

Laura Beaster-Jones
School of Natural Sciences
University of California, Merced
Department of Molecular and Cell Biology
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Education

- 2003 Ph.D., Biology, University of Illinois at Chicago, Department of Biological Sciences.
Dissertation Title: Functional and comparative analyses of the *Caenorhabditis elegans* novel pharyngeal factor PEB-1
Advisor: Okkema, P.
- 1996 B.A., *Cum laude*, Whitman College.
Major: Biology
Minors: Chemistry, Music
Thesis Title: Oxygen evolution and quantum yield of photosystem II in *Pisum sativum*
Advisors: Vernon, D., Edwards, G.

Professional Positions

- 2014-present Assistant Teaching Professor, Biology, Molecular Cell Biology, University of California, Merced.
- 2009-2014 Senior Lecturer, Biology, Texas A&M University.
- 2006-2009 Assistant Professor, Biology, Augustana College.
- 2003-2006 Postdoctoral Researcher, Evolution and Development, University of California, San Diego.
Advisor: Dr. Linda Holland
- 1997 Research Technician, Washington State University Extension-Cranberry Research Station.
- 1996 Research Technician, Washington State University Extension-Tree Fruit Research Station.

Teaching Experience

Assistant Teaching Professor (University of California, Merced)

- 2016-present Developmental Biology Lab (spring semester)
2015-present Evolution and Development (fall semester)
2014-present Contemporary Biology (team taught, every semester)

Senior Lecturer (Texas A&M University)

- 2013-2014 Evolution and Development (spring semester)
2009-2013 Developmental Biology (team taught, fall semesters)
2009-2012 Embryology (team taught, spring semesters)
2009-2014 Introductory Biology I (every semester)

Assistant Professor (Augustana College)

- 2008 Evolution and Development (interim course)
2006-2007 Vertebrate Embryology (fall semesters)
2007-2009 Developmental Biology (spring semesters)
2006-2009 Biological Principles I and II (team taught, fall and spring semesters)
2007 Senior Seminar-Bioethics and reproductive technologies
2006 Senior Seminar-Genetically modified organisms

Teaching Assistant (University of Illinois-Chicago)
2002 Seminar-Promise of the Human Genome Project
1999-2000 Laboratory Section-Vertebrate Embryology
1999 Discussion Section-Human Genetics
1998 Discussion Section-Human Development and Reproduction

Publications

Book Chapters

Camfield, E. K., **Beaster-Jones, L.**, Miller, A. D., Land, K. M. (2019). Using Writing in Science Class to Understand and Activate Student Engagement and Self-Efficacy. In J. J. Mintzes, E. M. Walter (Eds.), *Active Learning in College Science*. Berlin: Springer Nature. Publisher - Springer Nature.).

Journal Articles

Beaster-Jones, L. (2012). Cis-regulation and conserved non-coding elements in amphioxus. *Briefings in Functional Genomics*, 11(2), 118-30. (Current Status: Published; Date of Prior Status - June 30, 2014, Date Published - 2012).

Beaster-Jones et al. (2008). Expression of somite segmentation gene in amphioxus: a clock without a wavefront?. *Development Genes and Evolution*, 218(11-12), 599-611. (Current Status: Published; Date of Prior Status - June 30, 2014, Date Published - 2008).

Beaster-Jones, L., Schubert, M., Holland, L. Z. (2007). Cis-regulation of the amphioxus *engrailed* gene: insights into evolution of a muscle-specific enhancer. *Mechanisms of Development*, 124(7-8), 532-42. (Current Status: Published; Date of Prior Status - June 30, 2014, Date Published - 2007).

Rasmussen, S. L., Holland, L. Z., Schubert, M., **Beaster-Jones, L.**, Holland, N. D. (2007). Amphioxus AmphiDelta: evolution of Delta protein structure, segmentation, and neurogenesis. *Genesis*, 45(3), 113-22. (Current Status: Published; Date of Prior Status - June 30, 2014, Date Published - 2007).

Beaster-Jones, L., Horton, A. C., Gibson-Brown, J. J., Holland, N. D., Holland, L. Z. (2006). An amphioxus T-box gene *AmphiTbx15/18/22*, illuminates the origins of chordate segmentation. *Evolution and Development*, (8), 119-129. (Current Status: Published; Date of Prior Status - June 30, 2014, Date Published - 2006).

Beaster-Jones, L., Okkema, P. G. (2004). DNA binding and in vivo function of *C.elegans* PEB-1 require a conserved FLYWCH motif. *Journal of Molecular Biology*, (339), 695-706. (Current Status: Published; Date of Prior Status - June 30, 2014, Date Published - 2004).

Kalb et al. (2002). Interference between the PHA-4 and PEB-1 transcription factors in formation of the *C. elegans* pharynx. *Journal of Molecular*

Biology,(320), 697-704. (Current Status: Published; Date of Prior Status - June 30, 2014, Date Published - 2002).

Thatcher, J. D., Fernandez, A. P., **Beaster-Jones, L.**, Haun, C., Okkema, P. G. (2001). The *Caenorhabditis elegans* *peb-1* gene encodes a novel DNA-binding protein involved in morphogenesis of the pharynx, vulva, and hindgut. *Developmental Biology*,(229), 480-193. (Current Status: Published; Date of Prior Status - June 30, 2014, Date Published - 2001).

Presentations Given

- Beaster-Jones, L.** (Presenter & Author), 2019 Society for Developmental Biology West Coast Regional Meeting, "Effect of converting an upper division evolution and development course to student-centered approaches on course performance," Society for Developmental Biology, Cambria, CA. Poster presentation. (March 2019).
- Beaster-Jones, L.** (Presenter & Author), Kogl Camfield, E. (Author), Land, K. (Author), 2019 SABER West, "Student written narratives reveal aspects of the affective domain of learning," Society for the Advancement of Biology Education Research, University of California, Irvine, CA. Accepted Talk. (January 2019).
- Beaster-Jones, L.** (Presenter & Author), Kogl Camfield, E. (Author), Land, K. (Author), 2018 HHMI University of California STEM Faculty Learning Community-Delivering on the UC Promise: Providing Equitable STEM Education Opportunities for California, "Using student-authored narratives to explore student values, self-efficacy and sense of belonging in an introductory biology course," Howard Hughes Medical Institute, University of California, Santa Barbara, CA. Invited talk. (November 2018).
- Beaster-Jones, L.**, (Presenter & Author), Land, K. (Author), Kogl Camfield, E. (Author), 2018 SABER Annual Meeting, "More than course content: student values, attitudes and beliefs in an introductory biology course," Society for the Advancement of Biology Education Research, Minneapolis, MN. Poster presentation. (July 2018).
- Beaster-Jones, L.**, Climate Neutrality Curriculum Initiative Networking Event, University of California Office of the President Carbon Neutrality Initiative, Panel: Conceptualizing Sustainability, University of California, Merced. Roundtable Discussion. (April 2017).
- Beaster-Jones, L.**, Climate Neutrality Curriculum Initiative Networking Event, "Incorporating sustainability concepts into an introductory biology course," University of California Office of the President Carbon Neutrality Initiative, University of California, Merced. Poster presentation. (April 2017).
- Beaster-Jones, L.**, Society for Developmental Biology West Coast Meeting, "Structuring Courses for Effective Student Learning and Engagement," Society for Developmental Biology, Tenaya Lodge at Yosemite National Park. Poster presentation. (March 2017).
- Mohanty, S. (Presenter & Author), **Beaster-Jones, L.** (Author), Kunkel, G. (Author), Lekven, A. C. (Author), Society for Developmental Biology 74th Annual Meeting, "Characterizing the Role of Conserved Wnt targets: *sp5* and *sp5-like* genes, in Neural Patterning in Zebrafish.," Society for Developmental Biology, Panel: Patterning and Transcription Factors, Snowbird, UT. (July 2015).
- Beaster-Jones, L.**, Bioethics Forum, "Early human development," Texas A&M University, College Station, TX. oral presentation. (March 2014).
- Beaster-Jones, L.**, Oral Presentation, "Amphioxus and the evolution of chordate development," Whitman College. (December 2011).

- Beaster-Jones, L.**, Faculty Forum, "Origin of the Vertebrates," Augustana College, Sioux Falls, SD. (February 2008).
- Beaster-Jones, L.**, Oral Presentation, "Amphioxus and chordate evolution," University of Minnesota, Duluth, MN. (December 2007).
- Beaster-Jones, L.**, Oral Presentation, "Amphioxus and chordate evolution," Fairfield University, Fairfield, Connecticut. (December 2007).
- Beaster-Jones, L.**, Faculty Forum, "Evolutionary Developmental Biology: how altering developmental patterns contributes to the evolution of new animal forms," Augustana College, Sioux Falls, SD. (February 2007).
- Beaster-Jones, L.**, Conference on the Developmental Basis of Evolutionary Change, "Evolutionary conservation of a muscle-specific enhancer of the amphioxus *engrailed* gene," Chicago, IL. Poster Presentation. (October 2005).
- Beaster-Jones, L.**, 62nd Annual Meeting of the Society for Developmental Biology, "Function of the novel *C. elegans* factor PEB-1 requires nuclear localization and DNA binding activity," Society for Developmental Biology, Boston, MA. Poster Presentation. (July 2003).
- Beaster-Jones, L.**, The Chicago Area Developmental Biology Group, "Comparative and functional DNA binding analyses of the novel pharyngeal factor PEB-1," Children's Memorial Hospital, Chicago, IL. seminar presentation. (October 2002).
- Beaster-Jones, L.**, The 61st Annual Meeting of the Society for Developmental Biology, "Comparative and functional DNA binding analyses of the novel pharyngeal factor PEB-1," University of Wisconsin, Madison, WI. Poster Presentation. (July 2002).
- Beaster-Jones, L.**, The Chicago Area Developmental Biology Group, "Comparative and functional analyses of PEB-1, a novel DNA binding protein," University of Illinois, Chicago, IL. seminar presentation. (October 2001).
- Beaster-Jones, L.**, The 13th International *C. elegans* Meeting, "Comparative and functional DNA binding analyses of the novel pharyngeal factor PEB-1," University of California, Los Angeles, Los Angeles, CA, USA. Poster Presentation. (June 2001).
- Beaster-Jones, L.**, The Chicago Area Developmental Biology Group, "Investigating the potential partners of PEB-1, a novel DNA binding protein," Children's Memorial Hospital, Chicago, IL. seminar presentation. (December 2000).
- Beaster-Jones, L.**, Santa Cruz Developmental Biology Conference, "The novel transcription factor PEB-1 generates cell-type diversity in the *C. elegans* pharynx," University of California, Santa Cruz, Santa Cruz, CA. Poster Presentation. (July 2000).
- Beaster-Jones, L.**, Sigma Xi Graduate Student Research Forum, "Does *peb-1* generate cell type diversity in the *C. elegans* pharynx?," University of Illinois, Chicago, IL. seminar presentation. (April 2000).

Contracts, Grants and Sponsored Research

Grant

- Beaster-Jones, Laura (Co-Principal Investigator), Manilay, Jennifer Oliveros (Principal Investigator), Garcia-Ojeda, Marcos Esteban (Co-Principal Investigator), "Undergraduate Science Education Inclusive Excellence Grant," Howard Hughes Medical Institute. \$1,000,000/5 years. (September 2018 - September 2023).
- Beaster-Jones, Laura (Principal Investigator), "Setting the stage for vertebrates: the origin of chordate segmentation-Augustana Research and Artist Fund," Augustana College. \$3700/1 year (2007).

Awards and Honors

- UC Merced Academic Senate Distinguished Undergraduate Teaching Award, University of California, Merced. (2017 - 2018). Awarded in recognition of excellence in teaching at the undergraduate level to 1-2 faculty at UC Merced per academic year.
- Graduate College Student Travel Award, University of Illinois, Society for Developmental Biology 62nd Annual Meeting. (2003).
- Graduate College Student Travel Award, University of Illinois, Society for Developmental Biology 61st Annual Meeting. (2002).
- Graduate College Student Travel Award, University of Illinois, 13th International *C. elegans* Meeting. (2001).
- Graduate College Student Travel Award, University of Illinois, Santa Cruz Developmental Biology Conference. (2000).
- Sigma Xi Research Forum, University of Illinois. (2000).
presentation awarded 3rd prize
- Phi Beta Kappa, Whitman College. (1996).
Beta of Washington
- Dean's List. (1992 - 1996).
Eight of eight undergraduate semesters
- Plant Biochemistry Research Training Grant Fellowship, NSF-DOE-USDA. (1995).
- Undergraduate Honors, Whitman College. (1995).

Professional Development

- Workshop, "Summer Institute on Scientific Teaching," HHMI and Yale University Center for Teaching and Learning, Olympia, WA. (July 2018).
- Conference Attendance, "2018 Southern California PULSE Institute," National Science Foundation, Los Angeles, CA. (June 2018).
- Faculty Fellowship, "UC Berkeley Transforming STEM Teaching Faculty Learning Program," Berkeley, CA. (January 2018 - March 2018).
- Workshop, "Partnership for Undergraduate Life Sciences Education (PULSE)-UC Merced Biology Department Workshop," National Science Foundation-PULSE Program, Merced, CA. (January 2018).
- Conference Attendance, "Transforming Teaching and Learning at the University of California: Clearing Institutional Barriers @UCSC," Howard Hughes Medical Institution, Santa Cruz, CA. (October 2017).
- Conference Attendance, "SABER National Meeting 2017," Society for the Advancement of Biology Education Research, Minneapolis, MN. (July 2017).
- Learning Community Member, Assessment as Pedagogy and Planning Learning Community, (August 2016 - December 2016).
- Conference Attendance, "HHMI – UC STEM Faculty Learning Community Program- Implementing Vision and Change at the University of California," Howard Hughes Medical Institution, Riverside, CA. (September 2016).
- Conference Attendance, "SABER National Meeting 2016," Society for the Advancement of Biology Education Research, Minneapolis, MN. (July 2016).

Conference Attendance, "West Coast Regional Society for Developmental Biology Meeting," Society for Developmental Biology, Tenaya Lodge at Yosemite National Park, CA. (March 2015).

Conference Attendance, "Regional Association for Biology Laboratory Education," Association for Biology Laboratory Education, Irvine, CA. (February 2015).

Workshop, "Teaching Matters - Surviving the Classroom with 1st Generation College Students," Center for Research on Teaching Excellence, Merced, CA. (August 2014).

Workshop, "Technology-enhanced Approaches for Engaging Students in Large Classes", Texas A&M Center for Teaching Excellence, College Station, TX. (June 2013).

Doctoral Candidacy Committees

2017 - 2019, P. Barghouth, Member

2016 - 2018, D. Wu, Member

2016, M. Aboukilila, Member

Undergraduate Research Supervision

2008, B. McCluskey, M. Thooft, Advisor Biomedical Research Infrastructure Network Summer Research Symposium, Vermillion, SD

2008, M. Thooft, Advisor Annual Meeting of the South Dakota Academy of Science, Chamberlin, SD

2007, M. Thooft, Advisor Biomedical Research Infrastructure Network Summer Research Symposium, Vermillion, SD

University and Professional Service

Member, UC Merced Teaching Professor Consortium Leadership Team. (January 2019 - Present).

Member, UC Merced Teaching Professor Consortium. (August 2018 - Present).

Mentor and Member, W-STEM (Women in Science, Technology, Engineering, and Math). (August 2018 - Present).

Member, Undergraduate Council-Admissions and Financial Aid subcommittee. (November 2016 - June 2018).

Organizer, Partnership for Undergraduate Life Sciences Education (PULSE) Workshop. (August 2017 - December 2017).

Member, Undergraduate Council. (August 2015 - June 2017).

Member, Undergraduate Council-Undergraduate Academic Programs, Policies and CRF subcommittee. (August 2015 - October 2016).

Coordinator, Faculty Workshop "Strategies for Promoting an Inclusive Scientific Community: From the Classroom to the Lab and Beyond!". (February 2016).

Organizer and Director, Annual Biology TA Training Workshop. (2015-2018).

Society for Developmental Biology, Poster judge, Snowbird, UT, USA, (July 2015).

Zoological Letters, Journal Article Reviewer, Japan (June 2015).

National Science Foundation, Grant reviewer. (2009).

WH Freeman Evolution and Development book proposal, Reviewer. (2009).

Hematech, Inc. Institutional Biosafety Committee, Member. (2008 - 2009).

Professional Memberships

Pan-American Society for Evolutionary Developmental Biology. (2019 - Present).

Society for the Advancement of Biology Education Research. (June 2017 - Present).

Society for Developmental Biology. (February 2015 - Present).

Society for Developmental Biology. (2008).

Executive counselor, Association for Women in Science-Chicago Chapter. (2002 - 2003).

Treasurer, Biological Graduate Student Association. (2000 - 2001).

Sigma Xi Scientific Research Society. (2000).