Michael Sellers Cuoco

Updated February 18, 2024

PhD Student, Bioinformatics and Systems Biology

mcuoco@ucsd.edu | (978) 505-0993 | Salk Institute | UC San Diego | La Jolla, California
michaelcuoco.com | 0000-0003-2163-5120 | mikecuoco | cuoco_michael | michaelcuoco

Research interests

Retrotransposon activity in the developing, aging, and diseased human brain.

Education

University of California, San Diego — La Jolla, California

PhD in Bioinformatics and Systems Biology — In Progress

Thesis Committee:

- Fred H. Gage, PhD (Chair)
- Eran A. Mukamel, PhD (Co-Chair)
- Graham McVicker, PhD
- Melissa Gymrek, PhD
- Nicholas Schork, PhD

Trinity College — Hartford, Connecticut

BS in Molecular and Cellular Biology — May 2016

Minor in Models and Data

Honors and Awards

NSF Graduate Research Fellowship — 2022

National Science Foundation (NSF)

Spot Award — 2017

Broad Institute

Beta Beta Beta National Biology Honors Society — 2014

Trinity College

NESCAC Winter All-Academic Team — 2014

Trinity College

Research experience

PhD Student — 2020 – Present

Gage Lab, Salk Institute for Biological Studies — La Jolla, California

Mukamel Lab, UC San Diego — La Jolla, California

Mentors: Fred H. Gage and Eran A. Mukamel

Research Associate — 2016 – 2020

Regev Lab, Broad Institute — Cambridge, Massachusetts

Mentors: Aviv Regev, Benjamin Izar, Pratiksha Thakore, Yaara Oren

Undergraduate Researcher 2014 – 2016
Meyerson Lab, Dana-Farber Cancer Institute Boston, Massachusetts
Mentors: Matthew Meyerson and Alison Taylor

Undergraduate Researcher 2013
Trinity College Hartford, Connecticut
HHMI Science Education Alliance-Phage Hunters Advancing Genomics and Evolutionary Science program. (SEA-PHAGES: seaphages.org)

Research: Published

Toda, T., Bedrosian, T. A., Schafer, S. T., **Cuoco, M. S.**, Linker, S. B., Ghassemzadeh, S., Mitchell, L., Whiteley, J. T., Novaresi, N., McDonald, A. H., Gallina, I. S., Yoon, H., Hester, M. E., Pena, M., Lim, C., Suljic, E., Mansour, A. A., Boulard, M., Parylak, S. L., Gage, F. H., "Long interspersed nuclear elements safeguard neural progenitors from precocious differentiation." In: *Cell reports* 43 (2 Feb. 13, 2024). DOI: 10.1016/j.celrep.2024.113774.

Boyle, E. A., Goldberg, G., Schmok, J. C., Burgado, J., Layng, F. I., Grunwald, H. A., Balotin, K. M., **Cuoco, M. S.**, Chang, K.-C., Ecklu-Mensah, G., Arakaki, A. K. S., Ahmed, N., Arceo, X. G., Jagannatha, P., Pekar, J., Iyer, M., Yeo, G. W., "Junior scientists spotlight social bonds in seminars for diversity, equity, and inclusion in STEM." In: *PloS one* 18 (11 Nov. 2023). DOI: 10.1371/journal.pone.0293322.

Otto, J. E., Ursu, O., Wu, A. P., Winter, E. B., **Cuoco, M. S.**, Ma, S., Qian, K., Michel, B. C., Buenrostro, J. D., Berger, B., Regev, A., Kadoch, C., "Structural and functional properties of mSWI/SNF chromatin remodeling complexes revealed through single-cell perturbation screens." In: *Molecular cell* 83 (8 Apr. 2023). DOI: 10.1016/j.molcel.2023.03.013.

Shih, J., Sarmashghi, S., Zhakula-Kostadinova, N., Zhang, S., Georgis, Y., Hoyt, S. H., **Cuoco, M. S.**, Gao, G. F., Spurr, L. F., Berger, A. C., Ha, G., Rendo, V., Shen, H., Meyerson, M., Cherniack, A. D., Taylor, A. M., Beroukhim, R., "Cancer aneuploidies are shaped primarily by effects on tumour fitness." In: *Nature* 619 (7971 June 29, 2023). DOI: 10.1038/s41586-023-06266-3.

Eraslan, G., Drokhlyansky, E., Anand, S., Fiskin, E., Subramanian, A., Slyper, M., Wang, J., Wittenberghe, N. V., Rouhana, J. M., Waldman, J., Ashenberg, O., Lek, M., Dionne, D., Win, T. S., **Cuoco, M. S.**, Kuksenko, O., Tsankov, A. M., Branton, P. A., Marshall, J. L., Greka, A., Getz, G., Segrè, A. V., Aguet, F., Rozenblatt-Rosen, O., Ardlie, K. G., Regev, A., "Single-nucleus cross-tissue molecular reference maps toward understanding disease gene function." In: *Science (New York, N.Y.)* 376 (6594 May 14, 2022). DOI: 10.1126/science.abl4290.

Hwang, W. L., Jagadeesh, K. A., Guo, J. A., Hoffman, H. I., Yadollahpour, P., Reeves, J. W., Mohan, R., Drokhlyansky, E., Wittenberghe, N. V., Ashenberg, O., Farhi, S. L., Schapiro, D., Divakar, P., Miller, E., Zollinger, D. R., Eng, G., Schenkel, J. M., Su, J., Shiau, C., Yu, P., Freed-Pastor, W. A., Abbondanza, D., Mehta, A., Gould, J., Lambden, C., Porter, C. B. M., Tsankov, A., Dionne, D., Waldman, J., **Cuoco, M. S.**, Nguyen, L., Delorey, T., Phillips, D., Barth, J. L., Kem, M., Rodrigues, C., Ciprani, D., Roldan, J., Zelga, P., Jorgji, V., Chen, J. H., Ely, Z., Zhao, D., Fuhrman, K., Fropf, R., Beechem, J. M., Loeffler, J. S., Ryan, D. P., Weekes, C. D., Ferrone, C. R., Qadan, M., Aryee, M. J., Jain, R. K., Neuberg, D. S., Wo, J. Y., Hong, T. S., Xavier, R., Aguirre, A. J., Rozenblatt-Rosen, O., Mino-Kenudson, M., Castillo, C. F.-D., Liss, A. S., Ting, D. T., Jacks, T., Regev, A., "Single-nucleus and spatial transcriptome profiling of pancreatic cancer identifies multicellular dynamics associated with neoadjuvant treatment." In: *Nature genetics* 54 (8 July 29, 2022). DOI: 10.1038/s41588-022-01134-8.

Li, J., Pinto-Duarte, A., Zander, M., **Cuoco, M. S.**, Lai, C.-Y., Osteen, J., Fang, L., Luo, C., Lucero, J. D., Gomez-Castanon, R., Nery, J. R., Silva-Garcia, I., Pang, Y., Sejnowski, T. J., Powell, S. B., Ecker, J. R., Mukamel, E. A., Behrens, M. M., "Dnmt3a knockout in excitatory neurons impairs postnatal synapse mat-

uration and increases the repressive histone modification H3K27me3." In: *eLife* 11 (May 24, 2022). DOI: 10.7554/eLife.66909.

Bi, K., He, M. X., Bakouny, Z., Kanodia, A., Napolitano, S., Wu, J., Grimaldi, G., Braun, D. A., **Cuoco, M. S.**, Mayorga, A., DelloStritto, L., Bouchard, G., Steinharter, J., Tewari, A. K., Vokes, N. I., Shannon, E., Sun, M., Park, J., Chang, S. L., McGregor, B. A., Haq, R., Denize, T., Signoretti, S., Guerriero, J. L., Vigneau, S., Rozenblatt-Rosen, O., Rotem, A., Regev, A., Choueiri, T. K., Allen, E. M. V., "Tumor and immune reprogramming during immunotherapy in advanced renal cell carcinoma." In: *Cancer cell* 39 (5 Mar. 13, 2021). DOI: 10.1016/j.ccell.2021.02.015.

Frangieh, C. J., Melms, J. C., Thakore, P. I., Geiger-Schuller, K. R., Ho, P., Luoma, A. M., Cleary, B., Jerby-Arnon, L., Malu, S., **Cuoco, M. S.**, Zhao, M., Ager, C. R., Rogava, M., Hovey, L., Rotem, A., Bernatchez, C., Wucherpfennig, K. W., Johnson, B. E., Rozenblatt-Rosen, O., Schadendorf, D., Regev, A., Izar, B., "Multimodal pooled Perturb-CITE-seq screens in patient models define mechanisms of cancer immune evasion." In: *Nature genetics* 53 (3 Mar. 2021). DOI: 10.1038/s41588-021-00779-1.

He, M. X., **Cuoco, M. S.**, Crowdis, J., Bosma-Moody, A., Zhang, Z., Bi, K., Kanodia, A., Su, M.-J., Ku, S.-Y., Garcia, M. M., Sweet, A. R., Rodman, C., DelloStritto, L., Silver, R., Steinharter, J., Shah, P., Izar, B., Walk, N. C., Burke, K. P., Bakouny, Z., Tewari, A. K., Liu, D., Camp, S. Y., Vokes, N. I., Salari, K., Park, J., Vigneau, S., Fong, L., Russo, J. W., Yuan, X., Balk, S. P., Beltran, H., Rozenblatt-Rosen, O., Regev, A., Rotem, A., Taplin, M.-E., Allen, E. M. V., "Transcriptional mediators of treatment resistance in lethal prostate cancer." In: *Nature medicine* 27 (3 Mar. 2021). DOI: 10.1038/s41591-021-01244-6.

Jerby-Arnon, L., Neftel, C., Shore, M. E., Weisman, H. R., Mathewson, N. D., McBride, M. J., Haas, B., Izar, B., Volorio, A., Boulay, G., Cironi, L., Richman, A. R., Broye, L. C., Gurski, J. M., Luo, C. C., Mylvaganam, R., Nguyen, L., Mei, S., Melms, J. C., Georgescu, C., Cohen, O., Buendia-Buendia, J. E., Segerstolpe, A., Sud, M., **Cuoco, M. S.**, Labes, D., Gritsch, S., Zollinger, D. R., Ortogero, N., Beechem, J. M., Nielsen, G. P., Chebib, I., Nguyen-Ngoc, T., Montemurro, M., Cote, G. M., Choy, E., Letovanec, I., Cherix, S., Wagle, N., Sorger, P. K., Haynes, A. B., Mullen, J. T., Stamenkovic, I., Rivera, M. N., Kadoch, C., Wucherpfennig, K. W., Rozenblatt-Rosen, O., Suvà, M. L., Riggi, N., Regev, A., "Opposing immune and genetic mechanisms shape oncogenic programs in synovial sarcoma." In: *Nature medicine* 27 (2 Jan. 27, 2021). DOI: 10.1038/s41591-020-01212-6.

Muus, C., Luecken, M. D., Eraslan, G., Sikkema, L., Waghray, A., Heimberg, G., Kobayashi, Y., Vaishnav, E. D., Subramanian, A., Smillie, C., Jagadeesh, K. A., Duong, E. T., Fiskin, E., Triglia, E. T., Ansari, M., Cai, P., Lin, B., Buchanan, J., Chen, S., Shu, J., Haber, A. L., Chung, H., Montoro, D. T., Adams, T., Aliee, H., Allon, S. J., Andrusivova, Z., Angelidis, I., Ashenberg, O., Bassler, K., Bécavin, C., Benhar, I., Bergenstråhle, J., Bergenstråhle, L., Bolt, L., Braun, E., Bui, L. T., Callori, S., Chaffin, M., Chichelnitskiy, E., Chiou, J., Conlon, T. M., **Cuoco, M. S.**, Cuomo, A. S. E., Deprez, M., Duclos, G., Fine, D., Fischer, D. S., Ghazanfar, S., Gillich, A., Giotti, B., Gould, J., Guo, M., Gutierrez, A. J., Habermann, A. C., Harvey, T., He, P., Hou, X., Hu, L., Hu, Y., Jaiswal, A., Ji, L., Jiang, P., Kapellos, T. S., Kuo, C. S., Larsson, L., Leney-Greene, M. A., Lim, K., Litviňuková, M., Ludwig, L. S., Lukassen, S., Luo, W., Maatz, H., Madissoon, E., Mamanova, L., Manakongtreecheep, K., Leroy, S., Mayr, C. H., Mbano, I. M., McAdams, A. M., Nabhan, A. N., Nyquist, S. K., Penland, L., Poirion, O. B., Poli, S., Qi, C., Queen, R., Reichart, D., Rosas, I., Schupp, J. C., Shea, C. V., Shi, X., Sinha, R., Sit, R. V., Slowikowski, K., Slyper, M., Smith, N. P., Sountoulidis, A., Strunz, M., Sullivan, T. B., Sun, D., Talavera-López, C., Tan, P., Tantivit, J., Travaglini, K. J., Tucker, N. R., Vernon, K. A., Wadsworth, M. H., Waldman, J., Wang, X., Xu, K., Yan, W., Zhao, W., Ziegler, C. G. K., "Single-cell meta-analysis of SARS-CoV-2 entry genes across tissues and demographics." In: *Nature medicine* 27 (3 Mar. 2021). DOI: 10.1038/s41591-020-01227-z.

Oren, Y., Tsabar, M., **Cuoco, M. S.**, Amir-Zilberstein, L., Cabanos, H. F., Hütter, J.-C., Hu, B., Thakore, P. I., Tabaka, M., Fulco, C. P., Colgan, W., Cuevas, B. M., Hurvitz, S. A., Slamon, D. J., Deik, A., Pierce, K. A., Clish, C., Hata, A. N., Zaganjor, E., Lahav, G., Politi, K., Brugge, J. S., Regev, A., "Cycling cancer persister cells arise from lineages with distinct programs." In: *Nature* 596 (7873 Aug. 13, 2021). DOI: 10.1038/s41586-021-03796-6.

Pelka, K., Hofree, M., Chen, J. H., Sarkizova, S., Pirl, J. D., Jorgji, V., Bejnood, A., Dionne, D., Ge, W. H., Xu, K. H., Chao, S. X., Zollinger, D. R., Lieb, D. J., Reeves, J. W., Fuhrman, C. A., Hoang, M. L., Delorey, T., Nguyen, L. T., Waldman, J., Klapholz, M., Wakiro, I., Cohen, O., Albers, J., Smillie, C. S., **Cuoco, M. S.**, Wu, J., Su, M.-J., Yeung, J., Vijaykumar, B., Magnuson, A. M., Asinovski, N., Moll, T., Goder-Reiser, M. N., Applebaum, A. S., Brais, L. K., DelloStritto, L. K., Denning, S. L., Phillips, S. T., Hill, E. K., Meehan, J. K., Frederick, D. T., Sharova, T., Kanodia, A., Todres, E. Z., Jané-Valbuena, J., Biton, M., Izar, B., Lambden, C. D., Clancy, T. E., Bleday, R., Melnitchouk, N., Irani, J., Kunitake, H., Berger, D. L., Srivastava, A., Hornick, J. L., Ogino, S., Rotem, A., Vigneau, S., Johnson, B. E., Corcoran, R. B., Sharpe, A. H., Kuchroo, V. K., Ng, K., Giannakis, M., Nieman, L. T., Boland, G. M., Aguirre, A. J., Anderson, A. C., Rozenblatt-Rosen, O., Regev, A., Hacohen, N., "Spatially organized multicellular immune hubs in human colorectal cancer." In: *Cell* 184 (18 Aug. 28, 2021). DOI: 10.1016/j.cell.2021.08.003.

Raundhal, M., Ghosh, S., Myers, S. A., **Cuoco, M. S.**, Singer, M., Carr, S. A., Waikar, S. S., Bonventre, J. V., Ritz, J., Stone, R. M., Steensma, D. P., Regev, A., Glimcher, L. H., "Blockade of IL-22 signaling reverses erythroid dysfunction in stress-induced anemias." In: *Nature immunology* 22 (4 Mar. 24, 2021). DOI: 10.1038/s41590-021-00895-4.

Schenkel, J. M., Herbst, R. H., Canner, D., Li, A., Hillman, M., Shanahan, S.-L., Gibbons, G., Smith, O. C., Kim, J. Y., Westcott, P., Hwang, W. L., Freed-Pastor, W. A., Eng, G., **Cuoco, M. S.**, Rogers, P., Park, J. K., Burger, M. L., Rozenblatt-Rosen, O., Cong, L., Pauken, K. E., Regev, A., Jacks, T., "Conventional type I dendritic cells maintain a reservoir of proliferative tumor-antigen specific TCF-1+ CD8+ T cells in tumor-draining lymph nodes." In: *Immunity* 54 (10 Sept. 18, 2021). DOI: 10.1016/j.immuni.2021.08.026.

Drokhlyansky, E., Smillie, C. S., Wittenberghe, N. V., Ericsson, M., Griffin, G. K., Eraslan, G., Dionne, D., **Cuoco, M. S.**, Goder-Reiser, M. N., Sharova, T., Kuksenko, O., Aguirre, A. J., Boland, G. M., Graham, D., Rozenblatt-Rosen, O., Xavier, R. J., Regev, A., "The Human and Mouse Enteric Nervous System at Single-Cell Resolution." In: *Cell* 182 (6 Sept. 2020). DOI: 10.1016/j.cell.2020.08.003.

Izar, B., Tirosh, I., Stover, E. H., Wakiro, I., **Cuoco, M. S.**, Alter, I., Rodman, C., Leeson, R., Su, M.-J., Shah, P., Iwanicki, M., Walker, S. R., Kanodia, A., Melms, J. C., Mei, S., Lin, J.-R., Porter, C. B. M., Slyper, M., Waldman, J., Jerby-Arnon, L., Ashenberg, O., Brinker, T. J., Mills, C., Rogava, M., Vigneau, S., Sorger, P. K., Garraway, L. A., Konstantinopoulos, P. A., Liu, J. F., Matulonis, U., Johnson, B. E., Rozenblatt-Rosen, O., Rotem, A., Regev, A., "A single-cell landscape of high-grade serous ovarian cancer." In: *Nature medicine* 26 (8 June 24, 2020). DOI: 10.1038/s41591-020-0926-0.

Kinker, G. S., Greenwald, A. C., Tal, R., Orlova, Z., **Cuoco, M. S.**, McFarland, J. M., Warren, A., Rodman, C., Roth, J. A., Bender, S. A., Kumar, B., Rocco, J. W., Fernandes, P. A. C. M., Mader, C. C., Keren-Shaul, H., Plotnikov, A., Barr, H., Tsherniak, A., Rozenblatt-Rosen, O., Krizhanovsky, V., Puram, S. V., Regev, A., Tirosh, I., "Pan-cancer single-cell RNA-seq identifies recurring programs of cellular heterogeneity." In: *Nature genetics* 52 (11 Nov. 2020). DOI: 10.1038/s41588-020-00726-6.

Mao, P., Cohen, O., Kowalski, K. J., Kusiel, J. G., Buendia-Buendia, J. E., **Cuoco, M. S.**, Exman, P., Wander, S. A., Waks, A. G., Nayar, U., Chung, J., Freeman, S., Rozenblatt-Rosen, O., Miller, V. A., Piccioni, F., Root, D. E., Regev, A., Winer, E. P., Lin, N. U., Wagle, N., "Acquired FGFR and FGF Alterations Confer Resistance to Estrogen Receptor (ER) Targeted Therapy in ER+ Metastatic Breast Cancer." In: *Clinical cancer research* 26 (22 July 30, 2020). DOI: 10.1158/1078-0432.CCR-19-3958.

Li, A., Herbst, R. H., Canner, D., Schenkel, J. M., Smith, O. C., Kim, J. Y., Hillman, M., Bhutkar, A., **Cuoco, M. S.**, Rappazzo, C. G., Rogers, P., Dang, C., Jerby-Arnon, L., Rozenblatt-Rosen, O., Cong, L., Birnbaum, M., Regev, A., Jacks, T., "IL-33 Signaling Alters Regulatory T Cell Diversity in Support of Tumor Development." In: *Cell reports* 29 (10 Dec. 2019). DOI: 10.1016/j.celrep.2019.10.120.

Jerby-Arnon, L., Shah, P., **Cuoco, M. S.**, Rodman, C., Su, M.-J., Melms, J. C., Leeson, R., Kanodia, A., Mei, S., Lin, J.-R., Wang, S., Rabasha, B., Liu, D., Zhang, G., Margolais, C., Ashenberg, O., Ott, P. A., Buchbinder, E. I., Haq, R., Hodi, F. S., Boland, G. M., Sullivan, R. J., Frederick, D. T., Miao, B., Moll, T., Flaherty, K. T., Herlyn, M., Jenkins, R. W., Thummalapalli, R., Kowalczyk, M. S., Cañadas, I., Schilling, B., Cartwright, A. N. R., Luoma, A. M., Malu, S., Hwu, P., Bernatchez, C., Forget, M.-A., Barbie, D. A., Shalek, A. K., Tirosh, I., Sorger, P. K., Wucherpfennig, K., Allen, E. M. V., Schadendorf, D., Johnson,

B. E., Rotem, A., Rozenblatt-Rosen, O., Garraway, L. A., Yoon, C. H., Izar, B., Regev, A., "A Cancer Cell Program Promotes T Cell Exclusion and Resistance to Checkpoint Blockade." In: *Cell* 175 (4 Nov. 2018). DOI: 10.1016/j.cell.2018.09.006.

Nayar, U., Cohen, O., Kapstad, C., **Cuoco, M. S.**, Waks, A. G., Wander, S. A., Painter, C., Freeman, S., Persky, N. S., Marini, L., Helvie, K., Oliver, N., Rozenblatt-Rosen, O., Ma, C. X., Regev, A., Winer, E. P., Lin, N. U., Wagle, N., "Acquired HER2 mutations in ER+ metastatic breast cancer confer resistance to estrogen receptor-directed therapies." In: *Nature genetics* 51 (2 Dec. 12, 2018). DOI: 10.1038/s41588-018-0287-5.

Wallrapp, A., Riesenfeld, S. J., Burkett, P. R., Abdulnour, R.-E. E., Nyman, J., Dionne, D., Hofree, M., **Cuoco, M. S.**, Rodman, C., Farouq, D., Haas, B. J., Tickle, T. L., Trombetta, J. J., Baral, P., Klose, C. S. N., Mahlakõiv, T., Artis, D., Rozenblatt-Rosen, O., Chiu, I. M., Levy, B. D., Kowalczyk, M. S., Regev, A., Kuchroo, V. K., "The neuropeptide NMU amplifies ILC2-driven allergic lung inflammation." In: *Nature* 549 (7672 Sept. 14, 2017). DOI: 10.1038/nature24029.

Pope, W. H., Bowman, C. A., Russell, D. A., Jacobs-Sera, D., Asai, D. J., Cresawn, S. G., Jacobs, W. R., Hendrix, R. W., Lawrence, J. G., Hatfull, G. F., "Whole genome comparison of a large collection of mycobacteriophages reveals a continuum of phage genetic diversity." In: *eLife* 4 (Apr. 29, 2015). DOI: 10.7554/eLife.06416.

Research: Preprint

Boyle, E. A., Goldberg, G., Schmok, J. C., Burgado, J., Izidro Layng, F., Grunwald, H. A., Balotin, K. M., **Cuoco, M. S.**, Chang, K.-C., Ecklu-Mensah, G., Arakaki, A. K. S., Ahmed, N., Garcia Arceo, X., Jagannatha, P., Pekar, J., Iyer, M., Alliance, D., Yeo, G. W., "Junior scientists spotlight social bonds in seminars for diversity, equity, and inclusion in STEM". In: *BioRxiv* (2022). DOI: 10.1101/2021.12.05.471284.

Eraslan, G., Drokhlyansky, E., Anand, S., Subramanian, A., Fiskin, E., Slyper, M., Wang, J., Van Wittenberghe, N., Rouhana, J. M., Waldman, J., Ashenberg, O., Dionne, D., Win, T. S., **Cuoco, M. S.**, Kuksenko, O., Branton, P. A., Marshall, J. L., Greka, A., Getz, G., Segre, A. V., Aguet, F., Rozenblatt-Rosen, O., Ardlie, K. G., Regev, A., "Single-nucleus cross-tissue molecular reference maps to decipher disease gene function". In: *BioRxiv* (2021). DOI: 10.1101/2021.07.19.452954.

Pelka, K., Hofree, M., Chen, J., Sarkizova, S., Pirl, J. D., Jorgji, V., Bejnood, A., Dionne, D., Ge, W. H., Xu, K. H., Chao, S. X., Zollinger, D. R., Lieb, D. J., Reeves, J. W., Fuhrman, C. A., Hoang, M. L., Delorey, T., Nguyen, L. T., Waldman, J., Klapholz, M., Wakiro, I., Cohen, O., Smillie, C. S., **Cuoco, M. S.**, Wu, J., Su, M.-j., Yeung, J., Vijaykumar, B., Magnuson, A. M., Asinovski, N., Moll, T., Goder-Reiser, M. N., Applebaum, A. S., Brais, L. K., DelloStritto, L. K., Denning, S. L., Phillips, S. T., Hill, E. K., Meehan, J. K., Frederick, D. T., Sharova, T., Kanodia, A., Todres, E. Z., J, "Multicellular immune hubs and their organization in MMRd and MMRp colorectal cancer". In: *BioRxiv* (2021). DOI: 10.1101/2021.01.30.426796.

Subramanian, A., Vernon, K., Zhou, Y., Marshall, J., Alimova, M., Zhang, F., Slyper, M., Waldman, J., Montesinos, M., Dionne, D., Nguyen, L., **Cuoco, M. S.**, Dubinsky, D., Purnell, J., Keller, K., Turner, S. H., Grinkevich, E., Ghoshal, A., Weins, A., Villani, A.-C., Chang, S., Rosenblatt-Rosen, O., Shaw, J. L., Regev, A., Greka, A., "Obesity-instructed TREM2high macrophages identified by comparative analysis of diabetic mouse and human kidney at single cell resolution". In: *BioRxiv* (2021). DOI: 10.1101/2021.05.30.446342.

Frangieh, C. J., Melms, J. C., Thakore, P. I., Geiger-Schuller, K. R., Ho, P., Luoma, A. M., Cleary, B. R., Malu, S., **Cuoco, M. S.**, Zhao, M., Rogava, M., Hovey, L., Rotem, A., Bernatchez, C., Wucherpfennig, K. W., Johnson, B. E., Rozenblatt-Rosen, O., Schadendorf, D., Regev, A., Izar, B., "Multi-modal pooled Perturb-CITE-Seq screens in patient models define novel mechanisms of cancer immune evasion". In: *BioRxiv* (2020). DOI: 10.1101/2020.09.01.267211.

He, M. X., **Cuoco, M. S.**, Crowdis, J., Bosma-Moody, A., Zhang, Z., Bi, K., Kanodia, A., Su, M.-J., Rodman, C., DelloStritto, L., Shah, P., Burke, K. P., Izar, B., Bakouny, Z., Tewari, A. K., Liu, D., Camp, S. Y., Vokes, N. I., Park, J., Vigneau, S., Fong, L., Rozenblatt-Rosen, O., Regev, A., Rotem, A., Taplin, M.-E., Van Allen, E. M., "Transcriptional mediators of treatment resistance in lethal prostate cancer". In: *BioRxiv* (2020). DOI: 10.1101/2020.03.19.998450.

Hwang, W. L., Jagadeesh, K. A., Guo, J. A., Hoffman, H. I., Yadollahpour, P., Mohan, R., Drokhlyansky, E., Van Wittenberghe, N., Ashenberg, O., Farhi, S., Schapiro, D., Reeves, J. W., Zollinger, D. R., Eng, G., Schenkel,

J. M., Freed-Pastor, W. A., Rodrigues, C., Gould, J., Lambden, C., Porter, C., Tsankov, A., Dionne, D., Abbondanza, D., Waldman, J., **Cuoco, M. S.**, Nguyen, L., Delorey, T., Phillips, D., Ciprani, D., Kern, M., Mehta, A., Fuhrman, K., Fropf, R., Beechem, J. M., Loeffler, J. S., Ryan, D. P., Weekes, C. D., Ting, D. T., Ferrone, C. R., Wo, J. Y., Hong, T. S., Aguirre, A. J., Rozen, "Single-nucleus and spatial transcriptomics of archival pancreatic cancer reveals multi-compartment reprogramming after neoadjuvant treatment". In: *BioRxiv* (2020). DOI: 10.1101/2020.08.25.267336.

Muus, C., Luecken, M. D., Eraslan, G., Waghray, A., Heimberg, G., Sikkema, L., Kobayashi, Y., Vaishnav, E. D., Subramanian, A., Smillie, C., Jagadeesh, K., Duong, E. T., Fiskin, E., Torlai Triglia, E., Becavin, C., Ansari, M., Cai, P., Lin, B., Buchanan, J., Chen, S., Shu, J., Haber, A. L., Chung, H., Montoro, D. T., Adams, T., Aliee, H., Allon, S. J., Andrusivova, Z., Angelidis, I., Ashenberg, O., Bassler, K., Becavin, C., Benhar, I., Bergenstrahle, J., Bergenstrahle, L., Bolt, L., Braun, E., Bui, L. T., Chaffin, M., Chichelnitskiy, E., Chiou, J., Conlon, T. M., **Cuoco, M. S.**, Deprez, M., Fisc, "Integrated analyses of single-cell atlases reveal age, gender, and smoking status associations with cell type-specific expression of mediators of SARS-CoV-2 viral entry and highlights inflammatory programs in putative target cells". In: *BioRxiv* (2020). DOI: 10.1101/2020.04.19.049254.

Oren, Y., Tsabar, M., Cabanos, H. F., **Cuoco, M. S.**, Zaganjor, E., Thakore, P. I., Tabaka, M., Fulco, C. P., Hurvitz, S. A., Slamon, D. J., Lahav, G., Hata, A., Brugge, J. S., Regev, A., "Cycling cancer persister cells arise from lineages with distinct transcriptional and metabolic programs". In: *BioRxiv* (2020). DOI: 10.1101/2020.06.05.136358.

Subramanian, A., Vernon, K., Slyper, M., Waldman, J., Luecken, M. D., Gosik, K., Dubinsky, D., **Cuoco, M. S.**, Keller, K., Purnell, J., Nguyen, L., Dionne, D., Rozenblatt-Rosen, O., Weins, A., Network, H. C. A. L. B., Regev, A., Greka, A., "RAAS blockade, kidney disease, and expression of ACE2, the entry receptor for SARS-CoV-2, in kidney epithelial and endothelial cells". In: *BioRxiv* (2020). DOI: 10.1101/2020.06.23.167098.

Drokhlyansky, E., Smillie, C. S., Van Wittenberghe, N., Ericsson, M., Griffin, G. K., Dionne, D., **Cuoco, M. S.**, Goder-Reiser, M. N., Sharova, T., Aguirre, A. J., Boland, G. M., Graham, D., Rozenblatt-Rosen, O., Xavier, R. J., Regev, A., "The enteric nervous system of the human and mouse colon at a single-cell resolution". In: *BioRxiv* (2019). DOI: 10.1101/746743.

Jerby, L., Neftel, C., Shore, M. E., McBride, M. J., Haas, B., Izar, B., Weissman, H. R., Volorio, A., Boulay, G., Cironi, L., Richman, A. R., Broye, L. C., Gurski, J. M., Luo, C. C., Mylvaganam, R., Nguyen, L., Mei, S., Melms, J., Georgescu, C., Cohen, O., Buendia-Buendia, J. E., **Cuoco, M. S.**, Labes, D., Zollinger, D. R., Beechem, J. M., Nielsen, P., Chebib, I., Cote, G., Choy, E., Letovanec, I., Cherix, S., Wagle, N., Sorger, P. K., Haynes, A. B., Mullen, J. T., Stamenkovic, I., Rivera, M. N., Kadoch, C., Rozenblatt-Rosen, O., Suva, M. L., Riggi, N., Regev, A., "Opposing immune and genetic forces shape oncogenic programs in synovial sarcoma". In: *BioRxiv* (2019). DOI: 10.1101/724302.

Kinker, G. S., Greenwald, A. C., Tal, R., Orlova, Z., **Cuoco, M. S.**, McFarland, J. M., Warren, A., Rodman, C., Roth, J. A., Bender, S. A., Kumar, B., Rocco, J. W., Fernandes, P. A., Mader, C. C., Keren-Shaul, H., Plotnikov, A., Barr, H., Tsherniak, A., Rozenblatt-Rosen, O., Krizhanovsky, V., Puram, S. V., Regev, A., Tirosh, I., "Pan-cancer single cell RNA-seq uncovers recurring programs of cellular heterogeneity". In: *BioRxiv* (2019). DOI: 10.1101/807552.

Li, A., Herbst, R. H., Canner, D., Schenkel, J. M., Smith, O. C., Kim, J. Y., Hillman, M., Bhutkar, A., **Cuoco, M. S.**, Rappazzo, C. G., Rogers, P., Dang, C. Q., Rozenblatt-Rosen, O., Cong, L., Birnbaum, M., Regev, A., Jacks, T., "Longitudinal single cell profiling of regulatory T cells identifies IL-33 as a driver of tumor immunosuppression". In: *BioRxiv* (2019). DOI: 10.1101/512905.

Mao, P., Cohen, O., Kowalski, K. J., Kusiel, J. G., Buendia-Buendia, J. E., **Cuoco, M. S.**, Exman, P., Wander, S. A., Waks, A. G., Nayar, U., Chung, J., Freeman, S., Rozenblatt-Rosen, O., Miller, V. A., Federica Piccioni, F., Root, D. E., Regev, A., Winer, E. P., Lin, N. U., Wagle, N., "Acquired FGFR and FGF alterations confer resistance to estrogen receptor (ER) targeted therapy in ER+ metastatic breast cancer". In: *BioRxiv* (2019). DOI: 10.1101/605436.

Mentorship

Joelle Faybishenko Fall 2022 – present
Undergraduate Student, UC San Diego
Gage Lab, Salk Institute for Biological Studies La Jolla, California

Evan Lee Fall 2022 – present
Undergraduate Student, UC San Diego
Biology Undergraduate and Master's Mentorship, La Jolla, California

Rohini Gadde Fall 2021 – present
Undergraduate Student, UC San Diego
Mukamel Lab, UC San Diego La Jolla, California

Anise Porter Fall 2020 – present
Undergraduate Student, UC San Diego
Biology Undergraduate and Master's Mentorship, La Jolla, California

Jesslyn Goh Fall 2019 – 2020
Undergraduate Student, Wellesley College
Regev Lab, Broad Institute Cambridge, Massachusetts
Current: Masters Student, Harvard University Boston, Massachusetts

Teaching

Bootcamp instructor Fall 2021, Fall 2022
Bioinformatics and Systems Biology, UCSD La Jolla, California

Teaching assistant Spring 2015
Department of Biology, Trinity College Hartford, Connecticut
BIOL 224: Genetics

Tutor 2014 – 2016
Department of Biology, Trinity College Hartford, Connecticut
BIOL 182: Evolution of Life
BIOL 183: Cellular Basis of Life
BIOL 224: Genetics

Service / Outreach

Committee Member 2021 – Present
Advisory Committee on Diversity La Jolla, California
Salk Institute for Biological Studies

Director of Onboarding 2021 – Present
Symposium Organizer 2022
Graduate Bioinformatics Council La Jolla, California
UCSD Bioinformatics and Systems Biology

Committee Member 2020 – Present
Diversity Equity and Inclusion Committee La Jolla, California
UCSD Bioinformatics and Systems Biology

Seminar Organizer 2021
Symposium Organizer Fall 2021
Diversity and Science Lecture Series La Jolla, California
UCSD

Volunteer - High Tech High Mesa Fall 2021
Volunteer - La Jolla High School Fall 2021
SciChats@Salk Education Outreach La Jolla, California
Salk Institute for Biological Studies

Proficiencies / Skills

Programming Languages

R, Python, Bash