

# Coltan G. Parker

Ph.D. Candidate in Neuroscience  
University of Illinois, Urbana-Champaign, Illinois, USA  
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Curriculum Vitae | Current as of February 2022

## EDUCATION

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In Progress     **Ph.D. in Neuroscience**  
University of Illinois, Urbana-Champaign, Illinois, USA  
2016             **B.A. in Neuroscience, with Honors**  
Knox College, Galesburg, Illinois, USA

## PEER-REVIEWED PUBLICATIONS

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### Primary Research

In Prep           **Parker, C.G.**, Johnson, Z.V., Gruenhagen, G.W., Hegarty, B.E., Histed, A.R., Streelman, J.T. & Rhodes, J.S. (In Prep). Adult sex-change involves major reorganization of the forebrain in the common clownfish, *Amphiprion ocellaris*.  
In Prep           **Parker, C.G.**, Craig, S.E., Lee, J.S., Histed, A.R. & Rhodes, J.S. (In Prep). Cell proliferation in the preoptic area during male-to-female sex change in the common clownfish, *Amphiprion ocellaris*.  
In Revision       **Parker, C.G.**, Lee, J.S., Histed, A.R., Craig, S.E. & Rhodes, J.S. (In Revision). Re-evaluating patterns of behavioral sex change in a model of male-to-female sex change, the common clownfish *Amphiprion ocellaris*. *Hormones and Behavior*.  
2021             Gonzalez, J.A., Histed, A.R., Nowak, E., Lange, D., Craig, S.E., **Parker, C.G.**, Kaur, A., Bhuvanagiri, S., Kroll, K.J., Martyniuk, C.J., Denslow, N.D., Rosenfeld, C.S. & Rhodes, J.S. (2021). Feminization of the brain, gonads, and sex hormones from bisphenol-A pollutant and partial feminization from synthetic estradiol in a sexually labile coral reef fish. *Hormones and Behavior*, 136, 105043. [doi.org/10.1016/j.yhbeh.2021.105043](https://doi.org/10.1016/j.yhbeh.2021.105043)  
2020             **Parker, C.G.**, Dailey, M.J., Phillips, H. & Davis, E.A. (2020). Central sensory-motor crosstalk in the neural gut-brain axis. *Autonomic Neuroscience: Basic and Clinical*, 225, 102656. [doi.org/10.1016/j.autneu.2020.102656](https://doi.org/10.1016/j.autneu.2020.102656)  
2019             Dodd, L.D., Nowak, E., Lange, D., **Parker, C.G.**, DeAngelis, R., Gonzalez, J.A. & Rhodes, J.S. (2019). Active feminization of the preoptic area occurs independently of the gonads in *Amphiprion ocellaris*. *Hormones and Behavior*, 112, 65-76. [doi.org/10.1016/j.yhbeh.2019.04.002](https://doi.org/10.1016/j.yhbeh.2019.04.002)

### Reviews & Commentaries

Accepted         Casas, L., **Parker, C.G.** & Rhodes, J.S. (Accepted). Sex change from male to female: feminization of the brain, behavior, and gonads in anemonefish. *Evolution, Development and Ecology of Anemonefishes*, ed. Laudet, V. & Ravasi, T., CRC Press.  
2021             Ramp, J., **Parker, C.G.**, Rhodes, J.S. & Malik, P. (2021). Barriers to inclusion: Service dog handlers in science laboratories. *Disability and Health Journal*, 101070. [doi.org/10.1016/j.dhjo.2021.101070](https://doi.org/10.1016/j.dhjo.2021.101070)  
2021             Ramp, J., **Parker, C.G.**, Rhodes, J.S. & Malik, P. (2021). Comment on "Service dogs and safety in academic laboratories". *Journal of Chemical Education*, 98, 250-251. [doi.org/10.1021/acs.jchemed.0c00982](https://doi.org/10.1021/acs.jchemed.0c00982)  
2020             **Parker, C.G.** & Cheung, E.J. (2020). Metabolic control of teleost reproduction by leptin and its complements: Understanding current insights from mammals. *General and Comparative Endocrinology*, 292, 113467. [doi.org/10.1016/j.ygcen.2020.113467](https://doi.org/10.1016/j.ygcen.2020.113467)

**AWARDS, GRANTS AND FELLOWSHIPS**

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2021	Graduate Student Welcome Award, Society for Behavioral Neuroendocrinology
2020	\$2500 Travel Grant for Dissertation Research, University of Illinois Graduate College
2015	\$1000 Grant for Undergraduate Research, Richter Memorial Fund, Knox College
2015	\$3000 Fellowship for Undergraduate Research, ASSET Program, Knox College

**CONFERENCE PROCEEDINGS**

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2021	"Novel sexually-differentiated cell populations in the preoptic area of a sex-changing fish, <i>Amphiprion ocellaris</i> , characterized by single-nucleus RNA sequencing". Society for Neuroscience, Virtual
2021	"Male-to-female sex change in the common clownfish <i>Amphiprion ocellaris</i> is associated with persistent male-like behavior and a unique sex hormone profile". Society for Behavioral Neuroendocrinology (SBN) Conference, Virtual
2019	"Active feminization of the preoptic area independent of the gonads in <i>Amphiprion ocellaris</i> ". North American Society for Comparative Endocrinology Conference, Gainesville, FL.
2019	"Active feminization of the preoptic area occurs independently of the gonads in <i>Amphiprion ocellaris</i> ". Society for Neuroscience Chicago Chapter Conference, Chicago, IL
2018	"Transsynaptic tracing of sensory-motor connections to the small intestine". Experimental Biology Conference, San Diego, CA

**ON-CAMPUS AND DEPARTMENTAL PROCEEDINGS**

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**Talks**

2022	"Novel sexually-differentiated cell populations in the preoptic area (POA) of a sex-changing fish, <i>Amphiprion ocellaris</i> ". Neuroscience Program Open House, University of Illinois.
2021	"Feminization of the preoptic area in <i>Amphiprion ocellaris</i> ". Neuroscience Program Student Seminar, University of Illinois.
2020	"Active feminization of brain and behavior in <i>Amphiprion ocellaris</i> ". Behavioral Neuroscience Division Seminar, University of Illinois.
2020	"Active feminization of the brain in a sex-changing fish". Neuroscience Program Seminar, University of Illinois.
2019	"Sexual differentiation of brain and behavior in a sex-changing fish". Behavioral Neuroscience Division Seminar, University of Illinois.
2018	"Parenting and sex in the anemonefish <i>Amphiprion ocellaris</i> ". Behavioral Neuroscience Division Seminar, University of Illinois.
2018	"Sensory-autonomic circuitry of the gut-brain axis". Neuroscience Program Seminar, University of Illinois.
2017	"Central origins of intestinal autonomic innervation". Neuroscience Program Student Seminar, University of Illinois.

**Posters**

2020	"Active feminization of the preoptic area occurs independently of the gonads in <i>Amphiprion ocellaris</i> ". Neuroscience Program Open House, University of Illinois.
2018	"Sensory-autonomic circuitry of the gut-brain axis". Neuroscience Program Open House, University of Illinois.
2016	"Priming amygdalar endocannabinoid signaling for enhanced extinction". Horizons Undergraduate Research Conference, Knox College.

**TEACHING**

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\* asterisk indicates serving as instructor on record and delivering all course material

**Teaching Assistantships at University of Illinois (as Graduate Student)**

* Behavioral Neuroscience Lab (PSYC 311)	2021 Fall, 2020 Fall, 2020 Spring, 2019 Fall
Behavioral Neuroscience (PSYC 210)	2022 Spring, 2019 Spring, 2018 Fall
Stress, Trauma and Resilience (PSYC 365)	2019 Spring
Evolutionary Neuroscience (NEUR 433)	2018 Fall
Anatomy and Physiology (ANSC 222)	2017 Fall

**Teaching Assistantships at Knox College (as Undergraduate Student)**

Behavioral Neuroscience (PSYC 364)	2016 Spring
Neuroscience I (NEUR 240)	2015 Fall
Cell Biology and Physiology Lab (BIO 120)	2014 Winter, 2015 Winter
Molecular Biology and Genetics Lab (BIO 130)	2014 Spring

**Teaching Honors**

2020 Spring	Ranked Excellent Instructor in University of Illinois Course Evaluations (PSYC 311)
2019 Fall	Ranked Excellent Instructor in University of Illinois Course Evaluations (PSYC 311)

**Other Teaching Employment**

2014 – 2016 Peer Tutor in Biology and Neuroscience, Knox College Center for Teaching and Learning

**Volunteer Teaching**

2017 – 2020 Lab Activity Development and Instruction, Science Education Outreach Program to the Champaign County Juvenile Detention Center

**MENTORSHIP**

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*Undergraduate research assistants whom I mentored and worked alongside*

2020 – present	Emma Ibanez
2020 – 2022	Veronica Pronitcheva
2019 – present	Sarah E. Craig ( <i>pursuing Honors</i> )
2019 – present	Abigail R. Histed ( <i>pursuing Honors</i> )
2018 – 2021	Joanne S. Lee
2018	Ricardo P. Torres ( <i>NSF summer REU program for community college students</i> )

**SERVICE**

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**Organizational Positions Held**

2018 – 2019	Secretary, University of Illinois Neuroscience Program Student Organization
2018	Co-Coordinator, University of Illinois Neuroscience Program Applicant Open House
2017	Coordinator, University of Illinois Neuroscience Program Seminar Speaker Luncheon
2015 – 2016	Co-Chair, Honor Board, Knox College

**Volunteering**

2021	Speaker, Summer Community Education Series, University of Illinois Extension
2017, 2021	Judge, Poster Session, Univ. of Illinois Undergraduate Research Symposium
2017 – 2019	Community Engagement, Brain Awareness Day Community Education Day
2019	Community Engagement, Beckman Institute Community Open House
2017	Moderator and Judge, Oral Session, Univ. of Illinois Summer Research Symposium

## **POPULAR PRESS AND GENERAL INTEREST**

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### **Articles Written**

- 2019            **Parker, C.G.** (2019, May 23). How the college does (and doesn't) fail us: response to discourse piece "Letter from a recent grad". *The Knox Student*.
- 2014            **Parker, C.G.** (2014, May 29). Interacting with perception: the pseudoscience of hypnosis. *The Knox Student*.

### **Interviewed In**

- 2020            Hu, J.C. (2020). Gut-brain connection. *Natural History Magazine*, 128, 6.
- 2020            Quinn, L.D. (2020, April 2). Gut communicates with the entire brain through cross-talking neurons. *University of Illinois College of ACES Newsletter*.
- 2019            Quinn, L.D. (2019, October 21). Science on the inside: how neuroscience graduate students are bringing science education to youth behind bars. *University of Illinois Stories Blog*.
- 2016            Mishkin, K. (2016, March 6). Parker tests exercise, emotion in rats. *The Knox Student*.

## **OTHER HONORS**

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- 2019            Golden Key Honor Society, Graduate Inductee
- 2019            Phi Kappa Phi Honor Society, Graduate Inductee
- 2016            Awarded "Outstanding Senior" from the Graduating Class, Knox College Mortar Board
- 2015            Nu Rho Sci National Neuroscience Honor Society, Undergraduate Inductee
- 2015            Psi Chi International Psychology Honor Society, Undergraduate Inductee
- 2011            Eagle Scout, Boy Scouts of America