Stanford

Cuyler Luck

Postdoctoral Scholar, Bioengineering

Bio

BIO

I am from State College, Pennsylvania and earned a BS with Honors in Microbiology from Penn State in 2020. I moved west to complete my PhD in Biomedical Sciences at UCSF between 2020 and 2026 in the lab of Ross Okimoto, where I modeled ultra-rare sarcomas driven by fusion oncogenes. I am currently a Schmidt Science Fellow in Jenn Brophy's lab where I am learning synthetic biology in the context of yeast and plants with the goal of rewiring gene expression to shape development.

HONORS AND AWARDS

- Schmidt Science Fellow, Schmidt Sciences (2026-Present)
- Ruth L. Kirschstein NRSA F31 Fellow, National Cancer Institute, NIH (2024-2026)

PROFESSIONAL EDUCATION

- PhD, University of California, San Francisco , Biomedical Sciences (2026)
- BS (Honors), The Pennsylvania State University , Microbiology (2020)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

I am a primarily lab-based (but computationally competent) biologist with a broad interest in understanding both how cells evolve to cause disease and how we might leverage similar strategies to engineer new behaviors into organisms. I enjoy doing science in diverse research areas (previously including malaria, chromatin remodeling in yeast, and several types of cancer), and I am excited to continue this trend by building synthetic biology tools for deployment in plants as a postdoc.

Publications

PUBLICATIONS

- **Modeling of Capicua Family Fusion Oncoprotein-Driven Cancers Reveals Gene-Specific Functionality** *MOLECULAR CANCER RESEARCH*
  Luck, C., Luo, Y., Vasileva, E., Jacobs, K. A., Riad, J., Macaraig, C. D., Ponce, R. M., Amatruda, J. F., Okimoto, R. A.
  2026; 24 (5): 337-355
- **The CIC::DUX4 oncoprotein maintains DNA integrity through direct regulation of the catalytic subunit of DNA polymerase epsilon (POLE)** *ONCOGENE*
  Kosibaty, Z., Luck, C., Okimoto, R. A.
  2025; 44 (38): 3598-3608

- **First Generation Tools for the Modeling of Capicua (CIC) - Family Fusion Oncoprotein-Driven Cancers.** *bioRxiv : the preprint server for biology*
  Luck, C., Jacobs, K. A., Riad, J., Macaraig, C. D., Ponce, R. K., Okimoto, R. A.
  2025
- **The Capicua C1 Domain Is Required for Full Activity of the CIC::DUX4 Fusion Oncoprotein** *CANCER RESEARCH COMMUNICATIONS*
  Luck, C., Jacobs, K. A., Okimoto, R. A.
  2024; 4 (12): 3099-3113
- **TheCapicuaC1 Domain is Required for Full Activity of the CIC::DUX4 Fusion Oncoprotein.** *bioRxiv : the preprint server for biology*
  Luck, C., Jacobs, K. A., Okimoto, R. A.
  2024
- **Molecular and therapeutic advancements in Capicua (CIC)-rearranged sarcoma** *FRONTIERS IN CELL AND DEVELOPMENTAL BIOLOGY*
  Ponce, R. M., Luck, C., Okimoto, R. A.
  2024; 12: 1416697
- **Allosteric SHP2 inhibition increases apoptotic dependency on BCL2 and synergizes with venetoclax in FLT3- and KIT-mutant AML** *CELL REPORTS MEDICINE*
  Popescu, B., Stahlhut, C., Tarver, T. C., Wishner, S., Lee, B. J., Peretz, C. A. C., Luck, C., Phojanakong, P., Serrano, J., Hongo, H., Rivera, J. M., Xirenayi, S., Chukinas, et al
  2023; 4 (11): 101290
- **Osteosarcoma PDX-Derived Cell Line Models for Preclinical Drug Evaluation Demonstrate Metastasis Inhibition by Dinaciclib through a Genome-Targeted Approach.** *Clinical cancer research : an official journal of the American Association for Cancer Research*
  Schott, C. R., Koehne, A. L., Sayles, L. C., Young, E. P., Luck, C., Yu, K., Lee, A. G., Breese, M. R., Leung, S. G., Xu, H., Shah, A. T., Liu, H. Y., Spillinger, et al
  2023: OF1-OF16
- **Capicua suppresses YAP1 to limit tumorigenesis and maintain drug sensitivity in human cancer** *CELL REPORTS*
  Won Kim, J., Luck, C., Wu, W., Ponce, R., Lin, Y., Gupta, N., Okimoto, R. A.
  2022; 41 (1): 111443
- **Atypical Molecular Basis for Drug Resistance to Mitochondrial Function Inhibitors in Plasmodium falciparum** *ANTIMICROBIAL AGENTS AND CHEMOTHERAPY*
  Painter, H. J., Morrisey, J. M., Mather, M. W., Orchard, L. M., Luck, C., Smilkstein, M. J., Riscoe, M. K., Vaidya, A. B., Llinas, M.
  2021; 65 (3)