Stanford

Sofia Ferreira

Postdoctoral Scholar, Radiation Biology

Bio

BIO

Cancer Biology Scientist focused on improving treatment options on refractory tumors, primarily pancreatic cancer. My research focuses on uncovering innovative strategies to enhance the responsiveness of pancreatic cancer to existing treatments through fundamental research and preclinical approaches:

1. Investigate key molecular pathways in pancreatic cancer using in vivo, organelle-specific omics to identify new therapeutic targets

2. Identify unique drivers and tumor-stroma crosstalk across distinct pancreatic cancer subtypes

3. Exploit tumor cell innate immunity pathways to enhance pancreatic cancer responses to immunotherapy

HONORS AND AWARDS

- Deconstructing Lysosomal Rewiring in PDAC to Identify Vulnerabilities & Mechanisms of Immune Evasion, Stanford Cancer Institute Innovation Award (2025)
- Targeting Adar1 to overcome pancreatic cancer resistance to immune checkpoint blockade, Stanford Cancer Institute Innovation Award (2023)
- Understanding Pancreatic Ductal Adenocarcinoma Evolution from Different Cells of Origin, Postdoctoral Fellowship Award – Tobacco-Related Disease Research Program (2022)
- AsiDNA Is a Radiosensitizer with no Added Toxicity in Medulloblastoma Pediatric Models, Foundation for Medical Research (FRM) – Espoir de la Recherche (2018)
- Transcriptomic Analysis of AsiDNA and Radiation Across Medulloblastoma Subgroups by TP53 Status, Institut Curie Genomics of Excellence (2018)
- RADIATE ITN EU, Marie Skłodowska-Curie Actions – Initial Training Network Fellowship (2015)

STANFORD ADVISORS

- Laura Attardi, Postdoctoral Faculty Sponsor

LINKS

- LinkedIn: https://www.linkedin.com/in/sofiaferr/

Publications

PUBLICATIONS

- **DNA Methylation-Based Classification Uncovers Acinar and Ductal Origins for KPC-Derived PDAC Cell Lines.** *Cancer letters*
  Zoi, I., Rajput, M., Holguín-Horcajo, A., Haidar, M., Brusa, D., Chu, K., Xie, J., Shields, M., Ferreira, S. M., Stanger, B., Attardi, L. D., Kopp, J., Stemmler, et al
  2026: 218666

- **Inactivation of CDKN2AARF Promotes p53-Independent Remodeling of the PDAC Tumor Microenvironment.** *Cancer research*

Ferreira, S., Flowers, B. M., Choi, W. Y., Farina-Morillas, M., Gatto, A., Bhattacharyya, S., Boross, G., Hassan, G., Mulligan, A. S., Vogel, H., Wood, L. D., Weaver, V. M., Winslow, et al

2026

- **Merlin's disappearing act: NF2 loss conjures pancreatic cancer survival in the hostile tumor microenvironment** *JOURNAL OF CLINICAL INVESTIGATION*

  Ferreira, S., Attardi, L. D.

  2026; 136 (1)

- **Merlin's disappearing act: NF2 loss conjures pancreatic cancer survival in the hostile tumor microenvironment.** *The Journal of clinical investigation*

  Ferreira, S., Attardi, L. D.

  2026; 136 (1)

- **p53 drives lung cancer regression through a TSC2/TFEB-dependent senescence program.** *Cancer discovery*

  Wang, M., Bieging-Rolett, K. T., Kaiser, A. M., Brady, C. A., Lockhart, J. H., Ferreira, S., Nguyen, K. T., Rajeevan, A., Evans, S. A., Zhao, T., Raj, N., Elkrief, A., Tischfield, et al

  2025

- **Inactivation of CDKN2A ^{ARF} promotes p53-independent remodeling of the PDAC tumor microenvironment**

  Ferreira, S., Flowers, B. M., Choi, W., Farina-Morillas, M., Gatto, A., Bhattacharyya, S., Boross, G., Hassan, G., Mulligan, A. S., Vogel, H., Wood, L. D., Weaver, V. M., Winslow, et al

  AMER ASSOC CANCER RESEARCH.2025

- **Spatial transcriptomic analysis drives PET imaging of tight junction protein expression in pancreatic cancer theranostics.** *Nature communications*

  Wang, J., Seo, J. W., Kare, A. J., Schneider, M., Pandrala, M., Tumbale, S. K., Raie, M. N., Engudar, G., Zhang, N., Guo, Y., Zhong, X., Ferreira, S., Wu, et al

  2024; 15 (1): 10751

- **Epigenetic priming targets tumor heterogeneity to shift transcriptomic phenotype of pancreatic ductal adenocarcinoma towards a Vitamin D susceptible state.** *Cell death & disease*

  He, B., Stoffel, L., He, C. J., Cho, K., Li, A. M., Jiang, H., Flowers, B. M., Nguyen, K. T., Wang, K. W., Zhao, A. Y., Zhou, M. N., Ferreira, S., Attardi, et al

  2024; 15 (1): 89

- **Multifaceted role for p53 in pancreatic cancer suppression.** *Proceedings of the National Academy of Sciences of the United States of America*

  Mello, S. S., Flowers, B. M., Mazur, P. K., Lee, J. J., Müller, F., Denny, S. K., Ferreira, S., Hanson, K., Kim, S. K., Greenleaf, W. J., Wood, L. D., Attardi, L. D.

  2023; 120 (10): e2211937120

- **Understanding the Arf-p53 axis in PDAC suppression**

  Attardi, L. D., Flowers, B. M., Hanson, K., Mulligan, A. S., Ferreira, S., Bhattacharyya, S., Vogel, H., Wood, L. D., Sherman, M.

  AMER ASSOC CANCER RESEARCH.2022: 33-34

- **Characterizing acinar cell and ductal cell derived PDACs in mouse models**

  Ferreira, S., Flowers, B. M., Hanson, K. J., Gatto, A., Bhattacharyya, S., Sherman, M. H., Attardi, L. D.

  AMER ASSOC CANCER RESEARCH.2022: 40-41