Stanford



Silvana Maria Konermann

Assistant Professor of Biochemistry

Bio

BIO

Silvana is an Assistant Professor of Biochemistry at Stanford and Executive Director and Core Investigator at Arc Institute. Her research laboratory aims to understand the molecular pathways that drive the development of Alzheimer's disease using next-generation functional genomics, with the long-term goal of developing rationally targeted therapeutics for neurodegenerative disorders. She received her Ph.D. in Neuroscience from MIT. Silvana's pioneering work on tools to directly perturb the transcriptomic landscape of the cell using CRISPR has been recognized by her faculty appointment as a Chan Zuckerberg Biohub Investigator and Hanna Gray Fellow of the Howard Hughes Medical Institute.

ACADEMIC APPOINTMENTS

- Assistant Professor, Biochemistry
- Member, Bio-X

Teaching

COURSES

2023-24

- Biochemistry Mini-Course: BIOC 202 (Aut)

STANFORD ADVISEES

Doctoral Dissertation Advisor (AC)

Connor Duffy

Publications

PUBLICATIONS

- **Bridge RNAs direct modular and programmable recombination of target and donor DNA.** *bioRxiv : the preprint server for biology*
  Durrant, M. G., Perry, N. T., Pai, J. J., Jangid, A. R., Athukoralage, J. S., Hiraizumi, M., McSpedon, J. P., Pawluk, A., Nishimasu, H., Konermann, S., Hsu, P. D.
  2024

- **Deep learning and CRISPR-Cas13d ortholog discovery for optimized RNA targeting.** *Cell systems*
  Wei, J., Lotfy, P., Faizi, K., Baungaard, S., Gibson, E., Wang, E., Slabodkin, H., Kinnaman, E., Chandrasekaran, S., Kitano, H., Durrant, M. G., Duffy, C. V., Pawluk, et al
  2023

- **The KDM6A-KMT2D-p300 axis regulates susceptibility to diverse coronaviruses by mediating viral receptor expression.** *PLoS pathogens*

Wei, J., Alfajaro, M. M., Cai, W. L., Graziano, V. R., Strine, M. S., Filler, R. B., Biering, S. B., Sarnik, S. A., Patel, S., Menasche, B. L., Compton, S. R., Konermann, S., Hsu, et al

2023; 19 (7): e1011351

- **DYRK1A promotes viral entry of highly pathogenic human coronaviruses in a kinase-independent manner.** *PLoS biology*

  Strine, M. S., Cai, W. L., Wei, J., Alfajaro, M. M., Filler, R. B., Biering, S. B., Sarnik, S., Chow, R. D., Patil, A., Cervantes, K. S., Collings, C. K., DeWeirdt, P. C., Hanna, et al

  2023; 21 (6): e3002097

- **Genome-wide bidirectional CRISPR screens identify mucins as host factors modulating SARS-CoV-2 infection.** *Nature genetics*

  Biering, S. B., Sarnik, S. A., Wang, E., Zengel, J. R., Leist, S. R., Schafer, A., Sathyan, V., Hawkins, P., Okuda, K., Tau, C., Jangid, A. R., Duffy, C. V., Wei, et al

  2022

- **GENOME-WIDE, BIDIRECTIONAL CRISPR SCREENS IDENTIFY MUCINS AS CRITICAL MODULATORS OF SARS-COV-2 INFECTION**

  Biering, S. B., Sarnik, S., Wang, E., Sathyan, V., Nguyenla, X., Zengel, J., Van Dis, E., Yamashiro, L., Kim, J., Fox, D., Carette, J., Stanley, S., Konermann, et al

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