

**YARIRA ORTIZ-ALVARADO**

**Current Status**

PhD Candidate  
Dept. of Biology, UPR-Rio Piedras

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**Education**

2000-2004	B.S., Biology, Inter American University – Bayamón
2009-2011	M.S., Biology, Inter American University – Bayamón <b>Area of Study: Endocrinology, Gene Expression</b>
2013-Present	Ph.D., Biology, University of Puerto Rico – Rio Piedras <b>Area of Study: Gene Expression, Development and Physiology</b>
2017	Ph.D., Biology (expected)

**Current Research Interest:** My research interests is on the effects of antibiotics and the structure of micorbiota on metabolism and behavioral development. Currently I work with honey bees as a model organism performing behavioral and physiological assays and microbiota analysis in conjunction with transcriptomic analyses of brain and abdomen samples to examine how antibiotics affect overall development of organisms.

**Research Experience**

2013	University of Puerto Rico – Rio Piedras, PhD Research Student; behavior, development, physiology and gene expression (Mentor: Dr. Tugrul Giray)
2009-2012	Inter American University Rico – Bayamón, MS Research Student; endocrinology, gene expression (Mentor: Dr. Bert Rivera-Marchand)
2007-2009	Inter American University Rico – Bayamón, PRLS-AMP BS Student; behavior (Mentor: Dr. Bert Rivera-Marchand)
2007 (summer)	Inter American University – Bayamón, Research Assistant; methadone effects on white cells (Mentor: Dr. Ana M. Lugo)

**Honors/Awards**

2008	Undergraduate Fellowship for Evolution 2008; Harvard University and NSF
2008	Prospective Student Fellowship – Indiana University; NSF and AGEF
2008	Investigation of the Year – Dean of Studies; UIA Bayamón
2009	Outstanding investigation work; UIA Bayamón
2009	Magna Cum Laude BS. Biology; UIA Bayamón
2010	Graduate Fellowship for ESA 58 <sup>th</sup> ; UIA Bayamón
2011	Agustín Stahl Research Aid Fellowship; UIA Bayamón

**Presentations at Local Meetings**

**Ortiz-Alvarado, Y.** & Rivera-Marchand, B. Behavioral plasticity of queens in the little fire ant *Wasmannia auropunctata*. IUSSI Breakout Meeting, Guajataca, P.R., October 2008.

**Ortiz-Alvarado, Y.** & Rivera-Marchand, B. Plasticidad de comportamiento en reinas del Albayalde *Wasmannia auropunctata*. PRISM University Of Puerto Rico, Rio Piedras Campus, March 2009.

Rodríguez-Cruz Y., **Ortiz-Alvarado, Y.** & Rivera-Marchand B. Flight Capability of Females and Males of the Little Fire Ant (*Wasmannia auropunctata*). 9th Congress of Science Research at the UIA, Bayamon, P.R., November 2010

**Ortiz-Alvarado, Y.** & Rivera-Marchand, B. Little fire ant: a successful invasive species. Biodiversity Symposium. UIA, Bayamon, P.R, May 2011.

**Ortiz-Alvarado, Y.** & Rivera-Marchand, B. Effects of methoprene in queens of the little fire ant *Wasmannia auropunctata*, Graduate research AMP. University Of Puerto Rico, Carolina Campus, March 2012

#### **Presentations at National Meetings**

**Ortiz-Alvarado, Y.** & Rivera-Marchand, B. Behavioral plasticity of queens in the little fire ant *Wasmannia auropunctata*. Evolution 2008 Meeting, University of Minneapolis, Minnesota, June 2008.

**Ortiz-Alvarado, Y.** Rosado-Rodriguez, A. & Rivera-Marchand, B. Effect of methoprene on behavior of workers of the little fire ant *Wasmannia auropunctata*. Evolution 2010 Oregon Convention Center, June 2010

**Ortiz-Alvarado, Y.** & Rivera-Marchand, B. Worker queens? Effects of Methoprene on behavioral plasticity of queens in the little fire ant *Wasmannia auropunctata*. ESA 58<sup>th</sup> Annual Meeting. San Diego, CA. December 2010

Rodríguez-Cruz Y., **Ortiz-Alvarado, Y.** & Rivera-Marchand B. Flight Capability of Females and Males of the Little Fire Ant (*Wasmannia auropunctata*). ESA 58<sup>th</sup> Annual Meeting. San Diego, CA. December 2010

Rosado-Rodriguez, A., **Ortiz-Alvarado, Y.** & Rivera-Marchand, B. Effect of methoprene on behavior of workers of the little fire ant *Wasmannia auropunctata*. ESA 58<sup>th</sup> Annual Meeting. San Diego, CA. December 2010

Giray, T., Agosto, J. & **Ortiz-Alvarado, Y.** Of microbes and bees: How does microbiota influence age-related division of labor? ESA 61<sup>th</sup> Annual Meeting. Austin, TX, November 2013

**Ortiz-Alvarado, Y.** & Rivera-Marchand, B. Gene Expression of hormones relates to behavior in queens in the little fire ant *Wasmannia auropunctata*. ESA 61<sup>th</sup> Annual Meeting. Austin, TX, November 2013

Rivera-Colón, A., **Ortiz-Alvarado, Y.** & Rivera-Marchand, B. Levels of JHbp expression and its relationship to behavioral plasticity in workers of the little fire ant *Wasmannia auropunctata*. ESA 61<sup>th</sup> Annual Meeting. Austin, TX, November 2013

**Ortiz-Alvarado, Y.**, Giray T. & Dominguez-Bello, M. Effects of antibiotics in hives. MMCS Meeting. Washington, DC, November 2015.

#### **Publications**

Ortiz-Alvarado Y. 2012. "Worker queens"? Behavioral flexibility, Juvenile Hormone binding protein and Vitellogenin in queens of the little fire ant *Wasmannia auropunctata*. Ms. Thesis Inter American University of Puerto Rico

## Biographical Sketch

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