ERIN L. DOLAN (PECKOL)

Professor, Biochemistry & Molecular Biology
Georgia Athletic Association Professor of Innovative Science Education
University of Georgia
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EDUCATION

UNIVERSITY OF CALIFORNIA SAN FRANCISO — San Francisco, CA
Ph.D. in Neuroscience — 1999
Dissertation title: Developmental plasticity in the *C. elegans* nervous system
Teaching experience:
- Genes and Behavior (California Academy of Sciences Adult Education Program)
- Neuroscience for teachers (Science & Health Education Partnership Program)
- Neuroscience teaching assistant (Pharmacy)
- Triad After-school Science Club for Middle School Girls

WELLESLEY COLLEGE — Wellesley, MA
B.A. in Biology cum laude — 1993

PROFESSIONAL APPOINTMENTS

UNIVERSITY OF GEORGIA — Athens, GA
Professor of Biochemistry and Molecular Biology — 2016-present
Georgia Athletic Association Professor of Innovative Science Education — 2016-present
Associate Professor of Biochemistry and Molecular Biology — 2011-2014
Senior Scholar in Biology Education — 2011-2014
Adjunct faculty in Math and Science Education — 2011-present

Teaching experience
- BIOL 1108: Principles of Biology II, 2021-present
- BIOL 1107: Principles of Biology I, 2017-2020
- BCMB 3100: Introduction to Biochemistry & Molecular Biology, 2012-2014, 2017-2021
- GRSC 7770: Teaching Seminar, 2012-2014
- BIOL 1103: Concepts in Biology, 2012-2014

UNIVERSITY OF TEXAS — Austin, TX
Executive Director of the Texas Institute for Discovery Education in Science (TIDES) — 2014-2016
- Established mission and vision for innovating teaching across the College of Natural Sciences
- Developed strategies and tactics to catalyze, support, and showcase innovative and evidence-based undergraduate education
- Conceived and conducting studies to determine effectiveness and impact of education programming, and understand causal mechanisms of effective undergraduate, graduate, and faculty programs.

VIRGINIA TECH — Blacksburg, VA
Associate Professor of Biochemistry — 2009-2011
Assistant Professor of Biochemistry — 2005-2009
Adjunct faculty in Agricultural and Extension Education — 2005-2011
Outreach Director of the Fralin Life Science Institute — 2002-2011

Teaching and service experience
- Graduate coordinator (Biochemistry)
- Introduction to Biochemistry (Introductory undergraduate)
- Biotechnology Applications (Upper division undergraduate)
- Contemporary Pedagogy (Graduate)

UNIVERSITY OF ARIZONA — Tucson, AZ
Director of the BIOTECH Project — 1999-2001
- Designed and facilitated middle and high school outreach programming
- Developed and sustained K-12-university partnership programming

Teaching experience:
- Neuroscience for Teachers (Graduate)
- Graduate Topics in Biology Teaching (Graduate)
- K-12 Outreach (Upper division undergraduate)

PUBLICATIONS

JOURNAL ARTICLES

(*indicates postdoctoral researcher, **indicates graduate researcher, +indicates undergraduate researcher)

1. Tuma**, T.T., & Dolan, E.L. (in revision). What makes a good match? Predictors of quality mentorship among doctoral students. *CBE— Life Sciences Education*.
2. Limeri*, L. B., Carter, N. T., Hess**, R.A., Tuma**, T.T., Koscik+, I., Morrison+, A.J., Outlaw+, B., Royston+, K.S., Bridges+, B.H.T., & Dolan, E. L. (in revision). Development and Validation of the Mentoring in Undergraduate Research Survey. *CBE Life Sci Educ.* Posted on bioRxiv: https://www.biorxiv.org/content/10.1101/2023.08.19.553952v1
3. Pfeifer*, M. A., Zajic**, C. J., Isaacs+, J. M., Erickson+, O. A., & Dolan, E. L. (in re-review). Beyond performance, competence, and recognition: Forging a science researcher identity in the context of research training (p. 2023.03.22.533783). *International Journal of STEM Education.* Posted on bioRxiv: https://www.biorxiv.org/content/10.1101/2023.03.22.533783v1
4. Asif**, M. Z., Jain+, C., Dolan, E. L. (in re-review) Understanding the experiences of transitioning to a doctoral program in the U.S. for South Asian International (SAI) students: An interpretative phenomenological analysis. *Sage Open*.
5. Pfeifer*, M.A., & Dolan, E.L. (2023). Venturing into Qualitative Research: A Practical Guide to Getting Started. *Scholarship and Practice of Undergraduate Research, 7(1),* 10–20. https://doi.org/10.18833/spur/7/1/2
6. Fedesco*, H.N., Kraner +, E.R., Dolan, E.L. (2023). Evaluating the feasibility, utility, and impact of engaging in mentorship assessment to improve doctoral mentoring relationships. *New Directions for Teaching and Learning*, 2023(176), 95–105. https://doi.org/10.1002/tl.20572
7. Paoletti, M.M., Fournier, G.P., Dolan, E.L., & Saito, M.A. (2023). Metaproteogenomic Profile of a Mesopelagic Adenylylsulfate Reductase: Course-Based Discovery Using the Ocean Protein Portal. *Journal of Proteome Research*. https://doi.org/10.1021/acs.jproteome.3c00152
8. Limeri*, L. B., Carter, N. T., Lyra+, F., Martin+, J., Mastronardo+, H., Patel+, J., & Dolan, E. L. (2023). Undergraduate Lay Theories of Abilities: Mindset, universality, and brilliance beliefs uniquely predict undergraduate educational outcomes. *CBE—Life Sciences Education*, 22(4), ar40. https://doi.org/10.1187/cbe.22-12-0250
9. Hess**, R. A., Erickson+, O. A., Cole**, R. B., Isaacs+, J. M., Alvarez-Clare, S., Arnold, J., Augustus-Wallace, A., Ayoob, J. C., Berkowitz, A., Branchaw, J., Burgio, K. R., Cannon, C. H., Ceballos, R. M., Cohen, C. S., Coller, H., Disney, J., Doze, V. A., Eggers, M. J., Ferguson, E. L., … Dolan, E. L. (2023). Virtually the Same? Evaluating the Effectiveness of Remote Undergraduate Research Experiences. *CBE—Life Sciences Education*, 22(2), ar25. https://doi.org/10.1187/cbe.22-01-0001
10. Asif**, M. Z., Edison, A. S., & Dolan, E. L. (2023). Postgraduate perspectives on mentoring undergraduate researchers for talent development. *Annals of the New York Academy of Sciences*. https://doi.org/10.1111/nyas.14966
11. Erickson+, O. A., Cole**, R. B., Isaacs+, J. M., … & Dolan, E. L. (2022). "How do we do this at a distance?!" A descriptive study of remote undergraduate research programs during COVID-19. *CBE Life Sci Educ*, 21(1), ar1. https://www.lifescied.org/doi/full/10.1187/cbe.21-05-0125
12. Krishnan, S., Gehrtz, J., Lemons, P. P., Dolan, E. L., Brickman, P., & Andrews, T. C. (2022). Guides to Advance Teaching Evaluation (GATEs): A resource for STEM departments planning robust and equitable evaluation practices. *CBE—Life Sciences Education*, *21*(3), ar42. https://www.lifescied.org/doi/full/10.1187/cbe.21-08-0198

13. Andrews, T. C., Brickman, P., Dolan, E. L., & Lemons, P. P. (2021). Every Tool in the Toolbox: Pursuing Multilevel Institutional Change in the DeLTA Project. *Change: The Magazine of Higher Learning*, *53*(2), 25-32. https://www.tandfonline.com/doi/full/10.1080/00091383.2021.1883974
14. Tuma[**], T. T., Adams[+], J. D., Hultquist[+], B. C., & Dolan, E. L. (2021). The dark side of development: A systems characterization of negative mentoring experiences of doctoral students. *CBE Life Sci Educ* 20(2), ar16. https://doi.org/10.1187/cbe.20-10-0231
15. Limeri[*], L. B., Carter, N. T., Choe[+], J., Harper[+], H. G., Martin[+], H. R., Benton[+], A., & Dolan, E. L. (2020). Growing a growth mindset: Characterizing how and why undergraduate students' mindsets change. *IJ STEM Education*, 7(1), 35. https://doi.org/10.1186/s40594-020-00227-2
16. Dolan, E. L., Borrero, M., Callis-Duehl, K., Musgrove, M. M. C., de Lima, J., Ero-Tolliver, I., Gerhart, L. M., Goodwin, E. C., Hamilton, L. R., & Henry, M. A. (2020). Undergraduate Biology Education Research Gordon Research Conference: A Meeting Report. *CBE Life Sci Educ*, 19(2), mr1. https://doi.org/10.1187/cbe.19-09-0188
17. Limeri[*], L. B., Choe[+], J., Harper[+], H. G., Martin[+], H. R., Benton[+], A., & Dolan, E. L. (2020). Knowledge or Abilities? How Undergraduates Define Intelligence. *CBE Life Sci Educ*, 19(1), ar5. https://doi.org/10.1187/cbe.19-09-0169
18. Limeri[*], L. B., Asif[**], M. Z., Bridges[+], B. H. T., Esparza[+], D., Tuma[+], T. T., Sanders[+], D., … Dolan, E. L. (2019). "Where's my mentor?!" Characterizing negative mentoring experiences in undergraduate life science research. *CBE Life Sci Educ 18*, ar61. https://doi.org/10.1187/cbe.19-02-0036
19. Joshi[**], M., Aikens[*], M. L., & Dolan, E. L. (2019). Direct ties to a faculty mentor related to positive outcomes for undergraduate researchers. *BioScience* 69(5), 389–397. https://doi.org/10.1093/biosci/biz039
20. Limeri[*], L.B., Asif[**], M.Z., & Dolan, E.L. (2019). Volunteered or voluntold? Motivations and perceived outcomes of graduate and postdoctoral mentors of undergraduate researchers. *CBE Life Sci Educ 18(1),* ar13. https://doi.org/10.1187/cbe.18-10-0219
21. Corwin[*], L. A., Runyon[**], C. R., Ghanem, E., Sandy, M., Clark, G., Palmer, G. C., … Dolan, E.L. (2018). Effects of discovery, iteration, and collaboration in laboratory courses on undergraduates' research career intentions fully mediated by student ownership. *CBE Life Sci Educ 17(2),* ar20. https://doi.org/10.1187/cbe.17-07-0141
22. Walcott, R. L., Corso, P. S., Rodenbusch, S. E., & Dolan, E. L. (2018). Benefit–cost analysis of undergraduate education programs: An Example Analysis of the Freshman Research Initiative. *CBE Life Sci Educ 17(1),* rm1. https://doi.org/10.1187/cbe.17-06-0114
23. Dolan, E. L., Elliott, S. L., Henderson, C., Curran-Everett, D., St. John, K., & Ortiz, P. A. (2018). Evaluating discipline-based education research for promotion and tenure. *Innovative Higher Education 43(1),* 31-39. https://link.springer.com/article/10.1007/s10755-017-9406-y
24. Henderson, C., Connolly, M., Dolan, E. L., Finkelstein, N., Franklin, S., Malcom, S., … John, K. S. (2017). Towards the STEM DBER Alliance: Why We Need a Discipline-Based STEM Education Research Community. *J Engineering Education 106(3),* 349–355. https://doi.org/10.1002/jee.20168
25. Alford, R. F., Leaver-Fay, A., Gonzales, L., Dolan, E. L., & Gray, J. J. (2017). A cyber-linked undergraduate research experience in computational biomolecular structure prediction and design. *PLoS Computational Biology 13(12),* e1005837.
26. Wachsmuth[+], L.P., Runyon[**], C.R., Drake, J.M., and Dolan, E.L. (2017). Do Biology Students Really Hate Math? Empirical Insights into Undergraduate Life Science Majors' Emotions about Mathematics. *CBE Life Sci Educ 16,* ar49.
27. Aikens[*], M.L., Robertson[**], M.M., Sadselia[+], S., Watkins[+], K., Evans*, M., Runyon[**], C.R., Eby, L.T., and Dolan, E.L. (2017). Race and Gender Differences in Undergraduate Research Mentoring Structures and Research Outcomes. *CBE Life Sci Educ 16,* ar34.
28. Schinske, J.N., Balke, V.L., Bangera, M.G., Bonney, K.M., Brownell, S.E., Carter, R.S., Curran-Everett, D., Dolan, E.L., Elliott, S.L., Fletcher, L. Gonzalez, B., Gorga, J.J., Hewlett, J.A., Kiser, S.L., McFarland, J.L., Misra, A., Nenortas, A., Ngeve, S.M., Pape-Lindstrom, P.A., Seidel, S.B., Tuthill, M.C., Yin, Y., Corwin, L.A. Broadening Participation in Biology Education Research: Engaging Community College Students and Faculty. *CBE Life Sci Educ*, *16(2),* mr1. https://doi.org/10.1187/cbe.16-10-0289

29. Aikens*, M.L., Sadselia+, S., Watkins+, K., Evans*, M., Eby, L.T., and Dolan, E.L. (2016). A Social Capital Perspective on the Mentoring of Undergraduate Life Science Researchers: An Empirical Study of Undergraduate–Postgraduate–Faculty Triads. *CBE Life Sci Educ 15,* ar16.
30. Andrews*, T.C., Conaway+, E.P., Zhao, J., and Dolan, E.L. (2016). Colleagues as Change Agents: How Department Networks and Opinion Leaders Influence Teaching at a Single Research University. *CBE Life Sci Educ 15,* ar15.
31. Rodenbusch, S.E., Hernandez, P.R., Simmons, S.L., and Dolan, E.L. (2016). Early Engagement in Course-Based Research Increases Graduation Rates and Completion of Science, Engineering, and Mathematics Degrees. *CBE Life Sci Educ 15,* ar20. https://doi.org/10.1187/cbe.16-03-0117
32. Thompson*, J.J., Conaway+, E., and Dolan, E.L. (2015). Undergraduate students' development of social, cultural, and human capital in a networked research experience. *Cultural Studies Sci Educ* 1–32.
33. Corwin*, L.A., Graham, M.J., Dolan, E.L. (2015) Modeling course-based undergraduate research experiences: an agenda for future research and evaluation. *CBE Life Sci Educ 14*, es1. https://doi.org/10.1187/cbe.14-10-0167
34. Corwin*, L.A., Runyon**, C., Robinson+, A., and Dolan, E.L. (2015). The Laboratory Course Assessment Survey: A Tool to Measure Three Dimensions of Research-Course Design. *CBE Life Sci Educ 14,* ar37.
35. Aikens*, M.L., and Dolan, E.L. (2014). Teaching quantitative biology: goals, assessments, and resources. *Molecular Biology of the Cell 25*, 3478–3481.
36. Corwin Auchincloss*, L., Laursen, S. L., Branchaw, J. L., Eagan, K., Graham, M., Hanauer, D. I., Lawrie, G., McLinn, C. M., Pelaez, N., Rowland, S., Towns, M., Trautmann, N. M., Varma-Nelson, P., Weston, T. J., Dolan, E. L. (2014). Assessment of Course-Based Undergraduate Research Experiences: A meeting report. *CBE Life Sci Educ 13(1),* 29–40. https://doi.org/10.1187/cbe.14-01-0004
37. Hanauer, D. I., Dolan, E. L. (2014). The Project Ownership Survey: Measuring differences in scientific inquiry experiences. *CBE Life Sci Educ 13(1),* 149–58.
38. Peker*, D., Dolan, E. L. (2014). Guiding students' scientific practice: Distinct and common roles for teachers and scientists. *Sage OPEN, 4(1)*. doi:10.1177/2158244014525413.
39. Luketic**, C., Dolan, E. L. (2013). Factors influencing student perceptions of high-school science laboratory environments. *Learning Environments Research, 16,* 37-47.
40. Peker*, D., Dolan, E. L. (2012). Helping students make meaning of authentic investigations: Findings from a student-teacher-scientist partnership. *Cultural Studies of Science Education, 7,* 223-244.
41. Alkaher*, I., Dolan, E. L. (2011). Instructors' decisions that integrate inquiry teaching into undergraduate courses: How do I make this fit? *International Journal for the Scholarship of Teaching and Learning, 5,* 2.
42. Brooks**, E., Dolan, E. L., Tax, F. E. (2011). Partnership for Research and Education in Plants (PREP): Involving high school students in authentic research in collaboration with scientists. *American Biology Teacher, 73,* 136-140.
43. Grady**, J., Dolan, E., Glasson, G. (2010). Agriscience student engagement in scientific inquiry: Representations of scientific processes and nature of science. *J Agricultural Education, 51,* 10-19.
44. Dolan, E., Johnson*, D. (2010). The undergraduate – postgraduate – faculty triad: Unique functions and tensions within a science research community of practice. *CBE Life Sci Educ, 9,* 443-453.
45. Dolan, E. L., Grady**, J. (2010). Recognizing students' scientific reasoning: A tool for categorizing the complexity of reasoning during teaching by inquiry. *J Science Teacher Education, 21,* 31-55.
46. Dolan, E., Johnson*, D. (2009). Toward a holistic view of undergraduate research experiences: An exploratory study of impact on graduate / postdoctoral mentors. *J Science Education and Technology, 18,* 487-500.
47. Dolan, E. L., Lally, D. J., Brooks**, E., Tax, F. E. (2008). PREPping students for authentic science. *The Science Teacher 75,* 38-43.
48. Dolan, E. L. (2007). Grappling with the literature of education research and practice. *CBE Life Sci Educ, 6,* 289-296.
49. Lally, D. J., Brooks**, E., Tax, F. E., Dolan, E. L. (2007). Sowing the seeds of dialogue: Public engagement through plant science. *Plant Cell, 19,* 2311-2319.
50. Dolan, E. L., Tanner, K. D. (2005). Moving from Outreach to Partnership: Striving for Articulation and Reform across the K-20+ Science Education Continuum. *CBE Life Sci Educ, 4,* 35-37.

51. Dolan, E. L., Soots, B. E., Lemaux, P. G., Rhee, S. Y., Reiser, L. 2004. Strategies for avoiding reinventing the precollege education and outreach wheel. *Genetics*, 166, 1601-1609.
52. Doyle, H. J., Peckol, E., Tanner, K. 1998. Discover your brain with BrainLink. *CSTA Journal, Summer*, 24-29.
53. Tobin, D. M., Madsen, D. M., Kahn-Kirby, A., Peckol, E. L., Moulder, G., Barstead, R., Maricq, A. V., Bargmann, C. I. (2002). Interacting TRPV genes mediate nociception and chemosensation in *C. elegans*. *Neuron, 35,* 307-318.
54. Peckol, E. L., Troemel, E., Bargmann, C. I. (2001). Sensory experience and sensory activity regulate chemosensory receptor gene expression in *Caenorhabditis elegans*. *Proceedings of the National Academy of Sciences, 98*, 11032-8.
55. Zallen, J. A., Peckol, E. L., Tobin, D. M., Bargmann, C. I. (2000). Neuronal cell shape and neuritogenesis are regulated by the Ndr kinase SAX-1, a member of the Orb6/COT-1/Warts serine/threonine kinase family. *Molecular and Cellular Biology, 11,* 3177-3190.
56. Peckol, E. L., Zallen, J. A., Yarrow, J. C., Bargmann, C. I. (1999). Sensory activity affects the development of sensory axons in C. elegans. *Development, 126,* 1891-1902.
57. Ganim, R. B., Peckol, E. L., Larkin, J., Ruchhoeft, M. L., Cameron, J. S. (1998). ATP-sensitive K+ channels in cardiac muscle from cold-acclimated goldfish: Characterization and altered response to ATP. *Comparative Biochemistry and Physiology, 119A,* 395-401.
58. Schneider, H., Budhiraja, P., Walter, I., Beltz, B. S., Peckol, E., Kravitz, E. A. (1996). Developmental expression of the octopamine phenotype in lobsters, *H. americanus*. *J Comparative Neurology, 371,* 3-14.
59. Maricq, A. V., Peckol, E., Driscoll, M., Bargmann, C. I. (1995). Mechanosensory signalling in *C. elegans* mediated by the GLR-1 glutamate receptor. *Nature, 378,* 78-81.

BOOKS, BOOK CHAPTERS, INVITED PAPERS, AND MONOGRAPHS

1. Dolan, E. L., & Weaver, G. C. (2021). *A Guide to Course-based Undergraduate Research: Developing and Implementing CUREs in the Natural Sciences.* Part of the Research and Mentoring Series. Macmillan Learning: Austin, TX.
2. Robinson, S. B., Dolan, E., Cornely, K., Medlock, A. E., Lee, J. K., & Lemons, P. P. (2019). The Development and Use of Case Studies. In *Biochemistry Education: From Theory to Practice* (pp. 127-141). American Chemical Society.
3. Lunsford, L. G., Crisp, G., Dolan, E. L., & Wuetherick, B. (2017). Mentoring in higher education. Clutterbuck D. A., Kochan F. K,. Lunsford L,. Dominguez N., Haddock-Millar J. (Eds.), *The Sage Handbook of Mentoring,* 316-334.
4. Dolan, E. L. (2016). *Course-based Undergraduate Research Experiences: Current Knowledge and Future Directions.* Paper commissioned for the Committee on Research Experiences for Undergraduate STEM Students. Board on Science Education, Division of Behavioral and Social Sciences and Education. Board on Life Sciences, Division of Earth and Life Studies. http://nas.edu/STEM_Undergraduate_Research_CURE
5. Eby, L. T., Dolan, E. L. (2015). Mentoring in postsecondary education and organizational settings. In *APA Handbook of Career Intervention*, Volume 2: Applications, Hartung, P. J., Savickas, M. L., (pp. 383-395). American Psychological Association: Washington DC.
6. Alkaher[*], I., Dolan, E. L. (2014). Integrating research into undergraduate courses: Current practices and future directions. In Sunal, D., Sunal, C. & Wright, E., Mason, C., and Zollman, D. (Eds.), *Research based undergraduate science teaching.* Charlotte, NC: Information Age Pub.
7. Dolan, E. L. (2008). *Education Outreach and Public Engagement.* Springer: New York.

CONFERENCE PAPERS

([*]indicates postdoctoral researcher, [**]indicates graduate researcher, [+]indicates undergraduate researcher)

1. Morosky[**], K. D., Dolan, E. L. (2017). The science research resource generator: Undergraduates' perceptions of their social capital in securing a research apprenticeship. Paper presented at the annual meeting of the National Association for Research in Science Teaching (San Antonio, TX, April 22-25).

2. Aikens[*], M. L., Dolan, E. L. (2015). Examining mentoring of undergraduate science researchers in undergraduate-postgraduate-faculty triads. Paper presented at the National Association for Research in Science Teaching Annual Conference (Chicago, IL, April 11-15).
3. Thomspon[*], J. J., Glisson[+], B., Dolan, E. L. (2012). Mentors, friends, and co-workers: An analysis of emerging network ties and social capital in an undergraduate research network. Paper presented at the American Anthropological Association Annual Meeting (San Francisco, CA, November 13-18).
4. Alkaher[*], I., Dolan, E. (2010). The nature of undergraduate students' questions during inquiry. Paper presented at the National Association for Research in Science Teaching Annual Conference (Philadelphia, PA, March 21-24).
5. Alkaher*, I., Dolan, E. (2010). Covering the content? How undergraduate instructors make decisions as they integrate inquiry into their curricula. Paper presented at the Association for Science Teacher Education annual conference (Sacramento, CA, January 13-16).
6. Grady[**], J. R., Dolan, E. L., Glasson, G. (2009). Representations of the processes and nature of science: Scientific inquiry in an agricultural science classroom. Paper presented at the National Association for Research in Science Teaching Annual Conference (Garden Grove, CA, April 16-21).
7. Johnson[*], D., Dolan, E. L. (2008). The impact of undergraduate research experiences on the graduate student/postdoctoral fellow mentor. Paper presented at the National Association for Research in Science Teaching Annual Conference (Baltimore, MD, March 30-April 2).
8. Luketic[**], C. D., Wolfe, E. W., Singh, K., Dolan, E. (2008). Assessing Student Perceptions of High School Science Laboratories: A Validation Study. Paper presented at the International Objective Measurement Workshop (New York, NY, March 22).
9. Dolan, E. L., Grady[**], J., Lally, D. (2007). Defining authenticity within a student-teacher-scientist partnership. Paper presented at the National Association for Research in Science Teaching Annual Conference (New Orleans, LA, April 15-18).
10. Dolan, E. L. (2006). Student-teacher-scientist partnerships: Experimental biology in K-12 classrooms. Proceedings of Experimental Biology 2006, American Society for Biochemistry and Molecular Biology (San Francisco, CA, April 1-5, 2006). FASEB Journal 20, A1311.
11. Dolan, E. L. (2004). Sustaining Biotechnology Education: Challenges and Strategies. Paper for Conference on K-12 Outreach from University Science Departments, Raleigh NC.
12. Dolan, E. L. (2003). Partnership for Research & Education in Plants: A teacher-student-scientist collaboration. Paper for Conference on K-12 Outreach from University Science Departments, Raleigh NC.

REVIEWS, EDITORIALS, FEATURES, AND LETTERS

1. Segarra, V. A., Styers, M. L., & Dolan, E. L. (2019). Optimizing your undergraduate teaching as you would an experiment: developing the next generation of cell biologists. *Molecular biology of the cell*, 30(19), 2439-2440. https://doi.org/10.1091/mbc.E19-06-0349
2. Corwin, L. A., Dolan, E. L., Graham, M. J., Hanauer, D. I., & Pelaez, N. (2018). The need to be sure about CUREs: Discovery and relevance as critical elements of CUREs for nonmajors. *J Microbiol & Biol Educ,* 19(3).
3. Dolan, E. L. (2018). *CBE—Life Sciences Education*: the story of a "great journal scientists might be caught reading". *Molecular biology of the cell*, *29*(22), 2611-2613.
4. Dolan, E. L. (2017). Within and beyond Biology Education Research: Steps toward Cross-Disciplinary Collaboration. *CBE-Life Sci Educ*, *16*(4), ed2. https://doi.org/10.1187/cbe.17-10-0224
5. Dolan, E. L. (2017). Sustaining CBE—Life Sciences Education. *CBE-Life Sci Educ*, *16*(3), ed1. https://doi.org/10.1187/cbe.17-07-0120
6. Dolan, E. L. (2017). Undergraduate research as curriculum. *Biochemistry and Molecular Biology Education* 45(4), 293–298. https://doi.org/10.1002/bmb.21070
7. Dolan, E. (2015). Best practices for digital teaching. *Science 348*, 1436–1436.
8. Dolan, E.L. (2015). Biology Education Research 2.0. *CBE – Life Sciences Education 14*, ed1.
9. Dolan, E. L. (2014). Thanks! *CBE – Life Sciences Education*, *13,* 573-574.
10. Dolan, E. L. (2013). A year of firsts. *CBE – Life Sciences Education, 12,* 577-578.

11. Dolan, E. L., Stone, E. (2013). Adding to the biology education research toolkit: Research Methods essays. *CBE – Life Sciences Education*, *12,* 318-319.
12. Dolan, E. L. (2012). Biology education research—A cultural (r)evolution. *CBE – Life Sciences Education, 11,* 333-334. [http://www.lifescied.org/content/11/4/333.full]
13. Dolan, E. L. (2012). Next steps for Vision and Change: Moving from setting the vision to change. *CBE – Life Sciences Education, 11,* 201-202. [http://www.lifescied.org/content/11/3/201.full]
14. Dolan, E. L. (2011). The blossoming of biology education research. *CBE – Life Sciences Education, 10,* Highlights of 2011, 1-2. [http://www.ascb.org/files/2011-Editorial.pdf]
15. Ledbetter, M. L., Dolan, E. L. (2011). Book Review. Discipline-based education research: Preaching to converts who are learning to sing in the choir. *CBE – Life Sciences Education, 10,* 142-143. [http://www.lifescied.org/content/10/2/142.full]
16. Dolan, E. L. (2010). The next five years. *CBE – Life Sciences Education, 9,* 379-380. [http://www.lifescied.org/cgi/content/full/9/4/379]
17. Dolan, E. L. Current insights: Recent research in science teaching and learning. *CBE – Life Sciences Education.*
    i. Volume 9: 148-149. [http://www.lifescied.org/cgi/content/full/9/3/148]
    ii. Volume 9: 76-77. [http://www.lifescied.org/cgi/content/full/9/2/76]
    iii. Volume 9: 17-18. [http://www.lifescied.org/cgi/content/full/9/1/17]
    iv. Volume 8: 274-275. [http://www.lifescied.org/cgi/content/full/8/4/274]
    v. Volume 8: 162-164. [http://www.lifescied.org/cgi/content/full/8/3/162]
    vi. Volume 8: 108-110. [http://www.lifescied.org/cgi/content/full/8/2/108]
    vii. Volume 8: 9-10. [http://www.lifescied.org/cgi/content/full/8/1/9]
    viii. Volume 7: 353-354. [http://www.lifescied.org/cgi/content/ full/7/4/353]
    ix. Volume 7: 288-289. [http://www.lifescied.org/cgi/content/full/7/3/288]
    x. Volume 7: 171-172. [http://www.lifescied.org/cgi/content/full/7/2/171]
    xi. Volume 7: 25-26. [http://www.lifescied.org/cgi/content/full/7/1/25]
    xii. Volume 6: 259. [http://www.lifescied.org/cgi/content/full/6/4/259]

GRANTS

PENDING

Co-PI, BioFoundry: Glycoscience Resources, Education, And Training (BioF:GREAT), NSF BioFoundries Program, proposed 4/2024-3/2030, $23,995,058 requested.

SUBMITTED

Co-PI, Collaborative Research: A Cross-Institutional Partnership to Transform Teaching Evaluation & Optimize the Transferability of the DeLTA Model, NSF Improving Undergraduate STEM Education, proposed 1/2024-12/2028, $1,499,853 requested. Not funded.

ACTIVE RESEARCH GRANTS

PI, R01: The IMPACT Study: Improving Mentorship Practice through Attributions and Conflict Training, NIH NIGMS, 2022-2027, $1,309,093.

Senior personnel, Education Researcher & Diversity Coordinator, Center for Chemical Currencies of a Microbial Planet, NSF Foundation Science & Technology Center, 2021-2026, portion of the budget: $831,472.

PI, Collaborative: Examining the Nature and Impacts of Instructors' Communication with Students in Classroom-based Undergraduate Research Experiences, NSF Improving Undergraduate STEM Education, 2020-2024 (in no-cost extension), $156,661.

PI, Momentary Assessment of Research Learning Environments. NSF EHR Resources Core Research, 2019-2024 (in no-cost extension), $1,420,571.

PI, Measurement of Negative Mentoring in Undergraduate Research. NSF Improving Undergraduate STEM Education, 2019-2024 (in no-cost extension), $300,000.

ACTIVE CAPACITY BUILDING, PROGRAMMING, AND EVALUATION GRANTS

Co-PI, R25: PREP@UGA: Post-Baccalaureate Research Training to Diversify Biomedical Science. NIH Post-baccalaureate Research Education Program, proposed 12/2023-11/2028, $1,756,395.

PI, Preparing the Next Generation of Biology Education Researchers through Interdisciplinary Co-mentorship and Evidence-based Professional Development. NSF STEM Education Organizational Postdoctoral Fellowships, 9/2023-8/2026, $1,249,972.

PI, Howard Hughes Medical Institute Inclusive Excellence 3 Learning Community Collaborative 4 on meaningful evaluation of teaching for promotion and tenure, 2022-2028, $523,065. This combination of two related grants is to build capacity teaching evaluation at the University of Georgia through changes in policy and practice.

Co-PI, Post-Baccalaureate Training in Infectious Disease Research. NIH Post-baccalaureate Research Education Program (R25), 2018-2023, $2,124,910. This grant is to support cohorts of postbaccalaureate students from under-represented and marginalized backgrounds in gaining research and professional development experience to transition to and succeed in life science doctoral programs.

Co-PI, Transforming STEM Education at Research 1 University through Multi-Level Action Teams. NSF Improving Undergraduate STEM Education, 2018-2024 (in no-cost extension), $2,998,335. This grant is to shift the university toward more effective and inclusive undergraduate STEM instruction. My role is to lead university-level advancement of policy and practices.

Evaluator, Sophomore Fellows: Cultivating New Scientists through Research, Mentoring, and Community. Lead institution: UT Austin, NSF S-STEM, 2017-2023 (in no-cost extension), $52,052. I serve as external evaluator for this undergraduate science scholarship program for students from socioeconomically disadvantaged backgrounds.

COMPLETED

PI, RAPID: Optimizing distance learning programs to mitigate the effects of the COVID-19 Pandemic on REU sites in biology. NSF Division of Biological Infrastructure, 2020-2023, $77,892.

Co-PI, Supplement to T32 Predoctoral Training in Genetics. National Institutes of Health. The goal of this supplement is to develop and test interventions to improve graduate student-research advisor mentoring relationships. 2021-2023, $86,400.

PI, Course-based Undergraduate Research Experiences Network 2. NSF Research Coordination Networks in Undergraduate Biology Education, 2017-2022, $499,925. This grant supports the operations of a national network of people and programs integrating research into undergraduate life science courses.

Evaluator, Research Immersive Scholastic Experience in Biology (RISEbio): A Scholarship and Support Program Assisting Biology Students to Rise to their Full Potential. Lead institution: Minnesota State University – Mankato, NSF S-STEM, 2017-2022, $51,303.

Co-PI, Supplement to T32 Predoctoral Training in Genetics. National Institutes of Health. The goal of this supplement was to develop tools and processes to effectively evaluate graduate mentorship. 2020-2021, $113,804.

PI, Vertically Integrated Projects (VIP) at UGA. Subcontract from Georgia Tech as part of a grant from the Helmsley Foundation, $49,801.

PI, Examining the mentoring of undergraduates engaged in science research: An empirical study of undergraduate-postgraduate-faculty triads. NSF Research and Evaluation on Education in Science and Engineering, 2013-2017, $382,213.

PI, Moving the Needle: Applying successful strategies to improve persistence across the spectrum of STEM students, HHMI Undergraduate Science Education Award Program, 2014-2019, $2,400,000. *Stepped down in 2016 with institutional transition.*

Co-PI, Enhancing experiential learning with technology educators, Keck Foundation, 2015-2018, $500,000. *Stepped down in 2016 with institutional transition.*

PI, RCN-UBE: Course-based undergraduate research experiences network (CUREnet), NSF Research Coordination Network for Undergraduate Biology Education Program, 2011-2016, $497,556.

PI, Building an Infrastructure for Research Collaborations, NIH National Center for Research Resources - Science Education Partnership Award, 2009-2016, $1,281,896.

PI, Community College Biology Education Research Meeting, NSF Improving Undergraduate STEM Education Program, 2015-2016, $49,321.

PI, REU Site: Undergraduate Biology Education Research Program, NSF Research Experiences for Undergraduates Program, 2013-2016, $260,236. *Stepped down as PI in 2014 with institutional transition.*

PI, Collaborative: Engaging undergraduates in genomic questions and environmental context: Building a database of complex phenotypes for plant knockout mutants, NSF Integrated Organismal Systems Program, 2011-2015, $202,505.
Co-PI, Transforming Undergraduate Education in STEM – Central Resource Project: A Scientific Society's Response to the Vision and Change Report, NSF Division of Undergraduate Education, 2011-2013, $19,000.

Co-PI, Scieneering: Learning, Discovery and Engagement at the Intersections of Science, Engineering, and Law, HHMI Undergraduate Science Education Award Program, 2010-2014, $1,330,000. *Stepped down as co-PI in 2011 with institutional transition.*

Collaborator, Biology Education Network Collaborative, American Association for the Advancement of Science (AAAS), 2005-2010, $146,003.

PI, Expanding the Web of Partnership: teaching cutting-edge plant science through web-based Flash modules, American Society of Plant Biologists Education Foundation Grant Awards Program, 2007-2009, $28,369.

PI, Partnership for Research and Education in Plants, NIH National Center for Research Resources - Science Education Partnership Award, 2003-2009, $1,482,150.

PI, Integrating Biology Learning through Investigation, NSF Division of Undergraduate Education, Course, Curriculum, and Lab Improvement, 2007-2010, $200,000.

Co-PI, 2010 Project: Analysis of Four Families of Receptor Protein Kinases, NSF Department of Biological Infrastructure, 2004-2009, $312,824.

Co-PI, Structure and Localization of the Flavonoid Multienzyme Complex, NSF Division of Molecular and Cellular Biosciences, Metabolic Biochemistry, 2005-2009, $49,697.

PI, SEPA Web Site (administrative supplement to Partnership for Research and Education in Plants), NIH National Center for Research Resources - Science Education Partnership Award, 2004-2008, $207,018.

PI, National Science Foundation Plant Genomics Research Program Supplement: Partnership for Research and Education in Plants, 7/15/01-7/14/02, $48,382.

PI, Arizona Board of Regents Eisenhower Mathematics and Science Education Act: Bio Boot Camp, 6/1/01-5/31/02, $47,332.

AWARDS

Lillian Eby Mentoring Award, Owens Institute for Behavioral Research	2023
Nominee, Meigs Distinguished Teaching Professorship	2023
Franklin College Excellence in Undergraduate Teaching Award	2023
American Society for Cell Biology Distinguished Service Award	2020
American Society for Cell Biology Bruce Alberts Science Education Award	2018
Award for Exemplary Contributions to Education American Society for Biochemistry and Molecular Biology	2017
Excellence in Education of the American Society of Plant Biologists	2013
National Academies Education Fellow in the Life Sciences	2012
Virginia Tech Alumni Award for Outreach Excellence	2005
Virginia Fiske Recognition in Teaching Award, Wellesley College	1993

FELLOWSHIPS

Fellow, Owens Institute for Behavioral Research, University of Georgia	2016-present
American Heart Association [California Affiliate] Pre-doctoral Fellowship	1997-1999
University of California Regents Pre-doctoral Fellowship	1995-1997
Byers' Fellow of the Achievement Rewards for College Scientists Scholarship	1995-1996
National Science Foundation Graduate Fellowship, Honorable Mention	1994

INVITED TALKS AND PRESENTATIONS

INVITED TALKS AND NAMED LECTURES

West Virginia School of Medicine Department of Biochemistry	2023
Chemistry Education Gordon Research Conference	2023
Global Talent Mentoring	2023
Association of Medical and Graduate Departments of Biochemistry	2023
Gertrude Flora Ribble Seminar, University of Kentucky	2022
Purdue University	2022
Hodson Memorial Lecture, University of Delaware	2022
University of Minnesota Duluth	2022
Johns Hopkins School of Medicine Education Grand Rounds	2022
St. Mary’s College of Texas	2022
Georgetown University	2022
Vanderbilt University	2022
Antibody Engineering Hackathon	2022
Texas A&M University	2022
Baylor College of Medicine	2022
NSF BIO Research Experiences for Undergraduates PI Meeting	2021
National Academies Board on Science Education	2021
University of Washington Seattle	2020
University of Alabama Birmingham	2020

University of Utah	2020
University of Arizona	2020
Brown University	2020
Clemson University	2019
University of Notre Dame	2019
University of Memphis	2019
University of California Irvine	2019
University of Colorado Boulder	2019
University of Queensland, Australia	2018
Emory University	2018
Fresno State University	2018
University of Tennessee Knoxville	2018
University of Minnesota	2018
Indiana University - Purdue University Indianapolis	2017
Undergraduate Research Conference at the University of California Berkeley	2017
Geological Society of America Annual Meeting, Seattle, WA	2017
Mississippi State University	2016
Jackson State University	2016
University of North Carolina Chapel Hill	2016
Allied Genetics Conference, Orlando, FL	2016
The Ohio State University	2016
San Francisco State University	2016
Michigan State University	2016
Institut Pasteur, Paris, France	2015
Purdue University	2015
Middle Tennessee State University	2015
University of South Florida	2015
Smith College	2014
University of Delaware	2012
Yale University	2012
Harvard Medical School	2012
Howard Hughes Medical Institute meeting on scientist-teacher partnerships	2007
Women in Engineering Summer Academy, Lynchburg, VA	2006
Women in Engineering Summer Academy, Lynchburg, VA	2005
Institute for Advanced Learning and Research, Danville, VA	2005
Howard Hughes Medical Institute meeting on science magnet programs	2004
Ferrum College	2004
Human Genome Project Conference, Norfolk State University	2004
Central Virginia Governor's School, Lynchburg, VA	2003
Human Genome Project Conference, Norfolk State University	2003
Virginia Biotechnology Association Biotechnology Summit	2003
Virginia Biotechnology Association Biotechnology Summit	2002

PLENARY AND KEYNOTE TALKS

Memorial University Annual Biochemistry Symposium Newfoundland, Canada	2023

Conference on Applied Learning in Higher Education	2023
Lawrence Technological University	2023
Genomics Education Partnership National Meeting	2023
Mentoring Institute at the University of New Mexico	2022
University of Detroit Mercy	2022
York University	2022
The College of St. Scholastica	2021
ComBio2018, Sydney, Australia	2018
New Horizons in Biochemistry and Molecular Biology Education Conference Weizmann Institute of Science, Israel	2017
Transforming Research Undergraduate STEM Education Conference	2017
Training, Workforce Development, and Diversity Programs Principal Investigators Meeting NIH National Institute of General Medical Science	2017
University of West Alabama Undergraduate Research Symposium	2017
UC Davis Scholarship of Teaching and Learning Conference	2016
Transforming STEM Pedagogy through Active Learning Conference Southwestern University, Georgetown, TX	2016
Gordon Conference on Undergraduate Biology Education Research	2015
Freshman Research Initiative Conference	2014
National Association of Biology Teachers annual meeting Four-Year College & University Professional Development Symposium	2014
Southeast Regional PULSE Institute, University of Richmond	2014
American Society for Microbiology annual meeting	2010

INVITED PANELS / CONFERENCES

Association for the Study of Higher Education Annual Meeting	2019
NIH Training, Workforce Development, and Diversity PI meeting	2019
American Association for the Advancement of Science Annual Meeting	2017
EdFoo hosted by Google, Sesame Street Workshop and O'Reilly Media	2016
American Society for Microbiology Conference on Undergraduate Education	2015
Virginia Governor's Conference on STEM Education	2009

REVIEWER

JOURNALS

Advances in Physiology Education
Bioscience
CBE – Life Sciences Education
CourseSource
International Journal of Medical Education
Journal of Higher Education
Journal of Research in Science Teaching
Journal of Science Education and Technology
Journal of STEM Education
Journal of Women and Minorities in Science and Engineering
Learning and Individual Differences
PLoS Biology
PLoS ONE
Science
Science Advances
Science Education
The Plant Cell

GRANT PANELS

Howard Hughes Medical Institute

- Precollege Outreach Initiative for Biomedical Research Institution

National Institutes of Health

- Science Education Partnership Awards (R25)
- Blueprint for Neuroscience Research Science Education Award (R25)
- Small Business Innovation Research Program, Biobehavioral and Behavioral Processes
- National Institute for Environmental Health and Safety, Division of Extramural Research and Training Program

National Science Foundation

- Education and Human Resources Core Research Program
- Education and Human Resources Faculty Early Career Development (CAREER) Program
- Research on Education and Learning Program
- Widening Implementation and Demonstration of Evidence-based Reforms Program
- Discovery Research K-12 Program
- Transforming Undergraduate Education in STEM Program
- Course, Curriculum, and Laboratory Improvement Program
- Research and Evaluation of Education in Science and Engineering Program
- Math Science Partnership Program

U.S. Department of Agriculture

- Higher Education Challenge Grants

SITE VISIT TEAM MEMBER

Weizmann Institute for Science	2021
National Science Foundation Advanced Technological Education Program	2012

CONFERENCE PROPOSAL REVIEWS

American Educational Research Association National Meeting

National Association for Research in Science Teaching Annual Meeting

NATIONAL LEADERSHIP AND SERVICE

CBE – LIFE SCIENCES EDUCATION (www.lifescieed.org)
Open access journal of biology education research and evidence-based practice published by the American Society for Cell Biology in editorial partnership with the Genetics Society of America

Editor-in-chief	Jan 2010-Jul 2020
Senior Editor	Aug 2020-Jan 2023
Editorial board member	2003-2023

NATIONAL ACADEMIES OF SCIENCE, ENGINEERING, AND MEDICINE

Member of Roundtable on Systemic Change in Undergraduate STEM Education	2018-2021
Member of the Consensus Committee on The Science of Effective Mentoring	2018-2019
Organizing Member of the Participatory Workshop on Effective Mentoring in STEMM	2017

AMERICAN SOCIETY FOR CELL BIOLOGY

Co-chair of the Education Committee	2018-2022

GORDON RESEARCH CONFERENCE

Chair, Gordon Research Conference on Undergraduate Biology Education Research	2021 meeting

OTHER PROFESSIONAL ACTIVITIES

MEETINGS ORGANIZED / HOSTED

CURE Sustainability Meeting, Science Education Resource Center	2019
ASCB Regional Educators Meeting	2019
CUREnet2 Website Development Meeting, Science Education Resource Center	2017
Next Generation CURE Assessment Meeting, Atlanta, GA	2016
Course-based Undergraduate Research Experiences, Cold Spring Harbor Laboratory	2014
Assessment of Course-based Undergraduate Research Experiences, Chicago, IL	2013
Course-based Undergraduate Research Experiences Network Howard Hughes Medical Institute	2012
Vision and Change Workshop, Plant Biology Annual Meeting	2011
Biotechnology Education Conference	2002-2005, 2007

ADVISORY BOARDS

Science Communication Laboratory Governance Committee	2023
Biochemistry Authentic Scientific Inquiry Laboratory (BASIL) Community	2022-present
Broadening Participation and the Culture of Undergraduate Research Experiences San Diego State University	2022-present
Tracking Undergraduate Research in Texas and Long-Term Effects Texas Tech University	2022-present
Community College Undergraduate Research Initiative	2014-2023
CREST Center for Aquatic Chemistry and the Environment Florida International University	2017-2019
Center for Cellular Construction University of California San Francisco	2017-2019
CourseSource, A Journal of Biology Curriculum Resources	2012-2017
Partnership for Undergraduate Life Science Education (PULSE)	2012-2017
Education Foundation of the American Society of Plant Biologists	2009-2012
Advisory Board Member of PlantingScience.org	2008-2012
Child Development Center for Learning and Research at Virginia Tech	2005-2011
Increasing the Representation of Women in STEM via a New Interdisciplinary Engineering Program at a Liberal Arts Women's College	2006-2008

OTHER NATIONAL COMMITTEES AND SERVICE

Invited participant, NSF meeting on cognitive science and discipline-based education research	2016
Invited working group member Cottrell Scholars Collaborative to Promote Adoption of Research and Inquiry-Based Lab Curricula	2016-2017
Discipline-Based Education Research Alliance	2016
Organizing Committee, National Academies of Sciences, Engineering, and Medicine Convocation on Integrating Discovery-Based Research into the Undergraduate Curriculum	2015
Education Committee, American Society of Plant Biologists	
Chair	2009-2012
Member	2007-2014
Strand 2 Co-coordinator: Science Learning: Contexts, Characteristics, and Interactions National Association for Research in Science Teaching annual meeting	2008-2010
Professional Development Committee, National Association of Biology Teachers	2005-2008

National Association for Health & Science Education Partnerships

President	2006-2008
Executive Board	2004-2008

DEPARTMENT, COLLEGE, AND UNIVERSITY SERVICE

University of Georgia

Advisory Committee for Active Learning QEP	2022-present
University Review Committee for Promotion & Tenure	2021-present

Franklin College of Arts & Sciences

Indirect Costs Committee	2023-present
Franklin College Faculty Advisory Committee	2023-present

Biochemistry & Molecular Biology, University of Georgia

Executive Committee	2021-present
Undergraduate Assessment Committee	2017-2023
Undergraduate Affairs Committee	2017-present

Search Committee Member

Assistant Professor in Chemistry Education Research (Chemistry)	2023
Assistant Professor in Applied Cognition and Development (Educational Psychology)	2023
Professor and Director, Engineering Education Transformations Institute (Engineering)	2022
Assistant or Associate Professor in Industrial & Organizational Psychology (Psychology)	2022

Co-chair, 21st Century Undergraduate Education Working Group, University of Texas Austin 2015-2016

Graduate Committee, Biochemistry, Virginia Tech

Chair	2009-2011
Member	2007-2011

Coordinator, Virginia Tech STEM K-12 Outreach Initiative 2004-2006

Chair, Virginia Tech Sigma Xi Teaching Award Committee 2004-2005

FACULTY PROFESSIONAL DEVELOPMENT – DESIGN & FACILITATION

RESEARCH MENTORING

Topics include Introduction to Mentoring, Aligning Expectations, Communicating Effectively, Equity & Inclusion in Mentoring, Developing Mentee Independence, and Navigating Conflict in Mentoring

University of Georgia	2019-present
American Society for Virology	2023
Fort Valley State University	2022, 2023
Simons Collaboration on Principles of Microbial Ecosystems (PriME)	2022, 2023
Georgetown University	2022
Johns Hopkins University	2022
Texas A&M University	2021
National Institute on Scientific Teaching	2021
University of Texas Austin	2014-2016

COURSE-BASED UNDERGRADUATE RESEARCH EXPERIENCES (CURE)

Johnson County Community College	2023
Morgan State University	2023
Northeastern State University	2023
Inter American University of Puerto Rico, Ponce Campus	2021, 2023
New Mexico Highlands University	2021, 2023
Biological Collections Ecology & Evolution Network Delaware Museum of Natural History	2020-2023
Adams State University (Colorado)	2020-2023

North Carolina A&T University & Elizabeth City State University	2020
University of Massachusetts Amherst	2020
University of California Davis	2019
Cottrell Scholars Collaborative	2019
Alabama State University	2019
Fresno State University	2019
Community College of Rhode Island	2019
Maricopa County Community College System	2019
Bowie State University	2018
Santa Rosa Junior College	2018
Hampton University	2018
Mercy College	2018
North Carolina Central University	2018
University of Colorado Denver	2018
University of Puerto Rico Rio Piedras	2018
Santa Rosa Junior College	2017
University of Texas Austin	2017
University of West Alabama	2017
Santa Rosa Junior College	2016
University of Texas Austin	2016
Carleton College	2015

WORKSHOPS ON SCIENTIFIC TEACHING / ACTIVE LEARNING

Elizabeth City State University	2021
University of Texas Austin	
Summer Institute	2016
Workshop series	2015-2016
New faculty orientation	2015-2016
Tarrant County College System, Ft. Worth, TX	2015
Oxford College of Emory, Atlanta, GA	2014
University of Georgia	2013

WORKSHOPS ON BIOLOGY EDUCATION RESEARCH AND PUBLISHING

Transforming Undergraduate Education in the Molecular Life Sciences	2023
University of Queensland	2018
ComBio Conference, Sydney, Australia	2018
NIH IRACDA Conference	2018
Southwestern University, Georgetown, TX	2016
University of California at San Diego	2016
NIH IRACDA Conference	2013
Undergraduate Science Education Principal Investigators Meeting	2012
Writing Residency, American Society for Microbiology Biology Scholars Program	2009-2012
American Society for Biochemistry and Molecular Biology Education Conference	2009

WORKSHOPS ON EVALUATION AND ASSESSMENT

Mimulus Community Meeting, Duke University	2014
Plant Biology Meeting	2008

K-12 TEACHER PROFESSIONAL DEVELOPMENT

Summer Science Institute for High School Teachers. Alexandria City Public Schools, VA	2010
Biotech-in-a-Box Professional Development for Virginia high school teachers	2002-2010
BIOTECH Project Professional Development for Arizona high school teachers	1999-2001
BrainLink Project for California middle school teachers	1995-1998
City Science Summer Institute for elementary teachers in San Francisco	1996-1998

Drug Abuse Research Team Program, San Joaquin County School District, CA 1998

EVALUATION AND CONSULTING

USDA NIFA REU Site	2018-present
NSF S-STEM Sites at MSU Mankato, UT Austin	2018-2023
Fort Valley State University Science Learning Community	2018-2021
NSF REU Sites Johns Hopkins University, University of Georgia, UT Austin	2014-2018
Community College Undergraduate Research Initiative	2016-present
Pre-Ph.D. Scholar Program, Hampton University	2008-2012
Molecules of Life curriculum development program, Geospiza, Inc., Seattle, WA	2004
Teacher Internships in Plant Genomics, University of Arizona	2001
Grant proposal writing, Intrexon Corporation, Blacksburg, VA	2005-2006
Science education editing, BCS Publishing Ltd., Oxford, England	2004-2006
Science education editing, Brown Reference Group, Grolier Inc., London, England	2003-2005
Education Development Center, Newton, MA	2000-2002

PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Science (AAAS)
American Psychological Association (APA)
American Society for Biochemistry & Molecular Biology (ASBMB)
American Society for Cell Biology (ASCB)
Society for the Advancement of Biology Education Research (SABER)