

Alexander J. Sercel, PhD

San Diego, CA • ajsercel@gmail.com • (818) 472-1385

<https://www.linkedin.com/in/alexander-sercel-phd-54727880/>

Cell biologist with over 10 years of experience in translational and clinical mitochondrial disease research. Amgen Scholar at Caltech, PhD candidate at UCLA, and postdoctoral fellow at Columbia Medical Center with advanced training in mitochondrial transfer, clinical study design, and rare disease advocacy. Strong publication record with first author manuscripts in eLife, Nature Metabolism, and Trends in Cell Biology. Proven team leader, educator, and mentor with a track record of developing the skills and careers of a diverse group of young scientists.

Skills and Expertise

Mitochondrial bioenergetics	Manuscript preparation	Grant writing
Oral presentations	Data analysis	Cross-functional collaboration
Project management	Statistics	Team management
Clinical research	Experimental design	Mentorship

Employment History

- 2023-Present **Mitochondria World**, San Diego, CA
Director of Scientific Affairs – Mitochondrial Disease Biology
- Leads scientific development of a new public-facing, non-profit mitochondrial disease and biology information portal, MitochondriaWorld.org
 - Works closely with international advisory board and Key Opinion Leaders to connect mitochondrial research, clinical, and patient advocacy communities
 - Manages a team of contributing writers, artists, and developers to produce resources for mitochondrial researchers and educational materials for patients
 - Engages the broader research community through presentations at international conferences
- 2024 **Stemson Therapeutics**, San Diego, CA
Scientist – Cell Therapy Development
- Developed novel differentiation pipeline to generate dermal progenitor cells from iPSCs
 - Designed multicolor flow cytometry analysis panels to quantify purity of directed differentiation protocols and contributed to internal documentation and SOP development
 - Led a cross-functional study identifying a critical process flaw in the Stemson transplantation quality control and optimization pipeline
 - Mentored junior team members in high-throughput and single-cell resolution quantification methods, human tissue culture techniques, and data analysis
- 2021-2023 **Columbia University Irving Medical Center**, New York, NY
Postdoctoral Researcher – Bioenergetics of Mitochondrial Disease
- Designed and conducted translational and clinical research projects to investigate the energetic response to mitochondrial defects in primary tissue cultures and human subjects
 - Led a cross-functional team to prepare and execute an IRB-approved clinical study to quantify whole-body energy expenditure in human participants with mitochondrial diseases
 - Directly supervised and trained five junior lab members in laboratory technique, experimental design, and scientific communication
 - Communicated research findings at intramural seminars and international conferences

- 2020-Present **WinterCell Biodesign Inc**, San Diego, CA
Principal Consultant
- Works with executive leadership of biotechnology startups to develop research strategy and experimental design supporting discovery and product development
 - Drafts slide decks, poster presentations, and manuscripts for clients to communicate preclinical research results to internal and external stakeholders
 - Delivers comprehensive literature reviews on diverse technical topics to provide strategic insight and inform research goals for R&D and management teams
 - Prepares proposals for clients to multiple funding agencies, private investors, and institutions including the NIH, the Chan Zuckerberg Initiative and NASA
- 2015-2021 **University of California Los Angeles**, Los Angeles, CA
PhD Candidate – Mitochondrial Genome Engineering
- Developed mitochondrial transfer techniques and quantitative analysis methods to enable stable delivery of mitochondrial DNA into recipient cells for use in tissue engineering and drug screening applications.
 - Honored as a 2019 UCLA Grad Slam Finalist (university-wide graduate student research presentation competition): [Video Link](#)
 - Prepared proposals to win five consecutive years of competitive NIH T32 grant support (\$300K+)
 - Mentored seven undergraduate and graduate students in cell biology technique, experimental design, and scientific writing

STEM Outreach Activities

- 2019-Present **Impact Internships Health Sciences Immersion Program**, Los Angeles, CA
Science Education Consultant – Careers in Biological Research
- Develops and presents career guidance workshops to diverse groups of students interested in the health and biological sciences
 - Delivered research career presentations to over 1000 students
- 2017-2021 **Signal to Noise Magazine**, Los Angeles, CA
Managing Editor – Science Communication
- Managed and mentored a staff of seven writers contributing print and multimedia content to a digital science magazine, [Signal to Noise Magazine](#)
 - Oversaw the publication of more than 25 articles as Managing Editor

Education

- 2021 PhD, Molecular Biology
Molecular Biology Institute, University of California Los Angeles, Los Angeles, CA
- 2015 BA, Biology with Highest Honors
University of California Santa Barbara, Santa Barbara, CA

Publications (Select out of 11)

- Sercel AJ**, Sturm G, Gallagher D, St-Onge M-P, Kempes CP, Pontzer H, Hirano M, Picard M. (2024). Hypermetabolism and energetic constraints in mitochondrial disorders. *Nature Metabolism*. doi: [10.1038/s42255-023-00968-8](https://doi.org/10.1038/s42255-023-00968-8)
- Sercel AJ**, Patananan AN, Man T, Wu T-H, Yu AK, Guyot GW, Rabizadeh S, Niazi KR, Chiou P-Y, Teitell MA. (2021). Stable transplantation of human mitochondrial DNA by high-throughput, pressurized isolated mitochondrial delivery. *eLife*. doi: [10.7554/eLife.63102](https://doi.org/10.7554/eLife.63102).
- Sercel AJ**, Carlson N, Patananan AN, Teitell MA (2020). Mitochondrial DNA Dynamics in Reprogramming to Pluripotency. *Trends in Cell Biology*. doi: [10.1016/j.tcb.2020.12.009](https://doi.org/10.1016/j.tcb.2020.12.009).