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# Michael Sellers Cuoco

PhD Student, Bioinformatics and Systems Biology

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✉ 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

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**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**

- 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., Beroukhi, R., “Cancer aneuploidies are shaped primarily by effects on tumour fitness.” In: *Nature* (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.**, Kuksenkov, 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 maturation 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., Dellostretto, 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., Wucherpennig, 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., Broeye, 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., Wucherpennig, 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., Waghay, 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., Bergensträhle, J., Bergensträhle, 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., Kusieli, 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., Thummalaipalli, 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., Mahlaköiv, 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., Asinowski, 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., Wucherpennig, 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., Waghay, 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., Kusiak, 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

<b>Joelle Faybishenko</b>	Fall 2022 – present
Undergraduate Student, UC San Diego	
<i>Gage Lab, Salk Institute for Biological Studies</i>	La Jolla, California
<b>Evan Lee</b>	Fall 2022 – present
Undergraduate Student, UC San Diego	
<i>Biology Undergraduate and Master’s Mentorship,</i>	La Jolla, California
<b>Rohini Gadde</b>	Fall 2021 – present

	Undergraduate Student, UC San Diego <i>Mukamel Lab, UC San Diego</i>	La Jolla, California
	<b>Anise Porter</b> Undergraduate Student, UC San Diego <i>Biology Undergraduate and Master's Mentorship,</i>	Fall 2020 – present La Jolla, California
	<b>Jesslyn Goh</b> Undergraduate Student, Wellesley College <i>Regev Lab, Broad Institute</i>	Fall 2019 – 2020 Cambridge, Massachusetts
	<b>Current:</b> Masters Student, Harvard University	Boston, Massachusetts
Teaching	<b>Bootcamp instructor</b> <i>Bioinformatics and Systems Biology, UCSD</i>	Fall 2021, Fall 2022 La Jolla, California
	<b>Teaching assistant</b> <i>Department of Biology, Trinity College</i> BIOL 224: Genetics	Spring 2015 Hartford, Connecticut
	<b>Tutor</b> <i>Department of Biology, Trinity College</i> BIOL 182: Evolution of Life BIOL 183: Cellular Basis of Life BIOL 224: Genetics	2014 – 2016 Hartford, Connecticut
Service / Outreach	<b>Committee Member</b> <i>Advisory Committee on Diversity</i> <i>Salk Institute for Biological Studies</i>	2021 – Present La Jolla, California
	<b>Director of Onboarding</b> <b>Symposium Organizer</b> <i>Graduate Bioinformatics Council</i> <i>UCSD Bioinformatics and Systems Biology</i>	2021 – Present 2022 La Jolla, California
	<b>Committee Member</b> <i>Diversity Equity and Inclusion Committee</i> <i>UCSD Bioinformatics and Systems Biology</i>	2020 – Present La Jolla, California
	<b>Seminar Organizer</b> <b>Symposium Organizer</b> <i>Diversity and Science Lecture Series</i> <i>UCSD</i>	2021 Fall 2021 La Jolla, California
	<b>Volunteer</b> - High Tech High Mesa	Fall 2021

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**Volunteer** - La Jolla High School  
*SciChats@Salk Education Outreach*  
*Salk Institute for Biological Studies*

Fall 2021  
La Jolla, California

Proficiencies / Skills

**Programming Languages**  
R, Python, Bash