

*Megan Ostrowski*  
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## EDUCATION

- University of California, San Francisco**, PhD, Biochemistry and Molecular Biology 2023 – present
- Advisor: Dr. Alex Pollen, additional mentorship by Dr. Katie Pollard
- Princeton University**, B.A. Molecular Biology 2016 – 2020
- Advisor: Dr. Bonnie Bassler

## PUBLICATIONS

- Moore C, Wong E, Kaur U, Seng Chio U, Zhou Z, **Ostrowski M**, Wu K, Irkliyenko I, Wang A, Ramani V, and Narlikar G. ATP-dependent remodeling of chromatin condensates uncovers distinct mesoscale effects of two remodelers. In revision at Science (2024)
- **Ostrowski M\***, Yang M\*, McNally C, Abdulhay N, Wang S, Renduchintala K, Irkliyenko I, Biran A, Chew B, Midha A, Wong E, Sandoval J, Jain I, Groth A, Nora E, Goodarzi H, Ramani V. The single-molecule accessibility landscape of newly replicated mammalian chromatin. Accepted in principle at Cell (2024) \*denotes equal contribution
- Abdulhay N\*, Hseih L\*, McNally C\*, **Ostrowski M\***, Moore C, Ketavarapu M, Kasinathan S, Nanda A, Wu K, Seng Chio U, Zhou Z, Goodarzi H, Narlikar G, Ramani V. Nucleosome density shapes kilobase-scale regulation by a mammalian chromatin remodeler. Nature Structural and Molecular Biology (2023) \*denotes equal contribution
- Nanda A, Wu K, Kasinathan S, **Ostrowski M**, Clugston A, Satpathy A, Sweet-Cordero A, Goodarzi H. (2022) Direct transposition of native DNA for sensitive multimodal single-molecule sequencing. Nature Genetics (2024)
- Lin Y, Kwok S, Thai Bao, Alabi Y, **Ostrowski M**, Wu K, Hein A, Floor S. RNA molecular recording with an engineered RNA deaminase. Nature Methods (2023)

## PRESENTATIONS

- Functional gene regulatory networks in neuronal development** June 2024
- UCSF Tetrad Research in Progress Seminar
- Mapping replication-coupled chromatin fiber assembly at single molecule resolution** March 2023
- Poster at Gladstone Institutes Science Advisory Board – Gladstone Institutes, San Francisco, CA
- Replication-Aware Single Molecule Chromatin Footprinting** November 2022
- Talk at Tools and Tech Research in Progress Seminar – Gladstone Institutes, San Francisco, CA
- Mapping replication-coupled chromatin fiber assembly at single molecule resolution** August 2022
- Poster at EMBL Transcription and Chromatin – Heidelberg, Germany

## RESEARCH EXPERIENCE

- Pollen Lab**, Graduate Student, University of California, San Francisco, CA April 2024 – present
- Studying how the human-specific oxidative stress response modulates gene regulatory networks and chromatin accessibility in dopaminergic neurons.
  - Applying machine learning models to understand the sequence grammar of oxidative-stress responsive elements
- Ramani Lab**, Laboratory Technician, University of California, San Francisco, CA June 2021 – August 2023
- Project title: *Mapping replication-coupled chromatin fiber assembly at single molecule resolution*

- Conduct independent collaborative work on a variety of projects pertaining to gene regulation and chromatin organization, particularly during replication, using high-throughput methods and third-generation sequencing.
- Execute data analysis using R, Python, and Linux including computational modeling to predict biological states.
- Techniques: Third-generation sequencing, library preparation, tissue culture, molecular cloning, gel electrophoresis, Western Blot, PCR, command line data processing, computational modeling, Python, Linux

**Bassler Lab**, Undergraduate Researcher, Princeton University, Princeton, NJ January 2019 – May 2020

- Undergraduate thesis: *Development of High-Throughput Tools for the Investigation of Quorum Sensing in Vibrio cholerae*
- Designed and implemented an original thesis research project examining (1) how the quorum sensing response in *Vibrio cholerae* cells is modulated in various environmental conditions and (2) the optimization of a fluorescent tag to minimize impact on protein function.
- Techniques: Bacterial genetics, molecular cloning, gel electrophoresis, Western Blot, PCR, Gibson Assembly, Sanger and next-generation sequencing, Fluorescence-Activated Cell Sorting, microscope handling and imaging, data processing and visualization in Matlab and R

**Shaevitz Lab**, Undergraduate Researcher, Princeton University, Princeton, NJ June – September 2017

- Research Project Title: *Quantitative Analysis of Aggressive D. melanogaster Behavior*
- Techniques: *D. melanogaster* handling and sex separation procedures, multiple simultaneous video capture, Pipeline data processing and video analysis in Matlab, custom media formulation

## PROFESSIONAL EXPERIENCE

**Graduate Student Instructor**, UCSF, San Francisco, CA 09/2023 – present

- Served as a TA for the Cell Biology course for first-year graduate students
- Helped facilitate discussion sections
- Coordinated with the course director to foster an inclusive and welcoming classroom environment

**Research Assistant**, Sinai Community Institute, Chicago, IL July 2020 – July 2021

- Fostered collaboration between social service organizations on the West and South sides of Chicago through the Project 55 Fellowship, a one-year service-focused program for recent graduates.
- Chaired multiple committees aimed at addressing the social determinants of health.
- Performed data analysis and program evaluation for a variety of initiatives.
- Organized and executed events on the ground targeted at improving the health of underserved communities, particularly concerning outreach during the COVID-19 pandemic.

**English Teacher**, Jishou Normal College, Jishou, Hunan, China Summer 2018

- Designed and taught an original curriculum for teaching English as a second language to Chinese-speaking college students through Princeton in Asia's Summer of Service program.
- Worked collaboratively on a team of teachers.
- Spent time with students in an unstructured manner to further integrate English use and develop a cultural exchange outside of the classroom.