

Curriculum Vitae - Rayna M. Harris

EDUCATION	<p>The University of Texas at Austin, Austin, Texas Biochemistry; B.S., 2006</p> <p>The University of Texas at Austin, Austin, Texas Cell and Molecular Biology; Ph.D., 2017. Supervised by Hans A. Hofmann</p> <p>The University of California, 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> http://orcid.org/0000-0002-7943-5650 <i>Google Scholar statistics as of April 2019:</i> 670 citations; h-index of 11, i10-index of 11</p>
PRE-PRINTS	<p>18. Harris RM, Otopalik AG, Smith C, Bucher D, Golowasch J, Hofmann HA (2017) Single-Neuron Gene Expression Analysis Using the Maxwell 16 LEV System. <i>BioRxiv</i> 107342.</p>
INVITED ARTICLES AND REVIEWS	<p>17. Harris RM, 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 & Sons, Ltd, Chichester, UK. doi: 10.1002/9781118316757.ch15</p> <p>16. Oldfield RG, Harris RM, 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. Harris RM, 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. Harris RM, Hofmann HA (2014) Neurogenomics of Behavioral Plasticity. <i>Adv. Exp. Med. Biol.</i> 781:149-68.</p>
PEER REVIEWED PUBLICATIONS	<p>13. Harris RM, Kao H-Y, Alarcon JM, Hofmann HA, Fenton AA (2019) Hippocampal transcriptomic responses to enzyme-mediated cellular dissociation. <i>Hippocampus</i>, <i>in press</i>, doi: 10.1002/HIPO.23095.</p> <p>12. Renn SPC, Machado H, Duftner N, Harris RM, 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, Harris RM, 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 Harris RM, 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, Harris RM, 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> <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. <i>BMC Genomics</i> 16:114.</p> <p>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, <i>Symphodus ocellatus</i>. <i>Ethol.</i> 121:152-167.</p>

6. Smith CC, **Harris RM**, Lampert KP, Schartl 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

rOpenSci Community call: Multilingual communities. May 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 NORDFORSK workshop. November 16, 2012
University of Bergen Behavioural Fish Neuroscience Network Conference. November 12, 2012

SCIENTIFIC
POSTERS

2019 Scientific Computing with Python (SciPy). Austin, TX [Poster](#)
 2019 Society for Behavioral Neuroendocrinology (SBN) Annual Meeting. Bloomington, IN
 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
 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

SCIENTIFIC
POSTERS
continued

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; Physiology & Behavior; PLOS ONE; Proceedings of the Royal Society B.
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 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_dcppc](#), and *I Can Science* [@i.can.science](#)

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

Selected blog posts: [Open source style community engagement](#); [Using music, beer, and pop-culture to communicate science](#); and [Reproducible Data-Driven Discovery](#).