

Maureen Ann Bjerke

Address: *University of Colorado*
UCB 347
Boulder, CO 80309

Phone: 303-735-7629

E-mail: maureen.bjerke@colorado.edu

Citizenship: United States

Education

Ph.D. University of Virginia, Charlottesville, VA 2014
Department of Cell Biology

B.A. University of Colorado, Boulder, CO 2005
Major: Molecular, Cellular and Developmental Biology
Minor: Biochemistry

Teaching

Lecturer *MCDB 1171: Drug Discovery Lab I*
University of Colorado *MCDB 2171: Drug Discovery Lab II*
Fall 2018 - Present Co-instructor for freshman level Course Based Undergraduate Research Experience (CURE) style laboratory course. Joint responsibility for lecturing, designing course content and assessments, supervising teaching assistants and mentoring students performing guided independent research.
Enrollment = 120 per semester

MCDB 3010: Teaching in CUREs
Joint responsibility for providing pedagogical instruction and mentoring to graduate and undergraduate teaching assistants.
Enrollment = 20 per semester

Secondary Instructor
University of Virginia
Fall 2013

Core Course in Integrative Bioscience

Served as a subject area expert and mentor for groups of 4-6 first-year graduate students in "Polarity Symposium" and "Teach the Class" activities. Selected and assigned reading, advised students on scientific content and presentation style, graded presentations by each group in the class and provided feedback to students.

Enrollment = 36

Assistant Course Coordinator
Faculty Mentor: Dr. Jing Yu
University of Virginia
Spring 2010

Journal Survey in Cell and Developmental Biology

Selected topics and papers for graduate level journal survey, facilitated in-class discussions, graded presentations and provided feedback to students.

Enrollment = 13

Research

Postdoctoral Fellow
University of Colorado - Boulder
2014-2018

Advisor: Dr. Leslie Leinwand

Analyzing the acute effects of disease-causing mutations in myosin motors on the structure and function of cardiac and skeletal muscle cells and determining whether sex differences in these effects emerge at the level of the cell.

Graduate Research Assistant
University of Virginia
2007 - 2014

Advisor: Dr. Douglas DeSimone

Using early amphibian development as a model to study the interplay between cell-cell and cell-matrix adhesion during collective cell migration, with a particular focus on the role of endogenous tensile forces in modulating and signaling through these adhesions.

Student Research Assistant
University of Colorado - Health
Science Center
2005 - 2006

Advisor: Dr. Jan Jensen

Examining the roles of FGF10 in intestinal differentiation and maintenance of progenitor cells using conditional transgenic mouse lines.

Publications

Peter AK, **Bjerke MA**, Leinwand LA. (2016) Biology of the cardiac myocyte in heart disease. *Molecular Biology of the Cell* 27(14): 2149-60. PMID: 27418636.

Bjerke MA, Dzamba B, Wang C, DeSimone DW. (2014) FAK is required for tension-dependent organization of collective cell movements in *Xenopus* mesendoderm. *Developmental Biology* 394(2): 340-356. PMID: 25127991.

Weber GF, **Bjerke MA**, DeSimone DW. (2012) A mechanoresponsive cadherin-keratin complex directs polarized protrusive behavior and collective cell migration. *Developmental Cell* 22(1):104-15. PMID: 22169071. *Journal cover image

Link to video abstract: <http://bit.ly/WeberDevCell>

Commentaries: *Developmental Cell*, Previews, Jan 17, 2012

Nature Cell Biology, Research Highlights, March 2012

Weber GF, **Bjerke MA**, DeSimone DW. (2011) Integrins and cadherins join forces to form adhesive networks. *Journal of Cell Science* 124(Pt 8):1183-93. PMID: 21444749.

Nyeng P, **Bjerke MA**, Norgaard GA, Qu X, Kobberup S, Jensen J. (2011) Fibroblast growth factor 10 represses premature cell differentiation during establishment of the intestinal progenitor niche. *Developmental Biology* 349(1):20-34. PMID: 20883684.

Selected Presentations

Bjerke MA. Oral Presentation. (2016) Baker Undergraduate Research Symposium. University of Colorado, Boulder, CO. *The value of undergraduate research*. *Invited talk.

Bjerke MA. Oral Presentation. (2016) Cardiology Research Seminar. University of Colorado Anschutz Medical Campus, Aurora, CO. *Impact of myosin motor domain mutations on sarcomeric function in males and females*.

Dzamba B, Wang C, **Bjerke MA**, and DeSimone DW. Joint Seminar (2013) Cell Biology Department Seminar Series. University of Virginia, Charlottesville, VA. *Adventures in Collective Cell Migration: Reports from the Leading Edge*.

Bjerke MA, Weber GF and DeSimone DW. Flash Talk and Poster Presentation (2013) Gordon Conference on Directed Cell Migration. Galveston, TX. *Focal adhesion kinase is required for polarity of collectively migrating cells.* *Selected talk.

Bjerke MA. Oral Presentation. (2012) Cell Biology Department Retreat. University of Virginia, Charlottesville, VA. *Focal adhesion kinase is required for polarity of collective cell migration.*
*Invited talk.

Bjerke MA, Weber GF, and DeSimone DW. Seminar. (2012) GBS Forum: Graduate Bioscience Society Senior Student Research Seminars. University of Virginia, Charlottesville, VA.
Mechanosensitive adhesive networks guide collective cell migration.

Bjerke MA, Weber GF, and DeSimone DW. Oral Presentation. (2012) Huskey Graduate Research Symposium. University of Virginia, Charlottesville, VA. *Adhesive networks guide collective cell migration in the developing embryo.* *Selected talk, 3rd Place Prize for Oral Presentation

Weber GF, **Bjerke MA**, DeSimone DW, Joyce K, and Worden MK. Poster Presentation. (2012) Academy of Distinguished Educators Medical Education Poster Session. University of Virginia, Charlottesville, VA. *Educational multimedia content delivery online: A biomedical science video made with relative ease.*

Bjerke MA, Weber GF, and DeSimone, DW. Poster Presentation (2010) Cell and Molecular Biology Training Program Poster Session. University of Virginia, Charlottesville, VA. *A plakoglobin-containing mechanosensitive complex links c-cadherin to the keratin cytoskeleton to regulate collective cell migration.*

Bjerke MA, Weber GF, and DeSimone, DW. Poster Presentation. (2009) Keystone Symposium on Mechanotransduction in Physiology and Disease. Taos, NM. *FAK regulates morphogenetic movements through modulation of mechanosensitive cell-cell and cell-matrix adhesions.*

Fellowships and Honors

Cardiovascular Research Training Grant, University of Colorado (2014-2016)

Cell and Molecular Biology Training Grant, University of Virginia (2007-2009)

Dean's List, University of Colorado

Member of the National Society for Collegiate Scholars