Micah Olivas

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Education

Ph.D., Genetics — 2020–2026 *(expected)*
Stanford University, Stanford, CA
Advisor: Polly Fordyce
Thesis: *High-throughput microfluidic enzymology*

B.S. with Honors (*summa cum laude*), Biochemistry — 2016–2020
California State University, Fresno, Fresno, CA
Advisor: Lauren Dejean
Thesis: *Particulate matter-induced oxidative stress in alveolar macrophages*

Visiting Student, Chemistry and Cell Biology — 2019
University of Oxford, Oxford, UK
Host Advisor: Aziz Aboobaker

Awards and honors

Selected graduate speaker, *Gordon Research Conference (GRC) on Enzymes*	2025
American Chemical Society Poster Award, *Gordon Research Conference (GRC) on Enzymes*	2024
Ruth L. Kirschstein National Research Service Award, *National Institutes of Health*	2023
Stanford ADVANCE Scholar	2020–2021
Research Internship, *23andMe Therapeutics* (declined)	2020
Graduate Fellowship, *Phi Kappa Phi*	2020
Marshall Scholarship Finalist	2020
Samuel T. Reeves Merit Award, *Smittcamp Family Honors College*	2019
Visiting Student, *University of Oxford*	2019
Best Poster Award, *Stanford Summer Research Program Symposium*	2019
Stanford Amgen Scholar	2019
Barry M. Goldwater Scholar	2019
Chemistry Department Honors, *Fresno State*	2019
Helen Gigliotti Biochemistry Scholar, *Fresno State*	2018
Outstanding Poster Presentation, *American Chemical Society*	2017
Presidents Scholar, *Fresno State*	2016–2020
Smittcamp Family Honors Scholar (full-tuition scholarship)	2016–2020

Grants

F31 HG013267, National Human Genome Research Institute — 09/2023–08/2026
High-throughput thermodynamic and kinetic measurements for variant effects prediction in a major protein superfamily
Role: PI; Funding: $143,908

Graduate Fellowship Program, Honors Society of Phi Kappa Phi — 07/2020–08/2022
Funding: $8,500

Patents

Pending

P. Almhjell, **M. Olivas**, & P. Fordyce. High-throughput production of protein variants.
U.S. Provisional Patent Application No. 63/916,150.

Publications

[†]denotes equal contributions

Preprints

1. M. Olivas[†], P. Almhjell[†], F. Zepezauer, and P. Fordyce. "uSortM: scalable isolation of user-defined clones from pooled gene libraries." *bioRxiv* (2025).

Peer-reviewed publications

1. K. Han, S. E. Pierce, A. Li, K. Spees, G. R. Anderson, J. A. Seoane, Y. H. Lo, M. Dubreuil, M. Olivas, *et al*. "CRISPR screens in cancer spheroids identify 3D growth-specific vulnerabilities." *Nature* 580 (2020), 136–141.

Conference papers

1. C. Fannjiang[†], M. Olivas[†], *et al*. "Designing active and thermostable enzymes with sequence-only predictive models." *Neural Information Processing Systems (NeurIPS) Learning Meaningful Representations of Life workshop* (2022).

Contributed talks

Jul 2025	Using high-throughput microfluidic enzymology to investigate machine learning for function prediction *Gordon Research Conference on Enzymes, Coenzymes, and Metabolic Pathways. Waterville Valley, NH*
Apr 2025	Reimagining mutational scanning through microfluidic variant assays with suppressor tRNAs *Chan-Zuckerberg Biohub Interlab Meeting. San Francisco, CA*
Feb 2025	Reimagining mutational scanning through variant assays with suppressor tRNAs *Current Issues in Genetics. Stanford, CA*
May 2024	Insights from high-throughput enzymology in a small enzyme *Current Issues in Genetics. Stanford, CA*
Aug 2023	Beyond Structure: Exploring the Language of Enzyme Function with HT-MEK *Current Issues in Genetics. Stanford, CA*

Contributed posters

Jul 2025	Using high-throughput microfluidic enzymology to investigate machine learning for function prediction *Gordon Research Conference (GRC) on Enzymes, Coenzymes, and Metabolic Pathways. Waterville Valley, NH*
Jun 2025	Reimagining mutational scanning through microfluidic variant assays with suppressor tRNAs *Mutational Scanning Symposium. Barcelona, Spain*
Apr 2025	Reimagining mutational scanning through microfluidic variant assays with suppressor tRNAs *NHGRI Trainee Meeting. Philadelphia, PA*
Jul 2024	Using high-throughput microfluidic enzymology to investigate machine learning-informed functional prediction *Gordon Research Conference (GRC) on Enzymes, Coenzymes, and Metabolic Pathways. Waterville Valley, NH*
2023	Leveraging novel protein language models to understand constraints on enzyme function and design *Genetics Department Annual Retreat. Monterey, CA*
2022	Leveraging novel protein language models to understand constraints on enzyme function and design *Chan Zuckerberg Biohub Interlab Confabulation. San Francisco, CA*

Academic service

Scientific mentorship

Winter 2025 Diego Pomales-Matos, *Stanford Genetics Rotation Student*
Summer 2024 Forrest Zepezauer, *undergraduate student*