

EDUCATION

- **PhD Computational Cell Biology** Aug. 2022 - May. 2027
University of Colorado Anschutz Medical Campus Aurora, CO
- **BS Biochemistry and Data Science** Aug. 2017 - May. 2021
Maryville University of Saint Louis Saint Louis, MO

RESEARCH EXPERIENCE

- **PhD Research - Computational Cell Biology** Oct 2022 - Present
Advisor: Gregory P. Way, PhD, University of Colorado Aurora, CO
- **Post-baccalaureate Research Assistant - Genomics** 2021 - 2022
Advisor: Shawn Ahmed, University of North Carolina at Chapel Hill Chapel Hill, NC
- **Research Assistant - Genome editing** 2020 – 2021
Centro de Technologia Canavieira Saint Louis, MO
- **Undergraduate Research Assistant - Quantitative spectroscopy** 2019 – 2020
Advisor: Thomas Spudich, PhD, Maryville University of Saint Louis Saint Louis, MO
- **Undergraduate Research Assistant - Cell Biology** 2018 – 2021
Advisor: Stacy L. Donovan, PhD, Maryville University of Saint Louis Saint Louis, MO
- **Research Internship - Biochemistry** 2018 – 2019
Elemental Enzymes Saint Louis, MO

SCIENTIFIC APPOINTMENTS

- **Wellbeing and engagement committee, Department of Biomedical Informatics** 2024 – Present
University of Colorado Anschutz Medical Campus Aurora, CO
- **PhD student** Aug. 2022 - Present
University of Colorado Anschutz Medical Campus Aurora, CO
- **Journal Club Committee, Cell Biology, Stem Cells, and Development** 2023 – 2025
University of Colorado Anschutz Medical Campus Aurora, CO
- **Volunteer** 2023 – Present
Clear Directions Mentoring Aurora, CO
- **Cell Biology Graduate Teaching Assistant** 2023 – Present
University of Colorado Anschutz Medical Campus Aurora, CO
- **Research Assistant** May. 2021 - May. 2022
University of North Carolina at Chapel Hill Chapel Hill, NC
- **Teaching Aid – Chemistry/Cell Biology** 2019 – 2021
Maryville University of Saint Louis Saint Louis, MO
- **Lab technician training manager** 2019 – 2021
Maryville University of Saint Louis Saint Louis, MO
- **Biology and Maths Tutor** 2017 – 2019
Maryville University of Saint Louis Saint Louis, MO

PRESENTATIONS AND INVITED LECTURES

Invited speaker	Jan. 28, 2026
<i>Michael Johnson Seminar Series, Maryville University</i>	<i>Saint Louis, MO</i>
Oral presentation	Dec. 4, 2025
<i>Neurofibromatosis Young Investigator's Forum</i>	<i>Baltimore, MD</i>
Oral presentation	Oct. 27, 2025
<i>Society of Biomolecular Imaging and Informatics</i>	<i>Boston, MA</i>
Oral presentation	Oct. 24, 2025
<i>Cell Biology, Stem Cells, and Development Retreat</i>	<i>Estes Park, CO</i>
Poster presentation	Feb. 10, 2025
<i>Systems applications for cancer biology</i>	<i>Aurora, CO</i>
Oral presentation	Dec. 3, 2024
<i>American Society for Cell Biology Cell Bio conference</i>	<i>San Diego, CA</i>
Poster presentation	Oct. 18, 2024
<i>Cell Biology, Stem Cells, and Development Retreat</i>	<i>Breckinridge, CO</i>
Poster presentation	Aug. 27, 2024
<i>Center for Health Artificial Intelligence Retreat</i>	<i>Denver, CO</i>
Oral presentation	Jul. 18, 2024
<i>Computational Systems for Integrative Genomics</i>	<i>New York, NY</i>
Poster presentation	Dec. 3, 2023
<i>American Society for Cell Biology Cell Bio conference</i>	<i>Boston, MA</i>
Oral presentation	Aug. 19, 2023
<i>Center for Health Artificial Intelligence Retreat</i>	<i>Aurora, CO</i>
Poster presentation	Oct. 13, 2023
<i>Cell Biology, Stem Cells, and Development Retreat</i>	<i>Breckinridge, CO</i>

HONORS AND AWARDS

Neurofibromatosis Young Investigator's Forum Travel Award	2025
<i>Neurofibromatosis Young Investigator's Forum</i>	<i>Baltimore, MD</i>
Best Oral Presentation	2021
<i>Maryville University Research Conference</i>	<i>Saint Louis, MO</i>
Excellence in Biological & Physical Sciences	2021
<i>Maryville University</i>	<i>Saint Louis, MO</i>
Best Poster Award	2019
<i>Maryville University Research Conference</i>	<i>Saint Louis, MO</i>
Outstanding Junior Chemistry Student	2019
<i>American Chemical Society</i>	<i>Saint Louis, MO</i>

TEACHING AND MENTORING

Mentor - High School Student	Jan 2025 - Present
<i>University of Colorado Anschutz Medical Campus</i>	<i>Aurora, CO</i>
Guest Lecturer - CPBS 7601 Reproducible Computational methods course	Oct. 17, 2025
<i>University of Colorado Anschutz Medical Campus</i>	<i>Aurora, CO</i>
Guest Lecturer - Leveraging AI in Cell Biology	Apr. 10, 2025
<i>Maryville University of Saint Louis</i>	<i>Saint Louis, MO</i>
Guest Lecturer - CPBS 7601 Reproducible Computational methods course	Nov. 15, 2024
<i>University of Colorado Anschutz Medical Campus</i>	<i>Aurora, CO</i>

JOURNAL REVIEWER

- **Ad hoc Reviewer - Review Commons** 2025 - Present
- **Ad hoc Reviewer - Cell** 2024 - Present
- **Ad hoc Reviewer - Molecular Biology of the Cell** 2024 - Present
- **Ad hoc Reviewer - BiorXiv** 2023 - Present

PROGRAMMING SKILLS

- **Languages:** Python, R, SQL, Bash, Nextflow
- **Technologies:** HPC Orchestration (SLURM), Nextflow, Cloud (AWS, GCP), terraform, Docker, Git
- **Frameworks:** Pytorch, Scikit-learn, Pandas, NumPy, SciPy, Optuna, Seaborn
- **Visualization:** Matplotlib, Seaborn, ggplot2, Plotly, dash
- **Image software:** CellProfiler, napari, Fiji/ImageJ
- **Skills:** Machine Learning, Deep Learning, Statistical Analysis, Data Visualization, Data Wrangling, Data Mining, database Management

PUBLICATIONS

Google Scholar page (with citation metrics):

<https://scholar.google.com/citations?user=mTdpDrwAAAAJ&hl=en>

- 7 Michael J. Lippincott, Jenna Tomkinson, Ibrahim Bilem, Mahomi Suzuki, Akiko Nakde, Toshiaki Endou, Simon Mathien, Felix Lavoie-Perusse, Carla Basualto-Alarcón, Gregory P Way. (2025) High-content live-cell time-lapse imaging predicts cells about to die via apoptosis. In Review at Cell Systems Methods. bioRxiv: <https://doi.org/10.1101/2025.10.23.684203>
- 6 Dave Bunten, Jenna Tomkinson, Erik Serrano, Michael J. Lippincott, Kenneth I. Brewer, Vince Rubinetti, Faisal Alquaddoomi, Gregory P. Way (2025) Scalable data harmonization for single-cell image-based profiling with CytoTable. In Review at Patterns. bioRxiv: <https://doi.org/10.1101/2025.06.19.660613>
- 5 Erik Serrano, John Peters, Jesko Wagner, Rebecca E. Graham, Zhenghao Chen, Brian Feng, Gisele Miranda, Alexandr A. Kalinin, Loan Vulliard, Jenna Tomkinson, Cameron Mattson, Michael J. Lippincott, Ziqi Kang, Divya Sitani, Dave Bunten, Srijit Seal, Neil O. Carragher, Anne E. Carpenter, Shantanu Singh, Paula A. Marin Zapata, Juan C. Caicedo, Gregory P. Way. (2025) Progress and new challenges in image-based profiling. arXiv: <https://doi.org/10.48550/arXiv.2508.05800>
- 4 Abigail Mumme-Monheit, Grace E. Gustafson, Colette A. Hopkins, Raisa Bailon-Zambrano, Juliana Sucharov, Michael J. Lippincott, Gregory P. Way, Kathryn L. Colborn James T. Nichols. (2025) A quadratic paradigm describes the relationship between phenotype severity and variation. Nature Communications: <https://doi.org/10.1038/s41467-025-63316-2>
- 3 Michael J. Lippincott, Jenna Tomkinson, Dave Bunten, Milad Mohammadi, Johanna Kastl, Johannes Knop, Ralf Schwandner, Jiamin Huang, Grant Ongo, Nathaniel Robichaud, Milad Dagher, Masafumi Tsuboi, Carla Basualto-Alarcón, Gregory P. Way. (2025) A morphology and secretome map of pyroptosis. MBoC: <https://doi.org/10.1091/mbo.E25-03-0119>
- 2 Srivastava H, Michael J. Lippincott, Currie J, Canfield R, Lam MPY, Lau E. (2022). Protein prediction models support widespread post-transcriptional regulation of protein abundance by interacting partners. PLOS Computational Biology: <https://doi.org/10.1371/journal.pcbi.1010702>
- 1 Lister-Shimauchi EH, McCarthy B, Michael J. Lippincott, Ahmed S. (2022) Genetic and Epigenetic Inheritance at Telomeres. Epigenomes: <https://doi.org/10.3390/epigenomes6010009>