

## Benjamin Doughty

Ph.D. Student in Genetics, admitted Autumn 2020

### Publications

---

#### PUBLICATIONS

- **Single-molecule states link transcription factor binding to gene expression.** *Nature*  
Doughty, B. R., Hinks, M. M., Schaepe, J. M., Marinov, G. K., Thurm, A. R., Rios-Martinez, C., Parks, B. E., Tan, Y., Marklund, E., Dubocanin, D., Bintu, L., Greenleaf, W. J.  
2024
- **Genome-wide enhancer maps link risk variants to disease genes.** *Nature*  
Nasser, J., Bergman, D. T., Fulco, C. P., Guckelberger, P., Doughty, B. R., Patwardhan, T. A., Jones, T. R., Nguyen, T. H., Ulirsch, J. C., Lekschas, F., Mualim, K., Natri, H. M., Weeks, et al  
2021
- **HyPR-seq: Single-cell quantification of chosen RNAs via hybridization and sequencing of DNA probes.** *Proceedings of the National Academy of Sciences of the United States of America*  
Marshall, J. L., Doughty, B. R., Subramanian, V., Guckelberger, P., Wang, Q., Chen, L. M., Rodrigues, S. G., Zhang, K., Fulco, C. P., Nasser, J., Grinkevich, E. J., Noel, T., Mangiameli, et al  
2020; 117 (52): 33404–13
- **Rewriting regulatory DNA to dissect and reprogram gene expression.** *Cell*  
Martyn, G. E., Montgomery, M. T., Jones, H., Guo, K., Doughty, B. R., Linder, J., Bisht, D., Xia, F., Cai, X. S., Chen, Z., Cochran, K., Lawrence, K. A., Munson, et al  
2025
- **Thermodynamic principles link in vitro transcription factor affinities to single-molecule chromatin states in cells.** *bioRxiv : the preprint server for biology*  
Schaepe, J. M., Fries, T., Doughty, B. R., Crocker, O. J., Hinks, M. M., Marklund, E., Greenleaf, W. J.  
2025
- **The chromatin landscape of the histone-possessing *Bacteriovorax* bacteria.** *Genome research*  
Marinov, G. K., Doughty, B., Kundaje, A., Greenleaf, W. J.  
2024
- **Deciphering the impact of genomic variation on function.** *Nature*  
2024; 633 (8028): 47-57
- **Multicenter integrated analysis of noncoding CRISPRi screens.** *Nature methods*  
Yao, D., Tycko, J., Oh, J. W., Bounds, L. R., Gosai, S. J., Lataniotis, L., Mackay-Smith, A., Doughty, B. R., Gabdank, I., Schmidt, H., Guerrero-Altamirano, T., Siklenka, K., Guo, et al  
2024
- **Single-molecule chromatin configurations link transcription factor binding to expression in human cells.** *bioRxiv : the preprint server for biology*  
Doughty, B. R., Hinks, M. M., Schaepe, J. M., Marinov, G. K., Thurm, A. R., Rios-Martinez, C., Parks, B. E., Tan, Y., Marklund, E., Dubocanin, D., Bintu, L., Greenleaf, W. J.  
2024
- **Rewriting regulatory DNA to dissect and reprogram gene expression.** *bioRxiv : the preprint server for biology*  
Martyn, G. E., Montgomery, M. T., Jones, H., Guo, K., Doughty, B. R., Linder, J., Chen, Z., Cochran, K., Lawrence, K. A., Munson, G., Pampari, A., Fulco, C. P., Kelley, et al

2023

- **An encyclopedia of enhancer-gene regulatory interactions in the human genome.** *bioRxiv : the preprint server for biology*  
Gschwind, A. R., Mualim, K. S., Karbalayghareh, A., Sheth, M. U., Dey, K. K., Jagoda, E., Nurtdinov, R. N., Xi, W., Tan, A. S., Jones, H., Ma, X. R., Yao, D., Nasser, et al  
2023
- **The landscape of the histone-organized chromatin of Bdellovibrionota bacteria.** *bioRxiv : the preprint server for biology*  
Marinov, G. K., Doughty, B., Kundaje, A., Greenleaf, W. J.  
2023
- **Single-cell chromatin state transitions during epigenetic memory formation.** *bioRxiv : the preprint server for biology*  
Fujimori, T., Rios-Martinez, C., Thurm, A. R., Hinks, M. M., Doughty, B. R., Sinha, J., Le, D., Hafner, A., Greenleaf, W. J., Boettiger, A. N., Bintu, L.  
2023
- **Activity-by-contact model of enhancer-promoter regulation from thousands of CRISPR perturbations** *NATURE GENETICS*  
Fulco, C. P., Nasser, J., Jones, T. R., Munson, G., Bergman, D. T., Subramanian, V., Grossman, S. R., Anyoha, R., Doughty, B. R., Patwardhan, T. A., Nguyen, T. H., Kane, M., Perez, et al  
2019; 51 (12): 1664-+