

# Rachel Watson



Director of the University of Wyoming (UW) Science Initiative's Learning Actively Mentoring Program (LAMP)  
Science Institute  
Senior Faculty Development Professional  
Division of Kinesiology and Health & Microbiology Program

A pluriverse scholar, teacher, educational developer and coach.

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## **EDUCATION**

- 2012 ABD, Instructional Technology and Adult Education, University of Wyoming.  
2001 M.S., Molecular Biology, University of Wyoming, Thesis: *Conformational Changes in Pediocin AcH upon Vesicle Binding and Approximation of the Membrane-Bound Structure in Detergent Micelles*  
1998 B.S., Chemistry, University of Denver, Denver, CO.

## **ACADEMIC POSITIONS**

- 2025 Senior Faculty Development Professional, Science Institute Science Initiative Programs and Division of Kinesiology & Health (DKH), University of Wyoming  
2022 – Present Senior Academic Professional Lecturer, Science Initiative and Division of Kinesiology & Health (DKH), University of Wyoming  
2019 – 2025 Program Director, Wyoming Inclusive Excellence 3 Initiative, funded, in part, by a grant to the University of Wyoming from the Howard Hughes Medical Institute through the Science Education Program  
2019 – Present Co-Program Administrator for the Domestic and International *Nordic Ski Training and Coaching Program*, University of Wyoming DKH and Shanghai University of Sport  
2018 – Present Director, Science Initiative Learning Actively Mentoring Program (LAMP), University of Wyoming  
2013 – Present Director, Queer Studies Minor Program, University of Wyoming School of Culture, Gender and Social Justice  
1998 – Present Co-coach, Men's and Women's Nordic Ski Team, University of Wyoming  
2018 – 2022 Senior Academic Professional Lecturer, Department of Chemistry, University of Wyoming  
2016 – 2018 Interim Director, Science Initiative LAMP, University of Wyoming  
2001 – 2018 Academic Professional Lecturer, Molecular Biology Department, University of Wyoming  
2001 – 2002 Temporary Assistant Lecturer, Chemistry Department, University of Wyoming  
2000 – 2001 Instructor, Math Science Initiative Project & Upward Bound Program, University of Wyoming

## TEACHING

| Year | Semester       | Course No. / Title                                                                                     | Cr. Hrs. | Enrollment |
|------|----------------|--------------------------------------------------------------------------------------------------------|----------|------------|
| 2025 | Fall           | *Instructional design and partial teaching - MICR 4321: Transdisciplinary Microbiology Capstone Course | 4        | 11         |
| 2025 | Fall           | KIN 4071/5900: Endurance Mountain Sports                                                               | 4        | 11         |
| 2025 | Fall           | EDSE 4900/5900: Best Practices Active Learning                                                         | 1        | 18         |
| 2025 | Spring         | EDSE 4900/5900: Best Practices Active Learning                                                         | 1        | 12         |
| 2024 | Fall           | KIN 4071/5900: Endurance Mountain Sports                                                               | 4        | 10         |
| 2024 | Fall           | EDSE 4900/5900: Best Practices Active Learning                                                         | 1        | 11         |
| 2024 | Fall           | *Instructional design and partial teaching - MICR 4321: Transdisciplinary Microbiology Capstone Course | 4        | 12         |
| 2024 | Spring         | EDSE 4900/5900: Best Practices Active Learning                                                         | 1        | 12         |
| 2024 | Spring         | HP 4976: Honors Independent Study                                                                      | 1        | 1          |
| 2023 | Fall           | MICR 4321: Transdisciplinary Microbiology Capstone Course                                              | 4        | 10         |
| 2023 | Fall           | EDSE 4900/5900: Best Practices Active Learning                                                         | 1        | 19         |
| 2023 | Fall-March     | KIN 4071: The Science and Art of Nordic Ski Coaching and Racing                                        | 6        | 13         |
| 2023 | Spring         | ENR 4890: Earth as Body/Body as Planet                                                                 | 1-3      | 10         |
| 2022 | Fall           | CHEM 4400/5400: Biological Chemistry                                                                   | 3        | 17         |
| 2022 | Fall           | KIN 4071: The Science and Art of Nordic Ski Coaching and Racing                                        | 6        | 13         |
| 2022 | Fall           | MICR 4321: Transdisciplinary Microbiology Capstone Course                                              | 4        | 7          |
| 2022 | Fall           | EDSE 4900/5900: Best Practices Active Learning                                                         | 1        | 22         |
| 2022 | Spring         | EDSE 4900/5900: Best Practices Active Learning                                                         | 1        | 9          |
| 2022 | J-term /Spring | KIN 4071/ENR 4890/5890: Dysbiosis to Pluriversebiosis                                                  | 3        | 7          |
| 2021 | Fall           | CHEM 4400/5400: Biological Chemistry                                                                   | 3        | 24         |
| 2021 | Fall           | MICR 4321: Transdisciplinary Microbiology Capstone                                                     | 4        | 10         |
| 2021 | Fall           | EDSE 4900/5900: Best Practices Active Learning                                                         | 1        | 7          |
| 2021 | Spring         | EDSE 4900/5900: Best Practices Active Learning (co-instruction with grad)                              | 1        | 10         |

|      |        |                                                                           |     |                                 |
|------|--------|---------------------------------------------------------------------------|-----|---------------------------------|
| 2020 | Fall   | CHEM 4400/5400: Biological Chemistry                                      | 3   | 24                              |
| 2020 | Fall   | MICR 4321: Transdisciplinary Microbiology Capstone Course                 | 4   | 9                               |
| 2020 | Fall   | EDSE 4900/5900: Best Practices Active Learning (co-instruction with grad) | 1   | 3                               |
| 2020 | Summer | KIN 5900: Practicum in College Teaching                                   | 1   | 13 (includes Shanghai athletes) |
| 2020 | Spring | MOLB/MICR 2021: General Microbiology                                      | 3   | 90                              |
| 2020 | Spring | KIN 4071: Field Studies in the Art and Science of Nordic Ski Racing       | 3   | 12 (includes Shanghai athletes) |
| 2019 | Fall   | MICR 4321: Transdisciplinary Microbiology Capstone Course                 | 4   | 6                               |
| 2019 | Fall   | CHEM 4400/5400: Biological Chemistry                                      | 3   | 20                              |
| 2019 | Fall   | KIN 4071: Field Studies in the Art and Science of Nordic Ski Racing       | 6   | 15 (includes Shanghai athletes) |
| 2019 | Fall   | EDSE 4900/5900: Best Practices Active Learning (co-instruction with grad) | 1   | 8                               |
| 2019 | Spring | CHEM 4920: Spec. Problems: Learning Assistant                             | 1   | 17                              |
| 2019 | Spring | ENR 4890: Earth as Body / Body as Planet                                  | 3   | 8                               |
| 2018 | Fall   | MICR 4321: Transdisciplinary Microbiology Capstone Course                 | 4   | 13                              |
| 2018 | Fall   | CHEM 4400/5400: Biological Chemistry                                      | 3   | 31                              |
| 2018 | Fall   | MOLB 5900: Practicum in College Teaching.                                 | 1   | 9                               |
| 2018 | Spring | MOLB/MICR 2021-01: General Microbiology Lecture                           | 4   | 105                             |
| 2018 | Spring | MOLB/MICR 2021-10, 11 & 12: General Microbiology Lab                      | N/A | 98                              |
| 2018 | Spring | MOLB 5900: Practicum in College Teaching                                  | 1   | 10                              |
| 2018 | Spring | MOLB 4850: Undergraduate Teaching Internship                              | 1   | 14                              |
| 2018 | Spring | HP 4975: Honors Independent Study                                         | 3   | 3                               |

**\*Courses taught 2001-2018 are available upon request.**

## **PROFESSIONAL DEVELOPMENT**

### **Educational/Faculty & Instructional Development**

2024-Present, Designed, developed and implemented the Science Institute PhD Fellows Learning community, a community assisting PhD fellows in thriving across all academic pillars: research, teaching and service.

2024-2025, Designed, developed, and implemented the *Community Engaged Fellows Institute*, a holistic faculty development training on Service-Learning in collaboration with the *Office of Community Engagement*.

2024, Designed, developed, implemented and assessed a brand-new transdisciplinary course, *Endurance Mountain Sport*.

2024, Facilitator for the Wyoming Learning Community enrolled in the NSF-funded Inclusive STEM Teaching Project (ISTP) MOOC.

2024, Accepted and trained as a facilitator for the NSF-funded Inclusive STEM Teaching Project (ISTP).

- 2023, Proposed, funded, designed, developed, and implemented a holistic training for *School of Culture, Gender and Social Justice* Instructors in Active, Inclusive Pedagogies entitled *Building Community through Transformative Pedagogy*.
- 2023-Present, Utilized pilot learning community experience and research findings (see publications below) to evolve the design of the Inclusive Excellence Learning Community for Wyoming Community Colleges (Laramie County Community College, Western Wyoming College, Eastern Wyoming College and Casper College).
- 2022-Present, Community Building lead for the IMPACT STEM Transfer National Learning Community funded by Howard Hughes Medical Institute (HHMI) as a part of the Inclusive Excellence 3 (IE3) Initiative. Lead biweekly Collaborative Communication sessions.
- 2022-Present, Designed, developed, and implemented the Inclusive Excellence Learning Community for Wyoming Community Colleges launched at Northwest College.
- 2022-2023, Facilitator for the University Assessment Faculty Learning Community (FLC), a community that supports department and programmatic student learning assessment.
- 2022-2023, Established the Odd Bedfellows Community Dialogue series, monthly coffee shop dialogues that bring together two professionals from different fields to discuss their work. Attendees engage in Collaborative Communication to make connections.
- 2020-Present, Designed and developed the interactive [LAMP Active Learning Spectrum](#), a resource that immerses users in the many, diverse active learning modalities.
- 2020-Present, Established *LAMP Coffee & Curriculum*, weekly educational development program during which LAMP-trained educators showcase varying active learning strategies that they have implemented and assessed.
- 2020-2022, *Consultant for [Learning Corps](#)*, a Wyoming-based, all-women startup educational consulting company that provides faculty at small colleges and universities with research backed teaching techniques that foster student engagement and retention in a variety of learning environments.
- 2020-2022, *Development and Implementation of a Statewide Virtual Outreach Program (“[The Virtual Roadshow](#)”) in which undergraduate researchers and learning assistants facilitate virtual active learning in K-16 classrooms and the community*, University of Wyoming Science Initiative.
- 2019-Present, *Design and Development of the University of Wyoming - Shanghai University of Sport Nordic Ski Training Program (UW-SUS NSTP)*, A network of faculty, graduate students and undergraduate students who study, research and train through integrated academic and Nordic ski international exchanges.
- 2018-Present, *Design and Development of the “Leaving the Light On” Educator’s Learning Community (ELC)* for prior LAMP Fellows. One goal of this group is to catalyze continued transformation of classrooms from being teacher-centered to being learner-centered.
- 2018-2022, *Redesign of Biological Chemistry (CHEM 4400/5400)* using Problem-posing and Team-based learning (TBL) design principles.
- 2018, *University of Wyoming Accessibility Initiative: Implementing the Universal Design of Learning (UDL)*, An Ellbogen Center for Teaching and Learning Faculty Learning Community (FLC) member.
- 2017-Present, *Supervision of Design, Development and Implementation of an undergraduate learning assistant (LA) program (“LAMP Scholars”) and corresponding course (Best Practices in Active Learning)*, University of Wyoming Science Initiative Learning Actively Mentoring Program (LAMP)
- 2016-2021, *Development and Implementation of a Statewide Outreach Program (“The Roadshow”) in which undergraduate researchers and learning assistants facilitate active learning in K-16 classrooms*, University of Wyoming Science Initiative Learning Actively Mentoring Program (LAMP) and Wyoming Research Scholars Program (WRSP).
- 2017-Present, *Co-designed, Developed and Implemented the Scholarship on Teaching and Learning (SoTL) LAMP Faculty Learning Community (FLC)*.
- 2016-2019, *Development and Implementation of a scholarship program that funds K-16 educators to travel to the Wyoming Department of Education “Roadmap to STEM” Conference*. University of Wyoming Science Initiative Learning Actively Mentoring Program (LAMP) - the LAMP Scholarship.

- 2016-Present, *Collaborative Communication*, An Ellbogen Center for Teaching and Learning Faculty Learning Community (FLC) member.
- 2015-present, *Design, Development, Implementation and Assessment of an Extended, Holistic Active Learning Faculty / Graduate Student / Post-Doctoral Fellow Mentoring Program*. University of Wyoming Science Initiative Learning Actively Mentoring Program (LAMP) / Science Initiative Summer Institute [SI]<sup>2</sup> and yearlong training.
- 2015-2018, *Redesign of General Microbiology (MOLB/MICR 2021)*, Fully flipped classroom / full-scale active learning.
- 2013-Present, *Integrated Curriculum Development for Study Abroad / Ski Competition*. Design and development of integrated curriculum (competition, environmental science and social justice-based) for student-athletes.
- 2013-Present, *Design, Development, Implementation and Assessment of Microbiology Degree Capstone Course (CURE)* <http://uwmicrobiologycaptstone.weebly.com/>
- 2016, *Mentor for the 2016 Summer Institute on Active and Engaged Learning*, University of Wyoming Ellbogen Center for Teaching and Learning. 2016. <http://www.uwyo.edu/ctl/summer-faculty-institute/>
- 2008-2016, *Online Course Design: MOLB/CHEM 3610: Principles of Biochemistry*. Development of vodcasts and course shell.
- 2013-2014, *Faculty Trainer for the Learning Management System (Canvas)*
- 2010-2014, *Distance Education Guild*, University of Wyoming Outreach School Faculty Learning Community (FLC) Member.
- 2012, *Technology Boot Camp Mentor*, Outreach School and the Ellbogen Center for Teaching and Learning weeklong intensive workshop.
- 2004-2018, *Virtual Online Lab Development: The Virtual Edge*. Development of online General and Medical Microbiology Labs for use with UW course MOLB/MICR 2021 [2210] and MOLB/MICR 2240 [http://www.uwyo.edu/virtual\\_edge/index.htm](http://www.uwyo.edu/virtual_edge/index.htm) & <https://thevirtualedge.weebly.com/>.

## Publications

- McBride, R., Singh, R. and Watson, R. M. (2024) "It's a long way from here": Mapping rural-serving community college educators' work across landscapes of practice. *Community College Journal of Research and Practice*. DOI: [10.1080/10668926.2024.2328519](https://doi.org/10.1080/10668926.2024.2328519)
- Watson, R. M., McBride, R. and Singh, R. (2023) The Everyday Work of Rural-serving Community College STEM Faculty: Lessons from an Institutional Ethnography Across Wyoming's Public Institutions. *Thresholds in Education. Special Issue: Contemporary Challenges and Opportunities in Rural Education*, 46:3. <https://academyforeducationalstudies.org/journals/thresholds/thresholds-current-issues/volume-46-issue-3-fall-2023/>
- Nuhfer, E., Watson, R., Cervato, C. and Wangeline, A. (2022) Metacognitive Self-assessment in Privilege and Equity – Part 2: Majority Privilege in Scientific Thinking. Blog post August 22, 2022. Available: <https://www.improvewithmetacognition.com/metacognitive-self-assessment-scientific-thinking/>
- Watson, R., Nuhfer, E., Cervato, C. and Wangeline, A. (2022) Metacognitive Self-assessment in Privilege and Equity – Part 1 Conceptualizing Privilege and its Consequences. Improve with Metacognition. Blog post August 16, 2022. Available: <https://www.improvewithmetacognition.com/metacognitive-self-assess-equity-p1/>
- Mason, M., Watson, R. M. and Nicholas-Moon, K. (2021) Exploring the Experiences of First-Time Learning Assistants. *Journal on Excellence in College Teaching*. 32:4.
- Watson, R. (with contributions from E. DeWolf and C. Boggs). (2021) Navigating the Canyon to Redefine Belonging as a Metric for Inclusion. *The Physics Teacher*. 59, 588. <https://doi.org/10.1119/10.0006470>.
- Wirth, Karl R., Nuhfer, Edward B., Watson, Rachel M., Fleisher, Steven C., and Bailey, Roxanne. (2021) in Self-Directed Learning: An imperative for education in a complex society. Mentz, Elsa, Laubscher, Dorothy, and Jako Olivier Eds. Chapter 6: *Knowledge Surveys: Supporting Students Along Pathways to Self-Directed Learning with Self-Assessment*. AOSIS Scholarly Books. <https://doi.org/10.4102/aosis.2021.BK279.06>.
- Nuhfer, Ed, Cogan, Christopher, Fleisher, Steven and Rachel Watson. (2019) Knowledge Surveys Two Decades Later: Returning to Our Roots. *The National Teaching and Learning Forum*. Vol 29. Number 1.

- Watson, Rachel M., Edward Nuhfer, Kali Nicholas Moon, Steven Fleisher, Paul Walter, Karl Wirth, Christopher Cogan, Ami Wangeline, and Eric Gaze. "Paired Measures of Competence and Confidence Illuminate Impacts of Privilege on College Students." *Numeracy* 12, Iss. 2 (2019): Article 2. DOI: <https://doi.org/10.5038/1936-4660.12.2.2>
- Watson, R. M., Willford, J.D. and Pfeifer, M. (2018) A cultured learning environment: Implementing a problem and service-based microbiology capstone course to assess process and skill-based learning objectives. *Interdisciplinary Journal of Problem Based Learning (IJPBL)*. Vol. 12, Issue 1, Article 8, March 1, 2018. Available: <https://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1694&context=ijpbl> (Refereed, <15% acceptance)
- Watson, R.M. & Boggs, C.N. (contributions by: Bochanski, K.J., Solvang, S., Jech, S. Wiswell, S., Sulser, S.A., Noren, B.) (2016) Climate, competition and curriculum collide: Designing a fully integrated course with authentic research, study abroad and environmental sustainability curriculum components. *Action Research Network of the Americas (ARNA) Journal Proceedings*. Available: <https://sites.google.com/site/arnaproceedings/home/2016-proceedings/watson-and-boggs> (Refereed)
- Favazzo, L., Willford, J.D. and Watson, R. M. (2014) Correlating Student Knowledge and Confidence Using a Graded Knowledge Survey to Assess Student Learning in a General Microbiology Classroom. *Journal of Microbiology and Biology Education*. Vol. 15, Number 2. pp. 251-258. (Refereed)
- Watson, R., Boggs, C & Driscoll, A. (2013). *Is There a Virtual Edge? An Investigation of the Use of Virtual Labs to Supplement Traditional Microbiology Labs*. In . Jan Herrington et al. (Eds.), *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2013* (pp. 2353-2363). Chesapeake, VA: AACE. Retrieved October 26, 2013 from <http://www.editlib.org/p/112298>. (Refereed)
- Watson, R. M. (2013) **Projekt Mikrobiologie**. In A. Wasmann-Frahm (Ed), Photo Credit for Figure 4. (p. 63). Bildungshaus Schulbuchverlage. ISBN 978-3-507-86652-5 (Non-refereed)
- Watson, R. M. (2011) **Advising: Beyond Concrete Walls**. In S. L. Miller (Ed.), *Reflections* (pp. 57-59). Laramie, Wyoming: University of Wyoming College of Agriculture and Natural Resources. (Refereed)
- Watson, R., & Boggs, C. The Virtual Classroom: Student and Instructor Perceptions of Vodcast Lectures in a General Microbiology Classroom [Abstract]. In: Sixteenth Annual American Society for Microbiology Conference for Undergraduate Educators; 2009 May 28-31; Ft. Collins, CO. Washington, DC; 2009. p.56. Available: <http://www.asmcue.org/MicroBrew-Abstracts.shtml> (Refereed)
- Watson, R., & Boggs, C. (2008). Vodcast Venture: How Formative Evaluation of Vodcasting in a Traditional On-Campus Microbiology Class Led to the Development of a Fully Vodcasted Online Biochemistry Course. *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2008*. (pp. 3309-3316) Chesapeake, VA: AACE. [Online]. Available: <http://www.editlib.org/p/30137> (Refereed)
- Hughes A., Boggs, C. & Watson, R. (2008). The Online Dilemma: Student Perceptions of Online Supplemental Instruction for General Microbiology. *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2008*. (pp. 915-918) Chesapeake, VA: AACE. [Online]. Available: <http://www.editlib.org/p/29723> (Refereed)
- Watson, R. M. (2008) **A Brand of Excellence: Reflections on Teaching and Learning**. In J.K. Wangberg (Ed.), *Listen for the Dune Buggies* (pp. 111-123). Laramie, Wyoming: University of Wyoming. (Refereed)
- Watson, R., & Boggs, C. (2007). The Virtual Classroom: Student Perceptions of Podcast Lectures in a General Microbiology Classroom. *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2007*. (pp. 2170-2174). Chesapeake, VA: AACE. [Online]. Available: <http://www.editlib.org/index.cfm> (Refereed)
- Watson, R., & Boggs, C. (2003). Warming up the Chill: Integrating Technology into a General Chemistry Course. *World Conference on Educational Multimedia, Hypermedia and Telecommunications 2003*(1), 1881-1882. [Online]. Available: <http://dl.aace.org/13133> (Refereed)
- Watson, R. M., Woody, R. W., Lewis, R. V., Bohle, D. S., Andreotti, A. H., Ray, B. and Miller, K. W. (2001). Conformational Changes in Pediocin AcH Upon Vesicle Binding, and the Approximation of the Membrane-bound structure in Detergent Micelles. *Biochemistry*, Vol. 40, Number 46, pp. 14037-14046. (Refereed)

## Presentations

2025, *Reflecting on the journey of building and participating with community college learning communities in a rural state*. Action Research Network of the Americas (ARNA) 2025 Conference: *An Artful Experience: The*



- Use of Arts Throughout the Participatory Action Research Process*. Puerto Vallarta, Mexico and Online. May 16, 2025.
- 2024, [\*Students' feelings of classroom inclusion depend on controllable factors\*](#). Original Lilly Conference on College Teaching: "Evidence-Based Teaching and Learning." Miami University, Oxford, OH. November 23, 2024.
- 2024, *Educator Learning Communities: A Rural State Success Story*. Original Lilly Conference on College Teaching: "Evidence-Based Teaching and Learning." Miami University, Oxford, OH. November 23, 2024.
- 2024, **"Institutional Assessment - Finding Comfort in the Process and Progress Along the Way". Invited panelist**  
 Panelists - Dr. Janel Seeley (Ellbogen Center for Teaching & Learning), Dr. Steve Barrett (College of Engineering & Physical Sciences), Rachel Watson (College of Health Sciences), and Erika Helgeson (Academic Affairs) | Moderator - Heather Webb Springer (Ellbogen Center for Teaching & Learning)  
*Assessment for student learning at the University of Wyoming is an iterative process where we learn together for continued advancement and sustained success. Our panel will discuss assessment work and progress at the University of Wyoming from a variety of perspectives and illuminate the future of assessment work at our institution. Please join us for lunch and an engaging dialogue on assessment for student learning at UW!* [Session Recording](#)
- 2024, *Shining a light on rural-serving community college educators' everyday work: An Institutional Ethnography*. The Qualitative Report (TQR) Conference, Fort Lauderdale, FL. February 28, a featured conference presentation: <https://tqr.nova.edu/2024/01/15/weekly-report-january-15-2024/>
- 2023, ***Seeking Solutions to the World's Wicked Problems by Building Community Across K-12, Higher Education, and the Professions*. Wyoming Innovations Statewide Conference. Saratoga, WY. November 3, invited keynote speaker and workshop leader.**
- 2023, Watson et al. *Using the Environmental Injustice of Owens Dry Lakebed to Inspire Scientific and Participatory Action Student Research at the University of Wyoming*. in 2023 ARNA Proceedings, Kaye, C. (Ed). Abstract available: <https://arnaweb.org/proceedings/2023-2/>. Website showcasing the work: <https://www.uwyonordic.com/environment--natural-resources-class.html>
- 2022, *A Different Lens: Sci-Art Collaboration on the Beauty of the Micro and Macro Environment of the Owens Lakebed*. A Transdisciplinary Showcase. UW Art Museum, Laramie, WY. December 15, with Erin Bentley, Tristan Duke, Andrew Siegel, Rebecca Watson and the students of the transdisciplinary microbiology Capstone Course and the High School 3-D art and science courses.
- 2022, *A Transdisciplinary Capstone Course Benefits Community Partners and Allows Students to Communicate Research, Gain Professional Skills and Experience Growth*. Original Lilly Conference on College Teaching: "Evidence-Based Teaching and Learning." Miami University, Oxford, OH. Accepted for presentation in November, with Ella DeWolf.
- 2022, *Exploring Elite Cross-country Skiers' Perceptions of the COVID-19 Pandemic and its Impacts on their Training, Racing and Perceived Physical and Emotional Wellness*. "United States Collegiate Ski and Snow Sport Conference". Minneapolis, MN. June 11, with John Henry Paluszek, Silas Goetz, Jamison Peacock, Kaj Taylor, Matthew Joseph Williams and Christine Boggs.
- 2022, *Envisioning the Future of Active Learning*. Faculty learning community on the future of teaching. Ellbogen Center for Teaching and Learning, invited speaker.
- 2022, *Skiing to Learn Science, Racing Towards Planetary and Human Health*. "Voices in the Field" conference. Central Wyoming College, Riverton, WY. March 31, with Andrew Siegel.
- 2022, ***Growing Discovery to Include Teaching and Learning – Evolving Assessment from SoTL to Educational Research*. University of Wyoming Assessment Academy. Laramie, WY. March 3, invited keynote speaker.**
- 2022, *Skiing to Learn Science, Racing Towards Planetary and Human Health*. World Classroom invited speaker. Rowan University, South Jersey, NJ. February 17.
- 2021, [\*The Impact of More Frequent Use of Knowledge Survey on Gains in Student Learning\*](#). Original Lilly Conference on College Teaching: "Evidence-Based Teaching and Learning." Miami University, Oxford, OH. November 20, with McKensie Phillips.
- 2021, [\*Participating in Multi-year Learning Opportunities Enhances Connectivity of Social Networks and Transforms Educators\*](#). Original Lilly Conference on College Teaching: "Evidence-Based Teaching and Learning." Miami University, Oxford, OH. November 19, with Christine Boggs and Sierra Jech.
- 2021, *The Numeracy of Self-Assessment: Learned Consequences and Rich Opportunities*. National Numeracy Network Conference, Online, February 28, with Edward Nuhfer, California State University; Steven Fleisher, California State University Channel Islands; Karl Wirth, Macalester College; Rachel Watson, University of

- Wyoming; Paul Walter, St. Edwards University; Christopher Cogan, Memorial University of Newfoundland; Lauren Scharf, U.S. Air Force Academy; Kali Nicholas Moon, Respect Academy; Cinzia Cervato, Iowa State University; Eric Gaze, Bowdoin College; Patrick McKnight, George Mason University; Matt Rowe, University of Oklahoma. Available: [https://youtu.be/wcvN1CfO\\_6o](https://youtu.be/wcvN1CfO_6o)
- 2021, *Achieving or Exceeding your Learning Outcomes with Labs at a Distance*, University of Tennessee STEM Day Invited Keynote Speaker, Online, February 25, with Christine Boggs.
- 2021, *Building Strong Knowledge Scaffolds and Preventing the Illusion of Learning*. Online, Laramie, WY.
- 2020, *Honoring Place and Lived Experience in Learning*. Dickenson State University. Online, Dickenson, ND. October 13.
- 2020, *Active Learning: From Neurons to Ecosystems*. Dickenson State University. Online, Dickenson, ND. October 9.
- 2020, *Dialoguing through Collaborative Communication to Build Community*. Dickenson State University. Online, Dickenson, ND. October 9. Online, Laramie, WY. November 16.
- 2020, [Virtual Labs](#). Invited speaker for A Wyoming WebED Radio Podcast called CowboyED.
- 2020, *Achieving or Exceeding your Learning Outcomes with Labs at a Distance*. University of Wyoming Learning Actively Mentoring Program and Ellbogen Center for Teaching and Learning. Online in Laramie, WY. June 25, with Christine Boggs, Richard Vercoe and McKensie Harris.
- 2020, *Flipping your Classroom is one Path to Resilient Course Design*. University of Wyoming Deans and Directors and Board of Directors meetings. Laramie, WY. June 5 & July 16, with Christine Boggs and Liam Guille.
- 2020, *Assessment of Student Learning: Groups' Self-Assessment Ratings Confirm Surprisingly Accurate Agreement with Demonstrated Competency Scores*. American Association of Behavioral and Social Sciences Poster Presentation. Las Vegas, NV. February 25, with Edward Nuhfer, Steven Fleisher, and Paul Walter.
- 2020, *The Evidence of Value in Teaching Self-Assessment to College Students of Lesser Privilege*. American Association of Behavioral and Social Sciences Oral Presentation. Las Vegas, NV. February 25, with Edward Nuhfer, Steven Fleisher, and Paul Walter.
- 2019, ["Leaving the Light On": From Feeling Alone to Feeling Connected Within an Educator Learning Community](#). Original Lilly Conference on College Teaching: "Evidence-Based Teaching and Learning." Miami University, Oxford, OH. November, 23 with Sierra Jech and Christine Boggs.
- 2019, [Evolving the Statement of Teaching Philosophy: From Traditional to Multimodal](#). Original Lilly Conference on College Teaching: "Evidence-Based Teaching and Learning." Miami University, Oxford, OH. November, 23 with Jessica Sutter.
- 2019, [Measuring Changes in Students' Perception of Active Learning and Feelings of Inclusion](#). Original Lilly Conference on College Teaching: "Evidence-Based Teaching and Learning." Miami University, Oxford, OH. November, 22 with Kerry Sondgeroth and Michele Larson.
- 2019, *Envisioning Planet-Body-Mind: Wyoming Scholar-Athletes Implement Course-based Action Research Using Social Justice Theories to Reframe Environmental Degradation*. ARNA 2019 Conference. Repoliticizing P/AR: From Action Research to Activism. Montreal, Quebec, Canada.
- 2019, *Shifting Student Motivation from Making Dollars to Making Change*. A TEDx Talk. available at: <https://youtu.be/PjtsszwHL8w>
- 2018, *[LAMP] Learning Assistant Program Pilot Year: Exploring the Learning Assistant Experience through Interviews and a Focus Group*. Lilly International Conference on College Teaching Oral Presentation. Oxford, OH.
- 2017-2018, *The UW Science Initiative: Facilities and Program Development*. Chamber of Commerce Business Alliance. Sheridan, WY., Rotary. Laramie, WY, Torrington, WY & Cheyenne, WY.
- 2017, *Confirming the Value of Students' Metacognitive Self-Assessments: Being "Unskilled and Unaware of It" is Unlikely*. Lilly International Conference on College Teaching Oral Presentation. Oxford, OH.
- 2017, *Inspiring University of Wyoming STEM Educators: An Extended Holistic Professional Development Experience*. Lilly International Conference on College Teaching Poster Presentation. November 2017. Oxford, OH.
- 2017, *Gliding into Action: Skiing and Climate Change Research*. ARNA 2017 Conference, *Participation and Democratization of Knowledge: New Convergences for Reconciliation*. Cartagena, Colombia. Trailer video used in the presentation is available: <https://youtu.be/6QhFnY5RePI>



- 2016-2019, *HIV/AIDS: Virion structure, replication cycle, treatment strategies and social stigma*. A mock active learning session for the Science Initiative Summer Institute faculty fellows. Minneapolis, MN., Teton Research Station, WY, Leadville, CO., Sheridan, WY.
- 2017, *Embodied Expertise*. Disability Matters Seminar Series *invited speaker*. Laramie, WY.
- 2017, *Is the Scientific Method Male?*. Women's History month *invited speaker*. Laramie, WY.
- 2016, *Climate, competition and curriculum collide: Designing an integrated action-learning course with international competition and environmental sustainability curriculum*. ARNA 2016 Conference, *Making A Difference: Action Research for a Change*. Knoxville, TN
- 2015, *Active Learning: A Spectrum of Techniques for Diverse Classrooms*. Outreach Credit Programs and Ellbogen Center for Teaching and Learning: TnT Lunchbox Series. <https://youtu.be/S-uLOA9XMQ>. Laramie, WY
- 2015, *Climate, Competition, Curriculum and Culture Collide: Implementing Problem-based Courses in Microbiology and Environment and Natural Resources*. e-Volution Innovations in Learning Environments Conference. <https://www.youtube.com/watch?v=LcR4V-XggOA&feature=youtu.be>. Laramie, WY
- 2015, *Transformative Experiences: Active Learning, Experiential Learning, Service Learning, Study Abroad, Internships, and Capstones (Opening Panel)*. e-Volution Innovations in Learning Environments Conference. *Invited Speaker*. <https://www.youtube.com/watch?v=vqz4LE48v3M&feature=youtu.be>. Laramie, WY
- 2015, *University of Wyoming Science Initiative Update. Statewide Articulation Presentation*. <https://youtu.be/KLLpE9Ujulk>. Laramie, WY
- 2015, *Snapchat and Instagram for Archiving Microscopy Images*. Outreach Credit Programs and Ellbogen Center for Teaching and Learning: TnT Lunchbox Series. Laramie, WY
- 2015-2016, *Greywater: Environmental Potential, Bacteriology and Guidelines for Use*. *Invited Speaker* for Laramie Local Foods. July, 2015 & April, 2016. Laramie, WY
- 2014, *Liberating Space Through Leadership*. Women's Leadership Conference. Laramie, WY. *Invited Speaker*.
- 2014, *Online Discussions that Matter: From Ritalin to Marijuana...* e-Volution Innovations in Learning Environments Conference. Laramie, WY
- 2014, *Embracing technology to enhance intimacy and personalization of large lecture courses with labs*. e-Volution Innovations in Learning Environments Conference *Invited Roundtable Discussion Leader*. Laramie, WY
- 2014, *Becoming a Superhero by Living with Love and not Fear*. Faculty Sneak Peak for 600 new students (A&S Auditorium). *Invited Speaker*. Laramie, WY.
- 2014, *Ski Like a Girl, Coach Like a Girl: Gender and Equity in Coaching*. Gender and Women's Studies Women's History Month Event. *Invited Speaker*. Laramie, WY.
- 2014, *Culturing Justice: Students use Microbiology to Address Community Problems at ACRES Student Farm, Our Laramie Gardens and The Downtown Clinic*. 2014 Shepard Symposium for Social Justice. Laramie, WY.
- 2013, *Living with Love and Passion Allows Leadership*. Multicultural Student Leadership Initiative (MSLI). October 2013. *Invited Speaker*. Laramie, WY.
- 2013, *Blended Learning Faculty Panel*. e-Volution Innovations in Learning Environments Conference. Laramie, WY.
- 2013, *Is there a Virtual Edge? An investigation of the use of virtual labs to supplement traditional microbiology labs*. e-Volution Innovations in Learning Environments Conference. Laramie, WY. and Ed-Media World Conference. Victoria, BC.
- 2013, *Online Office Hours in Face-to-Face and Online Courses*. Blended Learning weeklong intensive workshop, Outreach School and the Ellbogen Center for Teaching and Learning. Laramie, WY
- 2013, *The Microbiology Meridian: Implementing a Problem and Service-based Microbiology Capstone Course to Assess Student Learning Objectives*. Microbiology Steering Program Committee Meeting. Laramie, WY.
- 2013, *Inclusive Pedagogy: Design, Development and Implementation of a Problem-based and Service-based Capstone Course in Microbiology*. 2013 Shepard Symposium for Social Justice. Laramie, WY.
- 2012, *Virtual Edge Reboot*. Technology Boot Camp, Outreach School and the Ellbogen Center for Teaching and Learning weeklong intensive workshop. July 2012. Laramie, WY.

- 2012, *Biochemistry from a Distance: Designing, Developing and Teaching a Fully Online, Vodcasted Biochemistry Course*. Wyoming Distance Education Consortium (WyDEC). Powell, WY
- 2012, *The DA Club: Assessment of Critical Thought and Writing in a Fully Online Summer Biochemistry Course*. Learning Resource Network's (LeaRN's) Teaching Writing in Wyoming Conference. Casper, WY
- 2011, *Applying the Tools in Higher Education*. e-Volution Innovations in Learning Environments Conference. Laramie, WY
- 2011, *A Whole New World for Teaching and Learning: Exploring Educational Opportunities in Second Life*. e-Volution Innovations in Learning Environments Conference. Laramie, WY
- 2011, *Mobile Motivation: Using Cell Phones to Engage Students*. Colorado Learning and Teaching with Technology (COLTT) conference. Boulder, CO.
- 2010, *Mobile Micro: The use of Mobile Devices in a General Microbiology Course*. Western Interstate Commission for Higher Education (WICHE) Cooperative for Educational Technologies (WCET) conference. La Jolla, CA.
- 2010, ***Concerning Little Known Students: Discovering those Hidden from our Sight. Rocky Mountain Branch of the American Society for Microbiology Regional Meeting. Invited Keynote Speaker***. Laramie, WY.
- 2010, *A Whole New World for Teaching and Learning: Exploring Educational Opportunities in Second Life*. Distance Learning Guild (Outreach Credit Programs). Laramie, WY
- 2010, *"I" Found Paul in the Social Sciences: A Narrative of the Experience of a Gay Student who Left the Hard Sciences to Pursue a Career in Social Science*. 2010 Shepard Symposium for Social Justice. April 2010. Laramie, WY
- 2009, *Cell Phones in the Classroom*. e-Volution Innovations in Learning Environments Conference. October 2009. Laramie, WY
- 2009, *What are Faculty Doing with Technology*. e-Volution Innovations in Learning Environments Conference. Laramie, WY
- 2009, *The Virtual Classroom: Student and Instructor Perceptions of Vodcast Lectures in a General Microbiology Classroom*. American Society for Microbiology Conference for Undergraduate Educators, Microbrew Session. Ft. Collins, CO
- 2009, *College of Agriculture and Natural Resources Commencement Address. Invited Commencement Speaker***. Laramie, WY.
- 2008, *Vodcast Venture: How Formative Evaluation of Vodcasting in a Traditional On-Campus Microbiology Class Led to the Development of a Fully Vodcasted Online Biochemistry Course*. E-Learn World Conference on E-learning in Corporate, Government, Healthcare and Higher Education. Las Vegas, NV
- 2008, *The Online Dilemma: Student Perceptions of Online Supplemental Instruction for General Microbiology*. E-Learn World Conference on E-learning in Corporate, Government, Healthcare and Higher Education. Las Vegas, NV
- 2008, Panel on *A Brand of Excellence: Reflections on Teaching and Learning*. Ellbogen Center for Teaching and Learning Fall Forum on Learning and Assessment. Laramie, WY
- 2008, *Web 2.0 for Teaching*. Ellbogen Center for Teaching and Learning ICS Workshop. Laramie, WY
- 2007, *The Virtual Classroom: Student Perceptions of Podcast Lectures in a General Microbiology Classroom*. E-Learn World Conference on E-learning in Corporate, Government, Healthcare and Higher Education. Quebec City.
- 2003, *Warming up the Chill: Integrating Technology into a General Chemistry Course*. Ed-Media World Conference. July 2003. Honolulu, HI
- Presentations prior to 2003 are available upon request.**

## **GRANTS**

### **Funded/Awarded Projects as PI or Co-PI**

- 2024 Pilot Award from the Wyoming Telehealth Network. *Revealing Effects of Academic Isolation on Educator's Mental Health and Wellbeing in Wyoming: A Photovoice Study*. \$6,000.

- 2023 Office of Diversity, Equity and Inclusion Grant to fund holistic training for School of Culture, Gender and Social Justice instructors in active, inclusive pedagogies. \$11,000.
- 2022 Howard Hughes Medical Institute Inclusive Excellence Challenge Program Learning Community Grant, Phase II grant awarded to full national cohort. \$8,800,000. Through collaborative work the national learning community distributed this to partner institutions such as those in Wyoming.
- 2022 Howard Hughes Medical Institute Inclusive Excellence Challenge Program Learning Community Grant, Phase II grant awarded to University of Wyoming. \$823,668. This includes \$353,002 in funds to be used to support activities of the full national learning community.
- 2022 Open Educational Resources Grant to fund the creation of a film documentary on Collaborative Communication. University of Wyoming's Libraries. \$3,000.
- 2021 Interagency Agreement between the Wyoming Department of Health and the University of Wyoming to fund the transdisciplinary, computational research of Microbiology Capstone undergraduate researchers (see course-based research below). \$27,480 of \$636,692 administered for the Capstone project.
- 2020-2023 Howard Hughes Medical Institute Inclusive Excellence Challenge Program Learning Grant, Pre-proposal was advanced and we became members of the National Learning Community for Inclusive Excellence. National Learning community membership is an opportunity to be a part of the national dialogue to make the award process more inclusive. \$30,000.
- 2015, 2017 & 2019 Innovative Course Grant, CoPI: Christi Boggs, University of Wyoming Office of Summer Session and Winter Courses. \$2100.
- 2018 *How Gender Identity and Sexuality are Measured in Large National Surveys*, A&S Interdisciplinary Seed Grant, PI: Jennifer Tabler, CoPI: Jamie S. Snyder, College of Arts and Sciences, \$7,300.
- 2015 & 2017 Creative Activities Grant. CoPI: Christi Boggs, University of Wyoming Haub School of Environment and Natural Resources. \$6,000
- 2012-2016 Service-Learning Mini-Grant, University of Wyoming Service, Leadership and Community Engagement Office. \$750.
- 2015 WyoCourses Advising Pilot Grant, University of Wyoming WyoCourses, \$500.
- 2013-2014 Engaged Scholarship Grant, CoPI: John Willford, Campus Compact of the Mountain West. \$3,000.
- 2011-2012 Ellbogen Center for Teaching and Learning (E-CTL) Assessment Grant, University of Wyoming, \$1500.
- 2011, Technology Integration Enhancements (TIE) Distance Education Grant. University of Wyoming (Outreach College). \$1500.
- 2008-2010 Learning Resource Network (LeaRN) Supplemental Instruction Grant. University of Wyoming.

### **Funded Projects as CoI**

- 2021 Grand Challenges Seed Fund. Innovative Methods to develop Adaptive Capacity through Transdisciplinarity (IMPACT). PI: B.G. Merkle. Co-PIs: B. Gellis, C. Knapp, M. Ehmke. M. Bourque, A. Chalfoun, K. Christensen, E. Currano, R. Fisher, A. Hagy, R. Jabbour, K. Kinney, K. Landreville, J. Lockwood, E. Minton, S. Parker, J. Seeley, J.J. Shinker, C. Tarwater, K. Vaughan, and R. Watson: \$20,000.

### **Unfunded Projects as CoPI or CoI**

- 2021 *Wyoming Community Resilience Fellowship Hub*, UW Provost's Strategic Investment Fund, 155,072.
- 2021 Provost Strategic Innovation Fund. Innovative Methods to develop Adaptive Capacity through Transdisciplinarity (IMPACT). PI: B.G. Merkle. Co-PIs: B. Gellis, C. Knapp, M. Ehmke. M. Bourque, A. Chalfoun, K. Christensen, E. Currano, R. Fisher, A. Hagy, R. Jabbour, K. Kinney, K. Landreville, J. Lockwood, E. Minton, S. Parker, J. Seeley, J.J. Shinker, C. Tarwater, K. Vaughan, and R. Watson. Request: \$97,550.
- 2019 Chemistry Distance Education Innovative Funds RFP CoPIs: Ginka Kubelka, David Anderson and Debashis Dutta, \$70,605.
- 2019-2021 *Developing a Latina STEM Educational Pipeline through the Wyoming Latina Youth Conference and Active Learning Outreach* CoPIs: Mark Clementz, Cecilia Aragon and Shawna McBride, NSF AISL, \$299,910.
- 2020 *Coalescing Academic and Athletic Programs to Nurture Effective Bodymind Learning, Connect Communities and Solve Real Problems*. Grand Teton Campus Use Proposal.
- 2020 EPSCoR Track 1 Preproposal. Innovative Methods to develop Adaptive Capacity through Transdisciplinarity (IMPACT). PI: B.G. Merkle. Co-PIs: B. Gellis, C. Knapp, M. Ehmke. M. Bourque, A. Chalfoun, K. Christensen, E. Currano, R. Fisher, A. Hagy, R. Jabbour, K. Kinney, K. Landreville, J. Lockwood, E. Minton,

S. Parker, J. Seeley, J.J. Shinker, C. Tarwater, K. Vaughan, and R. Watson. Request would be part of next \$20 million grant from NSF's EPSCoR program.

### **Support Faculty in writing the educational plan for their grant proposals (with focus on NSF-CAREER proposals)**

2023, Nguyen, N. *CAREER Grid-scale Energy Storage: Modeling, Analysis, and Control*.

2023, Doering, B. *CAREER: Reconstructing Human-Animal Relationships in Interior Alaska during Social and Climatic Transitions*

2022, Oliveira, L. *CAREER: Uncovering High Thermoelectric Performance in 2D Metal–Organic Frameworks Through Ab Initio Atomistic Modeling*

2022, Hill, C. *CAREER: Chemical Measurement and Imaging*.

### **PROFESSIONAL AFFILIATIONS AND ACTIVITIES**

2022-Present, Facilitator for the Community Building Dialogues (collaborative communication/reflective dialogue) within the IMPACT STEM Transfer National Learning Community (supported by a grant to the LC from Howard Hughes Medical Institute (HHMI) Science Education Program as part of the Inclusive Excellence 3 Initiative).

2022-Present, Lead for the Learning Community Project within the IMPACT STEM Transfer National Learning Community Phase II Inclusive Excellence 3 Initiative.

2022-Present, Member of the National Learning Community dedicated to the evolution and practice of *Reflective Dialogue (Collaborative Communication)*.

2022, Writing Team Lead for IMPACT STEM Transfer National Learning Community Phase II Inclusive Excellence 3 Proposal.

2021-Present, Member of the IMPACT STEM Transfer National Learning Community (funded by a grant to the LC from Howard Hughes Medical Institute (HHMI) as a part of the Inclusive Excellence 3 (IE3) Initiative).

2016-Present, Member of the Action Research Network of the Americas (ARNA).

2020-2022, WCET (founded by the Western Interstate Commission for Higher Education (WICHE)). Member.

2019-2022, American Chemical Society. National Member.

2018-2019, President of the Wyoming Chapter of Phi Beta Kappa.

2017, Participant in the *Democratization of Knowledge: New Convergences for Reconciliation*, Cartagena, Colombia.

2001-Present, American Society for Microbiology (ASM). Rocky Mountain Regional and National Member.

2013-Present, Biannual Rocky Mountain Regional Branch (RMB) American Society for Microbiology Judge for student posters and presentations.

1996-Present, Phi Beta Kappa National Member.

2003-2010, Association for the Advancement of Computing in Education.

2010-2012, Western Interstate Commission for Higher Education (WICHE) Cooperative for Educational Technologies (WCET). Cooperative Interest Group for student retention.

### **HONORS AND AWARDS**

2025, *Honors College Award for Excellence in Capstone Mentorship* recipient, University of Wyoming Honors College Award for Mentorship of Honors Capstone Project, Laramie, WY.

2025, Certificate of Appreciation for leading the 2024-25 University of Wyoming Community Engaged Faculty Institute.

2024, College of Health Sciences nominee for *Distinguished Teacher*, nominated by Lacey Gaechter of the Division of Kinesiology and Health.

2024, Mentioned by a Tobin/Spitaleri Finalist as a professor who “changed their mind about an important issue”.

2023, Certificate of Mentorship for contributing as a mentor to the Young Southeast Asian Leaders Initiative (YSEALI). A program sponsored by the University of Wyoming, WyoGlobal, The University of Montana, and the United States Department of State.

2023, Honored as a *Favorite Professor* (those who have made an impact) by *Chi Omega* sorority.

2021, Nominated for the Wyoming Department of Education's *WyDEC Innovative Educator of the Year Award*. Statewide, WY.

2021, *Honors College Faculty Mentor Award Nominee*, University of Wyoming Honors College Award for Mentorship of Honors Capstone Project, Laramie, WY.

2021, *Shepard Symposium on Social Justice Outstanding Service Award*: For Outstanding Service as a Member of the 2021 Shepard Symposium Planning Committee, Laramie, WY.

2020, *Own It: Women in Science Committee Choice Award*. University of Wyoming, Laramie, Wyoming.

2019, 2018, 2017, 2016, 2014, 2013, 2012, 2010, 2009, 2008, 2007, 2006 & 2004, *Mortar Board "Top Prof"*, University of Wyoming Mortar Board, Laramie, Wyoming.

2018, *Thumbs Up Award*. University of Wyoming College of Arts and Sciences, Laramie, Wyoming.

2017, 2007 & 2005, *Lawrence Meeboer Outstanding Teacher Recipient*, University of Wyoming College of Agriculture & Natural Resources, Laramie, Wyoming.

2017, *Shepard Symposium on Social Justice Faculty Award*: For dedication and leadership in promoting equality, inclusion and social justice in local, national and global contexts, Shepard Symposium on Social Justice, Laramie, Wyoming.

2016, Awarded Extended Term and Promotion to Senior Academic Professional Lecturer, University of Wyoming Tenure and Promotion Committee, Laramie, Wyoming.

2016 & 2009, *Recognition of Excellence in Teaching Non-Honors Courses*. University of Wyoming Honors Program, Laramie, Wyoming.

2016, 2014, 2013, 2012, 2011, 2010 & 2009, *Promoting Intellectual Engagement (PIE) Award*. University of Wyoming (Ellbogen Center for Teaching and Learning (E-CTL), LeaRN (Learning Resource Network) and Residence Life & Dining), Laramie, Wyoming.

2015, *Outstanding Advisor Award Recipient*, University of Wyoming College of Agriculture & Natural Resources, Laramie, Wyoming.

2015, *Celebrating Diversity Inspirational Instruction Award*, Academic Affairs & Committee on Women and People of Color, Laramie, Wyoming.

2014 & 2012, *Outstanding Advisor Nominee*, University of Wyoming College of Agriculture & Natural Resources, Laramie, Wyoming.

2014, *UW Woman of Distinction Award*, Women's Leadership Conference, Laramie, Wyoming.

2014, *James C. Hurst Each Student – A Person Award Recipient*. University of Wyoming Student Affairs, Laramie, Wyoming.

2013, *James C. Hurst Each Student – A Person Award Nominee*, University of Wyoming Student Affairs, Laramie, Wyoming.

2013, *National Residence Halls Honorary Month Award*, Residence Life & Dining, Laramie, Wyoming.

2012, 2011 & 2006, *Lawrence Meeboer Outstanding Teacher Nominee*, University of Wyoming College of Agriculture & Natural Resources, Laramie, Wyoming.

2012, *Nominee for the National Awards Program for Excellence in College Teaching in the Food & Agricultural Sciences*, USDA, National Institute of Food and Agriculture & Natural Resources, Div. of Community and Education, Nation-wide.

2011, *Council for Advancement And Support of Education (CASE) U.S. Professor of the Year Nominee*, Carnegie Foundation for the Advancement of Teaching, Nation-wide.

2011, ***John P. Ellbogen Meritorious Classroom Teaching Award***, University of Wyoming's Highest Teaching Honor, Laramie, Wyoming.

2011, Awarded Extended Term to Associate Academic Professional Lecturer, University of Wyoming Tenure and Promotion Committee, Laramie, Wyoming.

2011, *College of Arts and Sciences Student Council Thumbs-up Award*: Recognition of Outstanding, Positive Contributions to the University of Wyoming, Laramie, Wyoming.

2010, *Outstanding Educator Award*, University of Wyoming College of Agriculture & Natural Resources and Natural Resources, Laramie, Wyoming.



2010, *Teaching Award of Merit*, North American Colleges and Teachers of Agriculture & Natural Resources, Nation-wide.

2008, *Campus Recreation Outstanding External Contributor*, University of Wyoming Campus Recreation, Laramie, Wyoming.

2007 & 2008, *Division of Student Affairs Outstanding External Contributor Nominee*, University of Wyoming Division of Student Affairs, Laramie, Wyoming.

2007 & 2002, *Mortar Board "Tip of the Cap"*, University of Wyoming Mortar Board, Laramie, Wyoming.

2005, *RSO Awards of Excellence: Outstanding Advisor*, University of Wyoming Recognized Student Organizations, Laramie, Wyoming.

2004, *"Toot Your Horn" Award*, University of Wyoming College of Agriculture & Natural Resources, Laramie, Wyoming.

2001, *Completed an M.S. Degree in Molecular Biology with a 4.0 GPA*, University of Wyoming, Laramie, Wyoming.

1998, *Summa Kum Laude*, University of Denver, Denver, Colorado.

1998, *Completed a Bachelor's Degree in Chemistry with a 3.98 GPA*, University of Denver, Denver, Colorado.

1996, *Phi Beta Kappa*. 1996-Present. Inducted at the University of Denver, Denver, Colorado.

1994-1998, *Dean's List*, University of Denver, Denver, Colorado.

1994, *Valedictorian*, Lake County High School, Leadville, Colorado.

#### **WORKSHOPS, INSTITUTES AND CONFERENCES DEVELOPED AND GIVEN**

2024-2025, *Community Engaged Faculty Institute* on Service-learning (an 8-session institute). In collaboration with the Office of Community Engagement.

2024, *Teton Summit* (Experiential Learning Component) for faculty and students from China and the United States. Learning took place at the UW research station in the Tetons and centered on the inextricable link between human and environmental health. After learning about the human and earth microbiome, the Kolb Cycle of Experiential Learning was used to guide participants in proposing their own place-based research.

2024, *Relating Grit and Growth Mindset with Self-Directed Learning and Problem Solving*. Mini-retreat at the Yellowstone Bighorn Research Association (YBRA)

2024, *Wyoming Inclusive Excellence 3 Initiative Statewide Gathering* in Cheyenne, WY for community college learning communities.

2024, *Synthesizing Across Active Learning Strategies to Select the one that Works Best for you and your Students*. Spring workshop for the LAMP Yearlong Training.

2024, *Coming Full Circle to Complete your Teaching and Learning Philosophy*. Spring workshop for the LAMP Yearlong Training.

2023, *Mapping your Curriculum onto Inclusive Pedagogy*. Fall workshop for the LAMP Yearlong Training.

2023, *Utilizing Assessment Data to Make Curricular Changes*. Fall workshop for the LAMP Yearlong Training.

2023, *Building Community through Transformative Pedagogy*. Summer Institute for the UW School of Culture, Gender and Social Justice.

2023, *Using the World's Greatest Problems to Guide Student Learning*. Science Initiative's LAMP Summer Institute [SI]<sup>2</sup> and Yearlong Training.

2022, *Putting Students in the Driver's Seat with Problem-based Learning*. Workshop for the Wyoming Education and Outreach Network (EON) Conference.

2022, *Creating a Knowledge Survey: Providing a Roadmap of Outcomes, Promoting Metacognition, Organization and Reflective Practice*. Ellbogen Center for Teaching and Learning Workshop. Invited facilitator for ECTL employees.

2022, *Integrating Universal Design, Collaborative Communication and Inclusive Excellence Guiding Questions to Inform the Planning of a Statewide Transdisciplinary Learner Showcase*. Northwest College Inclusive Excellence Learning Community Retreat. June 29<sup>th</sup>, Cody, WY.

2022, *Utilizing the Large-Scale Active Learning Classroom to Best Support Cooperative Learning*. LAMP Workshop.

2022, *Implementing Team-based Learning to Support Authentic Problem Solving in an Active Learning Classroom*. LAMP Workshop.

2022, *Employing an Abundance Mindset to Utilize Feedback as Assessment*. LAMP Workshop.

2021, *Wyoming Education and Outreach Network (EON) Conference* – a 3-day conference for statewide educators (K-community) that serves to connect outreach efforts at the University of Wyoming and educators around the state. Supervising faculty member for the graduate student group (COPSE) that hosts the conference.

2021, *Learning through Place*. Science Initiative's LAMP Summer Institute [SI]<sup>2</sup> and Yearlong Training.

2020, *Achieving or Exceeding your Learning Outcomes with Labs at a Distance*. LAMP and Ellbogen Center for Teaching and Learning workshop.

2020, *Deepening Student Learning Through Re-teaching*, Ellbogen Center for Teaching and Learning Webinar.

2020, *Change Theory: Applying the Diffusion of Innovations to Active Learning*. Workshop for the LAMP Educator Learning Community.

2020, *Facilitating Active Learning in Online and Virtual Environments*, Workshop for LAMP and the Ellbogen Center for Teaching and Learning. Zoom and *Second Life*.

2020, The LAMP February Workshop: *Building our Spectrum with Cooperative Learning Techniques*, Laramie, Wyoming.

2019, The LAMP Mini Symposium: *Assessing through SoTL to Improve the Student Experience*, Laramie, Wyoming.

2019, The LAMP October Workshop: *Considering Self-Assessment, Self-Efficacy, Self-Regulation in Drafting your Teaching Philosophy*, Laramie, Wyoming.

2019, The LAMP Science Initiative Summer Institute: *The Power of Transformative Learning*, Sheridan, Wyoming.

2019, The LAMP January Workshop: *Creating a Knowledge Survey*, Laramie, WY and separate online session delivered state-wide.

2018, The LAMP November Workshop: *Coming Full Circle: Assessing to Improve the Student Experience*, Laramie, Wyoming.

2018, The LAMP October Workshop: *Writing a Statement of Teaching Philosophy*, Cheyenne, Wyoming.

2018, The LAMP Science Initiative Summer Institute: *Active Learning Through Collaboration*, Leadville, Wyoming.

2017, The LAMP November Workshop: *Diving into Educational Research*, Laramie, Wyoming.

2017, The LAMP September Workshop: *Using Metacognition to Develop Assessment allows for Assessment that Develops Metacognition*, Laramie, Wyoming.

2017, The LAMP Science Initiative Summer Institute: *Active Learning: The Pedagogy of Inclusion*, Teton Research Station, Wyoming.

2016, The LAMP November Workshop: *Drafting your Teaching Philosophy*.

2016, The LAMP October Workshop: *Using Assessment to Develop Metacognition: Part II*

2016, The LAMP September Workshop: *Using Assessment to Develop Metacognition*

2016, The LAMP July Workshop: *Navigating the Institutional Review Board*.

2016, The LAMP Science Initiative Summer Institute: *Applying Cognitive, Metacognitive and Neuroscience to Active Learning*, Minneapolis, Minnesota and Laramie, Wyoming.

## **UNIVERSITY SERVICE**

*Division of Kinesiology and Health Seminar Committee (2024-present)*. I ensure that all remote students and faculty have access to seminar presentations. I enable live streaming of the seminars and work with the web site manager to ensure that recordings are also accessible. This has brought joy to my life as each seminar is a rich learning and networking experience.

*Next Generation General Education Experiential Learning Sub-committee member (2024)*. Committee charged with development of definition, learning outcomes and course/experience vetting.

*Next Generation General Education Innovative Pedagogy Sub-committee lead (2023)*. Committee researched and reported on pedagogical/andragogical best practices to inform the design and assessment of the general education curriculum.

*Division of Kinesiology and Health Curriculum Committee (2023-present)*.

*Assessment Coordinator for the College of Health Science (2022-2024)*

*University of Wyoming's Higher Learning Commission's Assessment Committee (2022-present)*. Committee interfaces with national HLC representatives.

*University Assessment Planning Committee (2021-present)* This committee is writing the University Assessment Plan.

*Next Generation General Education Committee (2020-2024)*. This committee was charged with redesigning the General Education Requirements for 2022 and beyond.

*University Assessment Coordinators Committee (2020-present)*. This committee will facilitate university-wide, department and programmatic student learning assessment.

*Member of the Hiring Committee for a STEM instructional professor in the Honors College (2020)*. This committee reviewed applications, interviewed potential job candidates, and selected the three position finalists.

*Faculty Advisor for the Community Outreach Program for STEAM Engagement (COPSE)*. This grassroots graduate student committee aims to communicate scientific outreach activities centered at University of Wyoming, provide resources and opportunities for graduate student skill development in communication, education, and outreach assessment and foster collaboration and communication between outreach scholars from undergraduate to postgraduate levels, thereby building a strong outreach community at the University of Wyoming.

*Head of the Chemistry Student Learning Assessment Committee (2019-2022)*. This committee is charged with student learning assessment and both annual and periodic reporting to the American Chemical Society.

*Member of the Hiring Committee for a tenure-track inorganic chemistry professor (2019)*. This committee reviewed applications, interviewed potential job candidates and selected the three position finalists.

*Chair of the Science Initiative's Active Learning Spaces Committee (2015-Present)*. This committee oversees the design of the large-scale active learning classrooms (ALCs).

*Chair of the Science Initiative's Learning Actively Mentoring Program (LAMP) Steering Committee (2016-Present)*. This committee oversees a statewide comprehensive, sustained mentoring and educational development program emphasizing active learning best practices. The LAMP fellows Program trains University of Wyoming educators and Wyoming Community College faculty in an immersive summer institute and year-round workshops. The LAMP Scholars Program supports undergraduate and post-baccalaureate students in becoming learning assistants for active learning classes while also taking a pedagogy course.

*Student Learning Assessment Committee Lead (2011-Present)*. University of Wyoming Microbiology Program.

*Microbiology Program Steering Committee*. University of Wyoming Microbiology Program. 2011-Present.

*Queer Studies (GLBT/Q/NS) Minor Steering Committee*. University of Wyoming. 2008-Present.

*Undergraduate Research & Inquiry Day Steering Committee (2018-2020)*. Assessment Lead. This committee is charged with re-envisioning and planning UG Research day to enhance impact and inclusivity.

*Roadmap to STEM Statewide Planning Committee & The Roadshow (2017-2019)*. This is a collaboration between LAMP and the Wyoming Department of Education to sponsor Wyoming educators to attend the annual Roadmap to STEAM Conference. LAMP undergraduate and graduate student researchers travel statewide to integrate hands-on, active science into these educators' K-12 classrooms.

*Campus Sustainability Committee (2017-2019)*. Campus-wide effort to build environmental sustainability into institutional visioning and current operations.

*Shepard Symposium on Social Justice Planning Committee (2016-2020)*. Plans a major national conference that seeks to engage participants in discussion and analyses of strategies and actions that can eliminate social inequality. (2018 Chair of the Awards Committee, 2019-2020, Chair of the Dialogic Symposium Track.)

*Committee on Women and People of Color (CoWPoC) (2015-2019)*. Grassroots social justice committee.

*Developer and Chair of Phi Beta Kappa (PBK) undergraduate awards committee honoring excellence in the liberal arts and sciences (2016- 2019)*. <http://www.uwyo.edu/pbk/scholarships-awards.html>

*LIFE Sciences Articulation Committee*. Wyoming Statewide Directive. 2009-2016.

*ARAG: Exploratory Studies Working Group*. University of Wyoming. 2017

*Open Range Statewide Committee to develop open access teaching resources / Vetting subcommittee*. Wyoming Department of Education. 2016-2017.

*Wyoming Research Scholars Program (WRSP) Committee*. University of Wyoming Science Initiative. 2015 - 2017. <http://www.uwyo.edu/wrsp/>

*Tobin Memorial and Rosemarie Martha Spitaleri Award Selection Committee*. University of Wyoming. 2015 - 2016.

*STEM Integrated Curriculum Committee*. University of Wyoming Academic Affairs. 2014.

*Student Transitions and Successes of Enrollment Management Committee*. University of Wyoming LeaRN. 2010.

*Student learning Assessment Committee Lead*. University of Wyoming Molecular Biology Department. 2009-2012.

*AG Ambassador Faculty Selection Committee*. University of Wyoming. April 2009.

*Self-Designed Major Committee (Forensic Science) for Chandra Thompson*. University of Wyoming. 2007.

*MOLB /MICR Stewardship Committee*. University of Wyoming. 2006.

*Budget Committee*. University of Wyoming College of Agriculture. 2004-2005.

## **STUDENT ADVISING / GRADUATE SUPERVISION**

## GRADUATE STUDENTS:

### Current Graduate Committees for which I am PI or Co-PI:

Grace Erholtz (Kinesiology and Health, Ski Historical Fund) Thesis: *“The World Needs Less Cowboys”: The UW Varsity Ski Team Examining the hierarchy of NCAA collegiate athletics and what happens to the ‘have-nots’ in times of crisis*

Erica Meyers (Community and Public Health, Division of Kinesiology and Health and School of Computing) Thesis: *Examining Curriculum, Assessment, and Deferment Practices in US High School Physical Education*

Chris Folsom (Kinesiology and Health) Thesis: *Endocrine Disrupting Effects of BzBP and its implications on Hyperadrenergic Postural Orthostatic Tachycardia Syndrome (POTS)*

### Current Graduate Committee Memberships:

MS (thesis)

Gloria Oladeji (Community and Public Health, Division of Kinesiology and Health) Thesis: *Comparing Nigeria’s Food Security Interventions with United Nations Recommended Strategies to meet Sustainable Development Goal 2*

PhD

Erin Bentley (Program in Ecology and Evolution/Botany) Dissertation: *The Lenses of Rarity: Investigating Penstemon, Rare Plants, and the Methods of Art/Science Transdisciplinarity*

Rebecca Austin (Instructional Technology)

Sabrina White (Zoology and Physiology)

Bolaji Akorede (Science Education)

### Completed Graduate Degrees for which I was PI or Co-PI

Velez, I. 2025, *The Undergraduate Research Experience: A VESSEL*. (MS Plan B)

Paluszek, J.H. 2023, *Exploring Graduate Student Success: A Qualitative Phenomenological Study Looking at Master’s and Doctoral Science Students’ Successes and Challenges*. (MS). [Available on ProQuest](#).

Mason, M. 2019, *Exploring the Impact of a Learning Assistant Program on LAs and their Mentors: A Qualitative Case Study*. (MS)

Nicholas-Moon, K., 2018, *Examining science literacy levels and self-assessment ability of University of Wyoming students in surveyed science courses using the Science Literacy Concept Inventory with expanded inclusive demographics*. (MS)

### Graduate Degrees Completed for which I was on the Committee

Baas, A., 2024, *Gaining Understanding of Systems & Impact of Infrastructuring* (PhD)

Campion, C., 2022, *Climate change and bumble bee declines: heat exposure threatens male fertility & game-based learning increases student understanding of core science concepts*. (MS)

DeWolf, E.I., 2021, *Associations of Nuphar polysepala with biogeochemistry and microbiology of mountain lakes*. (MS)

Rhoad, A. S., 2020, *Evaluation of the Intestinal Microbiome and its effects on disease severity of Toxoplasma gondii infection*. (PhD)

Noren, B. E., 2020, *Spatiotemporal Hydrogel Patterning to Control Cell Processes*. (PhD)

Bochanski, K.J., 2017, *The Effect of Competitive Nordic skiing on Athlete Nasal Microbiome, C-Reactive Protein, Secretory IgA and Heart Rate Variability*. (MS)

## OTHER ACTIVITIES/ACCOMPLISHMENTS

### **Faculty Scholarship of Teaching and Learning (SoTL) Research Supervisor**

- Peterson, A. (2024, Assistant professor of communications disorders), “*Team-Based Learning in a Graduate Course for Speech-Language Pathology.*”
- Pilkerton, A. (2024, Science Initiative’s community engagement and undergraduate research programming coordinator). *Near-Peer Mentoring Enhances STEM Identity.*
- Wiseman, C. with Cook, J. (2024, Assistant Lecturer, Mathematics) *Developing a Calculus Concept Inventory for Assessing Problem-Solving Ability.*
- Burd, K. (2024, Assistant professor of psychology) *Team-based learning in a large course: Preliminary data.*
- Layer, J. (2024, Assistant lecturer of kinesiology and health) *A Scalable Visual Framework of Teaching and Learning for Near-Peer Mentors.*
- Heater, K. (2022) *Beyond Content: Examining Your Teaching Values.*
- Jakapak, R. (2022) *Self-Assessing in the Field: Knowledge Surveys as Tools to Assess and Structure Fellowships.*
- Kubelka, G. (2022) *Can Knowledge Surveys Evaluate Instructional Methods?*
- Shukla, D. (2022) *Implementation of Learning Communities in an Artificial Intelligence Course.*
- Amarasuriya, D. (2021) *Implementing the Layered Approach in Physics Teaching.*
- Elshehabi, T. (2021) *Interactive Investigation of Teaching Philosophy Construction.*
- Singh, R. and Phillips, M. (2021) *Exploring Multidisciplinary and International Engagement by a Faculty Cohort.*
- Rhoad, A. (2021) *Case Studies in a Large Undergraduate Medical Microbiology Course.*
- Phillips, M. (2021) *Comparing Knowledge Surveys Post-unit and Post-class.*

### **Undergraduate Research Supervisor**

- Poteet, D. (2024), *Instructor Control and Student Resistance: Exploring Autonomy in STEM Courses.*
- Kraemer, S. (2021-Present). *From Planetary to Human Dysbiosis: Exploring elite cross-country skier’s perceptions on the use of beta-2 agonists as a response to air quality.* Wyoming Research Scholars Program (WRSP).
- Kraemer, S. (2024-Present). *Identifying and Reconstructing Glacier Lake Outburst Floods at Mammoth Glacier, Wyoming* (Honors/WRSP).
- Hybertson, W. (2024). *Exploring impacts of pollution on lichens along the Colorado Trail* (WRSP).
- Buchenroth, W. (2020-2021). *Remediating Wastewater using Algae and Stimulating Bacteria.* Wyoming Research Scholar (WRSP).
- Welsh, J. (2019-2020). *Transdisciplinary Knowledge Creation is Anything but Rubbish: Connecting Microbial, Middle School, University, City and Business Communities in an Effort to Remediate an Old Wyoming Landfill.* Participatory Action Research Supported by the Learning Actively Mentoring Program, and The College of Agricultural and Natural Resources.
- Fairbourn, L.J. (2016-2018) *Bacterial Cellulose: Determining Fiber Properties and Surmising Application Potentials as they Relate to the Textile Industry.* Research supported by the Wyoming Research Scholars Program (WRSP) and the McNair Scholars Program.
- Bochanski, K.J. (2014) *Identifying Native Plant Species for Uptake and Retention of Uranium from a Mill Tailings Radiation Control Act Site (UMTRCA) in Riverton, Wyoming.* Unpublished Research Thesis Supported by EPSCoR and the Berry Biodiversity Grant.
- Bochanski, K.J. (2013) *Virtual Edge Reboot: Redesigning Virtual Labs for General and Medical Microbiology.* Unpublished Research Thesis.

### **Senior Honors Thesis Advisor.** University of Wyoming Honors Program.

- Sundquist, C. (2024-Present). *Antimicrobials and Microbial Recolonization in Post-Wildfire Soil.*
- Williams, R. (2024). *Planning a statewide Tick Blitz.*
- Rodin, K. (2023-Present). *Ignored History.*
- Leland, C. (2023). *Do students feel more confident in their curriculum with learning assistants (LAs) in the classroom?*
- Antinoro, A. (2022). *Investigating the use of qPCR to Predict Microcystin Production in Cyanobacteria in Wyoming Lakes.*



- Romanjenko, B. (2021). *Correlating Diet and Food Access Data to SARS-CoV-2 Outcomes in Wyoming Counties*.
- Guille, L. (2021). *Assessing the Attitudes, Knowledge, and Behaviors of Wyoming Healthcare Practitioners toward Genetic Medical Practices: Current Positions and Potential Improvements*. IRB approved survey and interview study.
- Welsh, J. (2020). *Transdisciplinary Knowledge Creation is Anything but Rubbish: Connecting Microbial, Middle School, University, City and Business Communities in an Effort to Remediate an Old Wyoming Landfill*. Participatory Action Research Supported by the Learning Actively Mentoring Program, and The College of Agricultural and Natural Resources.
- Moncrief, K., Armitage, E. and Radosevich, N. (2018) Microbiology Capstone: Does active learning make a difference? Unpublished Honors Thesis.
- Dinneen, P. (2017) Voices of Wyoming Landscapes: Agricultural Traditions and Living Wisdom. Presented at the ARNA 2017 Conference, *Participation and Democratization of Knowledge: New Convergences for Reconciliation*. June 2016. Cartagena, Colombia. Finalist for the Phi Beta Kappa Excellence in the Liberal Arts Undergraduate Research Award.
- Zarzycka, A (O). (2017) Applying Change Theory when making Kombucha at the Albany County Downtown Clinic. Unpublished Honors Thesis.
- Bertani, A. (2016) A Decade Later: Comparing Knowledge of Testing and Assessing HIV Awareness of University of Wyoming Students. Unpublished Honors Thesis.
- Georgio Westover, S. (2016) The exclusionary effect of ineffective rhetoric and passive teaching styles used by faculty in undergraduate STEM courses on females and underrepresented minorities. Unpublished Honors Thesis.
- Bochanski, K.J. (2015) Addressing Uranium Contamination on the Wind River Reservation: Environmental Justice, Phytoremediation and Risk Analysis. Unpublished Honors Thesis.
- Kinley, A. (2014) Identification of Potential Targets for Viral Antisense mRNA Based Therapeutics through the Development of a T4 Bacteriophage Expression Library. Unpublished Honors Thesis.
- Wimpenny, S. (2013) *Holistic Methods to Overcome Dental Anxiety*. Unpublished Honors Thesis.
- Favazzo, L. (2012) *The Use of a Knowledge Survey in Microbiology*. Unpublished Honors Thesis.
- Ostrander, A. (2011) *What About Bugs? Developing an Entomology Curriculum for High School students*. Unpublished Honors Thesis.
- Averill, S. (2008) *The Essentials of Omega-3 Fatty Acid Promotion: Fishing for Answer*. Unpublished Honors Thesis.
- Young, K. (2007) *HIV Testing Awareness at the University of Wyoming and the Factors that Keep Students from Being Tested*. Unpublished Honors Thesis
- Jordan, N. (2006) *Hope for a Devastating Crisis: The Treatment of HIV and AIDS*. Unpublished Honors Thesis.

**Course-based Undergraduate Research (CURE) Projects** <http://uwmicrobiologycaptstone.weebly.com/>

- Focus of Attention in Endurance Sports*. A transdisciplinary survey study on external versus internal cueing are perceived to affect performance in endurance sports. Poster (2024).
- Thermo-recovery: an autoethnographic approach*. Poster (2024).
- Antimicrobial Production in Soil Following Wildfire*. Poster (2024).
- Investigating the impact of Wyoming Wildfire Smoke on Respiratory Health through the Analysis Microbial Activity and Transmission*. Poster (2024).
- Microchem Plus and Sporidicin Show Effectivity Against Coxiella burnetii, Natural Disinfectants Show Minimum Effect*. Poster (2023).
- Wyoming West Nile and Climate Change: A Correlative Study*. Poster (2023).
- Wyoming Tick Blitz: Launching a Citizen Science Initiative*. Poster (2023).
- The Study of Alpha-Gal Syndrome: A Survey to Determine the Duration of Tick Bite and Removal Methods Used*. Poster (2023)
- Grit, the Key to Success: A Study of the Predictive Effect of Grit on the Success of Nordic Ski Racers*. International Nordic Ski Training Program Poster (2023)
- Is there a Correlation Between Balance and Skate Skiing Performance?* International Nordic Ski Training Program Poster (2023)



*Impacts of Regular Yoga Training on Cross-Country Skiers' Physical and Mental Health.* International Nordic Ski Training Program Poster (2023)

*Returning Agency to Owens Dry Lakebed through Exploration of the Microbial, Chemical and Art-making Capacity of a Desiccated Site.* Poster (2022).

*Cyanobacterial Blooms in Wyoming: Microcystin Concentration is Correlated with Water Chemistry, No Correlations with mcyE Gene Count.* Poster (2021).

*Wyoming's HCB's: Novel Methods of Testing and Control.* Poster (2021).

*Cultivation of Cutibacterium acnes Minimal Essential Media Supports Growth Addition of Pores and Sebum like Compounds Failed to Increase Growth.* Poster (2021).

*Outcompeting and Inhibiting Staphylococcus aureus, Staphylococcus epidermidis, and Lactobacillus plantarum Interactions with acne associated Cutibacterium acnes.* Poster (2021).

[COVID-19 Deaths are Under-reported in Wyoming.](#) Webpage (2020).

[Impacts of Built and Natural Environments on COVID-19 Outcomes.](#) Webpage (2020).

[Statistical Visualizations Suggest Food Environment Variables Play a Role in COVID-19 Outcomes in Wyoming.](#) Webpage (2020).

*Exploring Surface Soil Microbes and Supporting Phytoremediation Strategies in an Old, Unlined Landfill.* Poster (2019).

*Riverton Landfill Surface Soil Chemistry & Microbiology Support Downgradient Phytoremediation Location.* Poster (2019).

*Sight Variability from Cross-Cultural Perspectives.* Behunin, K. (2019-2020)

*Identifying Microbes and Plastic Properties in Purchased and Recycled Clay: An Integrative Approach to STEAM-ing up STEM.* Poster (2018).

*Oenologists Anonymous: Uncovering Changes in Biodiversity of Wine Microbial Communities and Elucidating Selective Effects of Chemical Additives.* Poster (2018).

*Interpreting a correlation between antibiotic resistance rates with antibiotic prescription and recycling rates and socioeconomic status in seven Wyoming counties.* Poster (2018).

*Brucellosis Vaccine: assessment of shuttle vector stability in Lactococcus lactis during in vitro growth.* Poster (2017).

*Drug Recycling: Counties without Wyoming Medication Donation Program show more Bacterial Antibiotic Resistance in Wastewater per Person.* Poster (2017).

*Diverting Bioplastic Waste from the Landfill: Assessing and Optimizing Microbial Degradation of PLA-Based-Plastics in University of Wyoming Compost.* Poster (2017).

*The Pursuit of Happiness: Determining the Ideal Treatment for Enriching Kombucha with Psychobiotics.* Poster (2016).

*A Bright Solution: Acetic Acid but Not Coriander Oil Inhibits Microbial Growth in a Small Scale Continuous Flow Hydroponic System.* Poster (2016)

*Maximizing Sensitivity and Specificity of Brucella abortus 1988 antigen for improvement of a Brucellosis Lateral Flow Device in Cattle.* Poster (Implemented COM3 Course 2015)

*Beneficial Effects of Autoclaved Growth Substrates for Oyster Mushroom Cultivation at a Small Community Farm.* Poster (Implemented COM3 Course 2015) Awarded 1st place at the Rocky Mountain Branch American Society for Microbiology Conference in Denver, CO

*Culturing Yogurt: Creating a Suggested Probiotic Source for Patients with Type 2 Diabetes.* Poster (Implemented COM3 Course 2015) Awarded 2nd place at the Rocky Mountain Branch American Society for Microbiology Conference in Denver, CO

*Olfactory Relief in Laramie, WY: Altered Composting Efficiency and Microbial Community in Aerated and Covered Compost Piles.* Poster (Pilot Course 2014)

*Reevaluating how Probiotics are Provided to Patients of the Downtown Clinic: Monitoring Probiotic Antagonism Toward Diarrheal Pathogens.* Poster (Pilot Course 2014)

*Covering and Aeration of Local Community Compost Modifies Microbial Composition.* Poster (Pilot Course Spring 2013)

*Characterizing Microbial Communities and Soil Characteristics to Enhance Practices in Our Laramie Gardens.* Poster (Pilot Course Spring 2013)

#### **Queer Studies Capstone Thesis Advisor**

Hays, L. (2018) *Queer Bodies in Virtual Spaces*. Published WyoCourses Module in Queer Theory.

Jech, S. (2016) *A Queer Theory Approach to Disability, Ageism, and Sexuality on Collegiate Nordic Ski Racing Teams*. Unpublished Thesis that Informed the Presentation *Embodied Expertise* (see Presentations section of this Vitae).

## **STATEWIDE, NATIONAL AND INTERNATIONAL VOLUNTEERISM**

2019-Present, Co-Program Director for the Domestic and International *Nordic Ski Training and Coaching Program* (NSTCP). International. Act as direct supervisor for an assistant coach for this program.

1998-Present, *Coach, Men's and Women's Nordic Ski Team*. University of Wyoming. National and International.

2018-Present, Founding member and current board member of the Skiers Nordic of Wyoming (SNOW) Nonprofit.  
<https://www.snowyoming.org/>

2012-Present, Trash-2-Treasures. Environmental justice through reclaiming / recycling of furniture. UW Nordic Ski Team, Service Learning and Community Engagement (SLCE) and Sustainability Club, Laramie, Wyoming.

2003-Present, *Coach/Organizer/Lecturer*, High School Summer Ski Camp. Skiers Nordic of Wyoming, High Plains Nordic Ski Association, Laramie High School Ski Team, Centennial and Laramie, Wyoming

2016-Present, *Coach/Organizer of the Maggi and Nick Murdock Free Community Ski Clinic*.  
<https://uwnordic.weebly.com/murdock-ski-clinic.html>, Laramie, Wyoming.

2003-Present, *Race Volunteer*, Medicine Bow Nordic Association, Laramie, Wyoming.

2009-2017, Co-director for the microbiology and molecular biology Freshman Interest Group (FIG). University of Wyoming LeaRN.

2003-2015, *Group Trip Leader*, University of Wyoming Outdoor Program (Campus Recreation), Laramie, Wyoming.

2011, 2014 & 2015, *Host for a member of the Board of Trustees in the "Take a Trustee to Class" Project*. University of Wyoming Faculty Senate Executive Committee.

2005 & 2008, Judge for UW Gold Award. University of Wyoming. 2008 & 2005.

2004, Judge for Homecoming Sing. University of Wyoming, Laramie, Wyoming.

2003-2005, Coach/Invited Lecturer. Casper High School Ski Camp, Casper, Wyoming.

2000-2003, Coach, Steamboat Springs Ski Camp, Steamboat Springs Winter Sports Club. Steamboat Springs, CO

2003, Coach, Nordic Master Skier Program. Medicine Bow Nordic Association, Laramie, WY

2000, *Group/Activity Leader*. Winter Sports Club for Girls. Boulder, CO

1998-Present, *Trail Maintenance*. Medicine Bow Nordic Association, Laramie, Wyoming.

## **Coaching and Athletic Accolades**

2024, *Head Coach, classic wax technician, curriculum designer for the United States Collegiate All-Star Uni-USA Team, Pragelato, Italy*.

2020, *Named Head Coach of the World University Games 2021 United States Collegiate All-Star USA Team, Lucerne, Switzerland*.

2019-Present, *Co-coach for the Shanghai University of Sport (SUS) Nordic Ski Education Program*.

2018, *Head Coach of the World University Games 2019 United States Collegiate All-Star USA Team, Krasnoyarsk, Russia*.

2017, *Head Coach of the World University Games United States Collegiate All-Star USA Team*  
<http://almaty2017.com>, Almaty, Kazakhstan.

2011-2015, *Coach of the University of Wyoming Ski Team Invited to be the sole representatives of the United States of America at the World University Games*. 2011-Present. Erzurum, Turkey, Trentino, Italy & Strbske Pleso, Slovakia

2003-Present, *Coach of thirteen USCSA National Championship Teams*. Nationwide.

2001-Present, *Coach of thirty-one individual USCSA National Champions*. 2001-Present.

1998-Present, *Coach of more than 100 individual USCSA Academic All-Americans*.

1998, *Commitment to Excellence Award, Cross-Country Skiing*. University of Denver, Denver, Colorado.

1998, *Varsity Letter Recipient, Cross-Country skiing*. University of Denver. Denver, Colorado.

*1996, Scholar Athlete Award.* University of Denver, Denver, Colorado

*1994, National Champion.* Rocky Mountain Division Nordic Ski Team, Bend, Oregon.

*1994, State Champion,* Colorado Nordic Skiing State Meet. Vail, Colorado.

*1990-1994, Colorado High School All-State* 4 times in Cross-Country Skiing.