

Kevin Stachelek

· Ph.D Candidate, University of Southern California

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I am a student in the USC PIBBS Cancer Biology and genomics program mentored in the lab of Dr. David Cobrinik. My career aspiration is to lead a bioinformatics research group in industry or academia facilitating genomic analysis for research and clinical applications.

Education

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| 2018 — | PhD Candidate, Cancer Biology and Genomics
University of Southern California, Los Angeles, CA |
| 2015 — 2018 | M.S. Translational Biotechnology
University of Southern California, Los Angeles, CA |
| 2009 — 2013 | B.A. Biology
University of Southern California, Los Angeles, CA |

Professional Experience

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| 2018 — | Graduate Student Researcher
University of Southern California
PI: David Cobrinik |
| 2013 — 2018 | Technician
Children's Hospital Los Angeles
PI: David Cobrinik |
| 2012 — 2013 | Undergraduate Research Assistant
University of Southern California
PI: John Tower |

Grant Support

St. Baldrick's
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Scholarships and Awards

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| 2013 | Undergraduate SOAR |
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Peer-reviewed Publications

- 2022 Li, H.-T., Xu, L., Weisenberger, D. J., Li, M., Zhou, W., Peng, C.-C., Stachelek, K., Cobrinik, D., Liang, G. & Berry, J. L. Characterizing DNA methylation signatures of retinoblastoma using aqueous humor liquid biopsy. *Nat Commun* 13, 5523 (2022).
- 2021 Cambier, L., Stachelek, K., Triska, M., Jubran, R., Huang, M., Li, W., Zhang, J., Li, J. & Cobrinik, D. Extracellular vesicle-associated repetitive element DNAs as candidate osteosarcoma biomarkers. *Sci Rep* 11, 94 (2021).
- 2020 Kaneva, K., Merkurjev, D., Ostrow, D., Ryutov, A., Triska, P., Stachelek, K., Cobrinik, D., Biegel, J. A. & Gai, X. Detection of mitochondrial DNA variants at low level heteroplasmy in pediatric CNS and extra-CNS solid tumors with three different enrichment methods. *Mitochondrion* 51, 97–103 (2020).
- 2018 Berry, J. L., Xu, L., Kooi, I., Murphree, A. L., Prabakar, R. K., Reid, M., Stachelek, K., Le, B. H. A., Welter, L., Reiser, B. J., Chévez-Barrios, P., Jubran, R., Lee, T. C., Kim, J. W., Kuhn, P., Cobrinik, D. & Hicks, J. Genomic cfDNA analysis of aqueous humor in retinoblastoma predicts eye salvage: the surrogate tumor biopsy for retinoblastoma. *Molecular Cancer Research* 16, 1701–1712 (2018).
- 2018 Singh, H. P., Wang, S., Stachelek, K., Lee, S., Reid, M. W., Thornton, M. E., Craft, C. M., Grubbs, B. H. & Cobrinik, D. Developmental stage-specific proliferation and retinoblastoma genesis in RB-deficient human but not mouse cone precursors. *PNAS* 115, E9391–E9400 (2018).
- 2017 Kim, J. W., Jacobsen, B., Zolfaghari, E., Ferrario, A., Chevez-Barrios, P., Berry, J. L., Lee, D. K., Rico, G., Madi, I., Rao, N., Stachelek, K., Wang, L.-C. & Gomer, C. Rabbit model of ocular indirect photodynamic therapy using a retinoblastoma xenograft. *Graefe's Archive for Clinical and Experimental Ophthalmology* 255, (2017).
- 2017 Berry, J. L., Xu, L., Murphree, A. L., Krishnan, S., Stachelek, K., Zolfaghari, E., McGovern, K., Lee, T. C., Carlsson, A., Kuhn, P., Kim, J. W., Cobrinik, D. & Hicks, J. Potential of aqueous humor as a surrogate tumor biopsy for retinoblastoma. *JAMA Ophthalmology* 135, 1221–1230 (2017).
- 2022 Stachelek, K., Harutyunyan, N., Lee, S., Harutyunyan, A., Kim, J., Xu, L., Berry, J. L., Nagiel, A., Reynolds, C. P., Murphree, A. L., Lee, T. C., Aparicio, J. G. & Cobrinik, D. Non-Synonymous, synonymous, and non-coding nucleotide variants contribute to recurrently altered biological processes during retinoblastoma progression. Submitted.
- 2022 Shayler, D., Stachelek, K., Lee, S., Bai, J., Aparicio, J. G., Kim, Y., Singh, M., Bay, M., Thornton, M., Craft, C., Grubbs, B., Bonaguidi, M., Singh, H., & Cobrinik, David. Single cell transcriptomics reveals novel photoreceptor trajectories and a cancer-predisposed cone precursor state.

Refereed Presentations

- 2022 Children's Blood Disease Institute Annual Retreat 2022
- 2022 Biochemistry and Molecular Medicine Annual Retreat 2022

2022 The Saban Research Institute Science Day 2022

2019 Keystone Symposium 2019

Software & Technology

2022 SeuratTools

Teaching

2022 Introduction to R: Workshop for incoming PhD students - University of Southern California

- Led, organized, and co-designed 3-day workshop

2021 Introduction to R: Workshop for incoming PhD students - University of Southern California

- Led, organized, and co-designed 3-day workshop

Other Publications

2022 Moving the retinoblastoma aqueous humor liquid biopsy beyond genomics

- “Behind the Paper” blog post to Nature Communities