

Sara E. Brownell

Associate Professor, School of Life Sciences, Arizona State University

Lab website: <http://sebbers.wix.com/biology-ed-lab>

Education:

- **Stanford University, Stanford CA, 2007-2011**
 - Ph.D. in Biological Sciences, August 2011
 - Concentration: Neuroimmunology
 - Advisor: Dr. Lawrence Steinman
 - M.A. in Education, March 2011
 - Concentration: Undergraduate biology education
 - Advisor: Dr. Rich Shavelson
- **The Scripps Research Institute, La Jolla CA, 2004-2007**
 - M.S. in Biology, September 2007
 - Concentration: Molecular and Integrative Neuroscience
 - Advisor: Dr. Tamas Bartfai
- **Cornell University, Ithaca NY, 2000-2004**
 - B.S. in Biological Sciences, May 2004
 - Concentration: Neurobiology and Behavior
 - Magna Cum Laude

Appointments:

- **Associate Professor in the School of Life Sciences and Director of the Research in Inclusive STEM Education (RISE) Center**
 - Arizona State University, Tempe AZ, 2018-present
 - Research focus: Undergraduate biology education
 - Affiliated faculty: Center for Biology and Society, Center for Evolution and Medicine
- **Visiting Scholar in Evolution Education**
 - University of Münster, Münster Germany, 2019
 - Graduate School of Evolution, Institute for Evolution and Biodiversity
- **Assistant Professor in the School of Life Sciences**
 - Arizona State University, Tempe AZ, 2014- 2018
 - Research focus: Undergraduate biology education
 - Affiliated faculty: Center for Biology and Society, Center for Evolution and Medicine
- **Visiting Scholar in Biology Education**
 - University of Texas at Austin, Austin TX, 2015
 - Texas Institute for Discovery Education in Science in the College of Natural Sciences
- **Postdoctoral Scholar in Biology Education**
 - University of Washington, Seattle WA, 2013
 - Concentration: Undergraduate biology education
 - Advisors: Dr. Scott Freeman and Dr. Alison Crowe
- **Postdoctoral Scholar in Science Education**
 - San Francisco State University, San Francisco CA, 2012
 - Concentration: Undergraduate biology education
 - Advisor: Dr. Kimberly Tanner
- **Lecturer in Biology**
 - Stanford University, Stanford CA, 2011- 2012

Honors and Awards:

- Awarded National Association of Biology Teachers Biology Education Research Award, 2018
One national award given annually to a scholar in biology education research based on research
- Invited participant for Arizona State University Leadership Academy, 2018
Nominated by department head to participate in a university-wide leadership program
- Awarded American Physiological Society's Research Recognition Award, 2018
One national award given annually to a presenter at the meeting based on research
- Awarded ASU's highest college-level teaching award, Zebulon Pearce teaching award, 2017
One college-wide award given annually for faculty teaching in the Natural Sciences
- Awarded ASU's School of Life Sciences Excellence in Teaching award, 2017
One department-wide award given annually
- Awarded ASU's Faculty Women's Association Award for Outstanding Faculty Mentor, 2017
One of six awards given annually across the university
- Student-selected based on teaching as honorary member of ASU Golden Key Honor Society, 2015
Nominated by students for this recognition
- Awarded ASU's Centennial Teaching Award, university-wide pre-tenure teaching award, 2015
Nominated by over 30 students for this university-wide award, three are given annually
- Fellow for ASU's Lincoln Center for Applied Ethics, 2015
Selected as a research fellow for this center
- Awarded ASU's "Most Influential Faculty" by a Student-Athlete, Sai Tummala, 2015
Nominated by ASU men's basketball athlete
- Finalist for Maryellen Weimer Scholarly Work on Teaching and Learning Award, 2014
One of three finalists for national award
- Awarded Stanford Biology Student Services Award, Departmental Service Award, 2012
One award given annually to a staff member
- Awarded Alzheimer's Drug Discovery Foundation Outstanding Young Investigator Award, 2011
Award funded conference and travel
- Awarded Walter J. Gores Teaching Award, Stanford University's highest teaching award, 2010
Two university-wide awards given annually to graduate students
- Awarded Stanford School of Medicine Award for Outstanding Teaching Assistant, 2009
One university-wide award given annually
- Awarded Excellence in Teaching Award, Stanford Department of Biology, 2008
Many awards given annually to graduate students based on high teaching evaluations
- Stanford Graduate Fellowship, 2008-2011
Awarded most prestigious internal fellowship at Stanford
- National Science Foundation Graduate Fellowship, 2005-2008
Awarded most prestigious national fellowship
- Scripps Research Institution Bagel Fellowship, 2004-2005
Awarded an internal fellowship

Research Experience:

- **Faculty Research, Arizona State University, 2014-present**
Research interests focus on improving undergraduate biology education, specifically course-based undergraduate research experiences, programmatic assessment, and issues related to diversity and inclusion for women, religious students, LGBTQIA students, and transfer students.
- **Postdoctoral Research, University of Washington, 2013**
Worked under the direction of Dr. Scott Freeman and Dr. Alison Crowe on two projects: (1) to establish departmental learning goals and articulate the core concepts of Vision and Change for a general biology major and (2) explore student conceptions of experimental design.

- **Postdoctoral Research, San Francisco State University, 2012**
Worked in Dr. Kimberly Tanner's SEPAL lab on the role of faculty professional identity in faculty pedagogical change.
- **Ph.D. Thesis Research, Stanford University, 2007-2011**
Worked in a translational molecular and cellular neuroimmunology laboratory focused on the therapeutic potential of small heat shock proteins in mouse models of multiple sclerosis and stroke.
- **M.A. Thesis Research, School of Education, Stanford University, 2008-2011**
Evaluated the comparison of traditional biology lab courses to a set of newly designed course-based undergraduate research experiences embedded into introductory biology lab courses.
- **M.S. Thesis Research, The Scripps Research Institute, 2005-2007**
Worked in a molecular neuroscience laboratory focused on cytokines, temperature regulation, and obesity.

Fellowships and Grants:

Funded national awards

- **National Science Foundation (NSF) Improving Undergraduate STEM Education (IUSE) Award**
A large-scale, national systematic exploration of the impact of culturally competent evolution education. \$405,409 funded August 2018 as a PI. Recognition: 100%.
- **Howard Hughes Medical Institute (HHMI) Inclusive Excellence Award**
Teaching transformed: Using education technology to create a culture of inclusive excellence. \$1,000,000 funded May 2018 as a Co-PI (PI: Collins J, Co-PIs: Anbar A, LePore P). Recognition: 33%.
- **National Science Foundation (NSF) Scholarships in Science, Technology, Engineering, and Math (S-STEM) Award**
Making the LEAP from transfer student to research scientist. Collaborative grant aimed at improving transfer student success in undergraduate research in science. \$999,965 total funded January 2017 as a PI (Co-PIs: Zaniewski A, Harnett H). Recognition: 60%.
- **National Science Foundation (NSF) Improving Undergraduate STEM Education (IUSE) Award**
Establishing evidence-based curricula for evolutionary medicine. \$292,767 total funded September 2017 as a PI (Co-PIs: Nesse R, Grunspan D). Recognition: 50%
- **National Science Foundation (NSF) Research Coordination Network Undergraduate Biology Education (RCN UBE)**
Course-based Undergraduate Research Network 2: developing a national network of individuals interested in integrating teaching and research. \$499,925 total funded August 2017 as a Co-PI (PI: Dolan E at University of Georgia). Recognition: 100% for ASU's portion of \$31,169.
- **National Science Foundation (NSF) Improving Undergraduate STEM Education (IUSE) Award**
Exploring bias in undergraduate biology exams. Collaborative grant exploring how instructors write exam questions and whether they are biased towards any groups. \$241,036 total funded December 2017 as a Co-PI (PI: Wright C, Co-PI: Li). Recognition: 50%
- **National Science Foundation (NSF) Improving Undergraduate STEM Education (IUSE) Award, 2015-2018**
Learning from dialog versus monolog videos. Collaborative grant exploring the benefit of students watching videos outside of class with either an instructor alone or watching videos of instructor tutoring a student. \$249,995 total funded September 2015 as a Co-PI (PI: Chi M). Recognition: 20%.

- **National Science Foundation (NSF) Transforming Undergraduate Education in STEM (TUES) II Award, 2013-2018**
Navigating from Vision to Change with BioMaps. Collaborative grant on the development of programmatic assessments aligned with the core concepts of Vision and Change. \$528,452 total funded September 2013 as a Co-PI (PI: Smith M, Knight J, Crowe A); \$110,810 as subcontract to ASU as a PI. Recognition at ASU: 100%.
- **CUREnet national grant for working groups, 2013-2014**
Collaborative mini-grant funded through a NSF RCN-UBE grant to explore faculty involvement and interest in course-based research experiences. \$3,900 total funded December 2013 as a PI. Recognition: 100%.
- **National Science Foundation (NSF) Graduate Research Fellowship, 2005-2008**
Awarded \$90,000 total stipend, plus tuition support.

Funded internal institutional awards

- **ASU School of Life Sciences Bottom-Up Seminar Series Funding**
Funded by the School of Life Sciences to host the Evidence-based Teaching in STEM seminar series. \$5700. Funded May 2016.
- **ASU Center for Evolution and Medicine Research Grant**
Funded by the Center for Evolution and Medicine to research undergraduate biology students' conceptions of acceptance of evolution. \$1600. Funded April 2016.
- **ASU Lincoln Center for Applied Ethics Proposal Funding**
Funded by the Lincoln Center to explore ethics surrounding undergraduate research experiences. \$7,000. Funded July 2015.
- **ASU School of Life Sciences Bottom-Up Seminar Series Funding**
Funded by the School of Life Sciences to develop an Evidence-based Teaching in STEM seminar series. \$6,300. Funded May 2015.
- **ASU Centennial Teaching Award Funding for Teaching**
Project stipend to improve the quality of instruction at ASU specifically in active learning classrooms. \$5,000. Funded April 2015.
- **Stanford Graduate Fellowship in Science and Engineering, 2008-2011**
Most prestigious internal fellowship at Stanford. \$96,600 total stipend, plus tuition support.
- **Stanford University Vice Provost of Undergrad Education Curriculum Development Grant**
Funded to assess the Department of Biology Honors Program. \$3,500. Funded Nov 2011.
- **Stanford University Center for Teaching and Learning TA training Grant**
Funded to support Biology Laboratory TA Training program. \$2,500. Funded June 2011.
- **Stanford University Vice Provost of Undergrad Education Curriculum Development Grant**
Funded to support the course Imm185 "Brain and Immune System." \$3,000. Funded Nov 2008.
- **Stanford University Center for Teaching and Learning TA training Grant**
Authored grant to support Biology Advisors TA Training program. \$2,500. Funded June 2008.
- **The Scripps Research Institute's Bagel Fellowship, 2004-2005**
Awarded \$24,000 total stipend, plus tuition support.

Peer Reviewed Journal Articles

*The standards of the biology education research field are that the senior lead author is the last author of the publication and the first author is the trainee or person who conducted the majority of the research. Trainees are underlined: # denotes graduate student, ^ denotes undergraduate student, and + denotes postdoctoral scholar. Italics indicate when I am corresponding author and * indicates co-first author. My h-index is 25, i10 index is 41, and I have 2566 total citations.*

In press

71. Smith MK, **Brownell SE**, Crowe AJ, Holmes NG, Knight JK, Semsar K, Summers MM, Walsh C, Wright CD⁺, Couch BA. Tools for change: Introducing Bio-MAPS assessments designed to measure student conceptual understanding across undergraduate biology programs. *Journal of Microbiology and Biology Education*. In press.

70. Cooper KM⁺, **Brownell SE**, Gormally C. Coming Out to the Class: Identifying Factors that Influence College Biology Instructor Decisions About Whether to Reveal Their LGBTQIA Identity in Class. *Journal of Women and Minorities in Science and Engineering*. In press.

69. Diaz-Martinez LA, Fisher GR, Esparza D, Bhatt JM, D'Arcy CE, Apodaca J, **Brownell SE**, Corwin L, Davis WB, Floyd KW, Killion PJ, Madden J, Marsteller P, Mayfield-Meyer T, McDonald KK, Rosenberg M, Yarborough MA, Olimpo, JT. Recommendations for Effective Integration of Ethics and Responsible Conduct of Research (E/RCR) Education into Course-based Undergraduate Research Experiences: A Meeting Report. *CBE Life Sciences Education*. In press.

Published

2019

68. Cooper KM⁺*, Gin L^{#*}, **Brownell SE**. Diagnosing differences in what undergraduates in a fully online and an in-person biology degree program know and do regarding medical school admission. *Advances in Physiology Education*. May 2019. (*these authors contributed equally)
<https://physiology.org/doi/pdf/10.1152/advan.00028.2019>

67. Grunspan DZ⁺, Moeller KT, Nesse RM, **Brownell SE**. The state of evolutionary medicine in undergraduate education. *Evolution, Medicine, and Public Health (EMPH)*. May 2019.
<https://academic.oup.com/emph/advance-article/doi/10.1093/emph/eoz012/5487408>

66. Couch BA, Wright CD⁺, Freeman S, Knight JK, Semsar K, Smith MK, Summers MM, Zheng Y, Crowe AJ, **Brownell SE**. GenBio-MAPS: A programmatic assessment to measure student understanding of Vision and Change core concepts across general biology programs. *CBE Life Sciences Education*. March 2019.
<https://www.lifescied.org/doi/10.1187/cbe.18-07-0117>

Highlighted in Science Magazine as an Editor's Choice for Education

Highlighted in the journal Genetics as an Education Highlight

Commentary: ASU Now <https://asunow.asu.edu/20190507-biology-test-first-publicly-available-measure-understanding-five-core-concepts>

65. Semsar K, **Brownell SE**, Couch BA, Crowe AJ, Smith MK, Summers MM, Wright CD⁺, Knight JK. Phys-MAPS: A programmatic physiology assessment for introductory and advanced undergraduates. *Advances in Physiology Education*. March 2019. <https://www.physiology.org/doi/full/10.1152/advan.00128.2018>

64. Dunk R, Barnes ME⁺, Reiss M, Alters B, Asghar A, Carter B, Cotner S, Glaze A, Hawley P, Jensen J, Mead L, Nadelson L, Nelson C, Pobiner B, Scott E, Shtulman A, Sinatra G, Southerland S, Walter E, **Brownell S**, and Wiles J. Evolution Education Involves a Complex Landscape of Interrelated Factors. *Nature Ecology and Evolution*. February 2019. <https://www.nature.com/articles/s41559-019-0802-9>

63. Barnes ME⁺, Dunlop H[^], Holt E, Zheng Y, **Brownell SE**. Different evolution acceptance instruments lead to different research findings. *Evolution Education and Outreach*. January 2019. <https://evolution-outreach.biomedcentral.com/articles/10.1186/s12052-019-0096-z>

2018

62. Cooper KM[#], Hendrix T[^], Stephens M[^], Cala JM[#], Agloro A[^], Badini G[^], Barnes ME[#], Eledge B[^], Jones R[^], Krieg A[^], Lemon E[^], Mahrer K[^], Mossimo N[#], Martin A[^], Ruberto T[#], Simonson K[^], Webb E[^], Weaver J[^], **Brownell SE**. To be or not to be funny? Student perceptions of instructor humor in college science courses. *PLOS ONE*. August 2018. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0201258>

Commentary:

ASU Now, Inside Higher Ed, ZME Science, ASU State Press, ASU's TeachTech Blog, Science Daily, Phys.org, Ask A Biologist

Interviewed about article on Georgia Tech's Inside the Black Box radio show

Most viewed ASU Now news article in 2018

61. Cooper KM[#], **Brownell SE**. Developing course-based research experiences in discipline-based education research: Lessons learned and recommendations. *Journal of Microbiology and Biology Education*. August 2018. <http://www.asmscience.org/content/journal/jmbe/10.1128/jmbe.v19i2.1567>

60. Wright CW⁺*, Huang A^{^*}, Cooper KM[#], **Brownell SE**. Exploring differences in decisions about exams among instructors of the same introductory biology course. *The International Journal for the Scholarship of Teaching and Learning*. July 2018. (*these authors contributed equally). <https://digitalcommons.georgiasouthern.edu/ij-sotl/vol12/iss2/14/>

59. Grunspan D⁺, Kline M, **Brownell SE**. The Lecture Machine: A Cultural Evolutionary Model of Pedagogy in Higher Education. *CBE Life Sciences Education*. June 2018. <https://www.lifescied.org/doi/full/10.1187/cbe.17-12-0287>

Featured in STEM Prof newsletter

Highlighted in American Society for Cell Biology blog

58. Cooper KM[#], Downing V[#], **Brownell SE**. The influence of active learning practices on student anxiety in large-enrollment college science classrooms. *International Journal of STEM Education*. June 2018. <https://stemeducationjournal.springeropen.com/articles/10.1186/s40594-018-0123-6>

Selected by Science Magazine as an Editor's Choice for Education

Featured in STEM Prof newsletter

57. Summers MM, Couch BA, Knight J, **Brownell SE**, Crowe A, Semsar K, Wright CD⁺, Smith MK. EcoEvo-MAPS: An ecology and evolution assessment for introductory and advanced undergraduates. *CBE Life Sciences Education*. June 2018. <https://www.lifescied.org/doi/10.1187/cbe.17-02-0037>

Featured article in June 2018 issue

56. Cooper KM[#], Ding L, Stephens MD[^], Chi MTH, **Brownell SE**. A course-embedded comparison of instructor-generated videos of either an instructor alone or an instructor and a student. CBE Life Sciences Education. June 2018. <https://www.lifescied.org/doi/full/10.1187/cbe.17-12-0288>

Commentary:

Dann Hurlbert, Carleton College's Media and Design Guru. Video summary of paper.
<https://littleprompter.com/tag/instructional-video/>

55. Cooper KM[#], Krieg A[^], **Brownell SE**. Who perceives they're smarter? Exploring the influence of student characteristics on student academic self-concept in physiology. Advances in Physiology Education. April 2018. <https://www.physiology.org/doi/full/10.1152/advan.00085.2017>

Commentary:

Generated international press, including New York Times, ABC news, NBC news, BBC, Fortune, The Telegraph, The Times, Daily Mail, Mother Jones, Jezebel, phys.org, Science Daily, AZcentral, Slate's The Gist, and dozens of other radio shows, blogs, and news postings.

Most downloaded article for 2018 out of all 16 American Physiology Society journals

54. Cooper KM^{#*}, Ashley M^{^*}, **Brownell SE**. Breaking down barriers: A bridge program helps first year biology students become comfortable and make connections with faculty. Journal of College Science Teaching. March 2018. (*these authors contributed equally).
http://docs.wixstatic.com/ugd/98a1a0_c6956b34cbfc477a866a99f808aa37fb.pdf

Featured article in March 2018 issue

53. Truong J^{*}, Barnes ME^{#*}, **Brownell SE**. Can six minutes of culturally competent evolution education reduce students' level of perceived conflict between evolution and religion? American Biology Teacher. February 2018. (*these authors contributed equally).
http://docs.wixstatic.com/ugd/98a1a0_6aa4fa2b8fb34709b32bebf01bdee437.pdf

52. Grunspan DZ⁺, Nesse R, Barnes ME[#], **Brownell SE**. Core principles of evolutionary medicine: A Delphi study. Evolution, Medicine, and Public Health. January 2018. <https://academic.oup.com/emph/advance-article/doi/10.1093/emph/eox025/4774983>

Commentary:

Nunn, C. A roadmap for 'core concepts' in evolutionary medicine. EMPH Editorial.
2017

51. Barnes ME[#], **Brownell SE**. A call to use cultural competence when teaching evolution to religious undergraduate students: Introducing Religious Cultural Competence in Evolution Education (ReCCEE). CBE Life Sciences Education. December 2017. <https://www.ncbi.nlm.nih.gov/pubmed/29167225>

Commentary:

Hemphill, C. Five essential practices for "culturally competent" biology instructors. BioLogos.

50. Ashley M^{^*}, Cooper KM^{#*}, Cala JM[#], **Brownell SE**. Building better bridges into STEM: A synthesis of 25 years of literature on STEM summer bridge programs. CBE Life Sciences Education. December 2017. (*these authors contributed equally). <https://www.lifescied.org/doi/10.1187/cbe.17-05-0085>

One of five featured articles for December 2017 issue

49. Barnes ME[#], **Brownell SE**. Experiences and practices of evolution instructors at Christian universities that can inform culturally competent evolution education. *Science Education*. November 2017. <http://onlinelibrary.wiley.com/doi/10.1002/sce.21317/full>
48. Barnes ME[#], Evans EM, Hazel A, **Brownell SE**, Nesse RM. Teleological reasoning, not acceptance of evolution, impacts students' ability to learn natural selection. *Evolution Education and Outreach*. October 2017. 12 pages. <https://link.springer.com/article/10.1186/s12052-017-0070-6>
47. Jordt H, Eddy SL, Brazil R, Lau I, Mann C, **Brownell SE**, King K, Freeman S. Eliminating the achievement gap in an undergraduate biology class using a values affirmation intervention. *CBE Life Sciences Education*. September 2017. 10 pages. <https://www.lifescied.org/doi/full/10.1187/cbe.16-12-0351>
46. Cooper KM[#], Soneral P, **Brownell SE**. Design your goals before you develop your CURE. A call to use backward design in planning course-based undergraduate research experiences. *Journal of Microbiology and Biology Education*. August 2017. 7 pages. <http://www.asmscience.org/content/journal/jmbe/10.1128/jmbe.v18i2.1287>
45. Shortlidge EE⁺, Bangera G, **Brownell SE**. To each their own CURE: faculty who teach course-based undergraduate research experiences report why you too should teach a CURE. *Journal of Microbiology and Biology Education*. August 2017. 11 pages. <http://www.asmscience.org/content/journal/jmbe/10.1128/jmbe.v18i2.1260>

One of top 10% viewed articles in *Journal of Microbiology and Biology Education* for 2017

44. Cooper KM[#], Ashley M[^], **Brownell SE**. Using expectancy value theory as a framework to reduce student resistance to active learning: a proof of concept. *Journal of Microbiology and Biology Education*. August 2017. 8 pages. <http://www.asmscience.org/content/journal/jmbe/10.1128/jmbe.v18i2.1289>

One of top 10% viewed articles in *Journal of Microbiology and Biology Education* for 2017

43. Ballen CJ, Blum JE, **Brownell SE**, Hebert S, Hewlett J, Klein JR, McDonald EA, Monti DL, Nold SC, Slemmons K, Soneral P, Cotner S. A call to develop course-based undergraduate research experiences (CUREs) for nonmajor courses. *CBE Life Sciences Education*. June 2017. 7 pages. <https://www.lifescied.org/doi/10.1187/cbe.16-12-0352>
42. Schinske J, Balke VL, Bangera G, Bonney KM, **Brownell SE**, Carter RS, Curran-Everett D, Dolan EL, Elliott SL, Fletcher L, Gonzalez B, Gorga JJ, Hewlett JA, Kiser SL, McFarland JL, Misra A, Nenortas A, Ngeve SM, Pape-Lindstrom PA, Seidel SB, Tuthill MC, Yin Y, Corwin LA. Broadening Participation in Biology Education Research (BER): Engaging Community College Students & Faculty. *CBE Life Sciences Education*. June 2017. 11 pages. <https://www.lifescied.org/doi/10.1187/cbe.16-10-0289>
41. Cooper KM[#], Ashley M[^], **Brownell SE**. A Bridge to Active Learning: A Summer Bridge Program Helps Students Maximize Their Active-Learning Experiences and the Active-Learning Experiences of Others. *CBE Life Sciences Education*. March 2017. 14 pages. <https://www.lifescied.org/doi/10.1187/cbe.16-05-0161>

7th most read article in *CBE Life Sciences Education* in the second month it was published

40. Barnes ME[#], Truong J[^], **Brownell SE**. Experiences of Judeo-Christian students in undergraduate biology. *CBE Life Sciences Education*. March 2017. 16 pages. <https://www.lifescied.org/doi/10.1187/cbe.16-04-0153>

Commentary:

S. Leander (2017) Evolution and religion: Finding middle ground in the biology classroom. ASU Now
2nd most read article in CBE Life Sciences Education in the first month it was published

39. Cooper KM[#], Haney B[#], Krieg A[^], **Brownell SE**. What's in a name? The importance of students perceiving an instructor knows their names in a high enrollment biology classroom. CBE Life Sciences Education. March 2017. 13 pages. <https://www.lifescied.org/doi/10.1187/cbe.16-08-0265>

Commentary:

M. Weimer (2017) The Importance of Learning Students' Names. Faculty Focus blog

A. Krieg (2017) What's the Point of Using Student Names in Large Courses? ASU SOLS Teachtch blog

Highlighted in STEM PROF newsletter. I Got a Name: Why It Matters that Instructors Know Student Names

8th most read in CBE Life Sciences Education in the first month it was published

38. Barnes ME[#], Elser J, **Brownell SE**. Impact of a Short Evolution Module on Students' Perceived Conflict between Religion and Evolution. American Biology Teacher. February 2017. 8 pages. <http://abt.ucpress.edu/content/79/2/104>

Commentary:

R. Lloyd (2017) Dissent with Modification: Soothing Evolution–Religion Tensions in the Classroom. Scientific American

R. Lloyd (2017) Scientists Work on Public Trust. Undark blog

M. Puniewska (2017) There's a Strategy to Persuade Climate Change Deniers. Tonic

S. Leander (2017) Evolution and religion: Finding middle ground in the biology classroom. ASU Now

J. Krell (2017) Resolving the conflict between evolution and religion. ASU Center for Evolution and Medicine news

M. Nisbet (2017) Evolution in the college classroom: Facilitating conversations about science and religion. Skeptical Inquirer Magazine.

Interviewed by BBC Science in Action about this article and by Phoenix NPR affiliate KJZZ about this article

Most read article in American Biology Teacher in the first month it was published

2016

37. Shortlidge EE⁺, **Brownell SE**. How to assess your CURE: A practical guide for instructors of course-based undergraduate research experiences. Journal of Microbiology and Biology Education. December 2016. 10 pages. <http://www.asmscience.org/content/journal/jmbe/10.1128/jmbe.v17i3.1103>

Highlighted in the 2017 Spotlight issue of JMBE as an exemplary article

36. Hekmat-Safe D, **Brownell S**, Chandler PS, Malladi S, Imam J, Singla V, Bradon N, Cyert M, Stearns T. Using yeast to determine the functional consequences of mutations in the human p53 tumor suppressor gene: An introductory course-based undergraduate research experience in molecular and cell biology. *Biochemistry and Molecular Biology Education*. November 2016. 18 pages.
<http://onlinelibrary.wiley.com/doi/10.1002/bmb.21024/full>

35. Cooper KM[#], **Brownell SE**. Coming out in class: The challenges and opportunities of active learning for LGBTQIA students in an undergraduate biology class. *CBE Life Sciences Education as part of the Broadening Participation Special Issue*. September 2016. 19 pages. <https://www.lifescied.org/doi/10.1187/cbe.16-01-0074>

Commentary:

S. Leander (2016) 'Coming out' in the classroom, but not by choice. ASU Now news.

T. Pedersen (2016) Interactive Classrooms May Push LGBT Students to "Come Out" Before They Are Ready. PsychCentral

K. Cooper (2016) How Instructors Can Make Their Active Learning Classrooms More Inclusive to Members of the LGBTQIA Community. ASU SOLS Teachtech blog

3rd most read in CBE Life Sciences Education in the first month it was published

34. Hsu J, Wrona A, **Brownell SE**, Khalfan W. Exploration enhances education: single session research-based courses promote undergraduate research involvement and provide teaching opportunities for graduate students and postdocs. *Journal of College Science Teaching*. July/August 2016. 9 pages.
http://media.wix.com/ugd/98a1a0_e471e7e1ce9c4303800c788e3a82fd88.pdf

33. Eddy SL* and **Brownell SE***. Beneath the numbers: A review of gender disparities in undergraduate education across science, technology, engineering, and math disciplines. *Physics Review: Special Topics Physics Education Research: Gender in Physics*. August 2016. 20 pages. (*these authors contributed equally).
<http://journals.aps.org/prper/abstract/10.1103/PhysRevPhysEducRes.12.020106#fulltext>

Commentary:

R. Skibba (2016) Women in physics face big hurdles — still. Nature news

32. Wright CW⁺, Eddy SE, Wenderoth MP, Abshire E, Blankenbiller M, **Brownell SE**. Cognitive difficulty and format of exams predicts gender and socioeconomic gaps in exam performance of students in introductory biology courses. *CBE Life Sciences Education*. June 2016. 16 pages.
<https://www.lifescied.org/doi/10.1187/cbe.15-12-0246>

Highlighted as one of five featured articles from the June 2016 issue of CBE Life Sciences Education

Commentary:

S. Leander (2016) Gender gap discovered in science-exam performance. ASU Now news

M. Benz (2016) Women Underperformed Men in High Level Critical Thinking Examinations. MedicalResearch.com

News staff (2016) Gender gap discovered in science exam performance: test difficulty may be the cause. Science Daily.

J. Marczyk (2016) Sexism, Testing, And "Academic Ability." Psychology Today Pop Psychology blog

6th most read in CBE Life Sciences Education in the first month it was published

31. Barnes ME[#], **Brownell SE**. Practices and Perspectives of College Instructors on Addressing Religious Beliefs When Teaching Evolution. CBE Life Sciences Education. June 2016. 19 pages. <https://www.lifescied.org/doi/10.1187/cbe.15-11-0243>

Commentary:

S. Leander (2016) Evolution and religion: New insight into instructor attitudes in Arizona. ASU Now
Phys.org, Science Daily, Creation Evolution Headlines, Science 2.0, Richard Dawkins Foundation for Reason and Science, and Lutheran Alliance for Faith, Science, and Technology

6th most read in CBE Life Sciences Education in the first month it was published

30. Grunspan DZ*, Eddy SL*, **Brownell SE**, Wiggins B, Crowe AJ, and Goodreau SM. Male millennials overestimate the ability of other males in introductory biology. PloS One. Feb 2016. (*these authors contributed equally). 16 pages. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0148405>

Selected by Science Magazine as an Editor's Choice for Education

Commentary:

The Atlantic, The Washington Post, University of Washington Today News, Inside Higher Education, US News, Huffington Post, Teen Vogue, Jezebel, Bustle, Revelist, Vox, Glamour, Yahoo news, Educational Advisory Board, Headline news, Oxygen, Identities.com, Wonkett, and The Onion.

Article in top 25% of cited articles in PloS One in 2016

~47,000 article views one year after it was published

29. Shortlidge EE⁺, Bangera G, **Brownell SE**. Faculty Perspectives on Developing and Teaching Course-based Undergraduate Research Experiences. BioScience. January 2016. 9 pages. <http://bioscience.oxfordjournals.org/content/early/2015/12/04/biosci.biv167.abstract>

Commentary:

J. Krell (2016) ASU study shows lab courses benefit faculty, as well as students. ASU news.

2015

28. Eddy SL*, **Brownell SE***, Thummaphan P, Lan M, Wenderoth MP. Caution, student experience may vary: Social identities impact a student's experience in peer discussions. CBE Life Sciences Education. December 2015. (*these authors contributed equally). 17 pages. <https://www.lifescied.org/doi/full/10.1187/cbe.15-05-0108>

Highlighted as one of five featured articles from the December 2015 issue of CBE Life Sciences Education

Commentary:

C. Wright (2015) The Impact of Active Learning on Different Genders. ASU SOLS Teachtech blog

27. **Brownell SE**, Hekmat-Scafe DS, Singla V, Seawell PC, Conklin-Imam JF, Eddy SL, Stearns T, and Cyert MS. A high enrollment course-based undergraduate research experience improves student conceptions of scientific thinking and ability to interpret data. CBE Life Sciences Education. June 2015. 14 pages. <https://www.lifescied.org/doi/10.1187/cbe.14-05-0092>

Featured in the 2015 Highlights issue of CBE Life Sciences Education as an exemplar of life sciences education research

Highlighted in the journal Genetics as an Education Highlight

Highlighted on the CUREnet website, a national organization focused on course-based undergraduate research experiences

Highlighted on the University of Wisconsin Madison Educational Innovation website

26. **Brownell SE*** and Kloser MJ*. Toward a conceptual framework for measuring the effectiveness of course-based undergraduate research experiences in undergraduate biology. Studies in Higher Education. March 2015. 22 pages. (*these authors contributed equally). <http://www.tandfonline.com/doi/full/10.1080/03075079.2015.1004234>

Highlighted on CUREnet website, an organization focused on course-based undergraduate research experiences

2014

25. Bangera G* and **Brownell SE***. Course-based undergraduate research experiences can make scientific research more inclusive. CBE Life Sciences Education. December 2014. 5 pages. (*these authors contributed equally). <https://www.lifescied.org/doi/full/10.1187/cbe.14-06-0099>

Highlighted in the journal Genetics as an Education Highlight

Highlighted on American Geophysical Union Blogosphere

Highlighted on PULSE community website. Highlighted on American Society for Cell Biology's Office Hours with EdComm. Highlighted on New Mexico Highlands University Achieving in Research, Math and Science (ARMAS) in Education Center website. Highlighted on Livingston College STEM Undergraduate Program to Promote Opportunities in Research and Training (SUPPORT) website.

Commentary:

Jenna Richter (2015) Course-based undergraduate research experiences can make scientific research more inclusive. Center for Teaching Development, UCSD.

24. Eddy SL*, **Brownell SE***, Wenderoth MP. Gender gaps in achievement and participation in multiple introductory biology classrooms. CBE Life Sciences Education. September 2014. 16 pages. (*these authors contributed equally) <https://www.lifescied.org/doi/full/10.1187/cbe.13-10-0204>

Selected for Science Magazine as an Editor's Choice for Education

Highlighted in a NY Times OpEd on education "Is college lecturing biased?"

Highlighted on PULSE community website

Commentary:

S. Leander (2014) Study shows gender gaps remain in introductory science classrooms. ASU news.

C. Weller (2014) Gender gap in science continues, despite most biology majors being female. Medical Daily.

News staff (2014) How to get women to participate more in biology classes. Science 2.0

Interviewed by ASU Cronkite news about this article

23. **Brownell SE**, Freeman S, Wenderoth MP, Crowe AJ. BioCore Guide: A tool for interpreting the core concepts of Vision and Change. CBE Life Sciences Education. June 2014. 12 pages.

<https://www.lifescied.org/doi/full/10.1187/cbe.13-12-0233>

Highlighted as one of five featured articles for June 2014 issue of CBE Life Sciences Education

Most read in CBE Life Sciences Education in the first month it was published

Highlighted in the Vision and Change: Chronicling Change, Inspiring the Future Report

Highlighted on the websites for the National Science Foundation (NSF), American Institute for Biological Sciences (AIBS), PULSE community, Southeast Regional PULSE (SERP), and Oberlin College's Bio 100 syllabus.

Highlighted in Current Biology news story "Breathing fresh life into life science education"

Commentary:

S Leander (2014) ASU Researcher Leads National Effort to Transform Biology Education. ASU News

22. **Brownell SE**, Wenderoth MP, Theobald R, Okoroafor N, Koval M, Freeman S, Walcher-Chevillet CL, and Crowe AJ. How students think about experimental design: novel conceptions revealed by in-class activities. BioScience. February 2014. 13 pages. <http://bioscience.oxfordjournals.org/content/64/2/125.full>

-----Began faculty position at ASU in in December 2013-----

2013 and earlier

21. **Brownell SE**, Kloser MJ, Fukami T, and Shavelson R. Context matters: volunteer bias, small sample size, and the value of comparison groups in the assessment of research-based undergraduate introductory lab courses. Journal of Microbiology and Biology Education. December 2013.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3867754/>

Highlighted on Biology Scholars Research Residency website

20. **Brownell SE**, Price JV, and Steinman L. Science communication to the general public: Why we need to teach undergraduate and graduate students this skill as part of their formal scientific training. Journal of Undergraduate Neuroscience Education. October 2013.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3852879/>

Commentary:

S.H. Joo (2015) Communicating science to the general public. Student blog assignment for a course at Ryerson University

Forbes article “Study Re-Emphasizes: If You Want To Advance Science, Try Explaining It More Simply”

19. **Brownell SE**, Price JV, and Steinman L. A writing –intensive course improves biology undergraduates’ perception and confidence of their abilities to read scientific literature and communicate science. *Advances in Physiology Education*. March 2013. <http://advan.physiology.org/content/37/1/70>

18. Kloser MJ*, **Brownell SE***, Shavelson R, Fukami T. Effects of a Research-based Ecology Lab Course: A study of nonvolunteer achievement, self-confidence, and perception of lab course purpose. *Journal of College Science Teaching*. January/February 2013. (*these authors contributed equally)
http://media.wix.com/ugd/98a1a0_595a17d8dbaa410a82c888227226b2f4.pdf

17. **Brownell SE**, Khalfan W, Bergmann D, Simoni R. Explorations: A research-based program that provides unique teaching opportunities for graduate students while introducing undergraduates to diverse research topics in biology. *Journal of College Science Teaching*. January/February 2013.
http://media.wix.com/ugd/98a1a0_33b6c7ebc40b440cbc7cea73ca1fb0f2.pdf

16. **Brownell SE**, Tanner KD. Barriers to Faculty Pedagogical Change: Lack of Training, Time, Incentives, and ... Tensions with Professional Identity? *Cell Biology Education- Life Sciences Education (CBE-LSE)*. December 2012. <https://www.lifescied.org/doi/10.1187/cbe.12-09-0163>

4th most cited article in CBE Life Sciences Education out of all articles published since 2004

Finalist for Maryellen Weimer Scholarly Work on Teaching and Learning Award

Featured in 2013 Highlights issue of CBE LSE as an exemplar of life sciences education research

Highlighted as one of five featured articles in December 2012 issue

Highlighted in National Research Council report “Reaching Students”

Highlighted in Current Biology news story “Breathing fresh life into life science education”

Highlighted on PULSE community website and NSF’s WIDER Program Solicitation

Commentary:

C.M. Buddle (2013) How “professional baggage” may be a key barrier in changing how we teach. Personal blog

L. Johnson (2013) Barriers to change? Australian Council of Deans of Science Teaching and Learning Centre

L.A. Moran (2015) Why can’t we teach properly? Personal blog

Anonymous (2015) What is the relationship between teaching and learning? Personal blog

15. **Brownell SE***, Kloser MJ*, Fukami T, Shavelson RJ. Undergraduate biology lab courses: Comparing the impact of traditionally-based 'cookbook' and authentic research- based courses on student lab experiences. Journal of College Science Teaching. March/April 2012. (*these authors contributed equally)
http://media.wix.com/ugd/98a1a0_846ecd5fe8d44a30bd4fe77a34e8bd49.pdf

Commentary:

McClure M (2011) Ditch the cookbook: Stanford's biology pilot project shows benefits from nontraditional lab class. Stanford Report.

Passaelli J (2013) Out of the cookbook and into the field. Stanford Teaching Commons.

14. Kloser MJ*, **Brownell SE***, Chiariello NR, Fukami T. Integrating teaching and research in undergraduate biology laboratory education. PLoS Biology. November 2011. (*these authors contributed equally)
<http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1001174>

Scientific Publications

13. Rothbard JB, Kurnellas MP, Ousman SS, **Brownell S**, Rothbard JJ, Steinman L. Small heat shock proteins, amyloid fibrils, and nicotine stimulate a common immune suppressive pathway with implications for future therapies. Cold Spring Harbor Perspect Med. September 2018.

12. Steinman L, Axtell RC, Barbieri D, Bhat R, **Brownell SE**, de Jong B, Dunn SE, Grant JL, Han MH, Ho PP, Kuipers HF, Kurnellas MP, Ousman SS, Rothbard J. Piet Mondrian's trees and the evolution in understanding multiple sclerosis, Charcot Prize Lecture 2011. Multiple Sclerosis. 2013. Jan 9.

11. **Brownell SE***, Kurnellas MP*, Su L, Malkovskiy AV, Rajadas J, Dolganov G, Chopra S, Schoolnik GK, Sobel RA, Webster J, Ousman SS, Becker RA, Steinman L, Rothbard J. Chaperone activity of small heat shock proteins underlies therapeutic efficacy in experimental autoimmune encephalomyelitis. Journal of Biological Chemistry. 2012. Oct 19. (*these authors contributed equally)

10. Han MH, Lundgren DH, Jaiswal S, Chao M, Graham KL, Garris CS, Axtell RC, Ho PP, Lock CB, Woodard JI, **Brownell SE**, Zoudilova M, Hunt JF, Baranzini SE, Butcher EC, Raine CS, Sobel RA, Han DK, Weissman I, Steinman L. Janus-like opposing roles of CD47 in autoimmune brain inflammation in humans and mice. Journal of Experimental Medicine. 2012. June 25.

9. **Brownell SE**, Becker R, Steinman L. The protective and therapeutic function of small heat shock proteins in neurological diseases. Frontiers in Immunology Review. 2012. May 1.

8. Rothbard J*, Kurnellas M*, **Brownell SE**, Adams C, Su L, Axtell RC, Chen R, Fathman G, Robinson WH, Steinman L. Therapeutic effects of systemic administration of the chaperon alpha B crystallin associated with binding pro-inflammatory plasma proteins. Journal of Biological Chemistry. 2012. Feb 3. (*these authors contributed equally)

7. **Brownell SE***, Arac A*, Rothbard J, Chen C, Ko R, Pereira M, Albers G, Steinman L, Steinberg G. Systemic augmentation of α B crystallin provides therapeutic benefit twelve hours post-stroke onset via immune modulation. Proceeding of the National Academies of Science (PNAS). 2011. July 26. (*these authors contributed equally)

Commentary:

Collins N (2011) Stroke drug could reduce brain damage 12 hours later. The telegraph

Goldman B (2011) Scientists discover potential stroke treatment that may extend time to present brain damage. Inside Stanford Medicine.

6. **Brownell SE** and Conti B. Age and gender-specific changes of hypocretin immunopositive neurons in C57Bl/6 mice. *Neuroscience Letters*. 2010. Feb 1.
5. Osborn O, Sanchez-Alavez M, **Brownell SE**, Ross B, Klaus J, Dubins J, Beutler B, Conti B, and Bartfai T. Metabolic Characterization of a Mouse Deficient in All Known Leptin Receptor Isoforms. *Cell Mol Neurobiol*. 2009. Jul 7.
4. Osborn O, **Brownell SE**, Sanchez-Alavez M, Salomon D, Gram H, and Bartfai T. Treatment with an Interleukin 1 beta antibody improves glycemic control in obesity. *Cytokine*. 2008. Aug 22.
3. Conti B, Tabarean I, Sanchez-Alavez M, Davis C, **Brownell SE**, Behrens M, and Bartfai T. Cytokine receptors in the brain. Chapter in book: *Cytokines and the Brain, Volume 6 (NeuroImmune Biology)*. 2008.
2. Sanchez-Alavez M, Klein I, **Brownell SE**, Tabarean I, Davis CN, Conti B, and Bartfai T. Night eating and obesity in the EP3R-deficient mouse. *Proceedings of the National Academies of Science (PNAS)*. 2007. 104(8): p. 2009-14.

Commentary:

Schrope M (2007) Team discovers a chemical pathway that causes mice to overeat and gain weight. *The Scripps Research Institute News and Views*.

1. Conti B, Sanchez-Alavez M, Winsky-Sommerer R, Morale MC, Lucero J, **Brownell S**, Fabre V, Huitron-Resendiz S, Henriksen S, Zorrilla EP, de Lecea L, Bartfai T. Transgenic mice with a reduced core body temperature have an increased life span. *Science*. 2006. Nov 3; 314 (5800): 825-8.

Commentary:

Pearson H (2006) Cool mice live longer. *Nature News*.

Markey S (2006) "Cooler" mice live longer, study finds. *National Geographic News*.

Submitted and under peer review

Cooper KM⁺⁺, Gin L^{#*}, Akeeh B[^], Clark CE[^], Hunter JS[^], Roderick TB[^], Elliott DB[^], Gutierrez LA[^], Mello RM[^], Pfeiffer LD[^], Scott RA[^], Arellano D[^], Ramirez D[^], Valdez EM[^], Vargas C[^], Velarde K[^], Zheng Y, **Brownell SE**. Leaving research: Factors that influence life sciences undergraduate student persistence in an academic year research experience. Under review at PLOS ONE.

Cooper KM⁺⁺, Blattman JN, Hendrix T[^], **Brownell SE**. The impact of broadly relevant novel discoveries on student project ownership in a traditional lab course turned CURE. Under review at CBE Life Sciences Education.

Book chapter

Cooper KM⁺ and **Brownell SE**. Student anxiety and fear of negative evaluation in active learning science classrooms. In *Active Learning in College Science*. In press.

Curriculum article

Cala J.[#], Cooper KM⁺, **Brownell SE**. Using a Sequential Interpretation of Data in Envelopes (SIDE) approach to identify a mystery TRP channel. CourseSource. September 2018.

Professional Leadership:

Biology Education Research is an applied field with an active group of people and funding agencies that are interested in promoting national transformation of undergraduate biology education.

Discussions and decisions about undergraduate education are almost exclusively done at the national level since other countries have different educational systems. I have been an invited participant to 18 small invite-only working group meetings of national leaders in the field, six of which have resulted in meeting reports/books of the proceedings. These working groups are often establishing national standards and open questions for the field.

- Advisory board member, NSF IUSE grant Longitudinal Study of Early Career Faculty (FIRST IV former postdocs), 2017-present
- Advisory board member, NSF IUSE grant BioSkills: A Roadmap to Institution Transformation of Core Competencies Teaching, 2017-present
- National Science Foundation Grant Proposal Reviewer, TUES, IUSE, RCN-UBE, S-STEM, and CORE, 2013-present
- Invited member for 10-person Advanced Placement (AP) Biology Development Committee (one of only three higher education representatives) that writes and decides the content of the AP Biology exam administered to ~250,000 high school students, 2016-2019
- Inaugural Executive Committee for the Society for the Advancement of Biology Education Research (SABER), core member of initial leadership team for national society, 2018-2019
- Inaugural Steering Committee Member for the Society for the Advancement in Biology Education Research (SABER), helped create a mission statement, set of bylaws, and vision for this national society, 2017-2018
- PALM (Promoting Active Learning & Mentoring) Network Mentor, provided teaching mentorship to biology faculty as part of national network, 2017-2018
- Invited reviewer for National Academies report “Undergraduate Research Experiences for STEM Students: Successes, Challenges, and Opportunities,” 2016
- Invited Scholar-in-Residence at University of Texas at Austin, 2015
- Invited Discussion Leader for Gordon research meeting on Undergraduate Biology Education Research, 2015
- Invited Panelist/committee member for 18 small invite-only national meetings/working groups:
 - 2018 HHMI meeting on introductory biology assessment
 - 2018 Infusing Ethics into CUREs small working group meeting that resulted in a meeting report currently under review at CBE Life Sciences Education
 - 2017 Board on Life Sciences, Evolutionary medicine panel and Introductory biology panel
 - 2017 Unpacking a Movement: Lessons Learned from Vision & Change meeting that resulted in a national report <http://visionandchange.org/files/2018/09/VandC-2018-finrr.pdf>
 - 2017 NSF-funded EMBER (Environments and Metrics in Biology Education and Research) conference on promoting inclusion in undergraduate biology education
 - 2017 National Academies panel for report launch of “Undergraduate Research Experiences for STEM Students: Successes, Challenges, and Opportunities”
 - 2017 NSF-funded STEM Institute for Inclusive Teaching (SIIT) planning committee that planned the curriculum and assessment for a summer institute focused on promoting faculty inclusive teaching practices

- 2016 HHMI Constellation Studio focused on course-based research experiences that resulted in a meeting report
https://www.hhmi.org/sites/default/files/PPDF16_SummaryReport_030917_1.pdf
- 2016 NSF-funded Cognitive Science-Discipline Based Education Research conference
- 2016 NSF-funded Course-based undergraduate research experiences assessment
- 2016 NSF-funded Course-based undergraduate research experiences for non-majors meeting that resulted in a peer-reviewed meeting report in CBE Life Sciences Education
<http://www.lifescied.org/content/16/2/mr2.full>
- 2015 National Academies Convocation on Discovery-based Education that resulted in a National Report “Integrating Discovery-Based Research into the Undergraduate Curriculum: Report of a Convocation” <https://www.nap.edu/catalog/21851/integrating-discovery-based-research-into-the-undergraduate-curriculum-report-of>
- 2015 National Association of Biology Teachers (NABT) NSF-funded meeting on introductory biology
- 2015 NSF-funded Building capacity for community colleges in biology education research that resulted in a peer-reviewed meeting report in CBE Life Sciences Education
<http://www.lifescied.org/content/16/2/mr1.full>
- 2014-2015 Gates Foundation-funded Social Science Research Council project on assessment in undergraduate biology that resulted in a book “Improving Quality in American Higher Education”
- 2014 HHMI course-based research experiences (CRE) assessment meeting
- 2014 NSF-funded Faculty Developers Network meeting
- 2014 NSF-funded Conceptual Assessments in Biology (CAB) meeting

Presentations:

262 total presentations. I have been invited to give 76 talks/keynotes at national conferences or seminars at institutions, 38 peer-reviewed presentations at meetings, and 149 of these presentations are by my trainees (postdoctoral scholars, graduate students, or undergraduates) on our collaborative work.

76 invited talks/keynotes at national conferences or seminars at institutions:

- | | |
|------|--|
| 2019 | University of Münster Institute for Evolution departmental workshop “Spotting sources of bias: How to make your teaching and mentoring more inclusive of all students,” Münster Germany, June 2019. |
| 2019 | University of Münster Institute for Evolution departmental workshop “How to measure whether you are effective at teaching evolution,” Münster Germany, June 2019. |
| 2019 | University of Münster Institute for Evolution symposium keynote seminar, “From conflict to common ground: Introducing religious cultural competence in evolution education,” Münster Germany, May 2019. |
| 2019 | Texas A&M University Transformational Teaching and Learning Conference plenary talk, “Towards more inclusive active learning classrooms: How groups of students are differentially impacted by active learning,” College Station TX, May 2019. |
| 2019 | University of British Columbia Biology seminar, “Hidden inequities in active learning classrooms: How groups of students are differentially impacted by active learning,” Vancouver Canada, February 2019. |

- 2019 Simon Fraser University Biology department seminar, “Benefits associated with integrating teaching and research in course-based undergraduate research experiences,” Vancouver Canada, February 2019.
- 2019 Boise State Center for Teaching and Learning workshop, “Course-based undergraduate research experiences: What, Why, and How?,” Boise ID, January 2019.
- 2019 Boise State Biology Department seminar, “Benefits associated with integrating teaching and research in course-based undergraduate research experiences,” Boise ID, January 2019.
- 2019 Kentucky Wesleyan College Center for Engaged Teaching and Learning Faculty Retreat keynote, “Course-based undergraduate research experiences: What, Why, and How?,” Owensboro KY, January 2019.
- 2018 Stanford University Graduate School of Education Colloquium, “Revealing hidden inequities in undergraduate biology classrooms,” Stanford CA, November 2018.
- 2018 University of California (UC) STEM Faculty Learning Community at UC Santa Barbara plenary talk, “Exploring the experiences of students with covert social identities in active learning classrooms,” Santa Barbara CA, November 2018.
- 2018 National Association for Biology Teachers talk for national biology education research award, “A call to use cultural competence in evolution education,” San Diego CA, November 2018.
- 2018 Zombie Apocalypse Medicine Meeting talk, “Culturally competent evolution education,” Tempe AZ, October 2018.
- 2018 Brown University, Sheridan Center for Teaching and Learning HHMI-funded seminar, “Hidden gender inequities in undergraduate science courses,” Providence RI, October 2018.
- 2018 Brown University Sheridan Center for Teaching and Learning HHMI-funded seminar, “How do I design and assess a CURE?,” Providence RI, October 2018.
- 2018 Purdue University Biology Department seminar, “From conflict to common ground: Introducing religious cultural competence in evolution education,” West Lafayette IN, September 2018.
- 2018 Michigan State University Plant Biology Department seminar, “Hidden inequities in undergraduate science classrooms – from exams to instructor humor,” East Lansing MI, September 2018.
- 2018 American Association of Physics Teachers invited talk, “Exploring the influence of covert identities in active learning classrooms,” Washington DC, July 2018.
- 2018 University of La Verne Keck-foundation sponsored workshop, “Building inclusive and fair classrooms: Spotting sources of bias in undergraduate classrooms,” Pomona CA, June 2018.
- 2018 University of La Verne Keck-foundation sponsored workshop, “Assessment of courses that integrate teaching and research,” Pomona CA, June 2018.

- 2018 American Society for Microbiology Microbe Symposium on Growing Your Data and Reaching More Students through Course-Based Research Experiences invited talk, “Balancing pedagogical and research goals in the context of a course-based undergraduate research experience,” Atlanta GA, June 2018.
- 2018 Title V Cooperative Project between the UPR-MSU and Universidad Central del Caribe (UCC) plenary talk, “How to communicate science to a non-scientist,” San Juan, Puerto Rico, May 2018.
- 2018 University of Alabama Birmingham Biology Department seminar, “From conflict to common ground: Introducing religious cultural competence in evolution education,” Birmingham AL, April 2018.
- 2018 American Anthropological Association (AAPA) invited talk, “Religious cultural competence in evolution education (ReCCEE),” Austin TX, April 2018.
- 2018 University of Minnesota Biology Teaching and Learning Department seminar, “From conflict to common ground: A call for religious cultural competence in evolution education,” Minneapolis MN, March 2018.
- 2018 James Madison University College of Science and Mathematics seminar, “Opportunities and tensions associated with integrating teaching and research in undergraduate lab courses,” Harrisonburg VA, March 2018.
- 2018 James Madison University College of Science and Mathematics public lecture, “Student identity, equity, and inclusion in STEM active learning classrooms,” Harrisonburg VA, March 2018.
- 2018 CUR (Council on Undergraduate Research) Dialogues plenary talk, “A sense of mission: Assessment of courses that integrate teaching and research,” Washington DC, February 2018.
- 2018 Florida International University Biology Department seminar, “From conflict to common ground: Introducing religious cultural competence in evolution education,” Miami FL, January 2018.
- 2017 Brigham Young University Biology Department seminar, “From conflict to common ground: Introducing religious cultural competence in evolution education,” Provo UT, October 2017.
- 2017 Gordon Conference on Undergraduate Biology Education invited talk, “Who gets to participate in undergraduate research and how course-based undergraduate research experiences can make scientific research more inclusive,” Easton MA, July 2017.
- 2017 European Molecular Biology Laboratory Equality and Diversity Committee’s Inspirational Seminar, “Building inclusive and fair classrooms: Spotting sources of bias in biology classrooms,” Heidelberg Germany, July 2017.
- 2017 University of Heidelberg Center for Organismal Studies seminar, “Hidden inequities in the classroom: Using data to uncover differential impacts on students in active learning classrooms,” Heidelberg Germany, July 2017.

- 2017 Society of Experimental Biology international meeting invited talk, “Opportunities associated with course-based undergraduate research experiences (CUREs),” Gothenburg Sweden, June 2017.
- 2017 POGIL (Process-oriented Guided Inquiry Learning) national meeting plenary, “Hidden inequities in active learning classrooms: How groups of students are differentially impacted by active learning,” St Louis MO, June 2017.
- 2017 University of Tennessee Knoxville Department of Ecology and Evolutionary Biology seminar, “Hidden inequities in active learning classrooms: How groups of students are differentially impacted by active learning,” Knoxville TN, March 2017.
- 2017 University of Cincinnati STEM Education seminar, “Opportunities and tension points associated with course-based undergraduate research experiences,” Cincinnati OH, March 2017.
- 2017 University of Cincinnati STEM Education seminar, “Hidden inequities in active learning classrooms: How groups of students are differentially impacted by active learning,” Cincinnati OH, March 2017.
- 2017 University of Georgia Genetics Department seminar, “Hidden inequities in active learning classrooms: How groups of students are differentially impacted by active learning,” Athens GA, March 2017.
- 2017 Rochester Institute of Technology (RIT) Science and Mathematics Education Research Collaborative seminar, “Hidden inequities in active learning classrooms: How groups of students are differentially impacted by active learning,” Rochester NY, March 2017.
- 2017 Biology Leadership Conference (BLC) invited talk, “Opportunities associated with course-based undergraduate research experiences (CUREs),” Tucson AZ, February 2017.
- 2017 Society for the Advancement of Biology Education Research (SABER) West coast regional meeting invited talk, “How to assess your course-based undergraduate research experience (CURE),” Irvine CA, January 2017.
- 2016 San Francisco State University Department of Biology seminar, “Hidden inequities in active learning classrooms: How groups of students are differentially impacted by active learning,” December 2016.
- 2016 Stanford University Department of Biology and Center for Teaching and Learning seminar, “Hidden inequities in active learning classrooms: How groups of students are differentially impacted by active learning,” December 2016.
- 2016 Stanford University Department of Biology and Center for Teaching and Learning seminar, “Opportunities and tension points associated with course-based undergraduate research experiences,” December 2016.
- 2016 Community College Undergraduate Research Initiative (CCURI) national meeting invited talk, “Assessment of course-based undergraduate research experiences,” Glendale AZ, November 2016.

- 2016 HHMI constellation studio on implementing course-based research experiences at scale plenary, “Assessment of course-based undergraduate research experiences,” Chevy Chase MD, November 2016.
- 2016 Arizona State University West Campus School of Mathematical & Natural Sciences seminar, “Hidden inequities in active learning classrooms: How groups of students are differentially impacted by active learning,” Glendale AZ, September 2016.
- 2016 Arizona State University Tempe Campus Evidence-based teaching in STEM seminar, “Hidden inequities in active learning classrooms: How groups of students are differentially impacted by active learning,” Tempe AZ, September 2016.
- 2016 American Society for Microbiology Conference on Undergraduate Education invited talk, “How to assess your course-based undergraduate research experience,” Bethesda MD, July 2016.
- 2016 American Society for Microbiology Conference on Undergraduate Education invited talk, “Opportunities and tension points associated with integrating teaching and research in undergraduate biology lab courses,” Bethesda MD, July 2016.
- 2016 American Society for Microbiology Conference on Undergraduate Education invited talk, “So you transformed your class to active learning – How do you assess the impact of active learning on students?,” Bethesda MD, July 2016.
- 2016 Society for the Advancement in Biology Education Research plenary (long) talk, “Opportunities and tension points associated with course-based undergraduate research experiences,” Minneapolis MN, July 2016.
- 2016 Course-based Undergraduate Research Experience Summer Institute plenary talk, “Course-based undergraduate research experiences: What, why, and how?,” Austin TX, June 2016.
- 2016 American Society for Microbiology Microbe as part of a symposium Developing the Next Gen Scientist: The Role of Course Based Research in the Undergraduate Curriculum invited talk, “Faculty perspectives on course-based undergraduate research experiences,” Boston MA, June 2016.
- 2016 Maricopa Community College Institute for Learning Research seminar, “An overview of biology education research,” Phoenix AZ, April 2016.
- 2016 Portland State University Department of Biology seminar, “Hidden inequities in active learning classrooms: How groups of students are differentially impacted by active learning,” Portland OR, April 2016.
- 2015 University of California San Diego Science of Teaching seminar, “Integrating teaching and research in undergraduate biology lab courses,” La Jolla CA, December 2015.
- 2015 University of Washington Department of Biology seminar, “Integrating teaching and research in undergraduate biology lab courses,” Seattle WA, November 2015.

- 2015 Course-based Undergraduate Research Experience Summer Institute plenary talk, “Opportunities associated with course-based undergraduate research experiences,” Austin TX, June 2015.
- 2015 University of Texas Austin Freshman Research Initiative (FRI) seminar, “Promoting equity in undergraduate biology lab courses,” Austin TX, June 2015.
- 2015 Midwest Great Plains PULSE regional meeting plenary talk, “Navigating from Vision to Change: Tools to help biology departments align curriculum with the core concepts of biology,” St. Louis MO, June 2015.
- 2015 The Ohio State University Center for Life Science Education seminar, “Integrating teaching and research in undergraduate biology lab courses,” Columbus OH, March 2015.
- 2015 The Ohio State University Center for Life Science Education seminar, “BioCore Guide: A tool to interpret the core concepts of Vision and Change for general biology majors,” Columbus OH, March 2015.
- 2014 University of Minnesota College of Biological Sciences seminar, “From traditional lectures to active learning: Persistent gender differences in large introductory biology classrooms,” November 2014.
- 2014 Botanical Society national meeting Vision and Change symposium invited talk, “Integrating teaching and research in undergraduate biology lab courses,” Boise ID, July 2014.
- 2014 Southeast Regional PULSE Institute invited talk, “Course-based undergraduate research experiences (CUREs): Definition, outcomes, and assessment,” Richmond VA, June 2014.
- 2014 Southeast Regional PULSE Institute plenary talk, “Professional identity as a barrier to faculty pedagogical change,” Richmond VA, June 2014.
- 2014 Course-based Undergraduate Research Experiences Network (CUREnet) meeting invited talk, “Course-based undergraduate research experiences (CURE) assessment methods,” Cold Spring Harbor NY, April 2014.
- 2014 ASU Active Learning Symposium, “From traditional lectures to active learning: Persistent gender differences in large introductory biology classrooms,” Tempe AZ, March 2014.
- 2013 Willamette University iScience conference invited talk, “Navigating from Vision to Change: Development of a framework for core concepts in biology for graduating biology majors,” November 2013.
- 2013 Stanford Graduate School of Education Science Education Group invited talk, “Barriers to faculty pedagogical change,” March 2013.
- 2013 Arizona State University School of Life Sciences invited talk, “How undergraduate biology students come to think like a biologist: insights gained from research-based lab courses,” March 2013.
- 2013 Drexel University Department of Biology invited talk, “How undergraduate biology students come to think like a biologist: insights gained from research-based lab courses,” March 2013.

2013 University of Northern Colorado School of Biological Sciences invited talk, “How undergraduate biology students come to think like a biologist: insights gained from research-based lab courses,” February 2013.

2013 University of Georgia Division of Biological Sciences invited talk, “How undergraduate biology students come to think like a biologist: insights gained from research-based lab courses,” February 2013.

38 peer-reviewed invited presentations at the following meetings where I was primary presenter:

2019 Society for the Advancement of Biology Education Research (poster), “Testing Religious Cultural Competence in Evolution Education Nationwide,” Minneapolis MN, July 2019.

2019 International conference on underpinnings, requirements, and effects of undergraduate research experiences (poster), “The impact of broadly relevant novel discoveries on student project ownership in a traditional lab course turned CURE by using a mutant strain of mice”, Stuttgart Germany, June 2019.

2019 Society for Personality and Social Psychology national meeting (poster), “Exploring anxiety in large-enrollment active learning undergraduate classrooms,” Portland OR, February 2019.

2018 American Society for Cell Biology meeting (poster), “Same curriculum, different mice, different student outcomes: A comparison of a traditional lab course and a course-based undergraduate research experience,” San Diego CA, December 2018.

2018 American Society for Cell Biology meeting (talk), “Identifying the unwritten rules of undergraduate research,” San Diego CA, December 2018.

2018 Pixel International Future of Education meeting (talk), “Building inclusive and fair classrooms: spotting sources of bias in undergraduate classrooms,” Florence Italy, June 2018.

2018 International Society of Learning Sciences meeting (talk/poster), “Exploring the impact of different types of instructor generated videos on student learning in a university physiology course,” London England, June 2018.

2018 Experimental Biology (poster), “A comparison of instructor-generated videos of either an instructor alone or an instructor and a student: Student performance, attitudes, and preferences,” San Diego CA, April 2018.

2018 American Educational Research Association (AERA) (talk), “Religiosity and acceptance of evolution predict career choices among college biology students,” New York NY, April 2018.

2018 Society for the Advancement of Biology Education Research (SABER) West coast regional meeting (poster), “Identifying the unwritten rules of obtaining undergraduate research experiences,” Irvine CA, January 2018.

2017 Society for the Advancement of Biology Education Research (poster), “Who perceives they’re smarter? Exploring the influence of gender, transfer student status, and native English speaking on student academic self-concept in physiology,” Minneapolis MN, July 2017.

- 2017 Higher Education Teaching and Learning (HETL) Conference on Creating Inclusion and Diversity in Higher Education (talk), “Hidden inequities in active learning classrooms: How groups of students are differentially impacted by active learning,” Paisley, Scotland, June 2017.
- 2017 National Association for Research in Science Teaching (NARST) (talk), “Instructional practices of evolution instructors at Christian universities,” San Antonio TX, April 2017.
- 2017 National Association for Research in Science Teaching (NARST) (interactive poster symposium Biology Education Research (BER) at NARST), “Coming out in Life (Sciences): LGBTQIA faculty experiences in Biology,” San Antonio TX, April 2017.
- 2017 American Association for the Advancement in Science (AAAS) (talk), “How can we teach evolution to religious students who may be resistant?” Boston MA, February 2017.
- 2017 Biology Leadership Conference (BLC) (poster), “What’s in a name? The importance of student perceptions of an instructor knowing their names in a high enrollment biology course,” Tucson AZ, February 2017.
- 2017 Society for the Advancement of Biology Education Research (SABER) West coast regional meeting (talk), “BioCore Guide: A tool to interpret the core concepts of Vision and Change for general biology majors,” Irvine CA, January 2017.
- 2017 Society for the Advancement of Biology Education Research (SABER) West coast regional meeting (workshop), “Building inclusive and fair classrooms: Spotting sources of bias in biology classrooms,” Irvine CA, January 2017.
- 2016 American Society for Cell Biology (poster), “Coming out in class: The challenges and opportunities of active learning for LGBTQIA students in an undergraduate biology class,” San Francisco CA, December 2016.
- 2016 American Society for Microbiology Conference on Undergraduate Education (poster), “A bridge to active learning: A summer bridge program helps students to maximize active learning experiences and the active learning experiences of others,” Bethesda MA, July 2016.
- 2016 Experimental Biology (poster), “Navigating from Vision to Change: Tools to help biology departments align curriculum with the core concepts of biology,” San Diego CA, April 2016.
- 2015 American Society for Cell Biology national meeting (talk), “The development and validation of tools to help biology departments navigate from Vision to Change,” San Diego CA, December 2015.
- 2015 Association for American Colleges and Universities national STEM Education meeting (talk), “Align your curriculum to Vision and Change using the BioCore Guide and BioMaps programmatic assessment,” Seattle WA, November 2015.
- 2015 Gordon Research Conference: Undergraduate Biology Education Research (poster), “A high enrollment course-based undergraduate research experience improves student conceptions of scientific thinking,” Lewiston ME, July 2015.
- 2014 Life Discovery Science Meeting (talk), “BioCore Guide: A tool for interpreting the core concepts of Vision and Change,” San Jose CA, October 2014.

- 2014 Society for the Advancement in Biology Education Research (SABER) national meeting (talk), "BioCore Guide: A tool to interpret the core concepts of Vision and Change for general biology majors," Minneapolis MN, July 2014.
- 2014 Experimental Biology national meeting (talk), "Building a learning progression of undergraduate students' conceptions of two important aspects of experimental design: sample size and repetition of experiments," San Diego CA, April 2014.
- 2014 Experimental Biology national meeting (poster), "BioCore Guide: an interpretation of the core concepts of vision and change for general biology majors San Diego CA," April 2014.
- 2014 Course-based Undergraduate Research Experiences Network (CUREnet) national meeting (workshop), "Faculty perspectives on developing course-based undergraduate research experiences," Cold Spring Harbor Labs NY, April 2014.
- 2013 Vision and Change: Chronicling Change Meeting (poster), "Navigating from Vision to Change: Curriculum assessment in University of Washington's Department of Biology," Washington DC, August 2013.
- 2013 American Society for Biochemistry and Molecular Biology: Student-centered Education in the Molecular Life Sciences Meeting (poster), "Navigating from Vision to Change: Curriculum assessment in University of Washington's Department of Biology," Seattle WA, July 2013.
- 2013 Society for the Advancement of Biology Education Research (SABER) Meeting (talk), "In-class activities on experimental design reveal undergraduate students' conceptions of sample size and repetition of experiments," Minneapolis MN, July 2013.
- 2013 Society for the Advancement of Biology Education Research (SABER) Meeting (poster), "Navigating from Vision to Change: Curriculum assessment in University of Washington's Department of Biology," Minneapolis MN, July 2013.
- 2012 American Society for Cell Biology (ASCB) Meeting (poster), "Integrating teaching and research in a research-based introductory biology laboratory curriculum: results of a three-year comparison evaluation," San Francisco CA, December 2012.
- 2012 Society for the Advancement of Biology Education Research (SABER) Meeting (poster), "The impact of a writing-intensive course on developing undergraduate science students' abilities to read primary scientific papers and communicate science," Minneapolis MN, July 2012.
- 2012 American Society for Microbiology Conference for Undergraduate Educators Meeting (poster), "Integrating teaching and research in a research-based introductory biology laboratory curriculum: results of a three-year comparison evaluation," San Mateo CA, June 2012.
- 2011 Society for the Advancement of Biology Education Research (SABER) Meeting (poster), "Integrating teaching and research in an inquiry-based curriculum positively impacts student attitudes towards research," Minneapolis MN, July 2011.
- 2011 National Science Teacher's Association (NSTA) Meeting (talk), "Exploring the impact of cookbook and authentic research-based undergraduate biology lab courses," San Francisco CA, March 2011.

149 peer-reviewed invited presentations with a trainee as a primary presenter at the following venues:

- 2019 Society for the Advancement of Biology Education Research (talk), “The impact of student research anxiety on undergraduate biology students’ intentions to pursue a scientific research career,” Katey Cooper, Minneapolis MN, July 2019.
- 2019 Society for the Advancement of Biology Education Research (poster), “Fear of negative evaluation: A novel construct underlying student anxiety in active learning college science courses,” Katey Cooper, Minneapolis MN, July 2019.
- 2019 Society for the Advancement of Biology Education Research (talk), “Diagnosing differences in what undergraduates in a fully online and in an in-person biology degree program know and do regarding medical school admission,” Logan Gin, Minneapolis MN, July 2019.
- 2019 Society for the Advancement of Biology Education Research (poster), “Leaving Research: Factors that impact a student leaving an academic year research experience,” Logan Gin, Minneapolis MN, July 2019.
- 2019 Society for the Advancement of Biology Education Research (talk), “Testing the Effect of Human Examples When Teaching Evolution,” Dan Grunspan, Minneapolis MN, July 2019.
- 2019 Society for the Advancement of Biology Education Research (poster), “Different evolution acceptance instruments lead to different research findings,” Hayley Dunlop, Minneapolis MN, July 2019.
- 2019 International Research Network for the Study of Science and Belief in Society (talk), “Religious Students' Definitions of Evolution Predict their Acceptance,” Liz Barnes, Birmingham England, July 2019.
- 2019 Undergraduate Biology Education Research Gordon Research Conference (poster), “Fear of negative evaluation: A novel construct underlying student anxiety in active learning college science courses,” Katey Cooper, Lewiston ME, June 2019.
- 2019 Undergraduate Biology Education Research Gordon Research Conference (poster), “Leaving Research: Factors that impact a student leaving an academic year research experience,” Logan Gin, Lewiston ME, June 2019.
- 2019 Undergraduate Biology Education Research Gordon Research Seminar (talk), “Learning from a Discipline-Based Education Research Course-based Research Experience: The impact of research anxiety on biology undergraduates' intentions to pursue a science research career,” Katey Cooper, Lewiston ME, June 2019.
- 2019 Undergraduate Biology Education Research Gordon Research Seminar (poster), “Diagnosing differences in what undergraduates in a fully online and in an in-person biology degree program know and do regarding medical school admission,” Logan Gin, Lewiston ME, June 2019.
- 2019 International conference on underpinnings, requirements, and effects of undergraduate research experiences (poster), “Leaving Research: Factors that impact a student leaving an academic year research experience”, Katey Cooper, Stuttgart Germany, June 2019.

- 2019 ASU Undergraduate Research Symposium (poster), “Different evolution acceptance instruments lead to different research findings,” Hayley Dunlop, Tempe AZ, March 2019.
- 2019 University of Central Florida invited presentation (talk), “Religious cultural competence in evolution education (ReCCEE),” Liz Barnes, Orlando FL, March 2019.
- 2019 University of Central Florida invited presentation (talk), “Gender differences in student perception of intelligence and cultural evolutionary perspectives on faculty pedagogical practice,” Dan Grunspan, Orlando FL, March 2019.
- 2019 University of Central Florida invited presentation (talk), “Creating more inclusive large-enrollment active learning undergraduate biology classrooms,” Katey Cooper, Orlando FL, March 2019.
- 2019 California State University, Sacramento invited presentation (talk), Religious cultural competence in evolution education (ReCCEE),” Liz Barnes, Sacramento CA, March 2019.
- 2019 University of Guelph invited presentation (talk), Gender differences in student perception of intelligence and cultural evolutionary perspectives on faculty pedagogical practice,” Dan Grunspan, Guelph Ontario Canada, March 2019.
- 2019 American Association for the Advancement in Science (AAAS) national meeting (poster), “Different Instruments Measuring Evolution Acceptance Lead to Varied Research Results,” Hayley Dunlop, Washington DC, February 2019.
- 2019 ASU Teacher’s College Education Research Conference (poster), “Online with Career Goals? Exploring student decisions to enroll in online biology degree programs and lab courses,” Logan Gin, Tempe AZ, February 2019.
- 2019 UC Merced invited presentation (talk), “Religious cultural competence in evolution education (ReCCEE),” Liz Barnes, Merced CA, February 2019.
- 2019 ASU Diversity and Inclusion Science Initiative (DISI) (talk), “Maximizing inclusion and questioning excellence: Are online biology degree programs a way to promote inclusive excellence in undergraduate education?,” Logan Gin, Tempe AZ, February 2019.
- 2019 Society for Personality and Social Psychology (SPSP) national meeting (poster), “Exploring the impact of student religiosity on faculty perceptions of competence, hireability, and likeability of potential Ph.D. students in Biology,” Liz Barnes, Portland OR, February 2019.
- 2019 Society for the Advancement of Biology Education Research West coast meeting (talk), “Religious students’ definitions of evolution predict their acceptance,” Hayley Dunlop and Liz Barnes, Irvine CA, January 2019.
- 2019 Society for the Advancement of Biology Education Research West coast meeting (poster), “Exploring the impact of student religiosity on faculty perceptions of competence, hireability, and likeability of potential Ph.D. students in Biology,” Liz Barnes, Irvine CA, January 2019.

- 2019 Society for the Advancement of Biology Education Research West coast meeting (poster), "Leaving research: factors that impact a student learning an academic year research experience," Katey Cooper, Irvine CA, January 2019.
- 2019 Society for the Advancement of Biology Education Research West coast meeting (poster), "Factors influencing instructor preferences for how they want students to address them," Jacquie Cala, Irvine CA, January 2019.
- 2019 Society for the Advancement of Biology Education Research West coast meeting (talk), "Documenting the unwritten rules of undergraduate research in biology at a large, public research intensive university," Jacquie Cala and Katey Cooper, Irvine CA, January 2019.
- 2019 Society for the Advancement of Biology Education Research West coast meeting (poster), "Different Evolution Acceptance Instruments Lead to Different Research Results," Hayley Dunlop, Irvine CA, January 2019.
- 2019 Western Michigan University invited presentation (talk), "Toward more inclusive undergraduate active learning classrooms", Katelyn Cooper, Kalamazoo MI, January 2019
- 2019 Idaho State University invited presentation (talk), "Gender differences in student perception of intelligence and cultural evolutionary perspectives on faculty pedagogical practice", Dan Grunspan, Pocatello ID, January 2019.
- 2018 American Society for Cell Biology (poster), "The influence of active learning practices on student anxiety in large-enrollment college science classrooms," Katey Cooper, San Diego CA, December 2018.
- 2018 American Society for Cell Biology (poster), "Gender differences in student perceptions of instructor humor in college science courses," Katey Cooper, San Diego CA, December 2018.
- 2018 Cultural Evolution Society Conference (talk), "The Lecture Machine: A cultural evolutionary model of pedagogy in higher education," Dan Grunspan, Tempe AZ, October 2018.
- 2018 Fresno State University invited presentation (talk), "Religious Cultural Competence in Evolution Education, Liz Barnes, Fresno CA, October 2018.
- 2018 Joint Conference on Evolutionary Biology (poster), "Core principles of evolutionary medicine," Dan Grunspan, Montpellier France, August 2018.
- 2018 International Society for Evolution, Medicine, and Public Health (talk), "The state of evolutionary medicine in undergraduate education at American universities," Dan Grunspan, Park City Utah, August 2018.
- 2018 Society for the Advancement of Biology Education Research (poster), "How should I be addressed? Factors influencing instructor preferences for how they want students to address them," Jacquie Cala, Minneapolis MN, July 2018.
- 2018 Society for the Advancement of Biology Education Research (talk), "Explaining the dearth of African American students in evolutionary biology as a function of religiosity," Liz Barnes, Minneapolis MN, July 2018.

- 2018 Society for the Advancement of Biology Education Research (poster), “A course-embedded comparison of instructor-generated videos of either an instructor alone or an instructor and a student,” Katey Cooper, Minneapolis MN, July 2018.
- 2018 Society for the Advancement of Biology Education Research (poster), “To be funny or not to be funny: Gender differences in student perceptions of instructor humor in college science courses,” Katey Cooper, Minneapolis MN, July 2018.
- 2018 Society for the Advancement of Biology Education Research (poster), “Core Principles of Evolutionary Medicine,” Dan Grunspan, Minneapolis MN, July 2018.
- 2018 Society for the Advancement of Biology Education Research (poster), “Coming out to the class: Identifying factors that influence college biology instructor decisions about whether to reveal their LGBTQIA identity in class,” Katey Cooper, Minneapolis MN, July 2018.
- 2018 Society for the Advancement of Biology Education Research (poster), “Exploring the impact of student religiosity on faculty perceptions of competence, hireability, and likeability of potential PhD students in biology,” Liz Barnes, Minneapolis MN, July 2018.
- 2018 Society for the Advancement of Biology Education Research (poster), “Atheistic definitions of acceptance of evolution exacerbate rejection of evolution among religious students,” Hayley Dunlop, Minneapolis MN, July 2018.
- 2018 Society for the Advancement of Biology Education Research (poster), “Pedagogical change in academia: A cultural evolutionary model,” Dan Grunspan, Minneapolis MN, July 2018.
- 2018 Society for the Advancement of Biology Education Research (poster), “Online with career goals? Exploring student decisions to enroll in online biology degree programs and online lab courses,” Logan Gin and Evan Brus, Minneapolis MN, July 2018.
- 2018 Pixel International Future of Education meeting (talk), “Comparison of an immunology cookbook lab course and a course-based undergraduate research experience,” Katey Cooper, Florence, Italy, June 2018.
- 2018 Experimental Biology (poster), “How do astrophysicists organize a party? Their wives planet: Gender differences in student perceptions of instructor humor in college science classrooms,” Taija Hendrix, San Diego CA, April 2018.
- 2018 Experimental Biology (poster), “LEAP into Research: A program to help transfer students get involved in research,” Katey Cooper, San Diego CA, April 2018.
- 2018 Experimental Biology (poster), “Evidence-based resources for evolutionary medicine,” Michelle Stephens, San Diego CA, April 2018.
- 2018 Experimental Biology (poster), “Who perceives they’re smarter? Exploring the influence of gender, transfer student status, and native English speaking on student academic self-concept in physiology,” Katey Cooper, San Diego CA, April 2018.
- 2018 ASU Undergraduate Research Symposium (poster), “How do astrophysicists organize a party? Their wives planet: Gender differences in student perceptions of instructor humor in college science classrooms,” Taija Hendrix, Tempe AZ, April 2018.

- 2018 ASU Undergraduate Research Symposium (poster), “Can a six-minute introduction to an evolution module reduce students’ level of perceived conflict between evolution and religion?,” Jasmine Truong, Tempe AZ, April 2018.
- 2018 ASU Undergraduate Research Symposium (poster), “The survey matters: instructors using different surveys to measure acceptance of evolution may be reaching different conclusions about their students,” Hayley Dunlop, Tempe AZ, April 2018.
- 2018 American Educational Research Association (AERA) (talk), “Atheistic definitions of evolution exacerbate rejection of evolution among religious students,” Liz Barnes, New York NY, April 2018.
- 2018 ASU Diversity and Inclusion Science Initiative (talk), “From conflict to common ground: A call to use cultural competence in evolution education,” Liz Barnes, Tempe, AZ, February 2018.
- 2018 ASU Diversity and Inclusion Science Initiative (talk), “Student characteristics that influence academic self-concept,” Katey Cooper, Tempe, AZ, February 2018.
- 2018 ASU Diversity and Inclusion Science Initiative (talk), “To be funny or not to be funny: Student perceptions of instructor use of humor in college science classrooms,” Katey Cooper and Taija Hendrix, Tempe, AZ, February 2018.
- 2018 ASU Diversity and Inclusion Science Initiative (talk), “Learning anxiously: How to make active learning less anxiety-inducing,” Katey Cooper and Virginia Downing, Tempe, AZ, February 2018.
- 2018 ASU Diversity and Inclusion Science Initiative (poster), “The unwritten rules of undergraduate research,” Katey Cooper, Tempe, AZ, February 2018.
- 2018 Society for the Advancement of Biology Education Research West coast meeting (talk), “To be funny or not to be funny: Student perceptions of instructor use of humor in college science classrooms,” Katey Cooper and Taija Hendrix, Irvine CA, January 2018.
- 2018 Society for the Advancement of Biology Education Research West coast meeting (talk), “Using Cultural Competence to Improve the Experiences of Religious Students in Biology Classes,” Jasmine Truong, Irvine CA, January 2018.
- 2018 Society for the Advancement of Biology Education Research West coast meeting (talk), “Cultural Evolution of Pedagogy: a Conceptual Model,” Dan Grunspan, Irvine CA, January 2018.
- 2018 Society for the Advancement of Biology Education Research West coast meeting (poster), “Same curriculum, different mice, different outcomes: A reductionist approach to probing the impact of working on broadly relevant novel research,” Katey Cooper and Taija Hendrix, Irvine CA, January 2018.
- 2018 Society for the Advancement of Biology Education Research West coast meeting (poster), “Atheistic Definitions of Acceptance of Evolution Exacerbate Rejection of Evolution among Religious Students,” Hayley Dunlop, Irvine CA, January 2018.

- 2018 Society for the Advancement of Biology Education Research West coast meeting (poster), "Learning anxiously: Alleviating and exacerbating student anxiety in active learning classrooms," Katey Cooper, Irvine CA, January 2018.
- 2018 Society for the Advancement of Biology Education Research West coast meeting (poster), "Have Disability Resources Centers Evolved to Accommodate Active Learning?," Logan Gin, Irvine CA, January 2018.
- 2017 International Society for Evolution, Medicine, & Public Health meeting (poster), "A call to use cultural competence when teaching evolution to religious undergraduate students: Introducing Religious Cultural Competence in Evolution Education (ReCCEE)," Liz Barnes, Groningen Netherlands, August 2017.
- 2017 International Society for Evolution, Medicine, & Public Health meeting (talk), "Identifying Evolutionary Medicine Core Principles," Dan Grunspan, Groningen Netherlands, August 2017.
- 2017 Society for the Advancement of Biology Education Research (talk), "Towards more inclusive evolution education: a call to use cultural competence when teaching evolution," Liz Barnes, Minneapolis MN, July 2017.
- 2017 Society for the Advancement of Biology Education Research (talk), "GenBio-MAPS: A programmatic assessment designed to measure student's conceptual understanding of core biology concepts across a curriculum," Christian Wright, Minneapolis MN, July 2017.
- 2017 Society for the Advancement of Biology Education Research (poster), "Exploring instructor rationale for designing classroom assessments," Christian Wright, Minneapolis MN, July 2017.
- 2017 Society for the Advancement of Biology Education Research (poster), "Can a five-minute introduction to an evolution module reduce students' level of perceived conflict between evolution and religion?," Jasmine Truong, Minneapolis MN, July 2017.
- 2017 Society for the Advancement of Biology Education Research (poster), "The survey matters: instructors using different surveys to measure acceptance of evolution may be reaching different conclusions about their students," Liz Barnes and Hayley Dunlop, Minneapolis MN, July 2017.
- 2017 Society for the Advancement of Biology Education Research (poster), "Identifying the unwritten rules of obtaining undergraduate research experiences," Jacquie Cala, Minneapolis MN, July 2017.
- 2017 Society for the Advancement of Biology Education Research (poster), "To be funny or not to be funny: Student perceptions of instructor use of humor in college science classrooms," Katey Cooper and Taija Hendrix, Minneapolis MN, July 2017.
- 2017 Undergraduate Biology Education Research Gordon conference (poster), "Learning anxiously: The opportunities and challenges of science active learning classrooms for college students with anxiety," Katey Cooper, Eaton MA, July 2017.
- 2017 Undergraduate Biology Education Research Gordon conference (poster), "Who perceives they're smarter? Exploring the influence of student characteristics on student academic self-concept in physiology," Katey Cooper, Eaton MA, July 2017.

- 2017 National Association for Research in Science Teaching (NARST) national meeting (poster), “Capital gains: A bridge program influences social, cultural, and human capital,” Katelyn Cooper, San Antonio TX, April 2017.
- 2017 American Educational Research Association (AERA) national meeting (talk), “A need for culturally sensitive evolution education: perspectives from college biology instructors and students,” Liz Barnes, San Antonio TX, April 2017.
- 2017 American Educational Research Association (AERA) national meeting (poster), “Explaining the dearth of African Americans in evolutionary biology as a function of religiosity,” Liz Barnes, San Antonio TX, April 2017.
- 2017 ASU School of Life Sciences Septennial Review Student Poster Session (poster), “How identity, biology content, and instructional practices impact religious students’ sense of belonging in the biology classroom,” Jasmine Truong, Tempe AZ, April 2017.
- 2017 ASU Undergraduate Research Symposium (poster), “The survey matters: instructors using different surveys to measure acceptance of evolution may be reaching different conclusions about their students,” Hayley Dunlop, Tempe AZ, March 2017.
- 2017 ASU Undergraduate Research Symposium (poster), “Do Christian biology students experience stereotype threat?,” Taija Hendrix, Tempe AZ, March 2017.
- 2017 ASU Undergraduate Research Symposium (poster), “Will this be on the test? Depends on the instructor! Exploring differences in instructor exam decisions in introductory biology,” Austin Huang, Tempe AZ, March 2017.
- 2017 ASU Undergraduate Research Symposium (poster), “What’s in a name? The importance of student perceptions of an instructor knowing their names in a high enrollment biology course,” Anna Krieg, Tempe AZ, March 2017.
- 2017 ASU Undergraduate Research Symposium (poster), “How identity, biology content, and instructional practices impact religious students’ sense of belonging in the biology classroom,” Jasmine Truong, Tempe AZ, March 2017.
- 2017 ASU School of Human Evolution and Social Change Departmental Meeting (workshop), “Building inclusive and fair classrooms: Spotting sources of bias in biology classrooms,” Katelyn Cooper, Tempe AZ, March 2017.
- 2017 American Association for the Advancement in Science (AAAS) national meeting (talk), “How to teach evolution to religious students who may be resistant,” Liz Barnes, Boston MA, February 2017.
- 2017 American Association for the Advancement in Science (AAAS) national meeting (poster), “The impact of a short evolution module on students’ perceived conflict with evolution,” Liz Barnes, Boston MA, February 2017.
- 2017 American Association for the Advancement in Science (AAAS) national meeting (poster), “What’s in a name? The importance of student perceptions of an instructor knowing their names in a high enrollment biology course,” Anna Krieg, Boston MA, February 2017.

- 2017 American Association for the Advancement in Science (AAAS) national meeting (poster), "How identity, biology content, and instructional practices impact religious students' sense of belonging in the biology classroom," Jasmine Truong, Boston MA, February 2017.
- 2017 Biology Leadership Conference (BLC) (poster), "A summer bridge program helps students to maximize active learning experiences and the active learning experiences of others," Katelyn Cooper, Tucson AZ, February 2017.
- 2017 Society for the Advancement of Biology Education Research West coast regional meeting (talk), "Coming out in class: The influence of covert identities on student experiences in active learning classrooms," Katelyn Cooper, Irvine CA, January 2017.
- 2017 Society for the Advancement of Biology Education Research West coast regional meeting (talk), "Reducing students' perceived conflict between religion and evolution," Liz Barnes, Irvine CA, January 2017.
- 2017 Society for the Advancement of Biology Education Research West coast regional meeting (poster), "Learning Anxiously: The challenges and benefits of active learning for students with anxiety," Virginia Downing, Irvine CA, January 2017.
- 2017 Society for the Advancement of Biology Education Research West coast regional meeting (poster), "How identity, biology content, and instructional practices impact religious students' sense of belonging in the biology classroom," Jasmine Truong, Irvine CA, January 2017.
- 2017 Society for the Advancement of Biology Education Research West coast regional meeting (poster), "Defining Core Principles in Evolutionary Medicine: A Delphi Study," Dan Grunspan, Irvine CA, January 2017.
- 2017 Society for the Advancement of Biology Education Research West coast regional meeting (poster), "Capital Gains: The influence of a summer bridge program on first year students' social capital," Michael Ashley, Irvine CA, January 2017.
- 2017 Society for the Advancement of Biology Education Research West coast regional meeting (poster), "What's in a name? The importance of student perceptions of an instructor knowing their names in a high enrollment biology course," Anna Krieg, Irvine CA, January 2017.
- 2017 Society for the Advancement of Biology Education Research West coast regional meeting (poster), "The survey matters: instructors using different surveys to measure acceptance of evolution may be reaching different conclusions about their students," Hayley Dunlop, Irvine CA, January 2017.
- 2017 Society for the Advancement of Biology Education Research West coast regional meeting (poster), "Do Christian biology students experience stereotype threat?," Taija Hendrix, Irvine CA, January 2017.
- 2017 Society for the Advancement of Biology Education Research West coast regional meeting (poster), "Pedagogies of Professors Teaching evolution at secular versus Christian colleges," Liz Barnes, Irvine CA, January 2017.

- 2017 Society for the Advancement of Biology Education Research West coast regional meeting (poster), “Who perceives they’re smarter? Males have a higher academic self-concept in a large-enrollment physiology course,” Katelyn Cooper, Irvine CA, January 2017.
- 2017 ASU ISTL Learning Innovation Showcase (poster), “The impact of a short evolution module on students’ perceived conflict with evolution,” Liz Barnes, Tempe AZ, January 2017.
- 2017 ASU ISTL Learning Innovation Showcase (poster), “Capital Gains: The influence of a summer bridge program on first year students’ social capital,” Michael Ashley, Tempe AZ, January 2017.
- 2017 ASU ISTL Learning Innovation Showcase (poster), “How identity, biology content, and instructional practices impact religious students’ sense of belonging in the biology classroom,” Jasmine Truong, Tempe AZ, January 2017.
- 2017 ASU ISTL Learning Innovation Showcase (poster), “What’s in a name? The importance of student perceptions of an instructor knowing their names in a high enrollment biology course,” Anna Krieg, Tempe AZ, January 2017.
- 2016 American Society of Cell Biology (ASCB) (talk), “A summer bridge program helps students to maximize active learning experiences and the active learning experiences of others,” Katelyn Cooper, San Francisco CA, December 2016.
- 2016 American Society of Cell Biology (ASCB) (poster), “What’s in a name? The importance of student perceptions of an instructor knowing their names in a high enrollment biology course,” Katelyn Cooper, San Francisco CA, December 2016.
- 2016 ASU School of Life Sciences Honors Event (poster), “What’s in a name? The importance of student perceptions of an instructor knowing their names in a high enrollment biology course,” Anna Krieg, Tempe AZ, December 2016.
- 2016 ASU’s Diversity and Inclusion Education Conference (workshop), “Building inclusive and fair classrooms: Spotting sources of bias in biology classrooms,” Katelyn Cooper, Tempe AZ, November 2016.
- 2016 National Association of Biology Teaching (NABT) national meeting (talk), “Reducing students’ perceived conflict between religion and evolution,” Liz Barnes, Denver CO, October 2016.
- 2016 National Association of Biology Teaching (NABT) national meeting (poster), “The survey matters: instructors using different surveys to measure acceptance of evolution may be reaching different conclusions about their students,” Liz Barnes, Denver CO, October 2016.
- 2016 Ecology Society of America national meeting (talk), “Why you should teach course-based undergraduate research experiences,” Erin Shortlidge, Fort Lauderdale FL, July 2016.
- 2016 Society for the Advancement of Biology Education Research national meeting (poster), “Exploring instructor rationale for designing classroom assessment,” Austin Huang, Minneapolis MN, July 2016.

- 2016 Society for the Advancement of Biology Education Research national meeting (poster), “How identity, biology content, and instructional practices impact religious students’ sense of belonging in the biology classroom,” Jasmine Truong, Minneapolis MN, July 2016.
- 2016 Society for the Advancement of Biology Education Research national meeting (poster), “GenBio-MAPS: A programmatic assessment to measure student understanding of core biology concepts across a general biology curriculum,” Christian Wright, Minneapolis MN, July 2016.
- 2016 Society for the Advancement of Biology Education Research national meeting (poster), “Using a lens of Expectancy Value Theory to explore student resistance to active learning,” Michael Ashley, Minneapolis MN, July 2016.
- 2016 Society for the Advancement of Biology Education Research national meeting (poster), “Reducing students' perceived conflict between religion and evolution,” Liz Barnes, Minneapolis MN, July 2016.
- 2016 Society for the Advancement of Biology Education Research national meeting (talk), “What’s in a name? The importance of student perceptions of an instructor knowing their names in a high enrollment biology course,” Katelyn Cooper, Minneapolis MN, July 2016.
- 2016 Society for the Advancement of Biology Education Research national meeting (talk), “A bridge to active learning: A summer bridge program helps students to maximize active learning experiences and the active learning experiences of others,” Katelyn Cooper, Minneapolis MN, July 2016.
- 2016 Human Behavior and Evolution national meeting (poster), “Reducing students' perceived conflict between religion and evolution,” Liz Barnes, Vancouver BC Canada, June 2016.
- 2016 Evolution national meeting (poster), “Addressing potential conflict between students’ religious beliefs and evolution: instructor attitudes, practices, and barriers,” Liz Barnes, Austin TX, June 2016.
- 2016 Evolution national meeting (talk), “Reducing students' perceived conflict between religion and evolution,” Liz Barnes, Austin TX, June 2016.
- 2016 Council for Undergraduate Research (CUR) meeting (poster), “An exploratory interview study of what factors impact student participation in undergraduate research,” Katelyn Cooper, Tampa FL, May 2016.
- 2016 Council for Undergraduate Research (CUR) meeting (poster), “A high enrollment course-based undergraduate research experience improves student conceptions of scientific thinking,” Katelyn Cooper, Tampa FL, May 2016.
- 2016 ASU SOLS Undergraduate Research Symposium (poster), “A bridge to active learning: A summer bridge program helps students to maximize their active learning experiences and think about equity in groupwork,” Michael Ashley, Tempe AZ, April 2016.
- 2016 ASU SOLS Undergraduate Research Symposium (poster), “How identity, biology content, and instructional practices impact religious students’ sense of belonging in the biology classroom,” Jasmine Truong, Tempe AZ, April 2016.

- 2016 ASU LGBT Showcase (talk), “Coming out in class: The challenges and opportunities of active learning for LGBTQIA students in an undergraduate biology class,” Katelyn Cooper, Tempe AZ, April 2016.
- 2016 Experimental Biology meeting (poster), “Design elements of a high enrollment course based undergraduate research experience may lead to inaccurate student conceptions about scientific research,” Katelyn Cooper, San Diego CA, April 2016.
- 2016 Freshman Research Initiative (FRI) Biennial Conference (poster), “Design elements of a high enrollment course-based undergraduate research experience may lead to inaccurate student conceptions about scientific research,” Katelyn Cooper, Austin, TX, March 2016.
- 2016 Biology Leadership Community (poster), “Cognitive difficulty and format of exams predicts gender and socioeconomic gaps in exam performance of students in introductory biology courses,” Christian Wright, New Orleans LA, February 2016.
- 2016 ASU ISTL Learning Innovation Showcase (poster), “A two-week intensely active learning biology program has a positive impact on incoming first year students,” Katelyn Cooper and Michael Ashley, Tempe AZ, January 2016.
- 2016 ASU ISTL Learning Innovation Showcase (poster), “Cognitive difficulty and format of exams predicts gender and socioeconomic gaps in exam performance of students in introductory biology courses,” Christian Wright, Tempe AZ, January 2016.
- 2016 ASU Jumpstarting STEM Careers conference (poster), “A high enrollment course-based undergraduate research experience improves student conceptions of scientific thinking,” Katelyn Cooper, Tempe AZ, January 2016.
- 2015 American Society for Cell Biology national meeting (poster), “A high enrollment course-based undergraduate research experience improves student conceptions of scientific thinking,” Katelyn Cooper, San Diego CA, December 2015.
- 2015 Association for American Colleges and Universities national STEM Education meeting (poster), “Faculty perspectives on course-based undergraduate research experiences,” Erin Shortlidge, Seattle WA, November 2015.
- 2015 Society for the Advancement in Biology Education Research (SABER) national meeting (poster), GenBio-MAPS: A programmatic assessment to measure students understanding of core biology concepts across a general biology curriculum, Christian Wright, Minneapolis MN, July 2015.
- 2015 Society for the Advancement in Biology Education Research (SABER) national meeting (poster), “Pedagogies of Professors Teaching Evolution at Secular versus Christian Colleges,” Liz Barnes, Minneapolis MN, July 2015.
- 2015 Society for the Advancement in Biology Education Research (SABER) national meeting (poster), “A high enrollment course-based undergraduate research experience improves student conceptions of scientific thinking and ability to interpret data,” Katelyn Cooper, Minneapolis MN, July 2015.

- 2015 Society for the Advancement in Biology Education Research (SABER) national meeting (talk), “Faculty perceptions on course-based undergraduate research experiences,” Erin Shortlidge, Minneapolis MN, July 2015.
- 2015 Society for the Advancement in Biology Education Research (SABER) national meeting (talk), “Exam characteristics exacerbate performance gaps between male and female students,” Christian Wright, Minneapolis MN, July 2015.
- 2015 BioLogos: Evolution and Christian Faith national meeting (poster), “Pedagogies of Professors Teaching Evolution at Secular versus Christian Colleges,” Liz Barnes, Grand Rapids MI, May 2015.
- 2015 International Society for Evolution, Medicine, and Public Health national meeting (poster), “Pedagogies of Professors Teaching Evolution at Secular versus Christian Colleges,” Liz Barnes, Tempe AZ, March 2015.
- 2015 American Association for the Advancement of Science (AAAS) national meeting (poster), “Pedagogies of Professors Teaching Evolution at Secular versus Christian Colleges,” Liz Barnes, San Francisco CA, February 2015.
- 2014 Society for the Advancement in Biology Education Research (SABER) national meeting (poster), “Examining introductory and advanced undergraduates’ understanding of systems biology concepts using the BioCore Guide,” Christian Wright, Minneapolis MN, July 2014.

Teaching Experience:

- **Instructor, School of Life Sciences, Arizona State University, 2014- current**
 - Developed and taught a large-enrollment active learning undergraduate animal physiology course to ~150-300 students
 - BIO 360 Animal Physiology, Fall 2014, Fall 2015, Fall 2016, Fall 2017
 - Developed and taught a biology education research course to undergraduate and graduate students in the context of a course-based undergraduate research experience (CURE) to ~5-15 students
 - BIO 598 Biology Education Research, Spring 2014, Spring 2015, Spring 2017
 - Developed and taught a science education research course focused on teaching transfer students about undergraduate research to ~10-20 students
 - BIO/BCH/SES 494 Learning about Research, Fall 2017, Fall 2018
 - BIO/BCH/SES 494 Engaging in Research, Spring 2018
 - BIO/BCH/SES 494 Advising research, Fall 2018
 - BIO/BCH/SES 494 Producing research, Spring 2019
 - Developed and taught an active learning evolutionary medicine course to ~25 students
 - BIO/ASB294 Introduction to Evolutionary Medicine, Spring 2019
 - Developed and taught a journal club focused on recent papers in discipline-based education research to ~10-15 students
 - BIO 591 Papers in Discipline-based Education Research, Fall 2014, Spring 2015, Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2018
 - Developed and taught a college success course to freshman biology majors to ~20 students
 - BIO 189 Big Topics in Biology, Fall 2014
 - BIO 189 Extension of Summer Bridge Program, Fall 2015, Fall 2016
 - Developed and coordinated a seminar course on improving teaching for undergraduates and graduate students to ~15 students
 - BIO 494/598 Evidence-based Teaching in STEM, Fall 2015, Spring 2016, Fall 2016,

- Spring 2017
 - Mentored undergraduates in biology education research
 - BIO 495 Undergraduate Research, Fall 2014, Spr 2015, Fall 2015, Spr 2016, Fall 2016, Spring 2017, Fall 2017, Fall 2018, Spring 2019
- **Lecturer, Department of Biology, Stanford University, 2011-2012**
 - Developed and taught two upper-level writing-intensive courses to ~15 students in each course
 - BIO 199W Senior Honors Thesis: How to communicate scientific research, Fall 2011, Fall 2012
 - BIO 197WB Communicating neuroscience to non-scientists, Spring 2012
 - Developed and taught an introductory course-based undergraduate research experience to 250 students as part of a collaborative four person instructional team
 - BIO 44X Core Molecular Biology Laboratory: Investigating p53 mutants, Winter 2012, Fall 2012
- **Graduate Student Course Developer and Instructor, Stanford University, 2009-2011**
 - Brain and Immune System, Winter 2009, Winter 2010, Winter 2011
 - Co-developed and co-taught an upper-level undergraduate and graduate student neuroimmunology course that emphasized science communication to a layperson audience. Course was offered for three consecutive years to ~20 students per year.
- **Graduate Teaching Assistant, Stanford University, 2007-2008**
 - Human Behavioral Biology, Spring 2008
 - TA for this 500-student course. Lectured once to the whole class, led weekly discussion sections for two sections of ~20 students each, held review sessions, and wrote/graded exams.
 - Cell Biology and Animal Physiology, Winter 2008
 - TA for this 250-student course. Led weekly discussion sessions for two sections of ~20 students each, held office hours, held review sessions, and wrote/graded exams.
 - Neural Systems and Behavior, Fall 2007
 - TA for this 100-student course. Led weekly discussion sections for two sections of ~12 students each and wrote/graded exams.
- **Undergraduate Teaching Assistant, Cornell University, 2003-2004**
 - Principles of Biochemistry, Spring 2003, Fall 2003, Spring 2004
 - Tutored students, graded written exams, and administered oral exams.

Trainees Mentored in Individual Apprenticeships:

- **Postdoctoral scholars in biology education research, Arizona State University**
 - Dan Grunspan, August 2016- present (co-advised with Randy Nesse)
 - M. Elizabeth Barnes, June 2018- present
 - K. Supriya, August 2019- present
 - Katelyn Cooper, June 2018-July 2019
 - Current position: Assistant Professor in Biology Education, Department of Biology, University of Central Florida
 - Christian Wright, June 2014- June 2015
 - Current position: Non-tenure track Instructional Faculty, School of Life Sciences, Arizona State University
 - Erin Shortlidge, September 2014- September 2015
 - Current position: Assistant Professor in Biology Education, Department of Biology, Portland State University
- **Graduate students in biology education research, Arizona State University**
 - Erika Nadile, Ph.D. student in Biology and Society, 2019- present (advisor)
 - Logan Gin, Ph.D. student in Biology and Society and NSF Graduate Fellow in STEM Education, 2017-present (advisor)

- Evan Brus, Ph.D. student in Biology, 2014- present (advisor on education project)
- Virginia Downing, Academic advisor, 2016-2019 (advisor on education project)
 - Next position: Ph.D. student in Education at University of Wisconsin Madison
- Jacqueline Cala, M.S. student in Biology, 2017-2018 (advisor)
 - Next position: Tenure-track faculty, Chandler-Gilbert Community College
- M. Elizabeth Barnes, M.S. student in Biology and Society, 2013-2014 (advisor), Ph.D. student in Biology and Society and NSF Graduate Fellow in STEM Education, 2014-2018 (advisor)
 - Next position: NSF-funded biology education postdoc, ASU
- Katelyn Cooper, Ph.D. student in Biology, 2015-2018 (advisor)
 - Next position: NSF-funded biology education postdoc, ASU
- Brian Haney, Ph.D. student in Animal Behavior, 2015- 2016 (advisor on education project)
 - Next position: Teaching postdoc, Stonehill College
 - Current position: Tenure-track faculty at College of Mount St. Vincent
- Nevada Wagoner, M.S. student in Biology and Society, 2014-2015 (advisor)
 - Next position: Freshmen Academic Advisor, Embry Riddle Aeronautical University
- Katie Fenton, M.A. student in Science Teaching at Northern Arizona Univ, 2014-2015 (co-advisor)
 - Next position: Stay-at-home mom
- **Undergraduate students in biology education research, Arizona State University**
 - Anna Abraham, ASU undergraduate, 2019-present (advisor)
 - Sara Etebari, ASU undergraduate, 2019-present (advisor)
 - Samantha Maas, ASU undergraduate, 2019-present (advisor)
 - Julie Roberts, ASU undergraduate, 2019-present (advisor)
 - Rachel Scott, ASU undergraduate, 2019 (advisor)
 - Hayley Dunlop, ASU undergraduate and SOLUR researcher, 2016-2019 (advisor)
 - Leilani Pfeiffer, ASU undergraduate, 2019 (advisor)
 - Jasmine Truong, ASU undergraduate and SOLUR researcher and fellow, 2015- 2018 (advisor)
 - Taija Hendrix, ASU undergraduate, 2016-2018 (advisor)
 - Michelle Stephens, ASU undergraduate, 2017- 2018 (advisor)
 - Kali Mahrer, ASU undergraduate, 2017 (advisor)
 - Austin Huang, ASU undergraduate and SOLUR researcher, 2014-2017 (advisor)
 - Michael Ashley, ASU undergraduate and then research assistant, 2015- 2017 (advisor)
 - Anna Krieg, ASU undergraduate and Honors thesis student, 2016- 2017 (advisor)
 - Kayla Campbell, ASU undergraduate, 2016- 2017 (advisor)
 - Dalia Aguilar, ASU undergraduate, 2016- 2017(advisor)
 - Cyril Wassef, ASU undergraduate, SRE researcher, and Honors thesis student, 2015-2016 (advisor)
 - Aditya Ponnappalli, ASU undergraduate, 2016 (advisor)
 - Samantha Belcher, ASU undergraduate, 2015 (advisor)
 - Monro Obenauer, ASU undergraduate, 2015 (advisor)
 - Kate Bergovoy, ASU undergraduate, 2015 (advisor)
 - Sailesh Tummala, ASU Honors thesis student, 2014-2015 (co-advisor)
 - Anika Larson, ASU Honors thesis student, 2014-2015 (thesis committee member)
 - Bethany Vu, ASU Honors thesis student, 2013-2014 (co-advisor)
- **Committee member for theses, Arizona State University**
 - Tom Roberto, M.A. student in Geosciences Education, 2017-2018 (committee member)
 - Nicholas Massimo, Ph.D. student in Biology, 2017-2018 (committee member)
 - Evan Brus, Ph.D. student in Biology, 2014- present (committee member)
 - Lishan Zheng, Ph.D. student in Computer Science, 2015 (committee member)

- Anika Larson, ASU Honors thesis student, 2014-2015 (committee member)
- **Undergraduate students in neuroimmunology research, Stanford University, 2008-2011**
 - Rachel Becker, Stanford undergraduate, awarded the Shuer Award for Excellence in Neuroscience Research award for her honors thesis, and was awarded a NSF Pre-doctoral Graduate Fellowship.
 - Aleena Syed, Stanford undergraduate who went on to medical school at Texas A&M
 - Ryan Medlock, high school student who went on to be a Vanderbilt undergraduate
 - David Praharaaj, high school student who went on to be a Stanford undergraduate
 - Sriya Subramani, University of Iowa undergraduate who went on to medical school at Univ of Iowa
 - Kyle Duff, Stanford undergraduate who went on to medical school at University of Pittsburgh
 - Juliet Idiga, Stanford undergraduate who went on to medical school at Columbia University
 - Tyler Berbert, high school student who went on to be a Stanford undergraduate

Awards for trainees:

2019

ASU Undergraduate Student Government travel award, Hayley Dunlop

ASU Barrett travel award, Hayley Dunlop

Gordon research conference travel award, Katelyn Cooper

Gordon conference discussion leader, Katelyn Cooper

Gordon research conference travel award, Logan Gin

ASU Graduate College travel grant, Logan Gin

ASU GPSA travel grant, Logan Gin

Science and Religion conference travel award, Liz Barnes

Fully funded Masters in Public Health at University of Edinburgh, Hayley Dunlop

2018

ASU Faculty Women's Association (FWA) Distinguished Graduate Student Award, Katey Cooper

ASU Faculty Women's Association (FWA) Distinguished Graduate Student Award, Liz Barnes

ASU CLAS Dean's medalist award for top student in the School of Life Sciences, Jasmine Truong

ASU School of Life Sciences True Grit award for student with the most growth, Taija Hendrix

ASU School of Life Sciences Innovative TA award, Katey Cooper

ASU School of Life Sciences Innovative TA award, Evan Brus

ASU School of Life Sciences Scholarship award winner, Hayley Dunlop

ASU School of Life Sciences Faculty Excellence in Teaching award, Christian Wright

ASU School of Life Sciences (SOLS) Graduate Student Travel Award, \$400, Logan Gin

American Society for Cell Biology LGBTQ+ Travel Award, \$600, Katelyn Cooper

ASU School of Life Sciences (SOLS) Graduate Student Travel Award, \$400, Katelyn Cooper

CourseSource travel award to meeting, Dan Grunspan

ASU Undergraduate Student Government travel award, Hayley Dunlop

2017

ASU Graduate and Professional Student Association Teaching Excellence Award, Katey Cooper

ASU Graduate and Professional Student Association Mentorship Award, Liz Barnes

Inclusive Environments and Metrics for Biology Education Research (iEMBER) lightning talk award, Katey Cooper

National Science Foundation (NSF) Graduate Fellowship, Logan Gin

ASU College of Liberal Arts and Sciences (CLAS) Graduate Excellence Award, Liz Barnes

AAAS 2nd place student poster competition, Liz Barnes

ASU SOLUR Researcher, Hayley Dunlop

ASU SOLUR Researcher, Taija Hendrix
ASU SOLUR Fellow, Jasmine Truong
ASU School of Life Sciences Undergraduate Programs Travel Stipend, \$500, Katey Cooper
ASU Graduate & Professional Student Association (GPSA) Travel Grant, \$950, Katey Cooper
ASU School of Life Sciences (SOLS) Graduate Student Travel Award, \$400, Katey Cooper
ASU Graduate College Travel Award, \$500, Katey Cooper
Environment and Metrics in Biology Education and Research (EMBER) Grant, \$500, Katey Cooper
Undergraduate Biology Education Gordon Research Conference Travel Award, \$500, Katey Cooper
SOLUR Program Travel Grant, \$300, Taija Hendrix
ASU Graduate & Professional Student Association (GPSA) Travel Grant, \$950, Liz Barnes
ASU Graduate College Travel Award, \$450, Liz Barnes
Portland State Teaching award, Erin Shortlidge

2016

ASU College of Liberal Arts and Sciences (CLAS) Graduate Excellence Award, Katelyn Cooper
ASU SOLUR Researcher, Jasmine Truong
ASU CLAS Undergraduate Summer Enrichment Scholarship, Jasmine Truong
ASU SOLS Student of the Year for Genetics, Cell, and Developmental Biology, Michael Ashley
American Society for Biochemistry and Molecular Biology Graduate Travel Award, Katelyn Cooper, \$1000
ASU School of Life Sciences (SOLS) Graduate Student Travel Award, Katelyn Cooper, \$400
ASU Graduate & Professional Student Association (GPSA) Travel Grant, Katelyn Cooper, \$450
ASU School of Life Sciences Graduate Student Travel Grant, Liz Barnes, \$400
ASU School of Life Sciences Graduate Student Travel Grant, Liz Barnes, \$400
ASU Graduate Education Travel Grant, Liz Barnes, \$500
ASU SOLS travel funds, Austin Huang, \$250
Nominated for ASU Faculty Women's Association Graduate Student Award, Liz Barnes and Katelyn Cooper

2015

National Science Foundation (NSF) Graduate Fellowship, Liz Barnes
ASU SOLS SOLUR Researcher, Austin Huang
ASU SOLS SOLUR Summer Research Experience program, Cyril Wassef
ASU SOLS Joyce Foster Larson Scholarship, Samantha Belcher
ASU Graduate & Professional Student Association (GPSA) Travel Grant, Katelyn Cooper, \$632
ASU SOLS Graduate Student Travel Award, Katelyn Cooper, \$400
BioLogos Travel grant, Liz Barnes, \$500
ASU College of Liberal Arts and Sciences (CLAS) Graduate Excellence Award, Liz Barnes

2014 and earlier

National Academies Summer Institute on Scientific Teaching Fellow, Christian Wright
ASU Biology and Society Travel Grant, Liz Barnes, \$1600
National Science Foundation (NSF) Graduate Fellowship for undergraduate trainee, Rachel Becker
Stanford Shuer Award for Excellence in Neuroscience Research award for honors thesis, Rachel Becker

General press about the lab research and people:

Skeptic Magazine. How to teach evolution to religious students.
http://docs.wixstatic.com/ugd/98a1a0_b701d0c4872a48cd868d2175499ca0ff.pdf

BioLogos blog. Teaching evolution to students of faith: An interview with Sara Brownell and Elizabeth Barnes. <https://biologos.org/blogs/kathryn-applegate-endless-forms-most-beautiful/teaching-evolution-to-students-of-faith-an-interview-with-sara-brownell-and-elizabeth-barnes>

Scientific American. Teachers Help One Another Bring Evolution Back to the Classroom. http://docs.wixstatic.com/ugd/98a1a0_673f8891051243dcb2c5afe37dec2132.pdf

ASU featured graduates – featuring Katey Cooper. <https://asunow.asu.edu/20180429-biology-phd-grad-gains-international-recognition-her-research-final-week-school>

ASU featured graduates – featuring Liz Barnes. <https://asunow.asu.edu/20180429-overcoming-odds-graduate-earns-doctorate-real-life-cinderella-story>

ASU SOLS news Student Spotlight- featured undergraduate Taija Hendrix. <https://sols.asu.edu/student-spotlight/taija-hendrix>

Center for Biology and Society Website “The Biology Education Research Lab’s Eye on Equity” – featured the lab research <https://cbs.asu.edu/news/biology-education-research-lab%E2%80%99s-eye-equity>

Center for Biology and Society Website “Liz Barnes, CBS PhD Student is Making Her Mark” – featured Ph.D. student Liz Barnes <https://cbs.asu.edu/news/liz-barnes-cbs-phd-student-making-her-mark>

ASU SOLS news. “Finding a community within School of Life Sciences” – featured undergraduate Michael Ashley <https://sols.asu.edu/news-events/news/finding-community-within-school-life-sciences>

ASU SOLS news. “BioBridge program gives ASU freshmen the tools to succeed” – featured the bridge program co-directed by myself <https://asunow.asu.edu/content/biobridge-program-gives-asu-freshmen-tools-succeed>

NY Times OpEd ““Are college lectures unfair?”! – featured lab research on gender gaps <http://anniemurphypaul.com/2015/09/are-college-lectures-unfair/>

Center for Biology and Society website “Sara Brownell blazes her way through her first semesters at ASU” <https://cbs.asu.edu/news/sara-brownell-blazes-her-way-through-her-first-semesters-asu>

ASU’s College of Liberal Arts and Sciences magazine, Spring 2015 issue, featured Ph.D. student Liz Barnes

Current Biology “Breathing fresh life into life science education” – featured lab research on professional identity and the BioCore Guide <http://www.sciencedirect.com.ezproxy1.lib.asu.edu/science/article/pii/S0960982214015528>

ASU Cronkite news “Education gender gaps” – featured lab research on gender gaps <https://www.youtube.com/watch?v=PjWPxqUncgo&list=UUO8tHWm0LQy3QWFcnZeV4CQ>

Program-level Mentoring, Curriculum Development, and Informal Teaching Experience:

- **Undergraduate Biology Honors Program Director, Stanford University, 2011-2012**
Mentored students, coordinated logistics, and provided extensive writing feedback on student honors proposals and drafts of honors theses for 65 Biology majors.

- **Bing Honors College Faculty Mentor, Human Biology, Stanford University, 2011-2012**
Mentored ~12 senior human biology majors as the natural sciences faculty mentor in an undergraduate honors thesis bootcamp. Led workshops and gave presentations on skills and tools necessary to write a good honors thesis, as well as individual mentoring.
- **Explorations Program Founder and Director, Stanford University, 2008-2012**
Founded and directed a program in the introductory Biology curriculum where grad students and postdocs taught single session hands-on, interactive specialized classes on topics in biology that undergraduate students would not have gotten exposure to in intro biology. Over 100 graduate students and postdocs participated and over 600 undergraduates attended classes during these years and the program is ongoing. Published two papers on program evaluation.
- **Center for Teaching and Learning (CTL) Consultant, Stanford University, 2010-2011**
Served as a teaching consultant for university-wide departments. Led videotaped microteaching sessions, small group evaluations, and TA training.
- **Biology Department TA Orientation Founder and Coordinator, Stanford University, 2010-2012**
Initiated the first-ever Biology department-specific TA orientation for incoming graduate students. Orientation focused on departmental TA mentoring opportunities and support services, teaching goals, and small group discussions about teaching challenges.
- **Mentors in Teaching (MinT) Fellow, Stanford University, 2009-2011**
Selected as a fellow for a university-wide TA mentorship program that worked with multiple departments to improve graduate student teaching through workshops, videotaped teaching sessions, and the development of new mentoring programs.
- **Biocore Advisors Founder and Director, Stanford University, 2008-2011**
Founded and directed a TA training program for teaching assistants in the introductory Biology core classes that paired new TAs with previously successful TAs that have taught the same course. 18 mentors worked with over 54 TAs while I directed the program and program is now a mandatory part of TA training for graduate students in Biology.
- **HHMI EXROP Summer Research Coordinator, Stanford University, 2011**
Coordinated a 10-week HHMI-funded summer undergraduate research program to six first generation students doing biological research.
- **High School Outreach Program Coordinator and Instructor, Scripps Research, 2004-2007**
Program coordinator for 2006-2007; taught high school students and teachers specialized topics in biology and chemistry and organized the summer research internship and mentoring program.
- **Scientific Volunteer, Ruben H. Fleet Science Museum, San Diego, 2005**
Performed hands-on demonstrations in an informal science education setting.
- **Biology Student Advisor, Cornell University, 2003-2004**
Mentored freshman biology majors, helped plan freshman schedules, held advising office hours, and tutored introductory biology and chemistry.

Professional Service:

Institution-level service at ASU:

- Founding Director for Research in Inclusive STEM Education (RISE) Center, 2018- present
Established a new research center focused on improving equity and inclusion in college STEM
- School of Life Sciences Strategic Planning committee, 2018- present
Committee to plan goals in teaching and research for the School of Life Sciences
- Faculty co-director for Early Start BioBridgE Program, 2014-present
Co-led two week intensive early start program for ~30 incoming freshmen majoring in biology. Focus of the program was on helping students do well in their first year courses and building community.
- University-level General Studies Task Force, 2018
Identified a new plan for general studies across the four different campuses of the university

- Active Learning Steering Committee, 2016- present
Served on committee dedicated to exploring technological and structural needs of classroom spaces for active learning
- Animal Physiology learning goals committee, 2018-present
Served on a committee of other instructors of Bio360 Animal Physiology to come to consensus about learning goals for the course
- Guest lecturer/presenter, 2014- present
Biology and Society Conversation series, Can institutions be elite and inclusive?. Fall 2018
DCI 791: Transdisciplinary Seminar II, Spring 2017
ELS 501 Grand Challenges in Environmental Life Sciences, Fall 2016, Fall 2017
Biology and Society Lab, Spring 2016
IGERT Alliance for Person Centered Accessible Technologies, Spring 2016
School of Life Sciences Graduate Student Orientation, Fall 2014
- Faculty co-director for Seminar Series Evidence-based Teaching in STEM, 2015 – 2018
Served as a co-director for seminar series that focuses on evidence-based teaching in college STEM and aims to create a learning community of faculty, staff, and students interested in teaching. We hosted 10 outside speakers over three years.
- Faculty participant in Camp Ignite, 2014-2016
Attended 2-day summer program for all incoming biology majors that was aimed at building community
- College of Liberal Arts and Sciences Inclusion Campus Climate Committee, 2016- 2017
Served on a college-level committee focused on diversity and inclusion
- Workshop facilitator, Global Health & Human Biology SOLS/SHESC Workshop, 2016
Facilitated a half-day discussion on competencies and curriculum for ~40 faculty members who teach classes or do research related to global health.
- Faculty co-director for Graduate Certificate in Scientific Teaching in Higher Education, 2014-2015
Helped design program of study and get institutional approval. Program is intended to provide interested graduate students with a suite of courses, mentored teaching opportunities, and the opportunity to engage in biology education research.
- First Year Forward Committee, 2014 - 2015
Served on committee dedicated to addressing how *all* students experience their first year at college.
- School of Life Sciences Director Search Committee, ASU, 2014- 2015
Served on departmental committee to conduct a target hire for high level Director position.
- School of Life Sciences Instructional Professional Search Committee, ASU, 2014- 2015
Served on departmental committee to hire two active learning specialists in biology.
- Institution-wide STEM Education Group, 2014
Served on committee dedicated to STEM education across the ASU campus that participated in STEM education discussions and collaborative grant writing.
- Curriculum Reform Committee, School of Life Sciences, 2014
Served on departmental committee to help biology instructors improve their courses by engaging in more student-centered instruction.

National-level:

- Member of Advisory Board for the Society for the Advancement in Biology Education Research (SABER), 2019-2020
- Member of Executive Committee for the Society for the Advancement in Biology Education Research (SABER), 2018-2019
- Co-lead of Society for the Advancement in Biology Education Research (SABER) Diversity and Inclusion committee, 2018-present

- Member of Society for the Advancement in Biology Education Research (SABER) abstract committee, 2018-present
- Member of Society for the Advancement in Biology Education Research (SABER) Bill Wood Graduate Award, 2018-present
- Ad hoc reviewer for CBE-Life Sciences Education, Science Advances, BioScience, Evolution Education and Outreach, Journal of Engineering Education, Physics Review, Journal of Geosciences Education, Science and Education, Learning and Instruction, Journal of Accounting Education, F1000 Research, FEMS Microbiology Letters, International Journal of STEM Education, eLife, and PloS One, 2013-present
- Conference Abstract reviewer for Society for Biology Education Research (SABER) national meeting and AAAS national meeting, 2014-present
- Organizer for professional development sessions at national SABER meeting and Gordon meeting on “Is there the need for interdisciplinary graduate training programs in biology education,” 2015
- Invited to participate in the Partnership for Undergraduate Life Sciences Education (PULSE) community as a Northwest PULSE Workshop facilitator and Southwest PULSE Circle member, 2014-2016
- Panel organizer for national SABER meeting for “Getting your first job as a Science Faculty with Education Specialty” and “Getting tenure as a Discipline-based education researcher”, 2014

Public and community outreach:

- **Arizona State University Teach Tech Blog posts from members of the lab**
 1. Who are you teaching to? <http://asutechwebs.blogspot.com/2014/11/who-are-you-teaching-to.html>
 2. Understanding CUREs: Course-based Undergraduate Research Experiences <http://asutechwebs.blogspot.com/2015/04/understanding-cures-course-based.html>
 3. Transforming undergraduate biology education: What resources are available to faculty and departments? <http://asutechwebs.blogspot.com/2015/04/transforming-undergraduate-biology.html>
 4. The Hidden Economic Costs of Active Learning <http://asutechwebs.blogspot.com/2015/09/the-hidden-economic-costs-of-active.html>
 5. The Impact of Active Learning on Different Genders <http://asutechwebs.blogspot.com/2015/12/the-impact-of-active-learning-on.html>
 6. Beyond “Teaching the Facts”: How to Teach Evolution to Religious Students Who Don’t “Believe” <http://asutechwebs.blogspot.com/2016/05/beyond-teaching-facts-how-to-teach.html>
 7. How Instructors Can Make Their Active Learning Classrooms More Inclusive to Members of the LGBTQIA Community <http://asutechwebs.blogspot.com/2016/09/how-instructors-can-make-their-active.html>
 8. What’s the Point of Using Student Names in Large Courses? <http://asutechwebs.blogspot.com/2017/02/whats-point-of-using-student-names-in.html>
 9. Should science instructors try to be funny? Yes, depending on what they joke about! <http://asutechwebs.blogspot.com/2018/08/should-science-instructors-try-to-be.html>
 10. Considering Clickers & Anxiety: Implementing Clicker Technology So that it Decreases Student Anxiety in the Classroom <http://asutechwebs.blogspot.com/2018/08/considering-clickers-anxiety.html>
 11. Building STEM Bridges: Reflecting on five years of ASU’s BioBridge Program <http://asutechwebs.blogspot.com/2018/10/building-stem-bridges-reflecting-on.html>
- **Workshops**
Building inclusive classrooms: Spotting hidden inequities in exam questions, ASU, September 2016, November 2016, and March 2017.

Professional Development:

- **Membership in Professional Societies**

 - Society for the Advancement of Biology Education Research (SABER)

 - National Science Teacher's Association (NSTA)

 - American Society for Cell Biology (ASCB)

- **Attended Teaching-related Classes/Workshops/Learning Communities**

 - Science Course Design, Speaking about Science, Professional and Leadership Development,

 - Intro to Teaching, Directed Reading on Undergraduate Biology Labs, The Science Curriculum,

 - Assessment and Accountability in Higher Education, Research in Science Education:

 - Assessment and Evaluation, Mentors in Teaching (MinT) training, Community College Biology

 - Faculty Enhancement through Scientific Teaching (CCB FEST), University of Washington

 - Biology Education Research Group (BERG), ASU Science Education Research Group