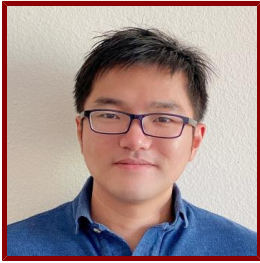


Stanford



Han Sun

- Postdoctoral Scholar, Genetics
- Biostatistician 2, Pediatrics - Endocrinology

SUPERVISORS

- Anna Gloyn

Bio

BIO

Han had been a postdoc with Dr. Steinmetz at the genetics department for five years, working on both cancers and heart diseases, trying to understand the mechanisms linking from variants to disease phenotypes. This led to a few very interesting findings of aberrant splicing regulation, such as splicing-mediated readthrough stabilization (SRS), one more mechanism for oncogene activation in multiple types of cancers, and tissue-specific splicing of a mitochondrial inner membrane protein, suggesting a molecular connection between deficiency in energy-supplying and dilated cardiomyopathy.

After being a senior computational biologist with Dr. Gloyn, who has been dedicated to the research of type 2 diabetes for decades, Han switched to the field of this multifactorial metabolic disease. It did take some courage to make such a switch at his post-postdoc stage, however, Han has a consistent interest in studying PG&E, which is not pacific gas and electric nearby, but the interaction between phenotype, genotype, and environment. With years of hands-on experience in statistical modeling and the analysis of next-generation sequencing and mass spectrometry data, in addition to a good understanding of disease genetics, cancer biology, and systems biology, Han is highly confident that he will enjoy the adventure and contribute to our understanding of diabetes.

INSTITUTE AFFILIATIONS

- Member (Postdoc), Cardiovascular Institute

STANFORD ADVISORS

- Lars Steinmetz, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Proteomic predictors of individualized nutrient-specific insulin secretion in health and disease.** *Cell metabolism*
Kolic, J., Sun, W. G., Cen, H. H., Ewald, J. D., Rogalski, J. C., Sasaki, S., Sun, H., Rajesh, V., Xia, Y. H., Moravcova, R., Skovsø, S., Spigelman, A. F., Manning Fox, et al
2024; 36 (7): 1619-1633.e5
- **Heterogeneity of increased biological age in type 2 diabetes correlates with differential tissue DNA methylation, biological variables, and pharmacological treatments.** *GeroScience*
Cortez, B. N., Pan, H., Hinthorn, S., Sun, H., Neretti, N., Gloyn, A. L., Aguayo-Mazzucato, C.
2023

- **PAX4 loss of function increases diabetes risk by altering human pancreatic endocrine cell development.** *Nature communications*
Lau, H. H., Krentz, N. A., Abaitua, F., Perez-Alcantara, M., Chan, J. W., Ajeian, J., Ghosh, S., Lee, Y., Yang, J., Thaman, S., Champon, B., Sun, H., Jha, et al
2023; 14 (1): 6119
- **Loss of RREB1 in pancreatic beta cells reduces cellular insulin content and affects endocrine cell gene expression.** *Diabetologia*
Mattis, K. K., Krentz, N. A., Metzendorf, C., Abaitua, F., Spigelman, A. F., Sun, H., Ikle, J. M., Thaman, S., Rottner, A. K., Bautista, A., Mazzaferro, E., Perez-Alcantara, M., Manning Fox, et al
2023
- **Inferring causal genes at type 2 diabetes GWAS loci through chromosome interactions in islet cells.** *Wellcome open research*
Torres, J. M., Sun, H., Nylander, V., Downes, D. J., van de Bunt, M., McCarthy, M. I., Hughes, J. R., Gloyn, A. L.
2023; 8: 165
- **A genome-wide CRISPR screen identifies CALCOCO2 as a regulator of beta cell function influencing type 2 diabetes risk.** *Nature genetics*
Rottner, A. K., Ye, Y., Navarro-Guerrero, E., Rajesh, V., Pollner, A., Bevacqua, R. J., Yang, J., Spigelman, A. F., Baronio, R., Bautista, A., Thomsen, S. K., Lyon, J., Nawaz, et al
2022
- **Zmiz1 is required for mature β -cell function and mass expansion upon high fat feeding.** *Molecular metabolism*
Alghamdi, T. A., Krentz, N. A., Smith, N., Spigelman, A. F., Rajesh, V., Jha, A., Ferdaoussi, M., Suzuki, K., Yang, J., Manning Fox, J. E., Sun, H., Sun, Z., Gloyn, et al
2022: 101621
- **Patient-derived gene and protein expression signatures of NGLY1 deficiency.** *Journal of biochemistry*
Rauscher, B., Mueller, W. F., Clauder-Munster, S., Jakob, P., Islam, M. S., Sun, H., Ghidelli-Disse, S., Boesche, M., Bantscheff, M., Pflaumer, H., Collier, P., Haase, B., Chen, et al
2021
- **Single-molecule, full-length transcript isoform sequencing reveals disease-associated RNA isoforms in cardiomyocytes.** *Nature communications*
Zhu, C., Wu, J., Sun, H., Briganti, F., Meder, B., Wei, W., Steinmetz, L. M.
2021; 12 (1): 4203
- **A Circulating Bioreactor Reprograms Cancer Cells Toward a More Mesenchymal Niche.** *Advanced biosystems*
Calamak, S., Ermis, M., Sun, H., Islam, S., Sikora, M., Nguyen, M., Hasirci, V., Steinmetz, L. M., Demirci, U.
2020; 4 (2): e1900139
- **iPSC Modeling of RBM20-Deficient DCM Identifies Upregulation of RBM20 as a Therapeutic Strategy.** *Cell reports*
Briganti, F. n., Sun, H. n., Wei, W. n., Wu, J. n., Zhu, C. n., Liss, M. n., Karakikes, I. n., Rego, S. n., Cipriano, A. n., Snyder, M. n., Meder, B. n., Xu, Z. n., Millat, et al
2020; 32 (10): 108117
- **Loss of N-glycanase 1 Alters Transcriptional and Translational Regulation in K562 Cell Lines.** *G3 (Bethesda, Md.)*
Mueller, W. F., Jakob, P. n., Sun, H. n., Clauder-Münster, S. n., Ghidelli-Disse, S. n., Ordonez, D. n., Boesche, M. n., Bantscheff, M. n., Collier, P. n., Haase, B. n., Benes, V. n., Paulsen, M. n., Sehr, et al
2020
- **Dysregulated ribonucleoprotein granules promote cardiomyopathy in RBM20 gene-edited pigs.** *Nature medicine*
Schneider, J. W., Oommen, S. n., Qureshi, M. Y., Goetsch, S. C., Pease, D. R., Sundsbak, R. S., Guo, W. n., Sun, M. n., Sun, H. n., Kuroyanagi, H. n., Webster, D. A., Coutts, A. W., Holst, et al
2020
- **Biological plasticity rescues target activity in CRISPR knock outs.** *Nature methods*
Smits, A. H., Ziebell, F. n., Joberty, G. n., Zinn, N. n., Mueller, W. F., Clauder-Münster, S. n., Eberhard, D. n., Fälth Savitski, M. n., Grandi, P. n., Jakob, P. n., Michon, A. M., Sun, H. n., Tessmer, et al
2019