MICAH OLIVAS

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EDUCATION

California State University Fresno, CA
B.S. in Biochemistry (Honors) | Minor in Physical Sciences | GPA: 3.92/4.0 Expected May 2020

- Barry Goldwater Scholar
- Marshall Scholarship Finalist
- Honors Thesis: Oxidative stress dynamics in the alveolar macrophage

Relevant Coursework: Cancer Biology, Molecular Biology, Protein Biochemistry, Microbiology, Cell Biology, Metabolism, Statistical and Biostatistical Modeling

Oxford University, Oxford, England September 2019 - December 2019
Study abroad coursework in Stem Cell Biology (1st) and Quantum Chemistry (II.i)

RESEARCH EXPERIENCE

Stanford University Department of Genetics Stanford, CA
Summer Undergraduate Research Fellow (AMGEN Scholar) January 2019 – August 2019
Project: Genome-wide CRISPR knockout screen in lung cancer spheroids

- Characterized synthetic lethality in genome-wide functional study of KRAS-mutant tumor spheroids

Duke University Department of Pharmacology and Cancer Biology Durham, NC
Summer Undergraduate Research Fellow May 2018 – July 2018
Project: Development of Inducible CRISPR/Cas9 screening systems

- Optimizing ERT2-Cas9 fusion (KI Liu et al.) function in human dormant mammary adenocarcinoma

California State University, Fresno Department of Chemistry Fresno, CA
Undergraduate Honors Researcher August 2016 – January 2020
Project: Reactive oxygen species production in alveolar macrophages

- Developed high throughput fluorometric pipeline to categorize intracellular ROS production by subcellular location

PEER-REVIEWED ARTICLES

1. Han, K., Pierce, S., Li, A., Spees, K., Anderson, G.R., Seoane, J.A., Wainberg, M., Kostyrko, K., Kelly, M.R., Yousefi, M., Simpkins, S.W., Yao, D., Lee, K., Kuo, C.J., Shokat, K.M., Jackson, P.K., Sweet-Cordero, A., Kundaje, A., Gentles, A.J., Curtis, C., Winslow, M.M., Lo, Y., Dubreuil, M., Olivas, M., Kamber, R., Bassik, M.C. *Genome-wide CRISPR screens in lung cancer spheroids identify 3D growth specific cancer vulnerabilities.* (In press, **Nature**).

2. Waterston, A., Castillo, J., Olivas, M., Hasson, A., & Dejean, L. *PM2.5 Exposure and ROS Production in NR8383 Rat Alveolar Macrophages.* **Biophysical Journal** 114, 334a (2018). DOI: https://doi.org/10.1016/j.bpj.2017.11.1872

TECHNICAL SKILLS

Laboratory: Sterile cell culture; confocal microscopy; multicolor flow cytometry; lentiviral engineering; CRISPR/RNAi/siRNA screen development; immunoblotting; DNA/protein purification and analysis, organic and inorganic chemical synthesis; spectrophotometry

Technology: R Studio, Tensor Flow, MATLAB, NCBI BLAST, SnapGene, GraphPad Prism, Flowjo, ImageJ, Pymol, JavaScript, Python, LaTeX (MacTex), Adobe Suite, Microsoft Office Suite

PROFESSIONAL SERVICE

California Air Resources Board
Community Steering Committee Member (Volunteer 10 hr/wk), November 2018 - Present

- Organized and implemented Assembly Bill 617 in South Fresno, providing protections for residents of critical non-attainment areas throughout the region
- Reported directly to the California Air Resources Board (CARB) during regular meetings at the California Environmental Protection Agency (CalEPA) building in Sacramento

Camp Kesem at Fresno State
Public Relations Coordinator (Volunteer 20 hr/wk), August 2017 - Present

- Coordinated weekly communication and a weeklong summer camp for more than 80 local children whose parents or guardians have been affected by cancer

FLOCC Comedy Improv Troupe at Fresno State
Performing Member (Volunteer 15 hr/wk), August 2017 - Present

- One of 10-15 members on A* performance team
- Raised nearly $7,000 for local charities during monthly shows in and around Fresno, CA

REFERENCES

Dr. Michael Bassik
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Dr. James Alvarez
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