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Bio

ACADEMIC APPOINTMENTS

- Basic Life Research Scientist, Bioengineering

Publications

PUBLICATIONS

- **Randomly barcoded transposon mutant libraries for gut commensals II: Applying libraries for functional genetics.** *Cell reports*
Voogdt, C. G., Tripathi, S., Bassler, S. O., McKeithen-Mead, S. A., Guiberson, E. R., Koumoutsis, A., Bravo, A. M., Buie, C., Zimmermann, M., Sonnenburg, J. L., Typas, A., Deutschbauer, A. M., Shiver, et al
2023; 43 (1): 113519
- **Randomly barcoded transposon mutant libraries for gut commensals I: Strategies for efficient library construction.** *Cell reports*
Tripathi, S., Voogdt, C. G., Bassler, S. O., Anderson, M., Huang, P. H., Sakenova, N., Capraz, T., Jain, S., Koumoutsis, A., Bravo, A. M., Trotter, V., Zimmerman, M., Sonnenburg, et al
2023; 43 (1): 113517
- **A mutant fitness compendium in Bifidobacteria reveals molecular determinants of colonization and host-microbe interactions.** *bioRxiv : the preprint server for biology*
Shiver, A. L., Sun, J., Culver, R., Violette, A., Wynter, C., Nieckarz, M., Mattiello, S. P., Sekhon, P. K., Friess, L., Carlson, H. K., Wong, D., Higginbottom, S., Weglarz, et al
2023
- **Construction and characterization of a genome-scale ordered mutant collection of Bacteroides thetaiotaomicron.** *BMC biology*
Arjes, H. A., Sun, J., Liu, H., Nguyen, T. H., Culver, R. N., Celis, A. I., Walton, S. J., Vasquez, K. S., Yu, F. B., Xue, K. S., Newton, D., Zermeno, R., Weglarz, et al
2022; 20 (1): 285
- **M-TUBE enables large-volume bacterial gene delivery using a high-throughput microfluidic electroporation platform.** *PLoS biology*
Huang, P., Chen, S., Shiver, A. L., Culver, R. N., Huang, K. C., Buie, C. R.
2022; 20 (9): e3001727
- **Design, construction, and invivo augmentation of a complex gut microbiome.** *Cell*
Cheng, A. G., Ho, P., Aranda-Diaz, A., Jain, S., Yu, F. B., Meng, X., Wang, M., Iakiviak, M., Nagashima, K., Zhao, A., Murugkar, P., Patil, A., Atabakhsh, et al
2022
- **Rapid ordering of barcoded transposon insertion libraries of anaerobic bacteria.** *Nature protocols*
Shiver, A. L., Culver, R., Deutschbauer, A. M., Huang, K. C.
2021
- **Chemical-genetic interrogation of RNA polymerase mutants reveals structure-function relationships and physiological tradeoffs.** *Molecular cell*

Shiver, A. L., Osadnik, H., Peters, J. M., Mooney, R. A., Wu, P. I., Henry, K. K., Braberg, H., Krogan, N. J., Hu, J. C., Landick, R., Huang, K. C., Gross, C. A.
2021; 81 (10): 2201

● **Functional genetics of human gut commensal *Bacteroides thetaiotaomicron* reveals metabolic requirements for growth across environments.** *Cell reports*

Liu, H. n., Shiver, A. L., Price, M. N., Carlson, H. K., Trotter, V. V., Chen, Y. n., Escalante, V. n., Ray, J. n., Hern, K. E., Petzold, C. J., Turnbaugh, P. J., Huang, K. C., Arkin, et al
2021; 34 (9): 108789

● **Genetic interaction mapping informs integrative structure determination of protein complexes** *SCIENCE*

Braberg, H., Echeverria, I., Bohn, S., Cimermancic, P., Shiver, A., Alexander, R., Xu, J., Shales, M., Dronamraju, R., Jiang, S., Dwivedi, G., Bogdanoff, D., Chaung, et al
2020; 370 (6522): 1294+

● **Mechanically resolved imaging of bacteria using expansion microscopy.** *PLoS biology*

Lim, Y., Shiver, A. L., Khariton, M., Lane, K. M., Ng, K. M., Bray, S. R., Qin, J., Huang, K. C., Wang, B.
2019; 17 (10): e3000268

● **Cutting the Gordian Knot of the Microbiota** *MOLECULAR CELL*

Vasquez, K. S., Shiver, A. L., Huang, K.
2018; 70 (5): 765–67

● **A genome-wide screen in *Escherichia coli* reveals that ubiquinone is a key antioxidant for metabolism of long-chain fatty acids** *JOURNAL OF BIOLOGICAL CHEMISTRY*

Agrawal, S., Jaswal, K., Shiver, A. L., Balecha, H., Patra, T., Chaba, R.
2017; 292 (49): 20086–99

● **A Comprehensive, CRISPR-based Functional Analysis of Essential Genes in Bacteria** *CELL*

Peters, J. M., Colavin, A., Shi, H., Czarny, T. L., Larson, M. H., Wong, S., Hawkins, J. S., Lu, C. H., Koo, B., Marta, E., Shiver, A. L., Whitehead, E. H., Weissman, et al
2016; 165 (6): 1493-1506