

# Eden W. McQueen

## *Curriculum Vitae*

Department of Molecular, Cellular, and Developmental Biology

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## Education & Training

- 2024- Research Area Specialist, Department of Molecular, Cellular, and Developmental Biology, University of Michigan, Ann Arbor, MI
- 2021-2024 Postdoctoral Fellow, Department of Molecular, Cellular, and Developmental Biology, University of Michigan, Ann Arbor, MI  
Mentor: Patricia Wittkopp
- 2013-2020 Ph.D., Department of Biological Sciences, University of Pittsburgh, Pittsburgh, PA  
Graduate thesis advisor: Mark Rebeiz
- 2005-2009 B.A., *Summa cum Laude* in Chemistry, Bryn Mawr College, Bryn Mawr, PA  
Undergraduate thesis advisor: Jonas Goldsmith

## Other Professional Research Experience

- 2009-2013 **Analytical Chemist**, Small molecule research and development, Merck & Co., West Point, PA

## Publications

- **McQueen E. W.**, Yang, B., and P. Wittkopp. 2025. "Epistatic impacts of cis- and trans-regulatory mutations on the distribution of mutational effects for gene expression in *Saccharomyces cerevisiae*."
  - *In revision*. Currently available on *BioRxiv*.
- **McQueen, E. W.**, Rice, G., Pillai, S., Saleh Ziabari, O., Vincent, B., and M. Rebeiz, 2025. "Parallels in the Regulatory Landscape of Dimorphic Female and Male Genital Structures in *Drosophila melanogaster*." *Genetics*: iyaf221.
- **McQueen E. W.**, Afkhami, M., Atallah, J., Belote, J. M., Gompel, N., Heifetz, Y., Kamimura, Y., Kornhauser, S. C., Masly, J. P., O'Grady, P., Peláez, J., Rebeiz, M., Rice, G., Sánchez-Herrero, E., Santos Nunes, M. D., Santos Rampasso, A., Schnakenberg, S. L., Siegal, M. L., Takahashi, A., Tanaka, K. M., Turetzek, N., Zelinger, E., Courtier-Orgogozo, V., Toda, M. J., Wolfner M. F., and A. Yassin, 2022. "A standardized nomenclature and atlas of the female terminalia of *Drosophila melanogaster*." *Fly*. 16(1):128151.
- Carson, W., Kuebbing, S., Betras, T., Campbell, A., **McQueen, E. W.**, Moore, C., Olmsted, C., Roberts, L., & N. Washington. 2021. "Advice on applying to graduate school in ecology and evolutionary biology: how to prepare and a step-by-step guide." *The Bulletin of the Ecological Society of America*. 10.1002/bes2.1917 —*In Production*
- Echeverri, S. A., Miller, A. E., Chen, J., **McQueen, E. W.**, Plakke, M., Spicer, M., Hoke, K. L., Stoddard, M. C., & N. I. Morehouse. 2021. "How signaling geometry shapes the efficacy

and evolution of animal communication systems." *Integrative and Comparative Biology*. icab090

- **McQueen, E. W.** and M. Rebeiz. 2020. "On the individuality of gene regulatory networks: how does network re-use affect subsequent evolution?" *Current Topics in Developmental Biology*. 139:375-405.
- Novick, A., Currie, A. M., **McQueen, E. W.**, & N. L. Brouwer. 2020 "Kon-Tiki Experiments." *Philosophy of Science*. Volume 87, Issue 2.
- **McQueen, E. W.**, & N. I. Morehouse. 2018. Rapid divergence of pheromone profiles between subspecies of the butterfly *Pieris rapae*. *Journal of Insect Science*. Volume 18, Issue 2.
- **McQueen, E. W.**, & J. I. Goldsmith. 2009. Electrochemical analysis of single-walled carbon nanotubes functionalized with pyrene-pendant transition metal complexes. *Journal of the American Chemical Society*. 131:17554–17556.
- Smith, H. L., Usala, R. L., **E. W. McQueen**, & J. I. Goldsmith. 2009. Novel polyaromatic terminated transition metal complexes for the functionalization of carbon surfaces. *Langmuir* 26:3342–3349.

## Presentations

- 2021** Poster presentation at *Predicting Evolution* Workshop, European Molecular Biology Laboratory. Title: "Surprising overlap in genetic architecture between male and female genital structures suggests involvement of pleiotropic linkage in their correlated evolution." *Virtual conference*.
- 2019** 15-minute oral presentation at Conference of Pan American Society for Evolutionary Developmental Biology, 2019 (August 2019) Title: "Dissecting the shared and divergent genetic architectures of a novel male genital structure and a novel female genital structure."
- 2019** Poster presentation at Drosophila Research Conference (March 2019). Title: "Dissecting the shared and divergent genetic architectures of a novel male genital structure and a novel female genital structure."
- 2018** 15-minute oral presentation at Three Rivers Evolution Event (September 2018). Title: The developmental gene network of a novel male genital feature also patterns a female genital trait."
- 2018** Poster presentation at Evolution Conference (August, 2018) Title: "A Gene Network Involved in the Origin of a Novel Male Genital Structure also Patterns a Novel Genital Feature in Females."
- 2018** Guest seminar at Jacques-Monod Institute (August, 2018)
- 2018** 15-minute oral presentation at Drosophila Research Conference (April 2018), Title: "A Gene Network Involved in the Origin of a Novel Male Genital Structure also Patterns a Novel Genital Feature in Females."
- 2018** Poster presentation, University of Pittsburgh Grad Expo. Title: "A Gene Network Involved in the Origin of a Novel Male Genital Structure also Patterns a Novel Genital Feature in Females."
- 2018** Poster presentation at Pittsburgh Women in Science and Engineering Conference

- (February 2018) Title: "A Gene Network Involved in the Origin of a Novel Male Genital Structure also Patterns a Novel Genital Feature in Females."
- 2017** Poster presentation at the Society for Integrative and Comparative Biology Annual Meeting (January, 2017). Title: "A Gene Network Involved in the Origin of a Novel Male Genital Structure also Patterns a Novel Genital Feature in Females."
- 2016** 15-minute oral presentation at the Society for Integrative and Comparative Biology Annual Meeting (January, 2016). Title: "Using genetically induced variation in genitalia to examine functional effects of trait variation."
- 2015** Presented poster at Animal Behavior Society Annual Conference. Title: "Using genetically induced variation in genitalia to examine functional effects of trait variation."

## Teaching Experience

- 2018 **Teaching assistant for Genetics Laboratory**, University of Pittsburgh 2014  
**Teaching assistant for Biology 101 Laboratory**, University of Pittsburgh
- 2010 **Lecturer, Organic Chemistry**, Bryn Athyn College, Bryn Athyn, PA.

## Awards and Honors

- 2019 **Travel Grant**, Pan American Society for Evolutionary Developmental Biology conference, 2019
- 2019 **Second place award for best talk by a graduate student**, Pan American Society for Evolutionary Developmental Biology conference, 2019
- 2018 **TREE Travel Grant**, University of Pittsburgh
- 2018 **Outstanding Presenter Award**, University of Pittsburgh Grad Expo
- 2018 **ESEB Congress Attendance Aid Grant**
- 2015 **Sigma Xi Grants-in-Aid of Research grant awarded**
- 2014-2017 **National Science Foundation Graduate Research Fellowship**
- 2013-2014 **University of Pittsburgh Recruiting Fellowship**
- 2006-2009 **Student Research Fellowships**, during summer terms. Bryn Mawr Chemistry Department, Bryn Mawr, PA
- 2009 **American Chemical Society Philadelphia Section's Scholastic Achievement Award**, for Bryn Mawr College
- 2008 **Honorable Mention, Barry M. Goldwater Scholarship**

## Professional Service

Manuscript Review: PNAS, Plos Genetics, Chemoecology, Ethology, European Journal of Entomology, Journal of Insect Science, Reviewer for National Science Foundation grant proposal, Division of Environmental Biology

## Outreach

**Lecture and Workshop (4/2019):** "What is CRISPR, and Why is it Important?" Trafford High School, Pittsburgh, PA.

**Lecture and Workshop (3/2019):** "What is CRISPR, and Why is it Important?" Carnegie Science Center, Pittsburgh, PA.

**Lecture and Workshop (11/2018):** "What is CRISPR, and Why is it Important?" Carnegie Science Center, Pittsburgh, PA.

**Grand Awards Judge (5/2018):** INTEL International Science and Engineering Fair 2018.

**Volunteer instructor (11/2017):** High school outreach through University of Pittsburgh and the Pittsburgh Science and Technology Academy

**Volunteer instructor (1/2017):** "What is a Scientist?" program, outreach to 7<sup>th</sup> and 8<sup>th</sup> grade classrooms prior to conference attendance at Society for Integrative and Comparative Biology in New Orleans, 2017.

**Science Fair Judge (3/2016):** Norwin School District district-wide K-8 science fair.

**Volunteer at "Meet a Scientist" Event (6/2015):** Alaska Museum of Science and Nature, in collaboration with presenters at the Animal Behavior Society Conference, 2015.

**Volunteer at Pittsburgh Frick Environmental Center (2014-2018):** Educational Outreach with Frick Environmental Center for K-12 students. Volunteering for programs that educate children and young adults in the areas of ecology, evolution, and conservation.