

Jennifer Avena, Ph.D.

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EDUCATION

University of Colorado Boulder, Boulder, CO
Molecular, Cellular, and Developmental Biology Department

Doctor of Philosophy, December 2014

Ohio Wesleyan University, Delaware, OH
Majors: Zoology (Genetics Concentration), Psychology (Honors)

Bachelor of Arts, May 2005

SELECTED TEACHING AND PROGRAM DEVELOPMENT EXPERIENCE

Instructor and Faculty Liaison
Becoming a Learning Assistant (EDUC 4610)
Learning Assistant Program, School of Education, University of Colorado Boulder

June 2018-Present
Spring 2019
Boulder, CO

Instructor
Health Professions Residential Academic Program, University of Colorado Boulder
Introduction to Cell and Molecular Biology (MCDB 1150)
Principles of Genetics (MCDB 2150)

Fall 2018-Present
Boulder, CO

Lecturer
Problem Solving in Genetics (MCDB 2152), Principles of Genetics (MCDB 2150)
The Brain – From Molecules to Behavior (MCDB 3650)
Fundamentals of Human Genetics (MCDB 1041)
Principles of Genetics (MCDB 2150)
Molecular, Cellular, and Developmental Biology Department, University of Colorado Boulder

Spring 2018
Fall 2015-2018
Spring 2016, 2017
Summer 2016, 2018
Boulder, CO

Lead Graduate Teacher
Graduate Teacher Program, University of Colorado Boulder
Advisor: Laura Border, Ph.D.

May 2011-May 2013
Boulder, CO

Instructor's Assistant
Yeast Genetics and Genomics Course, Cold Spring Harbor Laboratory
Advisors: Jeff Strathern, Ph.D., Sue Jaspersen, Ph.D., and Jeffrey Smith, Ph.D.

July 2011–August 2011
Cold Spring Harbor, NY

Teaching Assistant
Cell Biology, Advisors: Gia Voeltz, Ph.D. and Greg Odorizzi, Ph.D.
Principles of Genetics, Advisors: Mark Winey, Ph.D. and Nancy Guild, Ph.D.
Molecular, Cellular, and Developmental Biology Department, University of Colorado Boulder

Fall 2009
Spring 2010
Boulder, CO

SELECTED RESEARCH EXPERIENCE

Postdoctoral Research Associate
Problem solving in genetics
Measuring student learning in genetics
Molecular, Cellular, and Developmental Biology Department, University of Colorado Boulder
Advisor: Jennifer Knight, Ph.D.

2015-Present

Boulder, CO

Graduate Research Assistant
Phosphoregulation of Sfi1 is required for yeast centrosome duplication and separation
Molecular, Cellular, and Developmental Biology Department, University of Colorado Boulder
Advisor: Mark Winey, Ph.D.

2010-2014

Boulder, CO

Research Assistant II 2006-2009
Research Assistant I 2005-2006
Psychology/Psychiatry Department, Case Western Reserve University
Advisor: Norah Feeny, Ph.D. Cleveland, OH

“Effectiveness of PTSD Treatment: PE vs. Zolofit,” NIMH funded
“Assessment and treatment of traumatized youth,” The Cleveland Foundation funded
“Substance use and other outcomes following treatment for adolescent depression,” NIMH funded
“Individual differences in emotional processing,” University Hospitals Department of Radiology funded

SELECTED EDUCATIONAL COMMUNITY SERVICE

Expanding Your Horizons Workshop Presenter February 2013, 2014
Expanding Your Horizons Workshop Guide February 2012
University of Colorado Boulder Boulder, CO

Synthetic Biology Club and iGEM Team Advisor Fall 2012-Fall 2013
University of Colorado Boulder Boulder, CO

EXTERNALLY-FUNDED GRANTS

Co-Principal Investigator, NSF IUSE, DUE 1711348, “Problem solving through practice: Identifying common student struggles in solving complex biology problems and developing tools to drive improvement,” \$299,718.00, (2017-Present)

NIH training grant NIH 5 T32 GM007135 “Creative Training in Molecular Biology” (2010-2012)

PUBLICATIONS

Burns, S., **Avena, J.S.**, Unruh, J.R., Yu, Z., Smith, S.E., Slaughter, B.D., Winey, M., & Jaspersen, S.L. (2015). Structured-illumination with particle averaging reveals novel roles for yeast centrosome components during duplication. *Elife* 4:e08586. doi: 10.7554/eLife.08586.
Avena, J.S., Burns, S., Yu, Z., Ebmeier, C.C., Old, W.M., Jaspersen, S.L., & Winey, M. (2014). Licensing of yeast centrosome duplication requires phosphoregulation of Sfi1. *PLoS Genetics* 10:e1004666. doi:10.1371/journal.pgen.1004666.
Rytwinski, N.K. *, **Avena, J.S.***, Echiverri, A.M., Zoellner, L.A., & Feeny, N.C. (2013). The relationships between posttraumatic stress disorder severity, depression severity and physical health. *Journal of Health Psychology* 19, 509-20. doi: 10.1177/1359105312474913 (* Shared first authorship)

SELECTED PRESENTATIONS

Avena, J., Whitney, O., McIntosh, B., & Knight, J. (2018, July). *Exploring content and process in student problem solving in genetics*. Talk presented at the Society for the Advancement of Biology Education Research National Meeting, Minneapolis, MN.
Avena, J.S., Knight, J.K., Talbot, R., Briggs, D.C., (2016, July). *Measuring student learning in genetics: A comparison of content, cognitive level, and performance on the Genetics Concept Assessment and course assessments*. Talk presented at the Society for the Advancement of Biology Education Research National Meeting, Minneapolis, MN.
Avena, J.S., Knight, J.K., Talbot, R., Briggs, D.C., Kroog, H., Batzli, J.M., Brooker, R.J., Hamill, D.R., Smith, M.K. (2016, July). *A new set of guidelines for using Bloom’s Taxonomy to evaluate the cognitive processes targeted in genetics questions*. Roundtable discussion presented at the Society for the Advancement of Biology Education Research National Meeting, Minneapolis, MN.
Avena, J. (2014, April). *How do the cells in our bodies work?* Talk presented for a general audience at the Communicating Complex Ideas Capstone Presentation, Boulder, CO.
Avena, J. (2013, September). *Cyclin-dependent kinase control of yeast centrosome duplication*. Invited seminar talk presented at Regis College, Denver, CO.

SELECTED PROFESSIONAL WORKSHOPS DEVELOPED

Group Work in LA-supported Courses. (January 2019). Workshop held for the Learning Assistant Program at the University of Colorado Boulder, Boulder, CO.
Effectively Using LAs: Resources for Faculty. (August 2018, January 2019). Orientation workshops held for the Learning Assistant Program at the University of Colorado Boulder, Boulder, CO.
Pedagogy Course and Weekly Prep Connections. (November 2018). Workshop co-organized for the International Learning Assistant Conference at the University of Colorado Boulder, Boulder, CO.

Are Students Learning What We Think They Are? (September 2015). Invited workshop held for the Graduate Teacher Program's Fall 2015 Tiger 1 Workshop series at the University of Colorado Boulder, Boulder, CO.

Science Career Panel for Grad Students and PostDocs. (February 2013). Panel co-organized and held at the University of Colorado Boulder, Boulder, CO.

Helping Students Write Well in the Sciences. (September 2012). Invited workshop held for the Graduate Teacher Program's Fall 2015 Workshop series at the University of Colorado Boulder, Boulder, CO.

ACADEMIC PROFESSIONAL DEVELOPMENT AND CERTIFICATION

COPUS Observation Training November 2017
TRESTLE (Transforming Education, Supporting Teaching and Learning Excellence) Boulder, CO

National Academies Education Fellow in the Life Sciences 2015-2016 June 2015
The National Academies Summer Institute on Undergraduate Education in Biology Boulder, CO

Communicating Complex Ideas: A CU Boulder and Public Media Collaboration Grant Fall 2013-Spring 2014
Graduate Teacher Program, University of Colorado Boulder Boulder, CO

Certificate in College Teaching September 2013
Graduate Teacher Program, University of Colorado Boulder Boulder, CO

Professional Development Certificate for Preparing Future Faculty September 2013
Graduate Teacher Program, University of Colorado Boulder Boulder, CO

Lead Graduate Teacher Training May 2011, 2012
Graduate Teacher Program, University of Colorado Boulder Boulder, CO

MENTORING AND SUPERVISORY EXPERIENCE

Research Mentor to four undergraduate students and three graduate rotation students since 2010

Teaching Supervisor to seven learning assistants since 2018 in MCDB 2152 and EDUC 4610