

# Jacob Edwards

## Curriculum Vitae

Zuckerman Institute  
Columbia University  
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New York, NY 10030  
(865) 771-9750  
[amnion00@gmail.com](mailto:amnion00@gmail.com)

### EDUCATION

#### MSc

2018 Colorado State University  
Department of Biology  
Thesis Advisor: Dr. Kim Hoke

#### BSc

2013 University of Tennessee, Knoxville  
Department of Ecology and Evolutionary Biology

### PUBLICATIONS

**Edwards JA, Hoke KL. 2018.** Foundations of a self-constructing network: perineuronal nets in vertebrate nervous system development. (*In preparation*)

**Edwards JA, Hoke KL. 2018.** Spatial, structural, and cell-type diversity characterize vertebrate perineuronal nets. (*In preparation*)

**Edwards JA, Risch MN, Hoke KL. 2018.** Dynamic reconstruction of perineuronal nets during amphibian metamorphosis. (*In preparation*)

Williams JH, **Edwards JA**, Ramsey AJ. **2016.** Economy, efficiency, and the evolution of pollen tube growth rates. *American Journal of Botany* **103**: 471-483

### AWARDS

2016	National Science Foundation	EAPSI Fellowship	\$5,400
2013	Botanical Society of America	Young Botanist Award	
2008	University of Tennessee	Volunteer Scholarship	\$12,000

### CONFERENCE PRESENTATIONS

- 2017 Diverse developmental trajectories of perineuronal nets during vertebrate nervous system construction  
Front Range Neuroscience Gathering 2017, December 6
- 2017 Plasticity and stability in the amphibian central nervous system over metamorphosis  
OIST Developmental Neurobiology Course 2017, July 23
- 2014 Comparative economics of pollen tube growth in two water lily species  
Botany 2014, July 26-30

## **CAMPUS TALKS**

- 2017 Diverse developmental trajectories of perineuronal nets during vertebrate nervous system construction  
Colorado State University Biology Department, MSc Defense
- 2017 Flowers, fish, and finches: Journeys of a biologist-in-training  
Colorado State Biology Club

## **TEACHING**

- |      |   |                           |
|------|---|---------------------------|
| 2017 | General and Molecular Genetics  | Colorado State University |
| 2017 | Computing in Biology<br>(designed and taught curriculum for undergraduates) | Colorado State University |
| 2017 | Developmental Biology   | Colorado State University |
| 2016 | General and Molecular Genetics  | Colorado State University |
| 2015 | Animal Biology  | Colorado State University |

### **Undergraduate Honor's Thesis Mentor**

Student: Olamiposi Akinsooto  
Thesis title: Do cross-tutored zebra finches prefer conspecific or heterospecific song?

Student: Makayla Risch  
Thesis title: Plasticity of perineuronal nets in developing frogs

Student: Justine Stalnaker  
Thesis title: Perineuronal nets and environmental enrichment in guppies

## **RESEARCH EXPERIENCE**

- |      |                    |                             |                             |
|------|--------------------|-----------------------------|-----------------------------|
| 2018 | Research Assistant | Lab of Sarah Woolley        | Columbia Uni., New York     |
| 2017 | Graduate Student   | Lab of Kim Hoke             | CO State Uni., Fort Collins |
| 2016 | Research Associate | Lab of Yoko Yazaki-Sugiyama | OIST, Okinawa, Japan        |

2015	Lab Manager	Lab of Joseph H Williams	Uni. of TN, Knoxville
2012	Technician	University Herbarium	Uni. of TN, Knoxville

## **TECHNICAL SKILLS**

Immunohistochemistry, histology  
Confocal microscopy  
Small animal survival neurosurgery and non-survival surgery  
Animal husbandry  
Python, R, SAS, MATLAB  
Machine Learning implementation  
Audio recording and production: Audacity, Logic Pro X  
Unity, C#  
Adobe Photoshop

## **PROFESSIONAL AFFILIATIONS**

2017 US Japan Society for the Promotion of Science Alumni Association

## **COMMUNITY OUTREACH**

2018 BioBase Harlem - Volunteer