

Dominick Faith

Stanford University School of Medicine
Division of Infectious Diseases and Geographic Medicine
279 Campus Drive Beckman Building Rm 241 Stanford, CA 94305

Contact: dfaith@stanford.edu

Education

- 2021-2026** **Doctor of Philosophy**, Microbiology and Cell Biology
Montana State University
Dissertation: Molecular Mechanisms of Bacteriophage-Host Interactions
in Bacterial Pathogens
- 2015-2019** **Bachelor of Science**, Cell Biology and Neuroscience
Montana State University

Professional Experience

- 2026-Present** **Postdoctoral Scholar, Stanford University**
Advisor: Dr. Paul Bollyky
- 2021-2026** **PhD Student, Montana State University**
Fellowship: National Science Foundation Graduate Research Fellow
Advisor: Dr. Patrick Secor
Project: Bacterial Threat Assessments of Cellular Injury
- 2020-2021** **Research Technician, University of Montana**
Advisor: Dr. Patrick Secor
Project: Bacteriophage Pathobiology of Inflammatory Bowel
Disease
- 2017-2019** **Undergraduate Research Assistant, Montana State University**
Fellowship: Montana INBRE Undergraduate Scholars Program
Advisor: Dr. Blake Wiedenheft
Project: Culture-independent methods for novel virus isolation

Awards and Honors

- 2025** MSU Department of Microbiology and Cell Biology Graduate Student Awards:
"Most likely to be your PI"
- 2024** UM Bertha Morton Scholarship — \$3,000
<https://www.umt.edu/grad/tuition-and-funding/scholarships-and-fellowships.php>
- 2024** UM Dr. Linda Phillips Knoblock Fellowship — \$7,000
<https://www.umt.edu/biological-sciences//grad-programs/grad-scholarships/grad-scholarships.php>

- 2023** NSF Graduate Research Fellowship (Award #366502) — \$155,000
<https://www.nsfgrfp.org/>
- Media highlights: <https://www.umt.edu/news/2023/04/041223nsfa.php>
<https://www.montana.edu/news/22932/>
- 2023** NSF I-Corps Exploration Grant. Via the UM Blackstone LaunchPad and NSF Award Number 1829187 — \$2,500
https://nsf.gov/awardsearch/showAward?AWD_ID=1829187&HistoricalAwards=false
<https://www.umt.edu/launchpad/icorps/>
- 2022** NSF I-Corps Exploration Grant. Via the UM Blackstone LaunchPad and NSF Award Number 1829187 — \$2,500
https://nsf.gov/awardsearch/showAward?AWD_ID=1829187&HistoricalAwards=false
<https://www.umt.edu/launchpad/icorps/>
- 2022** UM Toelle-Bekken Family Memorial Fund Award — \$2,500
<https://www.umt.edu/humanities-sciences/about/people/awards/default.php>
- 2022** UM Experiential Learning Scholarship — \$1,000
<https://www.umt.edu/experiential-learning-career-success/elsf/default.php>
- 2019** USP-INBRE Undergraduate Research Grant. National Institute of General Medical Sciences of the National Institutes of Health Award Number P20GM103474. — \$4,600
<http://www.inbre.montana.edu>
- 2018** USP-INBRE Undergraduate Research Grant. National Institute of General Medical Sciences of the National Institutes of Health Award Number P20GM103474. — \$4,600
<http://www.inbre.montana.edu>
- 2018** Montana State University Initiative for Regulation and Applied Economic Analysis (IRAEA) Undergraduate Research Scholarship \$1,500
<https://www.montana.edu/regecon/researchprograms/undergraduateprogram/>
- 2017** Montana State University Presidential Emerging Scholars Grant — \$3,000
<https://www.montana.edu/calendar/events/18180>

Publications — [Google Scholar](#)

*Equal author contributions

1. Pershing NL, Brzozowski RS, Schmidt AK, **Faith DR**, Joyce AC, de Ora LO, Kominsky JD, Dankwardt A, Maciver A, Bell R, Henriques WS, Andersen SE, Wiedenheft B, Casjens SR, Duerkop BA, Round JL, Secor PR. A prophage-encoded sRNA limits phage infection of adherent-invasive E. coli. PLoS Pathog. 2026 Jan 2;22(1):e1013836. doi: 10.1371/journal.ppat.1013836. PMID: 41481766; PMCID: PMC12803456.

2. Fitzpatrick AD, Taylor VL, Patel PH, **Faith DR**, Secor PR, Maxwell KL. Phage reprogramming of *Pseudomonas aeruginosa* amino acid metabolism drives efficient phage replication. *mBio*. 2025 Mar 12;16(3):e0246624. doi: 10.1128/mbio.02466-24. Epub 2025 Feb 7. PMID: 39918338.
3. Schmidt AK, Schwartzkopf CM, Pourtois JD, Burgener EB, **Faith DR**, Joyce A, Lamma T, Kumar G, Bollyky PL, Secor PR. Targeted deletion of Pf prophages from diverse *Pseudomonas aeruginosa* isolates has differential impacts on quorum sensing and virulence traits. *J Bacteriol*. 2024 Apr 30:e0040223. doi: 10.1128/jb.00402-23. Epub ahead of print. PMID: 38687034.
4. **Faith DR**, Kinnersley M, Brooks DM, Drecktrah D, Hall LS, Luo E, Santiago-Frangos A, Wachter J, Samuels DS, Secor PR. Characterization and genomic analysis of the Lyme disease spirochete bacteriophage ϕ BB-1. *PLoS Pathog*. 2024 Apr 1;20(4):e1012122. doi: 10.1371/journal.ppat.1012122. PMID: 38558079.
5. Schwartzkopf CM, Taylor VL, Groleau MC, **Faith DR**, et al. Inhibition of PQS signaling by the Pf bacteriophage protein PfsE enhances viral replication in *Pseudomonas aeruginosa*. *Mol Microbiol*. 2023 Dec 1. Epub ahead of print. PMID: 38038061.
6. de Mattos CD* and **Faith DR***, et al. Polyamines and linear DNA mediate bacterial threat assessment of bacteriophage infection. *Proc Natl Acad Sci U S A*. 2023 Feb 28;120(9):e2216430120. doi: 10.1073/pnas.2216430120. Epub 2023 Feb 21. PMID: 36802441; PMCID: PMC9992862.
7. Schwartzkopf CM, Robinson AJ, Ellenbecker M, **Faith DR**, et al. Tripartite interactions between filamentous Pf4 bacteriophage, *Pseudomonas aeruginosa*, and bacterivorous nematodes. *PLoS Pathog*. 2023 Feb 17;19(2):e1010925. doi: 10.1371/journal.ppat.1010925. PMID: 36800381; PMCID: PMC9980816.
8. Schmidt AK*, **Faith DR***, Secor PR. PICI thieves: Molecular piracy and cooperation. *Cell Host Microbe*. 2023 Jan 11;31(1):3-5. doi: 10.1016/j.chom.2022.12.008. PMID: 36634621.
9. **Faith D**, et al. Complete Genome Sequence of the N4-like *Pseudomonas aeruginosa* Bacteriophage vB_PaeP_CMS1. *Microbiol Resour Announc*. 2022 Jul 21;11(7):e0023922. doi: 10.1128/mra.00239-22. Epub 2022 May 31. PMID: 35638894; PMCID: PMC9302080.
10. Schmidt AK, Fitzpatrick AD, Schwartzkopf CM, **Faith DR**, et al. A Filamentous Bacteriophage Protein Inhibits Type IV Pili to Prevent Superinfection of *Pseudomonas aeruginosa*. *mBio*. 2022 Jan 18;13(1):e0244121. doi: 10.1128/mbio.02441-21. Epub ahead of print. PMID: 35038902; PMCID: PMC8764522.
11. Kirsch JM, Brzozowski RS, **Faith D**, et al. Bacteriophage-Bacteria Interactions in the Gut: From Invertebrates to Mammals. *Annu Rev Virol*. 2021 Sep 29;8(1):95-113. doi: 10.1146/annurev-virology-091919-101238. Epub 2021 Jul 13. PMID: 34255542; PMCID: PMC8484061.

12. Rollins MF, Chowdhury S, Carter J, Golden SM, Miettinen HM, Santiago-Frangos A, **Faith D**, et al. Structure Reveals a Mechanism of CRISPR-RNA-Guided Nuclease Recruitment and Anti-CRISPR Viral Mimicry. *Mol Cell*. 2019 Apr 4;74(1):132-142.e5. Epub 2019 Mar 11. PMID: 30872121; PMCID: PMC6521718.

Conferences

- 2025** IAS-USA Conference on Bacteriophages: Biology, Dynamics, and Therapeutics
Washington, DC
- 2025** Montana Biofilm Meeting
Montana State University — Center for Biofilm Engineering
- 2023** Molecular Genetics of Bacteria and Phages Meeting
Madison, WI
Travel Award: NSF I-Corps Exploration Grant.
- 2021** Center for Biomolecular and Structural Dynamics Research Symposium
Seeley Lake, MT
- 2018** CRISPR Conference
Vilnius, Lithuania
Travel Award: MSU Presidential Emerging Scholars Grant.

Oral Presentations

- 2023** Molecular Genetics of Bacteria and Phages Meeting
Madison, WI
“Bacteriophages Modulate Intracellular Polyamine Levels to Evade Host Defenses”

Poster Presentations

- 2025** IAS-USA Conference on Bacteriophages: Biology, Dynamics, and Therapeutics
Washington, DC
“Missing the Mucoids: AlgU-mediated Phage Tolerance in *Pseudomonas aeruginosa*”
- 2025** Montana Biofilm Meeting
Montana State University — Center for Biofilm Engineering
“Stymieing the Slime: Viral Engineering for Eradicating Muroid *Pseudomonas aeruginosa*”
Poster Pitch Competition: Prize awarded
- 2021** Center for Biomolecular and Structural Dynamics Research Symposium
University of Montana
“A Filamentous Bacteriophage Protein Inhibits Type IV Pili to Prevent Superinfection of *Pseudomonas aeruginosa*”
- 2019** INBRE Summer Research Celebration
Montana State University
“Culture-Independent Method for Novel Virus Isolation”

- 2018** CRISPR Conference
Vilnius, Lithuania
“CRISPR defense and viral counter-defense”
- 2018** INBRE Summer Research Celebration
Montana State University
“Novel Phage-Based Treatment Strategy for *Salmonella typhimurium*”

Career Development

- 2023** Bioinformatics Workshop
Montana State University (Hosted by Dr. Artem Nemudryi and Dr. Blake Wiedenheft)
Travel Award: NSF I-Corps Exploration Grant.
- 2022** NSF I-Corps Customer Discovery Academy
<https://www.umt.edu/launchpad/icorps/>

Service

- 2023** Established the University of Montana Phage Pathobiology Mentorship Program
- 2022** Instructor for Sentinel High School Big Burn Fair
Activities/outreach fair for ~1,400 high school students
- 2019** Organizer for the “Montana Wild Virus Hunt”
<https://magazine.medlineplus.gov/article/the-montana-wild-virus-hunt>
- 2018** Organizer for the “Montana Wild Virus Hunt”
<https://magazine.medlineplus.gov/article/the-montana-wild-virus-hunt>

Mentoring Experience

Teaghan Arnott	Undergraduate research scientist — Montana State University
Andrew Maciver	Undergraduate research scientist — University of Montana
Lily Khang	High school student, summer research — University of Montana
Max Berndt	High school student, summer research — University of Montana
Mason Mazzola	Undergraduate research scientist — University of Montana
Laina Hall	Undergraduate research scientist — Montana State University
Michael Angyus	Undergraduate research scientist — Montana State University
Claire Stevenson	High school student, summer research — Montana State University

Teaching

Course number	Course	Number of Students	Year
BIOM 451	Microbial Physiology Lab	14	2021