Erin E. Shortlidge

Education

Ph.D.	2014	Biology, Portland State University
A.S. with Honors	2007	Biology, Harold Washington College
B.F.A. with Distinction	2000	Dance, University of Missouri-Kansas City

Employment

Interim Vice Provost for Student Success, Office of Academic Affairs, Portland State University	2024 - present
Associate Professor of Biology and Biology Education, Department of Biology, Portland State University	2021 - present
Office of Academic Affairs Leadership Fellow in Inclusive Pedagogy in STEM Education, Portland State University	2022 - 2024
Assistant Professor of Biology and Biology Education, Department of Biology, Portland State University	2015 - 2021
PSU HHMI Biology Education Fellow	2015 - 2019
Postdoctoral Research Associate, Biology Education Research, School of Life Sciences, Arizona State University	2014 - 2015
Graduate Teaching/Research Assistant, Department of Biology, Portland State University	2009 - 2014
NSF-funded Antarctic Researcher, Chile & South Shetland Islands, Antarctica	2014
NSF GK-12 Fellow, Portland State University	2011 - 2013
Field Instructor, Oregon Outdoor School	2008

Scholarship in Science Education and Scientific Research

Dissertation

Testing the Ecological and Physiological Factors Influencing Reproductive Success in Mosses, 2014.
Advisor: Dr. Sarah M. Eppley

Book Chapters

Komperda, R., Barbera, J., Shortlidge, E. E., & Shusterman, G. P. (2018). Connecting Chemistry to Community with Deliberative Democracy. In Citizens First! Democracy, *Social Responsibility and Chemistry* (Vol. 1297, pp. 81-98): American Chemical Society. https://pubs.acs.org/doi/abs/10.1021/bk-2018-1297.ch006

Refereed Publications

**Indicates graduate student; underline indicates undergraduate or postbaccalaureate student*

Tripp, B.T., Shortlidge, E.E. Disciplinarity Humility: A Means to Overcome Faculty Barriers to Interdisciplinary Science (in review, *Cultural Studies of Higher Education*)

*Gray, M.J., Stone, M.R., Shortlidge, E.E. Expressive and Instrumental Social Capital Facilitates Network Connections for Community College Transfer Students in STEM (in review, *Community College journal of Research and Practice*)

*Gray, M.J., Villaflor, J., Shortlidge, E.E. Elements of Social Capital and Counterspace Processes Contribute to Undergraduate STEM Student Development of a Sense of Belonging. *Science Education https://doi.org/10.1002/sce.21947*

Shortlidge, E.E., *Gray, M.J., Estes, S., *Goodwin, E.C. (2024). The Value of Support: STEM Intervention Programs Impact Student Persistence and Belonging. *CBE—Life Sciences Education*. 23:2. https://doi.org/10.1187/cbe.23-04-0059

Gray, M., Shortlidge, E., Teuscher, C. (2024), altREU: An Alternative Online Research Experience Broadens Opportunities for Undergraduates. ASEE Annual Conference & Exposition, Portland, OR https://peer.asee.org/46539

Shortlidge, E.E. *Kern, A.M., *Goodwin, E.C., Olimpo, J. (2023). Preparing Teaching Assistants to Facilitate Course-based Undergraduate Research Experiences (CUREs) in the Biological Sciences: A Call to Action. *CBE—Life Sciences Education*. 22:4. https://doi.org/10.1187/cbe.22-09-0183 (Highlighted Article)

*Goodwin, E. C., Cary, J. R., Phan, V. D., Therrien, H., & Shortlidge, E. E. (2023). Graduate teaching assistants impact student motivation and engagement in course-based undergraduate research experiences. *Journal of Research in Science Teaching*. https://doi.org/10.1002/tea.21848

*Rain-Griffith L., *Goodwin E.C., Shortlidge E.E. (2022). What's in this? Students Deliberate on Endocrine Disrupting Chemicals Found in Everyday Healthcare Items to Build Democratic Skills. *CourseSource* 9. https://doi.org/10.24918/cs.2022.31

*Goodwin E.C., Cary J.R., Shortlidge E.E. (2022). Not the same CURE: Student experiences in course-based undergraduate research experiences vary by graduate teaching assistant. *PLoS ONE* 17(9): e0275313. https://doi.org/10.1371/journal.pone.0275313

*Gray M.J., Gunarathne, S.A, Nguyen, N.N., Shortlidge, E.E. (2022). Thriving or Simply Surviving? A Qualitative Exploration of STEM Community College Students' Transition to a Four-Year University. *CBE—Life Sciences Education* 2022 21:3 (Highlighted Article)

Shortlidge, E. E., Jolley, A., Shaulskiy, S., Geraghty Ward, E., Lorentz, C. N., & O'Connell, K. (2021). A resource for understanding and evaluating outcomes of undergraduate field experiences. *Ecology and Evolution*, 11, 16387– 16408. https://doi.org/10.1002/ece3.8241

*Goodwin, E. C., Cary, J. R., & Shortlidge, E. E. (2021). Enthusiastic but Inconsistent: Graduate Teaching Assistants' Perceptions of Their Role in the CURE Classroom. *CBE—Life Sciences Education*, *20*(4), ar66.

*Naibert, N., Shortlidge, E. E., & Barbera, J. (2021). Modifying the ASPECT Survey to Support the Validity of Student Perception Data from Different Active Learning Environments. *Journal of Microbiology & Biology Education*, *23*(1), e00193-21.

Shortlidge, E. E., Carey, S. B., Payton, A. C., McDaniel, S. F., Rosenstiel, T. N., & Eppley, S. M. (2021). Microarthropod contributions to fitness variation in the common moss *Ceratodon purpureus*. *Proceedings of the Royal Society B*, *288*(1947), 20210119.

*Goodwin, E. C., Anokhin, V., Gray, M. J., *Zajic, D. E., Podrabsky, J. E., & Shortlidge, E. E. (2021). Is this science? Students' experiences of failure make a research-based course feel authentic. *CBE—Life Sciences Education*, *20*(1), ar10.

*Rain-Griffith, L., Sheghwei, S., Shusterman, G.P., Barbera, J., Shortlidge, E.E. (2020). Deliberative Democracy: Investigating the Longitudinal Impacts of Democratic Activities in Introductory Biology Courses. *The American Biology Teacher* 82.7, 453-462

*Tripp, B., Shortlidge, E.E. (2020). From Theory to Practice: Gathering Evidence for the Validity of Data Collected with the Interdisciplinary Science Rubric (IDSR). *CBE – Life Sciences Education* 19(3).

*Tripp, B., Voronoff, S. A., & Shortlidge, E. E. (2020). Crossing Boundaries: Steps Toward Measuring Undergraduates' Interdisciplinary Science Understanding. *CBE—Life Sciences Education*, 19(1), ar8.

Shortlidge, E. E., *Rain-Griffith, L. Shelby, C., Shusterman, G.P., Barbera, J. (2019). Despite Similar Perceptions and Attitudes, Postbaccalaureate Students Outperform in Introductory Biology and Chemistry Courses. *CBE—Life Sciences Education* 18:ar3.

*Tripp, B., Shortlidge, E.E. (2019). A Framework to Guide Undergraduate Education in Interdisciplinary Science. *CBE-Life Sciences Education* 18:3es3 (Highlighted Article)

Prather, H. M., Casanova-Katny, A., Clements, A. F., Chmielewski, M. W., Balkan, M. A., Shortlidge, E. E., & Eppley, S. M. (2019). Species-specific effects of passive warming in an Antarctic moss system. *Royal Society Open Science*, 6(11), 190744.

*Goodwin, E.C., Cao, J.N., Fletcher, M., Flaiban, J.L., Shortlidge, E.E. (2018). Catching the Wave: Are Biology Graduate Students on Board with Evidence-Based Teaching? *CBE-Life Sciences Education*, v. 17 (3)

Shortlidge E.E., Eddy, S.L. (2018). Trade-offs between research and teaching for graduate students: a myth? *PLoS ONE* 13(6)

Eppley S.M., Rosenstiel, T.N., *Chmieleweski, M.W., Woll, S.C., Shaw, Z.M., Shortlidge, E.E. (2018). Rapid population sex-ratio changes in the moss *Ceratodon purpureus*. *American Journal of Botany*, 105(7): 1232–1238

Shortlidge E.E, Bangera G, Brownell S.E. (2017). Each to Their Own CURE: Faculty Who Teach Course-Based Undergraduate Research Experiences Report Why You Too Should Teach a CURE. *Journal of Microbiology & Biology Education,* v18(2).

Shortlidge E.E., Eppley S.M., Kohler H, Rosenstiel T.N., Zúñiga G.E., Casanova-Katny A. (2017). Passive warming reduces stress and shifts reproductive effort in the Antarctic moss, *Polytrichastrum alpinum*. *Annals of Botany*, 119: 27-38.

Shortlidge, E.E., Brownell, S.E. (2016). How to assess your CURE: A practical guide for instructors of course-based undergraduate research experiences. *Journal of Microbiology and Biology Education* 17, 399-408 (chosen for year-end JMBE Spotlight edition)

Shortlidge, EE, Bangera, G, Brownell, SE. (2016). Faculty perspectives on developing and teaching course-based undergraduate research experiences. *BioScience* 66 (1): 54-62.

Llaneza Garcia, E., Rosenstiel, T., Graves, C., Shortlidge, E.E., Eppley, S.M. (2016). Distribution drivers and physiological responses in geothermal bryophyte communities. *American Journal of Botany* 103:625-634

Shortlidge, E.E., Hashimoto, J. (2015). Moss in the classroom: a tiny but mighty tool for teaching biology. *Journal of Microbiology & Biology Education* v16i2: 289-291.

Rosenstiel, TN, Shortlidge E.E., Melnychenko A.N., Pankow, J.F., and Eppley, S.M., (2012). Sex-specific volatile compounds influence microarthropod-mediated fertilization of moss. *Nature* 489:431-3.

Shortlidge, E.E., T.N. Rosenstiel, and S.M. Eppley. (2012). Tolerance to environmental desiccation in moss sperm. *New Phytologis*t 194:741-750.

Manuscripts In Preparation

*Berl, J., Shortlidge, E.E. *Instructors at a Crossroad: Perceptions of Collaboration and Support Intersect with Intentions to Implement a CURE*

*Shihadih, D., Asgari, M., Chouinard, A., Gutzler, S., Heinrich, K., Lee, S., Shortlidge, E.E. *What Does it Take to Transform Biology Graduate Student Training? Exploring Levers, Barriers and Community Efforts to Enact Change.*

*Shihadih, D., Shortlidge E.E., *Applying the Teacher-Centered Systemic Reform Model to Changemakers in Biology Graduate Education.*

Runkel Baez, E., Holt, K., Shortlidge, E.E. *Do STEM Students and Faculty See Eye to Eye on the Value and Utility of Belonging Exercises in STEM Classrooms?*

*Shihadih, D., *Gray, M.J., Stone, M., Gallant, B., Poticari, C., Sahnow, C., Shortlidge, E.E. *Sense of Belonging in STEM: Salient Belonging Factors for Students at an Urban-serving Commuter University.*

*Gray, M.J., Shortlidge, E.E. Teuscher, C. altREU: An Alternative Online Research Experience Broadens Opportunities for Undergraduates

Presentations at Professional Meetings

***Indicates graduate student or postdoc; underline indicates undergraduate or postbaccalaureate student*

2025

Shihadih, D., Runkel Baez, E., Shortlidge, E.E. Society for the Advancement of Biology Education Research (SABER), SABER West, Irvine, CA January

2024

Shortlidge, E.E., *Gray, M.J., Estes, S., Goodwin, E.C. The Value of Support: STEM Intervention Programs Impact Student Persistence and Belonging, Society for the Advancement of Biology Education Research (SABER) Annual Meeting, Minneapolis, MN July

*Gray, M.J., Sahnow, C., Shortlidge, E.E. Developing a STEM Identity: Transfer Student Engagement in a CURE Impacts Perceptions of Current and Future Possible Selves, Society for the Advancement of Biology Education Research (SABER) Annual Meeting, Minneapolis, MN July

*Gray, M.J., Shortlidge, E.E. Teuscher, C. altREU: An Alternative Online Research Experience Broadens Opportunities for Undergraduates, American Society for Engineering Education Annual Conference & Exposition, Portland, OR, June

Chouinard, A., Lee, S., *Shihadih, D., Shortlidge, E.E. Tools for Evaluating and Improving Teaching Assistant Teaching Professional Development (Workshop), Society for the Advancement of Biology Education Research (SABER), SABER West, Irvine, CA January

2023

Shortlidge, E.E. Elements of Social Capital and Counterspace Processes Facilitate S-STEM Transfer Students' Development of a Sense of Belonging in STEM, AAC&U Transforming STEM Higher Education Conference, Arlington, VA November

Shortlidge, E.E. The Elephant in the CURE Conversation: Impacts of Graduate Teaching Assistants on Experiences & Outcomes, BioTAP Virtual Conference (invited keynote), October

*Gray, M.J., Villaflor, J.N., Shortlidge, E.E., Elements of Social Capital and Counterspace Processes Facilitate Community College Transfer Students' Development of a Sense of Belonging in STEM. Society for the Advancement of Biology Education Research (SABER) Annual Meeting, Minneapolis, MN July

*Gray, M.J., Shortlidge, E.E. Thriving or Simply Surviving? A Qualitative Exploration of STEM Community College Students' Transition to a Four-Year University. Society for the Advancement of Biology Education Research (SABER) West, Regional Meeting, Irvine, CA January

2021

*Goodwin, E.C., Cary, J.R., Shortlidge, E.E. Exploring How Graduate Students Perceive their Role as an Instructor in the CURE Classroom, Society for the Advancement of Biology Education (SABER) National Conference. (Virtual)

*Tripp, B. & Shortlidge, E.E. How can Academic Culture be more Inclusive toward Interdisciplinary Work? Society for the Advancement of Biology Education (SABER) National Conference. (Virtual)

2020

Shortlidge, E.E, Jolley A., Shaulskiy, S., Geraghy Ward, E., Lorentz, C., O'Connell, K. Undergraduate Field Experiences Research Network (UFERN) Understanding and Evaluating Outcomes of Undergraduate Field Learning Experiences: co-led and developed virtual workshop, Organization of Biological Field Stations Annual Meeting, (Virtual)

*Goodwin, E.C., Cary, J.R., Gray, M.J., Shortlidge, E.E. Exploring the Impacts of Graduate Teaching Assistantson Student Experiences in a Course-Based Undergraduate Research Experience. Society for theAdvancement of Biology Education Research, Annual Meeting (Virtual)

Shortlidge, E.E. Interdisciplinary Science Rubric (IDSR): An Assessment Tool to Measure Student's Ability to Think Across Disciplinary Boundaries. Biology Leadership Conference, Sanibel, FL (invited)

Gray, M.J., Burrows, J., Lutner, L., *Goodwin, E.C., Shortlidge, E.E. Undergraduate students' participation inSTEM support programs increases sense of belonging. Society for the Advancement of Biology Education Research (SABER) West; Irvine, CA

*Tripp, B., Shortlidge, E.E. Development and Validation of an Instrument to Measure Students' Interdisciplinary Science Understanding. Society for the Advancement of Biology Education Research, (SABER) West, Irvine, CA

2019

Shortlidge, E.E., Shusterman G.P. Deliberative Democracy: A Workshop in Coming to Consensus. American Association of Colleges and Universities, Transforming STEM Education, Chicago, IL

Gray, M., Shortlidge E.E. Influences on STEM Student Sense of Belonging; BUILD EXITO Research Symposium, PSU

*Goodwin, E.C., Anokhin, V., Gray, M.J., Gurzhuy, Y., Shortlidge, E.E. It's Not a Red Herring! Exploring Student Beliefs About Research Authenticity in an Introductory Biology Killifish CURE. Society for the Advancement of Biology Education Research (SABER), Minneapolis, MN

Shortlidge, E.E. "Reducing Transfer-Shock with Collaborations, CUREs and Community" Gordon Research Conference, Undergraduate Biology Education Research, Lewiston, ME (invited)

Shortlidge, E.E. "Can graduate students defy perceptions of trade-offs between research and teaching? American Chemical Society (ACS), National Conference, Orlando, FL (invited)

*Rain-Griffith, L., Sheghewi, S., Shelby, C., Barbera, J., Shusterman, G., Shortlidge, E.E. Coming to Consensus in Biology: Investigating the Longitudinal Impacts of a Large-scale Deliberation Intervention. Society for the Advancement of Biology Education Research (SABER) West Conference, Irvine, CA

*Goodwin, E.C., and Shortlidge, E.E. Catching the Wave: Are Graduate Students on Board with evidence-BasedTeaching? Society for the Advancement of Biology Education Research (SABER) West RegionalMeeting, Irvine, CA

*Tripp, B., Voronoff, S.A, Thran, M.A., Shortlidge, E.E. Measuring interdisciplinary science understanding.Society for the Advancement of Biology Education Research, (SABER) Irvine, CA

*Goodwin, E.C., Shortlidge, E.E. Catching the Wave: Are biology graduate students on board with evidence-based teaching? BioTAP (Virtual)

Komperda, R., *Hosbein, K. N., Barbera, J, Shortlidge, E. E., & Shusterman, G. P. Investigating the effect of deliberative democracy on students' perceptions of science and confidence interpreting scientific material. Poster session presented at the meeting of the American Chemical Society, New Orleans, LA

2018

*Tripp, B., Voronoff, S., Thran, M., Shortlidge, E.E. Assessing student understanding of interdisciplinary science AAAS Pacific Division, Pomona, CA

Shortlidge, E.E., *Goodwin, E.C., *Zajic, D., Podrabsky, J. A CURE for the common classroom? Waking students up with explorations of metabolic dormancy: an introduction of an emerging model for biology labs. AAAS Pacific Division, Pomona, CA

*Griffith, L., Shortlidge, E.E. Deliberative Democracy: Connecting STEM Undergraduates with Real-World Problems. Northwest Biology Instructors Organization, Portland Community College, Portland, OR

Komperda, R., *Griffith, L., Olsen, E., *Hosbein, K. N., Zografos, C., Barbera, J., Shortlidge, E. E., &Shusterman, G. P. Connecting chemistry to community with deliberative democracy. In C.Maguire & R. Sheardy (Chairs), Citizens First! Symposium conducted at the meeting of the American Chemical Society, San Francisco, CA

Shortlidge, E.E., Eddy, S.L. Is there evidence for the perceived trade-offs between research and teaching for graduate students? Society for the Advancement of Biology Education Research (SABER) NationalConference, Minneapolis, MN

2017

*Goodwin, E., Fletcher, M., Shortlidge, E.E. Graduate student perceptions of evidence-based teaching. Society for the Advancement of Biology Education Research (SABER), Minneapolis, MN

Shusterman, G.P., Weasel, L., Barbera, J., Skinner, E., Shortlidge, E.E. (2017) Deliberative Democracy Pedagogy: a tool to broaden and engage, Network of STEM Education Centers National Meeting, New Orleans

Komperda, R., *Griffith, L., Olsen, E., *Hosbein, K. N., Zografos, C., Barbera, J., Shortlidge, E. E., Shusterman, G. P. Connecting chemistry to community with deliberative democracy. In C. Maguire & R. Sheardy (Chairs), *Citizens First!* Symposium conducted at the meeting of the American Chemical Society, San Francisco, CA

2016

Rosenstiel, T.R., Shortlidge, E.E., Eppley S., Kohler, H., Zuniga, G., Casanova-Katny, A. Passive warming reduces stress and shifts reproductive effort in an Antarctic moss system: implications for higher-level interactions. SCAR 2016, Kuala Lumpur, Malaysia

Shortlidge, E.E., Bangera, G., Brownell, S.E. Why you should teach course-based undergraduate research experiences. Ecological Society for America, Annual Meeting, Ft. Lauderdale, FL

2015

Shortlidge, E.E., Bangera, G., Brownell, S.E. Faculty Perceptions on course-based undergraduate research experiences. Society for the Advancement of Biology Education Research (SABER), Minneapolis, MN

Rosenstiel, T.N., Shortlidge, E.E., Eppley S., Kohler, H., Zuniga, G., Casanova-Katny, A. Warming in Antarctic mosses reduces physiological barrier to reproduction. Botanical Society of America, Botany, Manitoba, Canada

prior to current position

Shortlidge, E.E. (2013). Moss: A small but mighty tool for education and research in ecosystem ecology. Research to Action Symposium: Ecosystem Services. Institute for Sustainable Solutions, Portland State University.

Shortlidge, E.E., Rosenstiel, T., Eppley, S. (2013). Sex-specific volatile compounds influence microarthropod-mediated fertilization in moss. American Society of Plant Biologists Conference, Providence, RI

Shortlidge, E.E., Rosenstiel, T.R., Eppley, S.M. (2013). Sex-specific volatile profiles in mosses imply maintenance of dioecy in mosses. Dioecy in land plants symposia: Botanical Society of America, Botany, New Orleans, LA (invited talk)

Shortlidge, EE., Rosenstiel, T., Eppley, S. (2013). Sex-specific volatile compounds influence microarthropod-mediated fertilization in moss. Northwest Scientific Association Annual Meeting. Portland, OR

Shortlidge, E.E., Rosenstiel, T., Eppley, S. (2011) Desiccation tolerance in three species of moss sperm. Ecological Society of America Conference, Ecological Physiology Section, Austin, TX

Posters at Professional Meetings

*Indicates graduate student or postdoc; underline indicates undergraduate or postbaccalaureate student

2024

Holt, K.S., Runkel-Baez, E.A., Shortlidge, E.E., Do STEM Students and Faculty See Eye to Eye on the Value and Utility of Belonging? Center for Internships, Mentoring, and Research (CIMR) Student Research Symposium. Portland, OR, May (winning poster)

Stone, M.R., Shortlidge, E.E., *Gray, M.J., "Expressive and Instrumental Social Capital Facilitates Network Connections for Community College Transfer Students in STEM" (2024). Student Research Symposium, Portland, OR, May

Gallant, B.R., *Gray, M.J., Stone, M., Sahnow, C., Poticari, C., *Shihadih, D., Shortlidge, E.E. Exploring Factors that Contribute to STEM Transfer Student Sense of Belonging, Student Research Symposium. Portland, OR, May

Gallant, B.R., *Gray, M.J., Stone, M., Sahnow, C., Poticari, C., *Shihadih, D., Shortlidge, E.E. Exploring Factors that Contribute to STEM Transfer Student Sense of Belonging, Louis Stokes Alliance for Minority Participation Annual Conference, Boise, ID, April

Holt, K.S., Runkel, E.A., Shortlidge, E.E., STEM Faculty See Value in a Classroom Belonging Exercise. Society for the Advancement of Biology Education Research (SABER), SABER West, Irvine, CA, January

*Gray, M.J., Sahnow, C.A., Shortlidge, E.E., Developing a STEM Identity: Transfer Student Engagement in a CURE Impacts Perceptions of Their Current and Future Possible Selves. Society for the Advancement of Biology Education Research (SABER) West, Regional Meeting, Irvine, CA, January

Shortlidge, E.E., Asgari, M., Chouinard, A., Gutzler, S. Heinrich, K., Lee, S. *Shihadih, D. Evolving the Culture of Biology through Teaching Assistant Training in Inclusive and Evidence-Based Practices. Society for the Advancement of Biology Education Research (SABER) West, Regional Meeting, Irvine, CA, January

2023

*Gray, M.J., Stone, M.R., Shortlidge, E.E., Expressive and Instrumental Social Capital Facilitates Network Connections for STEM Community College Transfer Students. Society for the Advancement of Biology Education Research (SABER), Annual Meeting, Minneapolis, MN July

*Gray, M.J., Sahnow, C.A., Shortlidge, E.E., Developing a STEM Identity: Transfer Student Engagement in a CURE Impacts Perceptions of Their Current and Future Possible Selves. Society for the Advancement of Biology Education Research (SABER), Annual Meeting, Minneapolis, MN July

Shortlidge, E.E. STEM Faculty See Value in a Belonging Intervention, Biology Leadership Community Conference, Raleigh, NC 2023 (invited)

*Berl, J., Phan, V., Cabrera-Perez, P., Aguirre, A, Amaraphorn-Atma, B., Shortlidge, E.E., Instructor Context Provides Insight into Mobilizing Evidence-Based Teaching Practices. Society for the Advancement of Biology Education Research (SABER) West, Regional Meeting, Irvine, CA January

*Gray, M.J., Villaflor, J. N., Shortlidge, E.E., Elements of Social Capital and Counterspace Processes Facilitate Community College Transfer Students' Development of a Sense of Belonging in STEM. Society for the Advancement of Biology Education Research (SABER) West, Regional Meeting, Irvine, CA January

2022

*Gray, M.J., Villaflor, J.N., Shortlidge, E.E., Sorting out support: Understanding how a STEM intervention program aided the development of a sense of belonging for community college transfer students. Society for the Advancement of Biology Education Research, Annual Meeting

*Gray, M.J., Shortlidge, E.E., To Survive or Thrive: Exploring STEM Transfer Students' Transitions to a Four-Year University. Society for the Advancement of Biology Education Research, Annual Meeting

2021

*Goodwin, E.C., Cary, J. R., Therrien, H., Phan, V., Shortlidge, E.E. How a Graduate Teaching Assistant's Approach to Fostering Student Competence, Autonomy, and Relatedness Impacts Student Motivation in a CURE. Society for the Advancement of Biology Education Research, Annual Meeting (Virtual)

*Gray, M.J., Villaflor, J.N., Diaz, L.I., Shortlidge, E.E., Understanding the Development of Scientific Integration and Sense of Belonging Among Community College Transfer Students Participating in a STEM Intervention Program. Society for the Advancement of Biology Education Research, Annual Meeting (Virtual).

Villaflor, J.N., Diaz, L.I., *Gray, M.J., Shortlidge, E.E., Understanding the Development of Persistence Factors Among Community College Transfer Students Who Are Supported Through Elements of the S-STEM Program. PNW LSAMP Conference; Apr 22-24; (Virtual).

2020

*Goodwin, E.C., Cary, J. R., Anokhin, V., Shortlidge, E.E. Keeping Up with Change: Are Graduate Students Ready to Teach CUREs? Society for the Advancement of Biology Education Research (SABER West), Irvine, CA, January

2019

*Goodwin, E.C., McDonald, K.K., Shortlidge, E.E. The Elephant in the CURE Classroom: What Do We Know About CUREs Taught by Graduate Teaching Assistants? Society for the Advancement of Biology Education Research (SABER), Annual Meeting, Minneapolis, MN

*Tripp, B., Voronoff, S.A., Pham, A., Shortlidge, E.E., Interdisciplinary Science Rubric: An assessment tool tomeasure students' ability to think across disciplinary boundaries. Society for the Advancement of BiologyEducation Research (SABER), Annual Meeting, Minneapolis, MN

Gray, M.J., *Goodwin, E.C., Estes, S., Shortlidge, E.E. Do I belong here? STEM Support Programs Can Impact Sense of Belonging. Society for the Advancement of Biology Education Research (SABER) Annual Meeting, Minneapolis MN

*Goodwin, E.C., McDonald, K.K., Shortlidge, E.E. The Elephant in the CURE Classroom: What Do We Know About CUREs Taught by Graduate Teaching Assistants? Gordon Research Conference for Undergraduate Biology Education Research, Lewiston, ME

*Tripp, B., Voronoff, S.A., Pham, A., Shortlidge, E.E., Interdisciplinary Science Rubric: An assessment tool to measure students' ability to think across disciplinary boundaries. Gordon Research Conference. Lewiston, ME

Gray, M.J., *Goodwin, E.C., Estes, S., Shortlidge, E.E., Examining Integration and Sense of Belonging Among Undergraduate Students Participating in STEM Support Programs. Portland State University Student Research Symposium, Portland, OR

Gray, M.J., *Goodwin, E.C., Estes, S., Shortlidge, E.E., Examining Integration and Sense of Belonging Among Undergraduate Students Participating in STEM Support Programs. Pacific Northwest McNair Research Conference, Seattle, WA

*Tripp, B., Dewsbury, B., Dirks C., Shortlidge, E.E. Interdisciplinary Science in Undergraduate Education. Biology Leadership Conference, Las Vegas, NV

2018

Shortlidge, E.E., *Griffith, L., Shelby, C., Shusterman, G.P., Barbera, J. Despite similar course perceptions, attitude, and modified course structures, performance gaps exist among biology and chemistry students. Society for the Advancement of Biology Education Research (SABER), Minneapolis, MN

*Goodwin, E.C., Anokhin, V., Cornelius, E., *Zajic, D. E., Podrabsky, J.E., Shortlidge, E.E. Waking Students Up with Explorations of Metabolic Dormancy: Are CUREs Effective for Nontraditional Student Populations? Society for the Advancement of Biology Education Research (SABER), Annual Meeting, Minneapolis, MN

Shusterman G.P. , Komperda, K., Barbera, J., *Hosbein, K., Shortlidge, E.E. Investigating the effect of deliberative democracy on students' perceptions of science and confidence in interpreting scientific material, APLU Network of STEM Education Centers National Conference, Columbus, OH

*Goodwin, E.C., Cao, J.N., Flaiban, J.L, Fletcher, M., Shortlidge, E. E. Catching the Wave: Graduate Students are On Board with Evidence-Based Teaching Practices. Society for the Advancement of Biology Education Research (SABER) West. University of California, Irvine, Santa Ana, CA

*Griffith, L., Shelby, C., Barbera, J., Shusterman, G., Shortlidge, E.E. Biology Students' Perceptions of Deliberative Democracy - A Novel Active Learning Strategy. Society for the Advancement of Biology Education Research West Regional Conference. University of California, Irvine, Santa Ana, CA

*Tripp, B., Voronoff, S.A., Thran, M.A., Shortlidge, E.E. Does Teamwork Make the Dream Work? A Natural Sciences Approach to Interdisciplinarity. Society for the Advancement of Biology Education Research (SABER) West. University of California, Irvine, Santa Ana, CA

2017

*Goodwin, E.C., Cao, J.N., Flaiban, J.L., Fletcher, M., Shortlidge, E. E., Catching the Wave: Graduate Students are On Board with Evidence-Based Teaching Practices. Sigma Xi Columbia-Willamette Student Research Symposium, 2017. (winning poster)

*Griffith, L., Shelby, C., Barbera, J., Shusterman, G., Shortlidge, E.E. Deliberative Democracy: Linking Introductory Science Coursework to Globally Relevant Problems. Sigma Xi 14th Annual Columbia-Willamette Sigma Xi Student Research Symposium

*Tripp, B., Shusterman, G., Kautz, S., Ballhorn, D.K., Strongin, R.M., Shortlidge, E.E. Undisciplining Disciplinarity: Can a CURE Help Students Tap into the Interdisciplinarity of Science? Sigma Xi 5th Annual Columbia-Willamette Sigma Xi Student Research Symposium, Portland, OR (winning poster)

*Griffith, L., Shelby, C., Barbera, J., Shusterman, G., Shortlidge, E.E. Deliberative Democracy: Linking Introductory Science Coursework to Globally Relevant Problems. AAC&U Transforming STEM Higher Education Conference, San Francisco, CA

*Tripp, B., Shusterman, G., Kautz, S., Ballhorn, D.K., Strongin, R.M., Shortlidge, E.E. Undisciplining Disciplinarity: Can a CURE Help Students Tap into the Interdisciplinarity of Science? Society for the Advancement of Biology Education Research National Conference, Minneapolis, MN

Shortlidge, E.E., Eddy, S.L. Is there evidence for a trade-off between research and teaching for graduate students? Gordon Research Conference (GRC), Undergraduate Biology Education Research, Stonehill College, MA

2016

Shortlidge, E.E., Griffith, L., Olsen, E., Barbera, J., Shusterman, G. Student perceptions of teaching strategies in large introductory STEM courses at a non-traditional, urban university. HHMI Conference on Instructional Practices, Miami, FL

Shortlidge, E.E., Griffith, L., Olsen, E., Barbera, J., Shusterman, G. Student perceptions of teaching strategies in large introductory STEM courses at a non-traditional, urban university. Society for the Advancement of Biology Education Research, Annual Conference, Minneapolis, MN

Shortlidge, E.E., Podrabsky, J., Lutterschmidt, D.L. Transformations Ahead: Curriculum survey reveals both strengths in Core Concept coverage and avenues for improvement. NW Bio/NW Pulse Annual Meeting. Eugene, OR

*Suchy, A.K., Elser, J.J., Brownell, S.E., Grimm, N.B., Shortlidge, E.E. Students in a pilot course-based undergraduate research experience (CURE) collect novel data on CO2 emissions and nutrient limitation in six urban lakes in Tempe, AZ. CAP LTER All Scientists Meeting. Tempe, AZ (winning poster)

*Suchy, A.K., Crandall, I., Sprague, E., Shortlidge, E.E., Elser, J.J. Nutrient limitation and carbon dioxide fluxes from urban lakes supplied with groundwater and surface water in Tempe, AZ. AZ. CAP LTER All Scientists Meeting. Tempe, AZ

2015

Shortlidge, E.E., Bangera, G., Brownell, S.E. Why you should teach a CURE: Faculty perspectives on course-based undergraduate research experiences. AAC&U: Pathways to STEM Conference, Seattle, WA

Prior to current position

Shortlidge, E E., Rosenstiel, T., Eppley, S. (2014). Exploring the community ecology of geothermal mosses: Do invertebrates impact moss genetic diversity? Ecological Society of America Annual Conference, Sacramento, CA

*Deacova. T., *Rolfe, T., Shortlidge, E.E., Rice, A., Rosenstiel, T. (2014). Moss as a bio-indicator of anthropogenic nitrogen accumulation. AAAS Pacific Division Conference, Sigma Xi Winning Poster Section, CA (winning poster)

Shortlidge, E.E., Hashimoto, J. (2013). Mosscosms in the middle school classroom: A partnership model for inquiry-based learning. International Teacher Scientist Partnership Conference in association with the American Association for the Advancement of Science, Boston, MA

Shortlidge, E.E., Rosenstiel, T., Eppley, S. (2010). Desiccation tolerance in three species of moss sperm. Botany, Botanical Society of America Annual Conference, Providence, RI

Shortlidge, E.E., Rosenstiel, T., Eppley, S. (2010). Desiccation tolerance in three species of moss sperm. Evolution Annual Conference, Portland, OR

Shortlidge, E.E., Rosenstiel, T., Eppley, S. (2009) Desiccation tolerance in three species of moss sperm. Evo/WIBO, Northwest regional evolution meeting, Port Townsend, WA

Asadi, F., Shortlidge, E.E., Malakooti, J. (2006). E1A oncogene expression inhibits PTHrP P3 promoter activity and sensitizes human prostate cancer cells to TNF-induced apoptosis. 5th International Symposium on Hormonal Carcinogenesis, Montpellier, France

Honors, Grants, and Fellowships

Honors

John Eliot Allen Outstanding Teaching Award, 2017 & 2020
Honor's College Mentor Award, 2019-2020
Sigma Xi, Nominated for Full Membership, 2018
Institute for Sustainable Solutions Faculty Fellow, PSU 2017-present
BioTAP Scholar, National Science Foundation-funded program, 2017-2018
American Society of Plant Biologists: Runner-up for Early Career Participant on Science Policy Committee, 2013
F1000Prime: Shortlidge et al. 2012, *New Phytologist* article recommended as notable research
Certificate of Academic Excellence, Student Activities and Leadership Board, PSU 2013
Graduate Student Poster Award, First Place, Portland State University Alumni Night, 2012
NSF Graduate Research Fellowship Program, Honorable Mention, 2010
Graduate Student Oral Presentation Award, First Place, Portland State University, 2010
Outstanding Senior Award, University of Missouri-Kansas City, 2000

Grants Funded

Portland State University (PSU), Faculty Enhancement Award, PI: ($14,970), *Faculty and Student Perspectives of a Lived-Experience Classroom Intervention* (2023-25)

Howard Hughes Medical Institute, Inclusive Excellence 3 (HHMI ie3) LCC2, PI ($377,800) Award #421028 *Increasing Capacity to Support Equitable and Inclusive Learning Environments for Introductory-level STEM Students Across the LCC2 Learning Community* (2022-2028)

National Science Foundation (NSF), DUE IUSE Institutional and Community Transformation, PI ($2,882,672) Award #2142742, *Evolving the Culture of Biology: Promoting Graduate Teaching Assistant Professional Development to Foster Inclusion, Efficacy, and Evidence-based Practices* (2022-2027)

National Science Foundation (NSF), RCN-UBE, co-PI ($482,409) Award #245528 *Advancing CURE Teaching Assistant Professional Development via the CURE TAPESTRy Network* (2022-2026)

Howard Hughes Medical Institute, Inclusive Excellence 3 (HHMI ie3) Learning Grant, PI ($30,000) *Inclusive Excellence Learning Grant*, Award #421032 (2021-2022)

National Science Foundation (NSF), HRD, Award #1911026: *Pathways and Research Alliance: Pacific Northwest Louis Stokes Alliance for Minority Participation*, Key Personnel. $4,000,000, PI, Mark A. Richards, University of Washington (2019-2025)

Portland State University (PSU) Faculty Enhancement Award, PI: ($14,647), *Evaluating the Implementation of Course-based Undergraduate Research Experiences* (2019-2021)

Association of Public and Land-Grant Universities (APLU), Faculty Development Lead: ($250,000), *Student Experience Project: Designing Learning Environments to Advance Equity*, (2019-2021)

National Science Foundation (NSF), DUE S-STEM, PI: ($996, 400) Award #1742542. *Reducing Transfer Shock: Developing Community, CUREs, and Collaboration to Support Urban STEM Transfer Students* (2018-2023)

Biology Leadership Community, PI: ($5000) *Assessing Student Understanding of Interdisciplinary Science* (2018-2020)

National Science Foundation (NSF), Doctoral Dissertation Improvement Grant: ($14,915) DEB Award #1210957: *Testing mutualistic function in a multi-trophic mating system in mosses* (2012-2015)

American Philosophical Society, Lewis and Clark Field Scholar Award: ($5000), *The evolution of sex in extreme environments: genetic diversity and sexual reproduction in bryophytes under geothermal stress*, (2012-2014)

Sigma Xi Grants in Aid of Research: ($460), *Testing mutualism theory in regards to an ancient scent-based plant-pollinator-like relationship between the mosses and microarthropods*, (2013-2014)

Sigma Xi Willamette-Columbia Chapter, GIAR Supplementary Grant Award: ($100, 2013)

American Society of Plant Biologists, Travel Grant: ($575, 2013)

Grants Submitted, Unfunded

NSF – IGE, co-PI ($999,983) Track 2: Innovative Mentorship Academy for STEM Graduate Excellence (IM-STEM) April 2024

NSF – RAMP Pacific Northwest Research and Mentoring for Postbaccalaureates (PRN), PI ($2,965,633) Negotiating Partnerships Between Microbes and Host, February 2021

NSF – CAREER, PI: (1,081,180), Sense of Belonging in Urban Institutions, August 2020

NSF – BII, co-PI: ($10, 341,044), BII-Implementation: Stress Across Scales: Using Extreme Environments to Identify Nature's Tools for Stress Survival, 2020

NSF – EHR - CORE, co-PI: ($104, 507), Collaborative Research: The Climate of STEM: Using Course Evaluations to Measure the Role of Classroom Bias in Undergraduate STEM Success, 2019

NSF – EHR IUSE, PI (296,000), Evaluating the structure and instructor in course-based undergraduate research experiences, 2019

NSF – EHR - CORE, co-PI: ($139,952), Collaborative Research: The Climate of STEM: Using Course Evaluations to Measure Peer Effects in Undergraduate STEM Success, 2019

PSU – Vision2025, PI: ($30,000), 2019

PSU – President's Mini-grants Equity and Diversity, PI: ($500), 2019

NSF – DRL – Advancing Informal STEM Learning, PI: ($1,906,317) Using an equity lens to evaluate learner experiences and outcomes from Outdoor School - an inclusive STEM learning environment, 2017

NSF – PIRE, co-PI: ($5,556,332) The genetic basis for adaptation to environmental extremes in annual killifishes: A model to understand the capacity for adaptation and acclimation in vertebrates, 2017

NSF – DRL – Discovery K-12, co-PI: ($430,377) Student Engagement with the Learning Progressions of NGSS Practices and Crosscutting Concepts in the MS-HS Integrated Camp Nano, 2016

NSF – DRL – Advancing Informal STEM Learning, PI: ($1,255,434) Using an equity lens to evaluate learner outcomes in an inclusive informal STEM learning environment, 2016

NSF – DGE – EHR Core Research, PI: ($322,811) Evaluation of life science graduate students' preparedness for evidence-based teaching, 2016

NSF – DUE – S-STEM, co-PI: ($1,000,000) Reducing Transfer Shock: Developing Sustainable Peer and Mentor Support Systems, 2016

Spencer Foundation – Small Research Grants, PI: ($50,000) What do they know? A mixed-methods assessment of graduate student perceptions and training in the theory and practice of evidence –based teaching, 2016.

Oregon Department of Education, co-PI: ($350,000) Oregon Invests: Innovation and Diversity in STEM, 2016.

PSU - Faculty Enhancement Grant, PI: ($15,000) A mixed methods assessment of graduate student perceptions, awareness, and experiences in evidence-based teaching practices, 2016

NSF – DRL – Advancing Informal STEM Learning, PI: ($1,099,385) Evaluating the equity of learner experiences in informal STEM learning environments, 2015. (unfunded)

NSF- DUE; IUSE Collaborative Research, co-PI: ($248,707) Improving Success of Nursing Students from Underrepresented Groups in STEM and STEM-Related Courses: Research-Based Materials Development and Assessment, 2015

Fellowships

Office of Academic Affairs (OAA) Leadership Fellow in Inclusive Pedagogy and STEM Education, 2022-2024
Howard Hughes Medical Institute, PSU Biology Education Fellow, 2015-2019
National Science Foundation, GK-12 Graduate Teaching Fellowship, *Cascades to Coast*, 2011-2013
Research Assistantship, *Center for Life in Extreme Environments*, Portland State University, 2010
Chancellor's Award, University of Missouri-Kansas City, 1998-2000
Independent Study Award, Alvin Ailey American Dance, 1998-1999

Invited Presentations & Workshops

- General Education @ PSU: Past, Present and Future, Winter Symposium, PSU, February 2025
- *Inclusive Pedagogy for Graduate Students,* GTA Pedagogy Training*,* College of Liberal Arts and Sciences, PSU, September 2022, 2023, 2024
- EPIC@PSU Workshop Series for Faculty and Graduate Students, 2024
- Invited conversation, transfer student success, MCECS and Community Colleges Dinner, May 2024
- *Translating Belonging Research to Action @ PSU*, Research to Action Forum, MCECS, PSU, April 2024
- *Exploring Course-based Undergraduate Research Experiences,* Workshop*,* Reed College, Portland, OR, May 2024
- *Exploring Course-based Undergraduate Research Experiences*, Workshop, New Jersey City University, March 2024 (virtual)
- *Belonging in the Field* Community of Practice, January 2024 (virtual)
- *Inclusive Pedagogy*, Faculty Working Groups Kick-off Meeting, PSU April 2023
- *The Elephant in the CURE Conversation: Impacts of Graduate Teaching Assistants on Experiences and Outcomes*, Middle Tennessee State University, Invited seminar, Biology Department
- *S-STEM - Belonging in STEM*, University of California, Santa Barbara, February 2023 (virtual)
- *Inclusive Teaching in STEM*, Bakersfield College, BioQuest and Bridging to STEM Excellence (BTSE), May 2022
- *Students belong in STEM: Practices to promote belonging in your classroom today*, Faculty, Food and Fun Workshop Series, Oregon State University, October 2022
- *Publishing in Education Research*, CoSCIES Education Research Workshop, Oregon State University, October 2022
- *Intersections of Growth Mindset, Belonging, Identity, and STEM Student Success*, Maseeh College of Engineering and Computer Science, GTA Orientation, PSU, September 2022, 2023
- *Inclusive Teaching in STEM*, Bakersfield College, BioQuest and Bridging to STEM Excellence (BTSE), May 2022
- *HHMI ie3 CURE Fellows Workshop - Inclusive Pedagogy and CURE Development,* PSU, September 2021
- *Inclusive Teaching in STEM*, University of California, Chico, BioQuest and Bridging to STEM Excellence (BTSE), August 2021
- *Student Experience Project Workshop Series,* Portland State University, 2020-2021
- *Life Unlimited? New Ideas in Education,* FRINQ UNST 135, Portland State University, March 2020
- *Measuring Student Ability to Tap into the Interdisciplinary Nature of Science,* Biology Leadership Community, Ft. Meyers, FL, March 2020
- *Sense of Belonging for PSU STEM Students*, STEM Faculty Collaborative Teaching for Inclusive Active Learning in STEM, Portland State University, February 2020
- *The Future of STEM Education: Are life science graduate students willing and prepared to teach using evidence-based methods?* Engineering and Science Education Department Seminar, Clemson University, February 2020
- *Reaching all of our students: A discussion on inclusive teaching practices,* Faculty Winter Symposium, PSU, January2020
- *Course-based undergraduate research experiences (CUREs): A path to improving biology education*. Cellularand Molecular Sciences Seminar, Washington State University, Pullman, November 2019

- *Reducing Transfer Shock: Developing Community, CUREs, and Collaborations to Support Urban STEMTransfer Students*, Undergraduate Biology Education Research Gordon Research Conference (UBER GRC), Lewiston, Maine, July 2019
- *Catching the Wave: Are Graduate Students on Board with Evidence-Based Teaching?* Sacramento State University, Education Research Seminar. Sacramento, CA, May 2019
- *Can graduate students defy perceptions of trade-offs between research and teaching?* American ChemicalSociety(ACS), National Conference, Orlando, FL, April 2019
- *Can life science graduate students defy the cultural perception of trade-offs between teaching and research?*University of Tennessee, Knoxville, Ecology and Evolution Department Seminar Series Speaker, November, 2018
- *CUREs to Engage*. Invited speaker and workshop leader, American Association for the Advancement of Science, Annual Pacific Division annual meeting. Pomona, CA, June 2018
- *A CURE for the common classroom? Understanding course-based undergraduate research experiences from all angles.* Science Seminar Series, Washington State University, Vancouver, February 2017
- *Who is in your classroom?* College of Liberal Arts and Sciences Graduate Student Teaching Assistant Training, PSU, September 2017
- *Success and time management as a TA*. Graduate Prospectus, Department of Biology, PSU, 2016-2020
- *Why Learning Assistants in the Active Learning Classroom?* Learning Assistant Training, PSU, 2016-2019
- *Understanding CUREs: Course-based Undergraduate Research Experiences.* TeachTech Blog, ASU, 2015
- *Faculty perceptions of course-based undergraduate research experiences: motivations and benefits*. Science Education Group, ASU, 2015

Teaching, Mentoring and Curricular Achievements

Teaching

Graduate Research Prospectus – BI 598, 3 credits; 2020 - present
Scientific Teaching - BI 447/547, 4 credits; 2017; 2019; 2020 – present
STEM Research: Working to Solve Today's Problems - SCI 367, 4 credits; 2018; 2020 - present
S-STEM Summer Bridge Program, co-lead; summer 2018-2020
EXITO Immersion Workshop co-lead; summer 2020
Principles of Biology - BI 213, 4 credits, Section 001; 2016-2020
Principles of Biology Laboratory - BI 216, 1 credit – lead on all sections; 2016-2020

Mentoring

Postdoctoral Mentees

Diyala Shihadih, PhD (2023-present)

Doctoral Student Mentees

Leland Brown, PhD Student (2022-present)

MacKenzie Gray, PhD Candidate (2020-2024): *Experiences of Community College STEM Students in Transferring and Adapting to a Four-Year Urban University*

Emma Goodwin, PhD, PSU Biology (2016 - 2021): *Experiences of Undergraduates and Graduate Teaching Assistants in Course-Based Undergraduate Research Experiences*

Elizabeth Brie Tripp, PhD, PSU Biology (2016 – 2020): *From Theory to Practice: Interdisciplinary Science in Undergraduate Education*

Master's Student Mentees

Justin Berl, MS Student (2021-2023): *Instructors at a Crossroad: Perceptions of Collaboration and Support Intersect with Intentions to Implement a CURE*

Liz Rain-Griffith, MS, PSU (2018-2020): *Short- and Long-term Impacts of a Deliberative Pedagogy in Introductory Biology and Chemistry Courses*

Undergraduate Honors Theses Mentees

Elizabeth Runkel Baez, "*STEM Student Perspectives of Classroom Belonging Interventions*", (forthcoming 2024)

Stan Nguyen, "*Our Lives Lived: Faculty Responses to STEM Students' Lived Experiences*", #2478, PDX Scholar, Honors College, PSU 2022

Jacob Palazzi, "*Interests and Priorities in Sockeye Salmon Management: How are Policies Prioritized and Enacted on three Alaskan rivers?*", MS#2161, PDX Scholar, Honors College, PSU 2020

MacKenzie Gray, "*Examining Integration and Sense of Belonging Among Undergraduate Students Participating in STEM Support Programs*" MS #2021 PDX Scholar, Honors College, PSU 2020

Lucas A. Bennington, "*Why do people volunteer in free clinics*?", MS #1538 PDX Scholar, Honors College, PSU, 2017.

Sailesh Tummala, "*Bridge program literature review and cognitive self-efficacy theory analysis of Arizona State University's summer BioBridge program*", Barrett Honors College, ASU, 2015.

Undergraduate Research Mentees

Elizabeth Runkel Baez, 2023-present, Honors College
Cate Poticari, 2023-present
Kaisa Holt, 2023-present, BUILDO EXITO Scholar
Brittney Gallant, 2023-present, LSAMP Scholar
Makenna Stone, 2023-present
Cecilia Sahnow, 2023-2024, LSAMP Scholar
Bjoerg Amaraphorn, 2022- 2023
Alma Aguirre, 2022-2023, LSAMP Scholar
Patricia Cabrera-Perez, 2022-2023, LSAMP Scholar, McNAir Scholar
Liliana Diaz, 2021-2023, LSAMP Scholar
Vivian Phan, 2020-2023
Lindsay Lutner, BUILD EXITO Scholar, 2019 - 2023
MacKenzie Gray, McNair Scholar, BUILD EXITO Scholar, Honors College, 2018 - 2020
Stan Nguyen, 2022, Honors College
Jessica Cary, 2019 - 2021
Hayley Therrien, 2020-2021
Vladimir Anokhin, 2018 - 2020
Analee Pham, 2018 - 2020

Sophia Voronoff, 2017 - 2020
Sarah Sheghewi, LSAMP, 2018 - 2019
Phoebe Huyen, 2018 - 2019
Yelisey Gurzhuy, 2018 - 2019
Megan Thran, 2017 - 2019
Jane Cao, PSU, 2017 - 2018
Justin Flaiban, 2017 - 2018
Chloe Shelby, 2017- 2018
Lucas Bennington, Honors College, 2016 - 2017
Liz Griffith, 2015 - 2017
Emily Olsen, 2015 - 16
Ravi Thodupurni, 2015

Postbaccalaureate Research Mentees

Tricia Dowis, 2024-present
Jasmine Villaflor, 2020-2023
Alisia Overton, 2018 - 2019
Emily Cornelius, PSU, 2017 - 2018
Miles Fletcher, PSU, 2016 - 2017
Greggory Dallas, PSU, 2015 - 2016
Kyahn Daraee, PSU, 2015 – 2017

High School Mentees

Siddharth Muralidaran, Northwest Academy 2024
Grace Okoye, Partnership for Scientific Inquiry Program 2022

Doctoral Student Committees

Sarah Abdo, Chemistry Education, 2024-present
Rachael Mayhew, PSU, Chemistry Education, 2024-present
Emery Davis, University of Alabama, Biology Education, 2024-present
Molly Robinson, PSU, Math Education, 2023-present
Jono Abashier, PSU, Biology, 2024-present
Fiona Freeland, Eastern North Carolina University, Biology Education, 2024-present
Riley Roth-Carter, PSU, Biology, 2024-present
Erica Hernandez, PSU, Biology, 2023-present
Amanda Gruenwald, PSU, Biology, 2022-present
Elizabeth Vaughan, PSU Chemistry Education, 2020-present

Graduated:
Amy Forrester, PSU, Graduate School of Education, 2022-2024
Safaa Alnori, PSU Chemistry Education, 2020-2023
Irving Redding, PhD, PSU Chemistry, 2019 - 2020
Britta Belcher, PhD, PSU Environmental Sciences, 2019 – 2020
Nicole Naibert, PhD, PSU Chemistry Education, 2018-2022
Emryse Geye, PhD, PSU Chemistry Education, 2018 - 2022
Mariela Bao, PhD, PSU Graduate School of Education, 2018 – 2020
Kathryn Hosbein, PhD, PSU Chemistry Education, 2018 – 2019
Cory Hensen, PhD, PSU Chemistry Education, 2018 – 2019
Timea Deakova, PhD, PSU Biology, 2016 – 2019

Master's Student Committees

Graduated:
Brett Stinson, Engineering, 2022-2023
Cecily Douglas, MS, PSU Biology, 2018 - 2022
Adam Baz, MS, PSU Biology, 2018
Erica Hart, MST, PSU Biology, 2016

Other Mentorship

Completed PSU/OHSU CIMER Facilitating Entering Mentoring Workshop (2019)
Mentor to PSU S-STEM Scholars (n = 36 current and past STEM undergraduate scholarship students)
Informal advisor of Dr. Julia Burrows, Adjunct Professor of Biology, PSU, Reed College Academic Specialist
Co-advisor of Dr. Regis Komperda with Drs. Jack Barbera and Gwen Shusterman, Chemistry Education Research, 2017- 2019
BUILD EXITO Career Mentor to Noemi Serabia-Ferria (2017 - 2020)

Curricular Achievements

- OAA Faculty Fellow: Lead of the EPIC@PSU Inclusive Pedagogy Project, 2023-2024
- OAA Faculty Fellow: Lead of Faculty-Working Groups project to improve inclusion in gateway STEM courses 2022-2023
- Co-Led Student Experience Project (SEP) Faculty Professional Development Workshop Series in Inclusive Teaching Practices (2020-2022), PSU
- Undergraduate Field Experiences Research Network (UFERN) Understanding and Evaluating Outcomes of Undergraduate Field Learning Experiences: co-led and developed virtual workshop, Organization of Biological Field Stations Annual Meeting, 2020
- SCI 399U: Developed a three-part Junior Cluster in the Science in Social Context Cluster to be cloned as a course-based undergraduate research experience (CURE)
- PSU S-STEM Bridge Program, 2019: Developed summer bridge program for PSU S-STEM Scholar transfer students
- Principles of Biology CUREs (BI 216): Piloted course-based undergraduate research experiences (CUREs) in our lab sections of BI 216, Spring 2018
- Learning Assistant Training Workshop: co-led and developed PSU's Learning Assistant workshop 2017, 2018, 2019
- Chem + Bio CURE: Piloted interdisciplinary course-based undergraduate research experience for 400-level Chemistry and Biology students at PSU, 2016-17
- NW Pulse Fellow, NSF: Developed survey to identify Vision & Change recommendations for Core Concepts and Competencies into PSU Biology curricula, 2015-2016
- Deliberative Democracy Pedagogy, Portland State University: Learn, develop and design deliberative democracy pedagogy for PSU Biology, 2015 - present
- Learning Assistants for the Science Classroom Workshop, ASU, 2014

Community Outreach Achievements

PDXplores Podcast, PSU, 2023
Co-Chair, Online with LSE Webinar Series, 2021-2023
Invited Panelist, Biology Outreach and Investigation Group – Graduate Training Faculty Panel 2021, 2022
Oregon Health and Science University; Training Future Faculty, Invited Panelist; April 2020
Career Fair; STEM Cluster Grant High School, Portland, OR, February 2020 (intended, cancelled)
Inclusive STEM Laboratory Courses, College of Liberal Arts and Science Teaching Workshop, Invited panellist; January, 2020
A CURE for Transfer Shock: PSU Researcher Highlights YouTube Video; 2019 https://youtu.be/xeGz8hPeASM
Extreme Latitudes: Womxn in Antarctica, Invited Panelist; PSU, October, 2019
Invited panelist on Science Communication, PSU Biology Investigations and Outreach, Darwin Day, 2017

Professional Development Activities and Trainings

HHMI LCC 2 Community Meeting, 2024, 2025
Embracing our BIPoC Future, PSU 2024
PSU Program Director, HHMI Inclusive Excellence Grant, LCC2 2021-2027
Selected Member, Students First Initiative, PSU 2020-2023
PSU Faculty Lead, Student Experience Project, PSU 2021-22
Global Diversity & Inclusion, Towards Inclusive Hiring, Virtual, August 2021
PKAL STEM Leadership Fellow, Virtual, July 2021
Student Experience Project (SEP); Virtual, July 2020-2022
Student Experience Project (SEP); Charlotte, NC February 2020
Completed PSU/OHSU Facilitating Entering Mentoring Workshop, CIMER-Center for the Improvement of Mentored Experiences in Research (2019)
Growth Mindset 2.0, Workshop, Dr. Mary Murphy, Indiana University; PSU November 2019
Workshop in Q Methodology, Dr. Sue McClellan; University of Georgia; PSU, August 2019
NSF-funded Research Coordination Networks project – Undergraduate Field Experiences Research Network (UFERN), Blue River, OR, October 2019, invited participant
Biology Leadership Conference: Pearson Higher Education, Orlando, FL, invited, January 2018, March 2019
NWBio: Participant in state-wide effort to align biology curricula, 2016-2018
BioTAP: Selected as BioTAP Scholar for enhancing research on Graduate Teaching Assistant Teaching Professional Development 2017-2018, Meeting: Madison, WI, 2017
Office of Academic Innovation Workshops: Organized, assisted, and participated in two workshops led by Dr. Kimberly Tanner (SFSU): Engaging Students and Making Classrooms Inclusive: Cross-Disciplinary Tools, Insights, and Strategies to Promote Student Success; Active Learning Workshop: Moving Towards Active Learning, Both Inside and Outside of Class Time, PSU, 2017
HHMI Collaborative Project Workshop: HHMI awarded institutions conference for assessment and future directions, Miami, FL, 2016
CURE Summer Institute: Selected to attend SI to design, develop and evaluate original CURE for ASU Biology 281 and 282 laboratory courses, University of Texas, Austin, TX, 2015

Governance Activities for the University, College, Department

University

Financial Aid / Enrollment Federal Transition Review and Coordination Group, 2025

Student Success Lead, Strategic Enrollment Planning Work Group, PSU 2025
General Education Task Force Leadership Team, PSU 2024-present
PSU ANNAPISI Steering Committee, 2024-present
PhD Rethink Working Group, 2024-present
Undergraduate Curriculum Committee, 2022-2024
Undergraduate STEM Workgroup, 2020-2023
Persistence Pillar, Provost Students First Initiative; 2019-2023
    Persistence Pillar Subgroup: Data Analytics; 2020-2023
Search Committee Member, Vice Provost for Student Success, 2022
Search Committee Member, College of Education, Curriculum and Instruction, Tenure-track Science Education, 2022
Research and Graduate Studies, Research Misconduct Committee, 2020-2022
RGS, Research Misconduct Committee, 2020-2022
Faculty Non-Contractual Grievance Panel; 2018-19

College of Liberal Arts and Sciences
Biology Academic Working Group (appointed); 2019-2020
Science Building One Building Advisory Committee, 2019-2020
Co-organizer for the Discipline-Based Education Research (DBER) group; 2015-present

Department of Biology
Promotion and Tenure Committee, member, 2022-2024
GTEP Advisor for Biology, 2023-2024
AAUP, Biology Department Representative, 2020-2022
Chair, Non-tenure Track Biology Faculty Search Committee, 2021
Organizer, GenBioMaps curricular assessment effort; 2019-present
Search Committee; Biology Laboratory Technician 2; 2019

Professionally-Related Service

Senior Editor, Course Source (2023-present)
Monitoring Editor, CBE-Life Sciences Education (2021-present)
Co-Chair, CBE-Life Sciences Education Online with LSE Webinar Series, 2021-2023
Co-Chair, Education Committee, BioTAP, 2022-2023
Chair, Invited Speaker Committee, Society for the Advancement of Biology Education Research, 2021-22
co-Chair, Invited Speaker Committee, Society for the Advancement of Biology Education Research, 2020-21
National Academy of Science and Medicine: The Impacts on STEM Student Experiences of Higher Education's response to COVID-19: Resilience and Innovation in Online Learning and STEM Progression (invited panelist, September 2020)
Invited reviewer for CURE 2 Curenet, working group, Summer 2020
Sustainability Committee Member, Undergraduate Field Experiences Research Network (UFERN; NSF RCN), 2020 - present

Advisory Board and Evaluator for Funded Projects:
    Advisory Board, Pacific Northwest Alliance, Louis Stokes Alliance for Minority Participation (LSAMP; NSF), 2019 – present, University of Washington
    Advisory Board, University of Colorado, A Power of Place Learning Experience and Research Network (APPLE R Net) Project, 2022-present, University of Colorado, Boulder
    Advisory Board, Belonging in the Field, 2022-present, Oregon State University

Sustainability Committee Member, Undergraduate Field Experiences Research Network (UFERN; NSF RCN), 2020 – present, Oregon State University
External evaluator for University of California Coordinating Committee on Graduate Affairs (CCGA) Certificate program proposal at UC Davis, 2019

External Reviewer for Promotion and Tenure of Teaching and Research Faculty – multiple institutions

Panel reviewer for National Science Foundation:
CAREER award, Division of Undergraduate Education College of Reviewers for Undergraduate Education Pilot Program, Accelerating Discovery: Educating the Future STEM Workforce, Foundation's Improving Undergraduate STEM Education program, CORE Research Program, Scholarships in STEM Program

Invited Reviewer for Peer-reviewed Disciplinary/Interdisciplinary Journals:
CBE – Life Sciences Education, PLoS ONE, Journal of Microbiology and Biology Education, American Journal of Botany, FEMSLE; International Journal of STEM Education, Advances in Physiology Education, Frontiers in Ecology and the Environment, Journal of Chemical Education, Ecosphere, Integrative and Comparative Biology, Ecosphere