

# Amanda Everitt

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website <https://aseveritt.github.io/>

## EDUCATION

**University of California, Davis** BSc, Biotechnology-Bioinformatics 2013-2017

## RESEARCH EXPERIENCE

### Jeremy Willsey's Laboratory – Institute for Neurodegenerative Diseases

*Bioinformatic Programmer II* 01/2018 - 01/2019

*Bioinformatic Programmer III* 02/2019 - present

- Advisor: A. Jeremy Willsey, Ph.D.
- Specialize in downstream, system-level analyses that constrain spatial, temporal, and cell-type specific variables of the disease pathology
- Manage computational pipelines, data storage, billing, and cloud formation (via AWS) for large-scale studies
- Pre-processing and downstream analysis of RNA-seq, single-cell RNA-seq, and ATAC-seq next-generation sequencing data from various platforms and model organisms

### Viome

LIMS consultant 01/2018 – 03/2018

*Software Engineer* 10/2017 – 12/2017

- Collaborated with engineering, bioinformatics, and laboratory teams to improve functionality and local structure of Labware LIMS
- Streamlined the collection, curation, and migration of datasets into an integrated central database
- Developed a custom program to implement quality control measures which navigates cloud computing and Google Sheets API using SQL and Python

### Vector Genetics Laboratory – UC Davis School of Veterinary Medicine

*Undergraduate Research Assistant* 07/2015 - 04/2017

- Advisor: Bradley Main, Ph.D.
- Studied the genetic variation associated with pesticide resistance in mosquitoes by comparing gene expression profiles and structural variants. Published 2018.
- Prepared mRNAseq libraries, dissected and sexed mosquitoes, maintained mosquito colonies, and analyzed genomic and transcriptomic data

## Jonathan Eisen's Laboratory

*Bioinformatic Intern*

07/2015 - 04/2017

- Advisor: Prof. Jonathan Eisen and Guillaume Jospin
- Investigated the potential presence of unexpected microorganisms in metagenomic data by mapping, reassembling, and classifying previously unused reads
- Pre-processed metagenomic data, assisted in data storage, and converted software from Perl to Python

## iGEM (International Genetically Engineered Machine)

*Undergraduate Researcher*

04/2016 – 10/2016

- Advisors: Justin Siegel, Ph.D., Marc Facciotti, Ph.D. and Matthias Hess, Ph.D.
- Our project was a proof of concept that cyanobacteriochrome proteins could serve as a viable alternative to synthetic food dyes. This was in response to backlash against artificial colorants and large food companies pledging to use exclusively natural food colorings.
- Generated a pipeline which utilizes protein sequence patterns to predict color phenotype and evaluated the program's statistical efficiency
- Responsible for protein purification, bacterial culture, and presentation

## TEACHING EXPERIENCE

### Data and Software Carpentry

*Certified Instructor*

12/2018 - present

- Teach foundational data science and coding skills to researchers

### Data Intensive Biology Summer Institute

*Teaching Assistant*

Summer, 2017

- Director: Titus Brown, Ph.D.
- Helped instruct a workshop that covered foundational bioinformatics tools including Bash, R, markdown, Github, and cloud computing, as well as tutorials for RNA-seq, ChIP-seq, GWAS, variant calling, and *de novo* genome, transcriptome, and metagenome assembly
- Assisted students with workshop tutorials, guided classroom discussions, provided one-on-one help for students and installed software

## PEER-REVIEWED RESEARCH PUBLICATIONS

1. Shah PS, Link N, Jang GM, Sharp PP, Zhu T, Swaney DL, Johnson JR, Von Dollen J, Romage HR, Satkamp L, Newton B, Huttenhain R, Petiti MJ, Baum T, **Everitt A**, Laufmain O, et al. (2018). Comparative Flavivirus-Host Protein Interaction Mapping Reveals Mechanisms of Dengue and Zika Virus Pathogenesis. *Cell*, 175(7), 1931-1945.

2. Darbandi SF, Schwartz SER, Qi Q, Catta-Preta R, Pai E. LL, Mandell JD, **Everitt A**, Rubin A, Krasnoff RA, Katzman, S. (2018). Neonatal Tbr1 Dosage Controls Cortical Layer 6 Connectivity. *Neuron*, 100(4), 831-845.
3. Main BJ, **Everitt A**, Cornel AJ, Hormozdiari F, Lanzaro GC, (2018). Genetic variation associated with increased insecticide resistance in the malaria mosquito *Anopheles coluzzii*. *Parasites & Vectors* 11, 225.

#### **IN REVIEW**

1. Wojcechowskyj JA, Hultquist JF, Hiatt J, Jang GM, Li Y, Shales M, Mandell JD, Gordon DE, McGregor MJ, Chen Y, Weissman JS, Willsey AJ, **Everitt A**, Marson A, Frankel AD, Kampmann M, Krogan NJ. (submitted 2018). The exonuclease PNPT1 genetically interacts with HIV-1 Rev and regulates interferon signaling.

#### **PRESENTATIONS AND POSTERS**

1. **Everitt A**, Dohlman A. (2018). "Evaluating statistical methods for inferring directed microbial interaction networks". Oral Presentation. 2019 UCI Systems Biology Short Course. Irvine, CA.
2. **Everitt A**, Caligiuri A, Chen J, Akre S, Weyers B. (2016). "Cyanobacteriochrome as a Viable Natural Alternative to Synthetic Food Dyes". Oral and Poster Presentation. 2016 International Genetically Engineered Machine Competition. Boston, MA.  
- Received gold medal from a panel of judges, project nominated as a finalist

#### **AWARDS**

2017 Winter, Dean's List College of Agricultural and Environmental Sciences, UC Davis  
2016 Spring, Dean's List College of Agricultural and Environmental Sciences, UC Davis