

Amelia K. Schmidt, PhD

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WORK EXPERIENCE

Stanford Medicine, Division of Infectious Disease

May. 2025 – Present

Post-Doctoral Scholar

- Lead a multidisciplinary team to design and execute viral engineering projects, demonstrating collaboration, creative problem-solving, and adaptability in a fast-paced research environment.
 - **Key Results:** Earned the support of the Cystic Fibrosis Foundation Path to a Cure (PTAC) Postdoctoral Research Fellowship Award (\$151,000)
- Translate complex molecular biology and bioinformatics workflows into clear, engaging presentations and written reports for scientists and non-technical audiences.
- Partner with cross-functional colleagues including clinicians, computational biologists, and lab managers to align project outcomes with organizational goals.

Bacteriophage Pathobiology Laboratory

Aug. 2020 – Sept. 2024

Research Assistant

Missoula, MT

- Authored 10+ peer-reviewed publications and contributed to two patents by distilling complex datasets into compelling scientific narratives that influenced research direction and grant funding.
- Developed novel molecular biology tools and bioinformatics pipelines while translating experimental results into accessible figures, and presentations for diverse stakeholders.
- Managed multiple high-priority projects, balancing shifting timelines while maintaining a reputation for precision, reliability, and creative problem-solving.

EDUCATION

Ph.D. – Cellular, Molecular & Microbial Biology

Sept. 2024

University of Montana

Missoula, MT

B.A.Sc. – Synthetic Biology & Scientific Communication

May. 2020

Quest University Canada

British Columbia, Canada

CORE COMPETENCIES

- **Strategic Communication** – Excels at aligning research goals with organizational and funding objectives
- **Cross-Functional Collaboration** – Facilitates partnerships between clinicians, computational biologists, researchers, and private stakeholders.
- **Innovation & Patents** – Developed novel molecular biology tools and contributed to IP generation.
- **Scientific & Market Analysis** – Translates research insights into accessible reports and actionable goals to further informed decision-making.

SELECTED PUBLICATIONS

(1) Schmidt, AK et al., 2022. A Filamentous Bacteriophage Protein Inhibits Type IV Pili To Prevent Superinfection of *Pseudomonas aeruginosa*. MBio.

(2) Schwartzkopf, CM; Taylor, VL; Groleau, MC; Faith, DR; Schmidt, AK; Lamma, TL; Brooks, DM; Déziel, E; Maxwell, KaL; Secor, PR; 2024. Inhibition of PQS signaling by the Pf bacteriophage protein PfsE enhances viral replication in *Pseudomonas aeruginosa*. Molecular Microbiol.

(3) Schmidt, AK et al., 2024. Targeted deletion of Pf prophages from diverse *Pseudomonas aeruginosa* isolates has differential impacts on quorum sensing and virulence traits. Journal of Bacteriology.

(4) Schwartzkopf, CM; Robinson, AJ; Ellenbecker, M; Faith, DR; Schmidt, AK; Brooks, DM; Lewerke, L; Voronina, E; Dandekar, AA; Secor, PR; 2023. Tripartite interactions between filamentous Pf4 bacteriophage, *Pseudomonas aeruginosa*, and bacterivorous nematodes. PLoS Pathogens.

(5) Copeland, CJ; Roddy, JW; Schmidt, AK; Secor, PR; Wheeler, TJ; 2024. VIBES: a workflow for annotating and visualizing viral sequences integrated into bacterial genomes. NAR Genomics and Bioinformatics.

(6) Pourtois, JD; Haddock, NL; Gupta, A; Khosravi, A; Martinez, H; Schmidt, AK; Prakash, PS; Jain, R; Fleming, P; Chang, TH; Milla, C; Secor, PR; De Leo, GA; Bollyky, PL; Burgener, EB; 2025. *Pseudomonas* superinfection drives Pf phage transmission within airway infections in patients with cystic fibrosis. bioRxiv.