California, Riverside - Riverside, CA**

- Assisted in a grant proposal of the Polyphagous Shot Hole Borer (PSHB) on the efficiency and application of pesticides on wood: dinotefuran, clothianidin, and terpene citrus oil.
- Research related to the PSHB:
  - Statistical data analysis of PSHB activity against pesticide usage.
  - Prepared, organized, and maintained PSHB colony in a quarantine.
  - Identification of PSHB life stages.
  - Fieldwork conducted at the Huntington Library Botanical Gardens and the University of California, Irvine.
- Research related to the biological control of *Klambothrips myopori*:
  - Identification and number counts of *Klambothrips myopori* natural predators on foliage.
  - Identification and number counts of *Klambothrips myopori* life stages on foliage.
- Research related to snails and slugs:
  - Prepared, organized, and maintained snail, slug, and Giant African Land Snail colonies in a quarantine.
- Research related to parasitic wasps:
  - Number count and identification of emerged parasitic wasps: *Ophelimus maskelli*, *Closterocerus chamaeleon*, and *Selitrichodes* sp.

**William Walton**

04/2015 - 11/2016

**Laboratory Assistant**

**University of California, Riverside - Riverside, CA**

- Organization, preparation, and maintenance of *Culex tarsalis* colony in a quarantine.
- Research related to mosquito ecology and biology:
  - Fieldwork conducted in Prado Park - Chino, CA
    - Introduced vegetation to wetlands used to affect the distribution of mosquito larvae.
    - Tested NutriVex by MicroMix to *Culex* species as a non-toxic and natural form of mosquito control.
    - Executed the application of water chemistry analysis tests: Ammonia, Nitrogen, Total Nitrogen, Phosphorus, Reactive Phosphorus, COD, Nitrate, and Nitrile.
    - Knowledge of spectrophotometer used to identify the wavelengths of the water chemistry analysis tests and chlorophyll filtering system used on water samples collected from the field.
    - Identification of aquatic insects both immature and adult.
    - Species identification of mosquitoes collected from the field: *Culex*, *Culiseta*, and *Anopheles* sp.

**INTERNSHIPS**

**Biology Intern**

- Field work conducted in San Jacinto Wildlife Area:
  - Organized, prepared, and set up sticky traps and CDC traps in a field setting.
  - Species identification of mosquitoes collected from CDC traps: *Anopheles*, *Culex*, and *Culiseta* sp.
- Maintained and organized *Aedes*, *Anopheles*, and *Culex* sp. colonies.
- Assisted in experiments using Vectrax and Insect Growth Regulators (IGR).
- Fieldwork conducted in Vero Beach, Florida:
  - Prepared, organized, and executed the use of pesticide Vectrax and IGR to orange groves.
  - Organized and assembled oviposition traps and CO<sub>2</sub> baited CDC traps.
  - Species identification of mosquito species collected from CO<sub>2</sub> baited traps: *Anopheles*, *Culex*, *Coquillettidia*, *Psorophora*, and *Mansonia* sp.
  - Organized, assembled, and applied CO<sub>2</sub> baited traps equipped with technology measuring wing beat frequency of insects in a field setting.

**Northwest Mosquito and Vector Control District - Corona, CA**

03/2014 - 06/2014

**Biology Laboratory Assistant**

- Fieldwork conducted in various areas in Corona, CA.
- Organized and assembled CO<sub>2</sub> baited CDC traps.
- Collected and identified mosquito larvae and adult to species: *Culex*, *Culiseta*, and *Anopheles* sp.
- Separated of identified blood fed mosquito species for blood analysis.
- Collection of deceased fowl for West Nile Virus mouth swab analysis.

**ASSOCIATIONS AND ORGANIZATIONS**

- **Outreach**
  - 200+ hours
  - Entomological demonstrations from K-12<sup>th</sup> grade students.
- **Member of BEUSA (Botany and Entomology Undergraduate Student Association)**
  - 09/2012 - 06/2015
  - Odyssey Day 2015 Volunteer
  - Insect Fair Volunteer 2015 - 2016
- **Wayfaring Felines Cat Rescue Volunteer**
  - 10/2012 - 06/2015