

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; Hans Hofmann Lab Cell & Molecular Biology; PhD., Dec. 2017</p>
HONORS AND AWARDS	<p>University Graduate Continuing Fellowship, UT Austin (2016 - 2017). William Livingston Outstanding Graduate Student Academic Employee Award, UT Austin (2017) Academic Enrichment Fund Award, UT Austin (2014, 15, 16) Honorable mention, National Science Foundation Graduate Research Fellowship (2013, 2014)</p>
GRANTS	<p>Society for Integrative and Comparative Biology, \$1,000, "Integrated molecular and synaptic mechanisms of hippocampal learning and memory."</p>
PUBLICATIONS	<p><i>Full publication list: https://scholar.google.com/citations?user=_bVy9pMAAAAJ&hl=en February 2017: 317 citations total; h-index of 7, i10-index of 6.</i></p> <p>Note: ▶ highlights the most important papers, in my opinion.</p>
PEER REVIEWED PUBLICATIONS	<p>16. 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>Sexual Development</i> 10:97-110.</p> <p>15. 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 neuro-molecular changes in a cichlid fish. <i>BMC Genomics</i> 16:114.</p> <p>14. Stiver KA, Harris RM, Townsend JP, Hofmann HA, Alonzo SH (2015) Behavioral and physiological examinations of cooperation in <i>Symphodus ocellatus</i>, a species with alternative male reproductive tactics. <i>Ethology</i> 121:152-167.</p> <p>13. 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 <i>Xiphophorus multilineatus</i>. <i>Environmental Biology of Fishes</i> 98:23-33.</p> <p>12. Brawand D, Wagner CE, Li YI, Malinsky M, Keller I, Fan S, Simakov O, Ng AY, Lim ZW, Bezault E, Turner-Maier J, Johnson J, Alcazar R, Noh HJ, Russell P, Aken B, Alfdi J, Amemiya C, Azzouzi N, Baroiller JF, Barloy-Hubler F, Berlin A, Bloomquist R, Carleton KL, Conte MA, D'Cotta H, Eshel O, Gaffney L, Galibert F, Gante HF, Gnerre S, Greuter L, Guyon R, Haddad NS, Haerty W, Harris RM, Hofmann HA, et al. (2014) The genomic substrate for adaptive radiation: Genomes of five African cichlid fish. <i>Nature</i> 513: 375-381</p> <p>▶ 11. Fischer EK, Harris RM, Hofmann HA, Hoke KL (2014) Predator exposure alters stress physiology in guppies across timescales. <i>Horm Behav.</i> 65: 165-172.</p> <p>▶ 10. Harris RM, Dijkstra PD, Hofmann HA (2014) Complex Structural and Regulatory Evolution of the Pro-opiomelanocortin Gene Family. <i>General and Comparative Endocrinology</i> 195: 107-115.</p> <p>9. Sessa AK, Harris RM, Hofmann HA (2013) Sex Steroid Hormones Modulate Responses to Social Challenge & Opportunity in Males of the Monogamous Convict Cichlid, <i>Amatitlana nigrofasciata</i>. <i>General and Comparative Endocrinology</i> 189: 5965.</p> <p>8. 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. <i>Hormones and Behavior</i> 64:44-52.</p>

INVITED ARTICLES
AND REVIEWS

7. **Harris RM**, OConnell LA, Hofmann HA (2016) Brain Evolution, Development, and Plasticity, in *The Wiley Handbook of Evolutionary Neuroscience* (ed S. V. Shepherd), John Wiley & Sons, Ltd, Chichester, UK. doi: 10.1002/9781118316757.ch15

▶ 6. Oldfield RG, **Harris RM**, Hofmann HA (2015) Integrating Resource Defence Theory with Nonapeptide Expression to Explain Variation in Territory-based Mating Systems. *Frontiers in Zoology*, 12:S16.

5. **Harris RM**, Hofmann HA (2015) Seeing is believing: Dynamic evolution of opsin genes. *Proceedings of the National Academy of Sciences U. S. A.* 112:1252-1253.

4. **Harris RM**, Hofmann HA (2014) Neurogenomics of Behavioral Plasticity. *Advances in Experimental and Medical Biology* 781:149-68.

REPORTS AND
EDITORIALS

3. **Harris RM**, Otopalik AG, Smith C, Bucher D, Golowasch J, Hofmann HA (2014) Single-Neuron Gene Expression Analysis Using the Maxwell 16 LEV System. *BioRxiv* 107342; doi: <https://doi.org/10.1101/107342>

OPEN ACCESS
EDUCATIONAL
MATERIALS

2. Ahmadi A, Allen J, Banaszekiewicz P, Becker E, Bekolay T, Blischak J, Boughton A, Bray E, Cabunoc Mayes A, Crouch S, Davis N, Davis M, Duckles J, Emonet, R; Fortin, FA, Gonzalez I, Hamm C, Hansen M, **Harris RM**, Henninger F, Hinsen K, Hodge A, Jackson M, King WT, Kitzes J, Koch C, Liversidge, T, Michonneau F, Mills B, Nederbragt L, O'Leary A, Patitsas E, Pawlik A, Perez F, Pipitone J, Poisot T, Rokem A, Silva R, Teal T, Trndle T, Tweedie F, Vie JJ, Walker J, Walsh A, Weaver B, White E, Wilkerson C, Williams J, Wilson G, van der Walt A (2016) Software Carpentry: Instructor Training. *Zenodo*. 10.5281/zenodo.57571

▶ 1. **Harris RM**, Hofmann HA (2014). Laboratory Experiments for the 2014 Integrative Molecular Neuroscience Module. *Zenodo*. 10.5281/zenodo.60725

SOCIAL MEDIA
AND BLOGS

Twitter: @raynamharris, @texas_cbrs, and @nsb_mbl

Professional/personal blog: <https://medium.com/@raynamharris/>.

Selected blog posts (click on links): "Reproducible Data-Driven Discovery", "Effective Teaching Tips: From a Train-the-Trainers Workshop", "Surprising Origins of Sex Differences in the Brain!".

INVITED TALKS

UT Tyler. Biology Department Seminar. November 9, 2016

UT Austin. Waggoner Center for Alcohol Addiction Seminar. May 20, 2015

Gulbenkian Institute of Science, Oeiras, Portugal. COPEWELL Workshop on: Functional neuroanatomy of Fish: Mapping behavior and internal states into the brain. April 11, 2015

University of Bergen, Bergen, Norway. NORDFORSK Behavioural Fish Neuroscience Network Workshop. November 16, 2012.

CONTRIBUTED
TALKS

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. Brain, Behavior, & Evolution Graduate Seminar. April 17, 2015

UT Austin. 10th Annual Integrative Biology Graduate Student Symposium. April 5, 2014

St. Edwards University, Austin, Texas. Third 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, Bergen, Norway. NORDFORSK Behavioural Fish Neuroscience Network Conference. November 12, 2012

SCIENTIFIC
POSTERS

2017 The Moore Foundation Early Career Researcher Symposium. Waikoloa Beach, Hawaii.
2016 Society for Neuroscience Annual Meeting. San Diego, CA
2016 International Congress of Neuroethology. Montevideo, Uruguay
2016 Society for Integrative and Comparative Biology Meeting. Portland, OR
2015 Celebration of Discovery at the Marine Biological Laboratories. Woods Hole, MA
2015 NSF Data Science Workshop. Seattle, WA
2014 Society for Neuroscience 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. Austin, TX
2013 Gordon Research Conference in Neuroethology. West Dover, VT
2013 Society for Behavioral Neuroendocrinology Annual Meeting. Atlanta, GA
2012 Gordon Research Conference in Genes and Behavior. Galveston, TX

PROFESSIONAL
ACTIVITIES

Member, Software Carpentry Steering Committee, since March 2016
Co-Chair, Complementary Session to Symposium S12 - New Frontiers in the Integrative Study of Animal Behavior, Society for Integrative and Comparative Biology Annual Meeting, January 2016
Member, Software Carpentry Mentoring Committee, since March 2015
Cellular & Molecular Biology graduate representative for external review committee, October 2014
Organizer, Transdisciplinary Graduate Student Luncheon, October 2014
Coordinator, Summer School for Big Data in Biology, 2014 - 2017
Coordinator, Annual Big Data in Biology Symposia, 2012 - 2017
Program 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
Translator for Bienvenido al Mundo de los Hongos!, INBio Parque, Costa Rica, 2009
Peer-reviewer for: Behavioral Ecology; Gene; Genes, Genomes & Genetics; Journal of Experimental Zoology; Physiology & Behavior; Proceedings of the Royal Society B

TEACHING AND
WORKSHOPS

Lead or Co-Lead Instructor

Integrative Molecular Neuroethology, Neural Systems & Behavior Course at the Marine Biological Laboratories (Summer 2013-17)
Instructor Training, Software Carpentry Foundation. (2016 present)
Introduction to Unix, R, and Git for Bioinformatics, Center for Computational Biology and Bioinformatics (2016)
Software Carpentry, Software Carpentry Foundation (2015 present)
Introduction to Spanish, Futura Language Professionals (2008-2009)

Teaching Assistant

Introduction to Core Next-generation Sequencing Tools, Center for Computational Biology and Bioinformatics (2015,16,17)
BIO 301E: Problems in Modern Biology, UT Austin (2013)
CH 210C: Organic Chemistry Laboratory UT Austin (2007-2009)
CH 118K/L: Advanced Organic Chemistry Laboratory, UT Austin (2007)

Guest Lecturer

Comparative Animal Physiology (BIO 361T), The University of Texas at Austin.
Introduction to Biological Statistics, The University of Texas at Austin.
Neurobiology of Social Behavior, University of the Republic of Uruguay.

REFERENCES

References available upon request.