

Jeannette Tenthorey, Ph.D.

Assistant Professor and HHMI Hanna Gray Fellow
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EDUCATION AND TRAINING

- 2023-present **Assistant Professor**, University of California, San Francisco
- 2017-2023 **Postdoctoral Fellow**, Fred Hutchinson Cancer Research Center
Advisor: Harmit Malik, Division of Basic Sciences
Co-advisor: Michael Emerman, Division of Human Biology
Topic: Evolutionary landscapes of host-virus arms races
- 2011-2017 **Doctor of Philosophy** (Molecular & Cell Biology), University of California, Berkeley
Advisor: Russell Vance, Department of Molecular & Cell Biology
Topic: Mechanism of bacterial sensing by NAIP inflammasomes
- 2009-2011 **Research Technician**, University of California, San Francisco
Advisor: David Morgan, Department of Physiology
Topic: Enzymology of ubiquitination by the Anaphase Promoting Complex
- 2004-2009 **Bachelor of Arts** (Biology), Reed College, Portland, OR
Advisor: Jay Mellies, Biology Department
Topic: Target recognition by the virulence regulator in enteropathogenic *E. coli*

AWARDS & HONORS

- 2018-2026 HHMI Hanna Gray Fellow (postdoctoral & faculty phases)
- 2022-2024 Mathilde Krim Fellowship, American Foundation for AIDS Research
- 2022 Andy Kaplan Prize (CSH Retroviruses, distinguished senior postdoctoral scientist award)
- 2021 Intersections Science Fellow
- 2021 Leading Edge Fellow
- 2018 Damon Runyon Postdoctoral Fellowship (declined)
- 2018 Jane Coffin Childs Fellowship (declined)
- 2018 Co-chair, Gordon Research Symposium (Microbial Toxins & Pathogenesis)
- 2017 Ray Owen Young Investigator Award, Midwinter Conference of Immunologists
- 2014 Outstanding Graduate Student Instructor Award, UC Berkeley
- 2014 Ray Owen Oral Presentation Award, Midwinter Conference of Immunologists
- 2014 Poster Award, Chemical Biology in the Bay Area Symposium
- 2012 National Science Foundation Graduate Research Fellowship
- 2011 Berkeley Fellowship for Graduate Study

PEER-REVIEWED PUBLICATIONS

1. **Tenthorey JL[†]**, [Young C](#), [Sodeinde A](#), Emerman M, Malik HS. (2020). Mutational resilience of antiviral restriction favors primate TRIM5α in host-virus evolutionary arms races. *eLife* 9:e59988.
([†]Corresponding author; [direct mentees](#); **highlighted publication**)
 - featured in eLife Special Issue on Evolutionary Medicine, 2021

- Duxbury Z, Wang S, MacKenzie CI, **Tenthorey JL**, Zhang X, Huh SU, Hu L, Hill L, Ngou PM, Ding P, Chen J, Ma Y, Guo H, Castel B, Moschou PN, Bernoux M, Dodds PN, Vance RE, Jones JDG. (2020). Induced proximity of a TIR signaling domain on a plant-mammalian NLR chimera activates defense in plants. *Proc Natl Acad Sci USA* 117(31):18832-18839.
- Tenthorey JL**, Chavez RA, Thompson TW, Deets KA, Vance RE, Rauch IR. (2020). NLRC4 inflammasome activation is NLRP3- and phosphorylation-independent during infection and does not protect from melanoma. *J Exp Med* 217(7):e20191736. (**Highlighted publication**)
- Tenthorey JL***, Haloupek N*, Lopez-Blanco JR, Grob P, Adamson E, Hartenian E, Lind N, Bourgeois NM, Chacon P, Nogales E, Vance RE. (2017). The structural basis of flagellin detection by NAIP5: a strategy to limit pathogen immune evasion. *Science* 358(6365): 883-93. (*Authors contributed equally; direct mentees; **highlighted publication**)
- Rauch I, Deets KA, Ji DX, von Moltke J, **Tenthorey JL**, Lee AY, Phillip NH, Ayres JS, Brodsky IE, Gronert K, Vance RE. (2017). NAIP-NLRC4 inflammasomes coordinate intestinal epithelial cell expulsion with eicosanoid and IL-18 release via activation of Caspase-1 and -8. *Immunity* 46(4):649-659.
- Rauch I, **Tenthorey JL**, Nichols RD, Al Moussawi K, Kang JJ, Kang C, Kazmierczak BI, Vance RE. (2016). NAIP proteins are required for cytosolic detection of specific bacterial ligands in vivo. *J Exp Med* 213(5):657-65.
- Girard JR, **Tenthorey JL**, Morgan DO. (2015). An E2 accessory domain increases affinity for the anaphase-promoting complex and ensures E2 competition. *J Biol Chem* 290(40):24614-25.
- Tenthorey JL**, Kofoed EM, Daugherty MD, Malik HS, Vance RE. (2014). Molecular basis for specific recognition of bacterial ligands by NAIP/NLRC4 inflammasomes. *Mol Cell* 54(1):17-29.
- Hewitt SL, Yin B, Ji Y, Chaumeil J, Marszalek K, **Tenthorey JL**, Salvaggio G, Steinel N, Ramsey LB, Ghysdael J, Farrar MA, Sleckman BP, Schatz DG, Busslinger M, Bassing CH, Skok JA. (2009). RAG-1 and ATM coordinate monoallelic recombination and nuclear positioning of immunoglobulin loci. *Nat Immunol* 10(6):655-64.
- Visintin I, Feng Z, Longton G, Ward DC, Alvero AB, Lai Y, **Tenthorey JL**, Leiser A, Flores-Saiib R, Yu H, Azori M, Rutherford T, Schwartz PE, Mor G. (2008). Diagnostic markers for early detection of ovarian cancer. *Clin Cancer Res* 14(4):1065-72.

REVIEWS AND BOOK CHAPTERS

- Tenthorey JL[†]**, Emerman M, Malik HS. (2022). Evolutionary landscapes of host-virus arms races. *Annu Rev Immunol*. 40:271-94. ([†]Corresponding author)
- Haloupek N, Grob P, **Tenthorey JL**, Vance RE, Nogales E. (2019). Cryo-EM studies of the NAIP-NLRC4 inflammasomes. *Methods Enzymol* 625:177-204.

Full publication list: <https://www.ncbi.nlm.nih.gov/myncbi/14cdoOv9bciAjv/bibliography/public/>

TEACHING AND MENTORING EXPERIENCE

- | | |
|------|---|
| 2014 | Graduate student instructor (UC Berkeley), Molecular Immunology (MCB150)
*awarded Outstanding Instructor , based on student reviews |
| 2012 | Graduate student instructor (UC Berkeley), Immunology Laboratory (MCB150L) |
| 2012 | Grader (UC Berkeley), Plagues and Pandemics (MCB55) |
| 2009 | Teaching assistant (Reed College), Microbiology (Bio358) |

2007-2009 Tutor (Reed College): Developmental Biology (Bio351), Biochemistry (Chem391), Statistics (Math141)

Mentees:

Fred Hutchinson Cancer Research Center

2020-2022 Serena del Banco^{†*} (current research technician)
 2019-2020 Candice Young* (research technician, now Univ. of WA PhD student)
 2020 Rechel Geiger* (MD/PhD rotation student, now Malik lab PhD student)
 2020 Caroline Langley* (PhD rotation student, now Emerman/Malik joint PhD student)
 2018-2019 Afeez Sodeinde[†] (HHMI/EXROP summer student, now Yale PhD student)

University of California, Berkeley

2016 Natasha Bourgeois^{†*} (HHMI/EXROP summer student, now Univ. of WA PhD student)
 2015 Elise Adamson^{†*} (HHMI/EXROP summer student, now Duke PhD student)
 2015 Ella Hartenian* (PhD rotation student, now UC Berkeley postdoc)
 2015 Nicholas Lind (PhD rotation student, now biotech scientist)
 2014 Aaron Schaller[†] (PhD rotation student, now biotech startup cofounder)
 2013 Sarah Gilbertson* (PhD rotation student)
 2013 Rohaum Hamidi[†] (undergraduate student)

[†]racial/ethnic group underrepresented in science; *female-identifying

LEADERSHIP, OUTREACH, AND PROFESSIONAL DEVELOPMENT

2022-2023 **Panelist**, faculty application preparation workshop series for Leading Edge fellows
 2022 **Moderator**, Leading Edge Virtual Symposium
 2021 **Mentor**, Cientifico Latino's Graduate Student Mentorship Initiative
advised on graduate school application materials for minority students
 2021 **Founder**, Fred Hutch Basic Sciences Division Postdoctoral Association
organized discussion panels and social hours, presented concerns to division
 2021 **Speaker**, Meet-The-Author undergraduate journal club (Reed College, Portland OR)
discussed recent paper and publication process with genetics class
 2020 **Bias mitigation workshop**, Fred Hutchinson Cancer Research Center (2hr)
 2020 **Mentor training workshop**, HHMI Hanna Gray program (8hr)
 2018 **Co-chair**, Gordon Research Symposium (Microbial Toxins & Pathogenesis)
organized 2-day trainee-only symposium (set agenda, selected abstracts for attendance and talks); raised \$6000 for speaker fees and poster prizes
 2018 **Member**, Postdoc-invited seminar speaker committee (Fred Hutch)
organized speaker selection and invitation from Basic Sciences postdocs
 2018 **Mentor**, 5th grade science fair projects (Seattle, WA)
guided student teams in designing, performing, and presenting experiments
 2016 **Mentor**, 7th grade science fair projects (Berkeley, CA)
aided students to design and perform experiments, analyze and present results
 2015-2016 **Graduate representative to faculty** (IMP division of MCB, UC Berkeley)
represented graduate student body in division faculty meetings
 2014-2016 **Member**, Marian E. Koshland student-run seminar series committee (UC Berkeley)
organized selection, invitation, and visit schedule of speakers
 2014-2015 **Member**, UC Berkeley Center for Emerging and Neglected Diseases faculty search
voting member (graduate student representative) on search committee
 2013-2014 **Member**, graduate admissions committee (UC Berkeley, MCB Dept.)
selected applicants for interviews and acceptances
 2011-2013 **Graduate recruitment organizer** (UC Berkeley, MCB Dept.)
organized graduate student panel, housing and facilities tours, and social activities for recruitment; matched interviewees with student hosts

2011-2016 **Judge and organizer**, elementary through high school science fair (Alameda, CA)
volunteered as science fair judge at local school district (biannual); recruited and coordinated UC Berkeley graduate students as judges

Reviewer for: *Science Immunology, Cell Systems*

SELECTED TALKS

2022 West Coast Retrovirus Meeting
2022 International Systems Biology Journal Club
2021 Broad Institute Next Generation in Biomedicine Symposium
2021 Intersections Science Fellows Symposium
2021 HIV Structural Biology, NIH (speaker for HARC Center)
2021 World Microbe Forum (ASM Microbe, FEMS joint virtual conference)
2021 Leading Edge Fellows seminar series
2021 University of Texas Southwestern, Immunology Symposium (keynote speaker)
2021 Scripps Research Institute, Immunology & Microbiology Symposium
2021 Icahn School of Medicine at Mount Sinai, Microbiology Dept.
2020 University of Washington, Genome Sciences Dept. (student-invited seminar)
2020 Retroviruses (Cold Spring Harbor Laboratory)
2018 Gordon Research Conference: Microbial Toxins and Pathogenesis
2017 Midwinter Conference of Immunologists
2016 Gordon Research Symposium: Microbial Toxins and Pathogenesis
2016 Bay Area Microbial Pathogenesis Symposium
2014 Midwinter Conference of Immunologists