Stanford

Shannon White

Postdoctoral Scholar, Genetics

Bio

BIO

Hi, I'm Shannon White. I began my postdoctoral fellowship in Michael Snyder's lab in the fall of 2020. I received my PhD from Georgetown University in Tumor Biology in Chunling Yi's lab. My graduate worked explore the signaling and metabolic vulnerabilities of NF2-mutant tumors following YAP/TAZ depletion. My postdoctoral work is exploring the epigenetic hallmarks that contribute to colon cancer progression and drug resistance. I am developing colon organoids derived from pre-cancerous polyp tissue collected from Familial Adenomatous Polyposis patients as a model system to investigate epigenetic and signaling responses to chemoprevention treatments.

HONORS AND AWARDS

- Stanford School of Medicine Dean’s Postdoctoral Fellowship, Stanford University (2020-2021)
- Graduate Research Fellow, National Science Foundation (2018-2020)
- Dr. Mark Smulson Award for Excellence in Thesis Research, Georgetown University (2021)
- Dr. Robert Dickson Award, Georgetown University (2021)

PROFESSIONAL EDUCATION

- Bachelor of Science, University of Maryland College Park (2013)
- Doctor of Philosophy, Georgetown University (2020)
- PhD, Georgetown University , Tumor Biology (2020)
- BS, University of Maryland , Bioengineering (2013)

STANFORD ADVISORS

- Michael Snyder, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Short-chain fatty acid metabolites propionate and butyrate are unique epigenetic regulatory elements linking diet, metabolism and gene expression.** *Nature metabolism*

  Nshanian, M., Gruber, J. J., Geller, B. S., Chleilat, F., Lancaster, S. M., White, S. M., Alexandrova, L., Camarillo, J. M., Kelleher, N. L., Zhao, Y., Snyder, M. P.

  2025

- **Single-cell spatial mapping reveals alteration of cell type composition and tissue microenvironment during early colorectal cancer formation.** *bioRxiv : the preprint server for biology*

Guha, T. K., Esplin, E. D., Horning, A. M., Chiu, R., Paul, K., Weimer, A. K., Becker, W. R., Laquindanum, R., Mills, M. A., Glen Esplin, D., Shen, J., Monte, E., White, et al

2024

- **Global loss of promoter-enhancer connectivity and rebalancing of gene expression during early colorectal cancer carcinogenesis.** *Nature cancer*

  Zhu, Y., Lee, H., White, S., Weimer, A. K., Monte, E., Horning, A., Nevins, S. A., Esplin, E. D., Paul, K., Krieger, G., Shipony, Z., Chiu, R., Laquindanum, et al

  2024

- **Recurrent repeat expansions in human cancer genomes.** *Nature*

  Erwin, G. S., Gursoy, G., Al-Abri, R., Suriyaprakash, A., Dolzhenko, E., Zhu, K., Hoerner, C. R., White, S. M., Ramirez, L., Vadlakonda, A., Vadlakonda, A., von Kraut, K., Park, et al

  2022

- **MITI minimum information guidelines for highly multiplexed tissue images.** *Nature methods*

  Schapiro, D., Yapp, C., Sokolov, A., Reynolds, S. M., Chen, Y., Sudar, D., Xie, Y., Muhlich, J., Arias-Camison, R., Arena, S., Taylor, A. J., Nikolov, M., Tyler, et al

  2022; 19 (3): 262-267

- **Master lineage transcription factors anchor trans mega transcriptional complexes at highly accessible enhancer sites to promote long-range chromatin clustering and transcription of distal target genes.** *Nucleic acids research*

  White, S. M., Snyder, M. P., Yi, C.

  2021

- **A Yap-Myc-Sox2-p53 Regulatory Network Dictates Metabolic Homeostasis and Differentiation in Kras-Driven Pancreatic Ductal Adenocarcinomas** *DEVELOPMENTAL CELL*

  Murakami, S., Nemazanyy, I., White, S. M., Chen, H., Nguyen, C. D. K., Graham, G. T., Saur, D., Pende, M., Yi, C.

  2019; 51 (1): 113-+

- **YAP/TAZ Inhibition Induces Metabolic and Signaling Rewiring Resulting in Targetable Vulnerabilities in NF2-Deficient Tumor Cells** *DEVELOPMENTAL CELL*

  White, S. M., Avantaggiati, M., Nemazanyy, I., Di Poto, C., Yang, Y., Pende, M., Gibney, G. T., Ressom, H. W., Field, J., Atkins, M. B., Yi, C.

  2019; 49 (3): 425-+

- **The complex entanglement of Hippo-Yap/Taz signaling in tumor immunity** *ONCOGENE*

  White, S. M., Murakami, S., Yi, C.

  2019; 38 (16): 2899-2909

- **Rac1-Mediated DNA Damage and Inflammation Promote Nf2 Tumorigenesis but Also Limit Cell-Cycle Progression** *DEVELOPMENTAL CELL*

  Shi, Y., Bollam, S. R., White, S. M., Laughlin, S. Z., Graham, G. T., Wadhwa, M., Chen, H., Nguyen, C., Vitte, J., Giovannini, M., Toretsky, J., Yi, C.

  2016; 39 (4): 452-465

- **An ensemble model of QSAR tools for regulatory risk assessment** *JOURNAL OF CHEMINFORMATICS*

  Pradeep, P., Povinelli, R. J., White, S., Merrill, S. J.

  2016; 8: 48

PRESENTATIONS

- Ex vivo 3D cultures of precancerous polyps as a model system to evaluate chemoprevention efficacy for FAP patients - Human Tumor Atlas Network