Christy Fillman
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Molecular, Cellular and Developmental Biology
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Education:

University of Colorado, Boulder CO	PhD, MCD Biology, 2007
Colorado State University, Ft. Collins, CO	B.S., Biochemistry, 1999

Positions:
Senior Instructor, Department of Molecular, Cellular, and Developmental Biology
University of Colorado, Boulder 2015-present.
Instructor, Department of Molecular, Cellular, and Developmental Biology.
University of Colorado, Boulder. 2007-2015.
Research Assistant, Department of Biochemistry
University of Iowa, Iowa City 1991-2001.

PhD Dissertation:
Proteins involved in mRNA decapping localize to processing bodies and activate mRNA decay

Journal Article Publications:
Doyle, E. L., **Fillman, C. L.,** Reyna, N. S., Tobiason, D. M., Westholm, D. E., Askins, J. L., … Hatfull, G. F. (2018). Genome Sequences of Four Cluster P Mycobacteriophages. Genome Announcements, 6(2). https://doi.org/10.1128/genomea.01101-17
*This publication includes four MCDB 1161/2161 students as authors.

Hanauer DI, Graham MJ, Betancur L, **et al**. An inclusive Research Education Community (iREC): Impact of the SEA-PHAGES program on research outcomes and student learning. Proc Natl Acad Sci USA. 2017

Pope WH, Bowman CA, Russell DA, **et al***. Whole genome comparison of a large collection of mycobacteriophages reveals a continuum of phage genetic diversity. Elife. 2015;4.
*This publication includes 59 MCDB 2161 students and their faculty mentors as authors.

Erickson SL, Corpuz EO, Maloy JP, **Fillman C**, Webb K, Bennett EJ, and Lykke-Andersen J. Competition between Decapping Complex Formation and Ubiquitin-Mediated Proteasomal Degradation Controls Human Dcp2 Decapping Activity. Mol Cell Biol. 2015;35(12):2144-53.

Fenger-Grøn, M., **Fillman, C**.*, Norrild, B., Lykke-Andersen, J. (2005) Multiple Processing Body Factors and the ARE Binding Protein TTP Activate mRNA Decapping Mol. Cell, Dec; 22, (6) 20: 905-915.
*Co-first author

Fillman, C. and Lykke-Andersen, J. (2005) RNA decapping inside and outside of processing bodies.Curr Opin Cell Biol. Jun;17(3):326-31.

Teaching Publications:
Fillman, Christy. *MCDB 1161 Phage Genomics Lab Laboratory Manual.* Plymouth, MI: Hayden McNeil, 2016, 2017, 2018. Print.

Fillman, Christy. *MCDB 2151 Introduction to Genetics Laboratory Manual*. Plymouth, MI: Hayden McNeil, 2013, 2014, 2015. Print.

Fillman, Christy MCDB 1161 Phage Genomics I Lab Manual Boulder, CO: CU Bookstore 2008-2015. Print.

Fillman, Christy MCDB 2161 Phage Genomics II Lab Manual Boulder, CO: CU Bookstore 2009-2015. Print.

Fillman, Christy *Mastering Genetics* Pearson 2014. Authored 25 multipart questions on topics including bacterial genetics, DNA replication, cytoplasmic inheritance, recombinant DNA technology, and genomics.

GenBank Publications
2018 Mycobacterium Phage CheetO, complete genome. Accession: MH230875.
2018 Mycobacterium Phage Gex, complete genome. Accession: MH697585.
2018 Mycobacterium Phage KlimbOn, complete genome. Accession: MH651177.
2018 Mycobacterium Phage Lilith, complete genome. Accession: MH020238.
2017 Mycobacterium Phage BuzzBuzz, complete genome. Accession: KX523125.
2017 Mycobacterium Phage ToneTone, complete genome. Accession: KX375815.
2016 Mycobacterium Phage Tortellini, complete genome. Accession: KX648391.
2014 Mycobacterium Phage Manad, complete genome. Accession: KJ595576.
2013 Mycobacterium Phage Newman, complete genome. Accession: KC691258.
2012 Mycobacterium Phage Perseus, complete genome. Accession: JN572689.
2012 Mycobacterium Phage JHC117, complete genome. Accession: JF704098.

Meeting Presentations and Posters:
2017 Ninth Annual HHMI Phage Genomics Symposium Poster: “C1 Cluster Mycobacteriophage Iota Structural and DNA Metabolism Genes Show Homology to Gordonia and Rhodococcus Phages, which Suggests a Broader Host Range for Iota” Jack Johnson, Austin Hammermeister Suger, Erin Char, Gavin Chiem, Nathan Do, Scott Ho, Suchita Lulla, Ian McAdams, Manasa Ponnapalli, Nancy Guild and **Christy Fillman**.

2015 Science on Screen Presentation at the Dairy Center for the Arts "Using Phage Therapy to Fight Drug Resistant Diseases" with a showing of the film Extraordinary Measures **Christy Fillman**, Nancy Guild, Hayley Hyde and Kristi Bartholomay

2015 Seventh Annual HHMI Phage Genomics Symposium Poster: Comparing Codon Usage and tRNAs Present in a C1 Phage, Sprinklers, and a A6 Phage, ToneTone Brianna Morgan, Whitney Stanton, **Christy Fillman** and Nancy Guild

2012 Fourth Annual HHMI Phage Genomics Symposium Poster: Moving Phage into the Traditional Biology Lab **Christy Fillman** and Nancy Guild.

2011 Third Annual HHMI Phage Genomics Symposium Poster: A Comparison of Learning Gains, Class Performance and Science Attitudes in Introductory Biology Students, Nancy Guild, Jia Shi, and **Christy Fillman**

2010 Second Annual HHMI Phage Genomics Symposium Poster: Teaching Investigative Phage Biology at the University of Colorado, **Christy Fillman** and Nancy Guild

2010 HHMI In Situ Workshop Presentation: What Worked and What Didn't Teaching the First Year of Phage Genomics at the University of Colorado, **Christy Fillman** and Nancy Guild

2005 RNA Society Meeting talk: A Decapping Sub-Complex of human Processing Bodies contains co-activators of mRNA decay, **Christy Fillman**, Martin Fenger-Groen, Bodil Norrild, and Jens Lykke-Andersen, University of Colorado, Boulder.

Courses Currently Teaching:

MCDB 2150 Principles of Genetics Lecture section, Fall 2014-2017; Spring 2014-2015, 3 credits, 3 hours/week, 175 (fall) 250 (spring) students/section.

I was the main instructor Fall 2016, Spring 2015-2016, Co-instructor Fall 2017-2018, and assisted Fall 2007-2013 and Spring 2012-2014.

MCDB 2152 Problem Solving in Genetics, Fall 2009-2018; Spring 2015-2016, 1 credit, 1 hour/week, 3-9 sections/semester, 25 students/section.

Learning Assistant Supervisor

MCDB 1161 Phage Genomics Lab I, Fall 2009-2018, 2 credits, 5 required and 2 optional hours/week, 24 students/section (Starting Fall 2017, this course had 6-7 sections of 24 students with one hour of common lecture)

MCDB 2161 Phage Genomics Lab II, Spring 2010-2017, 2 credits, 4 hours/week, 22 students/section.

MCDB 4840 Independent Study, Fall 2008, 2016, 2018 Spring 2015-2016 variable credits, variable hours, 6 students (total).

Supervised a student completing a biotech internship, a student continuing a research project from MCDB 4111, and 4 students working on phage genomics projects.

Courses Taught Previously:
MCDB 2151 Principles of Genetics Laboratory, Fall 2007-2015; Spring 2012-2015, 1 credit, 2 hours/week, 6-9 sections/semester, 22 students/section.

MCDB 4111 Experimental Design and Research, Fall 2008, Spring 2008-2014, 3 credits, 6 hours/week, 10 students/section.

MCDB 2150 Principles of Genetics Baker Residence Academic Program (RAP), Spring 2008-2011, 3 credits, 3 hours/week, 20 students/section.

MCDB 3280 Molecular Cell Physiology, Spring 2008, 3 credits, 3 hours/week, 18 students/section.

Awards:
2009 HHMI Science Education Alliance National Genomics Research Initiative Grant
2002, 2003 NIH Training Grant in Genetics

Service:
2018-present Curriculum Committee Member
2017-present Faculty Coordinator for the Learning Assistant Program
2008-present Member of the HHMI Science Education Alliance
2011-present Honors Council Member (MCDB)
2011-present Pre Professional Interview Advisory Committee
2014 Student Faculty Mentor Program
2014-2015 Boulder Valley High School Science Research Seminar Mentor

Workshops and Activities:
2017 Fall Semester TRESTLE Scholars Learning Community Member Exploring course-based undergraduate research experiences
2017 (6/19-6/23) FTEP Summer Institute for Assessing Classroom Learning
2017 (6/11-6/13) SEA Phages Advanced Genome Workshop: Genome Announcements, Chevy Chase, MD
2010 National Genomics Research Initiative In Silico Workshop II, HHMI Janelia Research Campus, Ashburn, VA.
2009 (6/22-6/26) National Genomics Research Initiative In Situ Workshop II, HHMI Janelia Research Campus, Ashburn, VA.