

# Curriculum Vitae - Rayna M. Harris

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EDUCATION	<p><b>The University of Texas at Austin</b>, Austin, Texas Biochemistry; B.S., 2006</p> <p><b>The University of Texas at Austin</b>, Austin, Texas Cell and Molecular Biology; Ph.D., 2017. Supervised by Hans A. Hofmann</p> <p><b>The University of California</b>, Davis, California Postdoctoral Scholar, Current. Supervised by C. Titus Brown and Rebecca Calisi</p>
HONORS AND AWARDS	<p>AAAS Community Engagement Fellowship (2019) rstudio::conf 2019 Diversity Scholarship (2019) Elected to the Software Carpentry Steering Committee (2016 - 17) University Graduate Continuing Fellowship, UT Austin (2016 - 17) William Livingston Outstanding Graduate Student Academic Employee Award, UT Austin (2017) Grant in Aid of Research, Society for Integrative and Comparative Biology (2016) Academic Enrichment Fund Award, UT Austin (2014, 15, 16) Honorable mention, National Science Foundation Graduate Research Fellowship (2013, 14)</p>
PUBLICATIONS	<p><i>ORCID publication list</i>: <a href="http://orcid.org/0000-0002-7943-5650">http://orcid.org/0000-0002-7943-5650</a> <i>Google Scholar statistics as of Sept. 2019</i>: 758 citations; h-index of 11, i10-index of 11</p>
IN REVIEW	<p>20. Northcutt AJ, Kick DR, Otopalik AG, Goetz BM, <b>Harris RM</b>, Santin JM, Fenton AA, Hofmann HA, Marder E, Schulz DJ (2019) Molecular Profiling to Infer Neuronal Cell Identity: Lessons from small ganglia of the Crab <i>Cancer borealis</i>. <i>BioRxiv</i> 10.1101/690388</p> <p>19. Clarke DJB <i>et. al.</i> (2019) FAIRshake: toolkit to evaluate the findability, accessibility, interoperability, and reusability of research digital resources. <i>BioRxiv</i> 10.1101/657676</p> <p>18. Ernst D, <b>Harris RM</b>, Chintamen S, Dickens M, Calisi RM (2019) Differential influence of captive housing environments on zebra finch behavior, stress, and reproductive physiology. <i>Horm. Behav.</i></p>
INVITED ARTICLES AND REVIEWS	<p>17. <b>Harris RM</b>, O'Connell LA, Hofmann HA (2016) Brain Evolution, Development, and Plasticity, in <i>The Wiley Handbook of Evolutionary Neuroscience</i> (ed S. V. Shepherd), John Wiley &amp; Sons, Ltd, Chichester, UK. doi: 10.1002/9781118316757.ch15</p> <p>16. Oldfield RG, <b>Harris RM</b>, Hofmann HA (2015) Integrating Resource Defence Theory with Nonapeptide Expression to Explain Variation in Mating Systems. <i>Front. Zool.</i> 12:S16.</p> <p>15. <b>Harris RM</b>, Hofmann HA (2015) Seeing is believing: Dynamic evolution of opsin genes. <i>Proc. Natl. Acad. Sci. U.S.A.</i> 112:1252-1253.</p> <p>14. <b>Harris RM</b>, Hofmann HA (2014) Neurogenomics of Behavioral Plasticity. <i>Adv. Exp. Med. Biol.</i> 781:149-68.</p>
PEER REVIEWED PUBLICATIONS	<p>13. <b>Harris RM</b>, Kao H-Y, Alarcon JM, Hofmann HA, Fenton AA (2019) Hippocampal transcriptomic responses to enzyme-mediated cellular dissociation. <i>Hippocampus</i> DOI: 10.1002/HIPO.23095.</p> <p>12. Renn SPC, Machado H, Duftner N, <b>Harris RM</b>, Sessa AK, Hofmann HA (2018). Gene Expression Signatures of Mating System Evolution. <i>Genome</i>. DOI: 10.1139/gen-2017-0075.</p> <p>11. Devenyi GA, Emonet R, <b>Harris RM</b>, Hertweck KL, Irving D, Milligan I, Wilson G (2017) Ten simple rules for collaborative lesson development. <i>PLoS Comput Biol</i> 14(3): e1005963.</p> <p>10. Dijkstra PD, Maguire SM <b>Harris RM</b>, Rodriguez AA, DeAngelis RS Flores SA, Hofmann HA (2017) The melanocortin system regulates body pigmentation and social behaviour in a colour polymorphic cichlid fish. <i>Proc. R. Soc. B.</i> DOI: 10.1098/rspb.2016.2838.</p> <p>9. Goppert C, <b>Harris RM</b>, Theis A, Boila A, Hohl S, Ruegg A, Hofmann HA, Salzburger WE, Boehne A (2016) Inhibition of aromatase induces partial sex change in a cichlid fish: Distinct functions for sex steroids in brains and gonads. <i>Sex. Dev.</i> 10:97-110.</p>

8. Simoes JM, Barata EN, **Harris RM**, O'Connell LA, Hofmann HA, Oliveira RF (2015) Social odors conveying dominance and reproductive information induce rapid physiological and neuromolecular changes in a cichlid fish. *BMC Genomics* 16:114.
7. Stiver KA, **Harris RM**, Townsend JP, Hofmann HA, Alonzo SH (2015) Gene Expression Profiles and Androgen Levels Underlie Alternative Reproductive Tactics in the Ocellated Wrasse, *Symphodus ocellatus*. *Ethol.* 121:152-167.
6. Smith CC, **Harris RM**, Lampert KP, Scharl M, Hofmann HA, Ryan MJ (2015) Copy number variation in the melanocortin 4 receptor gene and alternative reproductive tactics in swordtail *Xiphophorus multilineatus*. *Environ. Biol. Fishes* 98:23-33.
5. Brawand et al. (2014) The genomic substrate for adaptive radiation: Genomes of five African cichlid fish. *Nature* 513: 375-381
4. Fischer EK, **Harris RM**, Hofmann HA, Hoke KL (2014) Predator exposure alters stress physiology in guppies across timescales. *Horm. Behav.* 65: 165-172.
3. **Harris RM**, Dijkstra PD, Hofmann HA (2014) Complex Structural and Regulatory Evolution of the Pro-opiomelanocortin Gene Family. *Gen. Compar. Endocrinol.* 195: 107-115.
2. Sessa AK, **Harris RM**, Hofmann HA (2013) Sex Steroid Hormones Modulate Responses to Social Challenge & Opportunity in Males of the Monogamous Convict Cichlid, *Amatitlania nigrofasciata*. *Gen. Compar. Endocrinol.* 189: 5965.
1. Oldfield RG, **Harris RM**, Hendrickson DA, Hofmann HA (2013) Arginine Vasotocin and Prolactin Pathways are Associated with Mating System Variation in North American Cichlid Fishes. *Horm. Behav.* 64:44-52.

INVITED AND  
CONTRIBUTED  
TALKS

**UCLA FORCE11** Scholarly Communication Institute. Aug 5, 2019  
**UC Davis** Next-Gen Sequence Analysis Workshop. Jul 5, 2019 [Slides](#). [Video](#).  
**rOpenSci** Community call: Multilingual communities. Jun, 28 2019  
**UC Davis** Environmental Endocrinology Seminar. December 11, 2018 [Slides](#)  
**Universidad de Palermo** LatinR. September 4, 2018 [Slides](#)  
**IBM Buenos Aires** R Ladies Buenos Aires Meetup. March 27, 2018. [Slides](#). [Video](#).  
**Online** Introduciendo Software Carpentry. March 19, 2018. [Slides with audio](#).  
**The North Door** Nerd Nite Austin Texas. January 10, 2018. [Slides](#). [Video](#)  
**UT Austin** RNA/DNA Club. December 11, 2017  
**UT Austin** Ph.D. Thesis Defense. October 18, 2017. [Slides](#)  
**Yale University** James Noonan Lab. September 15, 2017  
**Yale University** Daniel Colón-Ramos Lab. September 14, 2017  
**UC Berkeley** Michael Eisen Lab. January 13, 2017  
**UT Tyler** Biology Department. November 9, 2016  
**UT Austin** Brain, Behavior, & Evolution Graduate Seminar. October 2016  
**UT Austin** Chips & Dips Graduate Seminar. April 6, 2016  
**Michigan State University** Annual BEACON Congress. August 18, 2015  
**UT Austin** Waggoner Center for Alcohol Addiction Seminar. May 20, 2015  
**UT Austin** Brain, Behavior, & Evolution Graduate Seminar. April 17, 2015  
**Gulbenkian Institute of Science** COPEWELL Workshop. April 11, 2015  
**UT Austin** 10th Annual Integrative Biology Graduate Student Symposium. April 5, 2014  
**St. Edwards University** 3rd Annual Texas Poeciliid Conference. December 14, 2013  
**UT Austin** 9th Annual Integrative Biology Graduate Student Symposium. April 20, 2013  
**UT Austin** Darwin Day. February 10, 2013.  
**University of Bergen** Behavioural Fish Neuroscience Network Conference. November 12, 2012

SCIENTIFIC  
POSTERS

2019 Society for Behavioral Neuroendocrinology (SBN) Annual Meeting. Bloomington, IN [Poster](#)  
2019 Scientific Computing with Python (SciPy). Austin, TX [Poster](#)  
2017 The Moore Foundation Early Career Researcher Symposium. Waikoloa Beach, HI  
2016 Society for Neuroscience (SfN) Annual Meeting. San Diego, CA  
2016 International Congress of Neuroethology. Montevideo, Uruguay  
2016 Society for Integrative and Comparative Biology (SICB) Meeting Portland, OR  
2015 Celebration of Discovery at the Marine Biological Laboratories. Woods Hole, MA

SCIENTIFIC  
POSTERS  
*continued*

2015 Annual Waggoner Center for Alcohol & Addiction Research Advance. Austin, TX  
2015 National Science Foundation Data Science Workshop. Seattle, WA  
2014 Society for Neuroscience (SfN) Annual Meeting. Washington DC  
2014 Annual BEACON Congress. Lansing, MI  
2014 Animal Behavior Conference. Bloomington, IN  
2014 Brain Behavior & Evolution Symposium. Austin, TX  
2014 Society for Integrative and Comparative Biology Meeting (SICB). Austin, TX  
2013 Gordon Research Conference on Neuroethology. West Dover, VT  
2013 Society for Behavioral Neuroendocrinology (SBN) Annual Meeting. Atlanta, GA  
2012 Gordon Research Conference in Genes and Behavior. Galveston, TX

PROFESSIONAL  
ACTIVITIES

**Peer-reviewer** AAS Open Research; Behavioral Ecology; Gene; Genes, Genomes & Genetics; Journal of Experimental Zoology Part A; Nature; Physiology & Behavior; PLOS ONE; Proceedings of the Royal Society B'; rOpenSci.  
**Production Manager** *I Can Science* Documentary Series, 2019  
**Member** Open Access Week Advisory Committee, 2018  
**Secretary** Software Carpentry Steering Committee, 2017-2018  
**Member** Software Carpentry Steering Committee, 2016-2017  
**Poster Judge** College of Natural Science Undergraduate Research Forum, 2016, 17  
**Coordinator** Annual Big Data in Biology Symposia, 2012 - 2017  
**Coordinator** Summer School for Big Data in Biology, 2014 - 2017  
**Co-Chair** Complementary Session to Symposium - New Frontiers in the Integrative Study of Animal Behavior, Society for Integrative & Comparative Biology Annual Meeting, January 2016  
**Member** Software Carpentry Mentoring Committee, since March 2015  
**Blogger** PLOS Neuroscience Community, BEACON: An NSF Center for Evolution in Action, Data Carpentry, and Software Carpentry, Since 2014  
**Graduate Representative** Cell and Molecular Biology Graduate Program External Review Committee, October 2014  
**Coordinator** Transdisciplinary Graduate Student Luncheon, October 2014  
**Coordinator** Crockett High School UT Austin Internship Program, 2012-2014  
**Coordinator** Annual Brain, Behavior, and Evolution Symposia, 2011-2013  
**Volunteer** Barrington Elementary Science Career Day, November 2010  
**Spanish Translator** Welcome to the World of Mushrooms, INBio Park, Costa Rica, 2009

TEACHING

**Lesson Development**

- The Carpentries: Instructor Training
- Data Carpentry: Python usando datos de ecología
- Software Carpentry: La Terminal de Unix
- Software Carpentry: Control de Versiones con Git
- Laboratory Experiments for the 2014 Integrative Molecular Neuroscience Module.

**Guest Lecturer**

- Biological Science for Social Justice (NPB 13), UC Davis (2019) [Slides](#)
- Comparative Animal Physiology (BIO 361T), UT Austin (2016) [Slides](#)
- Principles of Neuroscience (NEU 482T), UT Austin (2014) [Slides](#)
- Introduction to Biological Statistics, UT Austin (2014)
- Neurobiology of Social Behavior, University of the Republic of Uruguay (2013)

**Lead or Co-Lead Instructor**

- El control de versiones con Git Software Carpentry (2018)
- Instructor Training, Software Carpentry and Data Carpentry (2016 present)
- Integrative Molecular Neuroethology, Neural Systems & Behavior Course (2013 - 2017)
- Introduction to Git for Bioinformatics, UT Austin (2017)
- Introduction to Unix and R, for Bioinformatics, UT Austin (2016)
- The UNIX Shell and Version Control with Git, Software Carpentry (2015)
- Introduction to Spanish, Futura Language Professionals (2008 - 2009)

TEACHING  
*continued*

**Teaching Assistant**

- Biostatistics (SDS 328M), UT Austin (2017)
- Introduction to Core Next-generation Sequencing Tools, UT Austin (2015, 16, 17)
- Problems in Modern Biology (BIO 301E), UT Austin (2013)
- Organic Chemistry Laboratory (CH 210C), UT Austin (2007-2009)
- Advanced Organic Chemistry Laboratory (CH 118K/L), UT Austin (2007)

SELECTED GITHUB  
REPOSITORIES

**DoveParentsRNAseq** This GitHub repository where I exploring molecular variation in the hypothalamus, pituitary, and gonads of male and female rock doves while they raise offspring.

**Thesis** This GitHub repository turns my thesis into a website that for easy reading and data exploraiton.

**DissociationTest** My reproducible workflow for testing the influence of cellular dissociation on hippocampal gene expression.

**IntegrativeProjectWT2015** My reproducible workflow to identify links between transcriptional variation in the mouse hippocampus and avoidance learning.

SOCIAL MEDIA  
AND BLOGS

**Twitter:** Personal [@raynamharris](#), Data Commons [@nih\\_dcpc](#), and *I Can Science* [@i.can.science](#)

**Blog:** <https://www.raynamharris.com/blog/>, <https://medium.com/@raynamharris/>.

**Selected blog posts:** Collaborative Conversational Classrooms

[Ten Networking Strategies for Community Managers](#)

[Data Carpentry Python Ecology Lesson Translated Into Spanish](#)

[Three Years in the Making for Instructor Training in Latin America](#)