

**Christy Fillman**

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Molecular, Cellular and Developmental Biology  
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**Education**

PhD, MCD Biology, 2007  
B.S., Biochemistry, 1999

University of Colorado, Boulder CO  
Colorado State University, Ft. Collins, CO

**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., Tobiasson, 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** *Codon Learning* authored and formatted content for the Genetics Course Evidence Based Teaching platform. (2020)

**Fillman, Christy.** *MCDB 1161 Phage Genomics Lab Laboratory Manual.* Plymouth, MI: Hayden McNeil, 2016, 2017, 2018, 2019. Print. 2020 online.

**Fillman, Christy** *Mastering Genetics* Pearson 2018. Authored 25 multiple choice questions for Dynamic Study Modules for each of 9 Chapters of Concepts of Genetics by Klug *et. al.*(2018).

**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.

### **Meeting Presentations and Posters**

2019 Eleventh Annual HHMI Phage Genomics Symposium Poster: “Characterizing Genetic Elements in the Cluster O Mycobacteriophage Blessica” Daniel Feeny, Daria Nicke, **Christy Fillman**, Nancy Guild.

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 Ponnappalli, 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.

### **GenBank Publications**

2020 Mycobacterium Phage BengiVuitton, complete genome. Accession: MT658804.  
2020 Mycobacterium Phage Snekmaggon, complete genome. Accession: MT684588.  
2019 Mycobacterium Phage Atchoo, complete genome. Accession: MN585977.  
2019 Mycobacterium Phage Blessica, complete genome. Accession: MN585964.  
2019 Mycobacterium Phage DirkDirk, complete genome. Accession: MN617841.  
2019 Mycobacterium Phage Iota, complete genome. Accession: MK359330.  
2019 Mycobacterium Phage Kenuha5, complete genome. Accession: MN369739.  
2019 Mycobacterium Phage Sprinklers, complete genome. Accession: MK359355.  
2019 Mycobacterium Phage Zerg, complete genome. Accession: MK112556.  
2018 Mycobacterium Phage CheetO, complete genome. Accession: MH230875.  
2018 Mycobacterium Phage Gancho, complete genome. Accession: MH727549.  
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.

### **Teaching Experience (Current Courses)**

**MCDB 2150 Principles of Genetics Lecture section** (9 semesters), 3 credits, 3 hours/week, 175 (fall) 250 (spring) students/section.

I was the main instructor 3 semesters and Co-instructor 6 semesters.

**MCDB 2152 Problem Solving in Genetics** (15 semesters), 1 credit, 1 hour/week, 3-9 sections/semester, 25 students/section. I supervised 3-6 learning assistants/semester.

**MCDB 1161 Phage Genomics Lab I** (14 semesters), 2 credits, 5 required and 2 optional hours/week, 24 students/section. Starting in the fall of 2017, this course had 7 sections of 24 students with one hour of common lecture.

**MCDB 2161 Phage Genomics Lab II** (8 semesters) 2 credits, 4 hours/week, 22 students/section.

**MCDB 4840 Independent Study** (7 semesters) variable credits, variable hours, 6 students (total). I supervised a student completing a biotech internship, a student continuing a research project from MCDB 4111, and 5 students working on phage genomics projects.

### **Teaching Experience (Past Courses)**

**MCDB 2151 Principles of Genetics Laboratory** (13 semesters 2007-2015), 1 credit, 2 hours/week, 6-9 sections/semester, 22 students/section.

**MCDB 4111 Experimental Design and Research** (8 semesters 2008-2014), 3 credits, 6 hours/week, 10 students/section.

**MCDB 2150 Principles of Genetics Baker Residence Academic Program (RAP)**, (4 semesters 2008-2011), 3 credits, 3 hours/week, 20 students/section.

**MCDB 3280 Molecular Cell Physiology** (1 semester 2008); 3 credits, 3 hours/week, 18 students.

### **Service**

2018-present College of Arts and Sciences Curriculum Committee Member  
2017-present MCDB Faculty Coordinator for the Learning Assistant Program  
2014 Student Faculty Mentor Program  
2014-2015 Boulder Valley High School Science Research Seminar Mentor  
2011-present Honors Council Member (MCDB)

2011-present Pre Professional Interview Advisory Committee  
2008-present Member of the HHMI Science Education Alliance

**Workshops and Activities**

2020 Faculty Scholars Group for International Student Success

2020 ASSETT Summer Course Design Workshop: Strategic Course Design for Flexible Teaching Modes

2019 ASSETT Summer Course Design Workshop: Flipping the Class and Designing Hybrid Classes

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.