Stanford

Anna L Gloyn

Professor of Pediatrics (Endocrinology) and of Genetics

Pediatrics - Endocrinology and Diabetes

CONTACT INFORMATION

- **Administrative Associate**

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Bio

BIO

Dr Anna Gloyn joined the faculty at Stanford University in February 2020 after sixteen years at the University of Oxford, UK. Dr Gloyn completed her DPhil at the University of Oxford under the supervision of the late Professor Robert Turner. Her post-doctoral training was carried out at the University of Exeter under the mentorship of Professors Andrew Hattersley & Sian Ellard and at the University of Pennsylvania in Philadelphia under the mentorship of Professor Franz Matschinsky. In 2004 she returned to Oxford with a Diabetes UK RD Lawrence Career Development Fellowship and established an independent research group focused on understanding beta-cell function through the investigation of genetic variants causally implicated in monogenic diabetes. In 2011 she was awarded a prestigious Wellcome Senior Fellowship in Basic Biomedical Science which she successfully renewed in 2016 and transferred to Stanford when she relocated.

ACADEMIC APPOINTMENTS

- Professor, Pediatrics - Endocrinology and Diabetes
- Professor, Genetics
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)
- Faculty Fellow, Sarafan ChEM-H

ADMINISTRATIVE APPOINTMENTS

- Associate Chair for Basic Science Research, Department of Pediatrics, (2020- present)
- Co-Director of the Pilot & Feasibility Program, Stanford Diabetes Research Center, (2023- present)
- Co-Director of Enrichment Program, Stanford Diabetes Research Center, (2023- present)
- Co-Director of Recruitment for Physician-Scientist Training Program, Pediatrics Residency Program, (2022- present)
- Co-Lead for Basic & Translational Science Scholarly Concentration, Pediatrics Residency Program, (2020- present)
- Co-Lead of Pancreas & Islet Affinity Group, Stanford Diabetes Research Centre, (2020- present)
- Member, Stanford Diabetes Research Centre, (2020- present)

HONORS AND AWARDS

- Outstanding Scientific Achievement Award, American Diabetes Association (June 2022)
- Dorothy Hodgkin Named Lecture, Diabetes UK (March 2019)
- G.B. Morgagni Prize Silver Medal, University of Padua Medical School, Padua, Italy (October 2014)
- Minkowski Award, European Association for the Study of Diabetes (October 2014)
- RD Lawrence Named Lecture, Diabetes UK (March 2009)
- Rising Star Award, European Association for the Study of Diabetes (September 2005)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Associate Editor, Diabetes Care (2024 - present)
- Editorial Advisory Board, Cell Genomics (2021 - present)
- Chair of Working Group Precision Diagnostics for Monogenic Diabetes, American Diabetes Association Precision Medicine Consensus Working Group (2020 - present)
- Member of the Executive Committee, Atlas of Variant Effects Alliance (2020 - present)
- Member of the Flagship Disease (Diabetes) Working Group, International Common Disease Alliance (2020 - present)
- Member of the Working Group (Mechanisms), International Common Disease Alliance (2020 - present)
- Member of the Working Group (Medicines), International Common Disease Alliance (2019 - present)
- Panel Member, ClinGen Monogenic Diabetes Variant Curation Expert Panel (2019 - present)
- Associate Editor, Endocrine Reviews (2018 - 2021)
- Editorial Advisory Board, Diabetologia (2018 - 2021)
- Trustee, European Diabetology (2017 - 2021)
- Expert Review Panel Member for Genetics Genomics & Population Health, Wellcome Trust (2016 - 2021)

LINKS

- Stanford Lab Website: https://med.stanford.edu/genomics-of-diabetes.html

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The consistent focus of Anna’s research has been using naturally occurring mutations in humans as tools to identity critical regulatory pathways and insights into normal physiology. Her early post-doctoral research led to the identification a new genetic aetiology for permanent and transient neonatal diabetes due to KCNJ11 mutations and resulted in one of the first examples of precision medicine, where the determination of the molecular genetic aetiology lead to improved treatment options for patients. Whilst in Oxford, Anna's team discovered a novel genetic cause of constitutive insulin sensitivity in humans due to mutations in the PTEN gene highlighting the complex interplay between pathways involved in cell-growth and metabolism.

Her early independent work focused on the clinical and functional characterization of glucokinase mutations in monogenic forms of hyperinsulinemia of infancy, hyperglycemia and neonatal diabetes. Anna maintains an active research program in monogenic forms of diabetes and how genetics can be used to assist diabetes diagnosis and treatment. Her lab has expertise in variant characterization for multiple genes involved in monogenic diabetes and she supports clinicians with the interpretation of variants of unknown significance from genetic testing. A major focus of her current work is focused on how deep mutational scanning and maps of variant effects for diabetes relevant genes can be incorporated into guidelines for variant interpretation for monogenic diabetes through her involvement in the Clin Gen Monogenic Diabetes Variant Expert Review Panel and the Atlas of Variant Effects (AVE) consortium. Recently she has co-led the working group on Precision Diagnostics in monogenic diabetes for the and the ADA/EASD Precision Medicines Initiative which has uncovered a number of gaps in our knowledge.

Anna's research is not limited to monogenic forms of diabetes she is also an active member of multiple international consortia for genetic discovery for type 2 diabetes including the Accelerated Medicines Partnership for Common Metabolic Disease (AMP-CMD) where she uses her expertise in islet biology, functional genomics and cell and molecular physiology to bridge the gap between genetic discovery and biological and clinical insight. One of her areas of interest is in how genetics can be used for stratified medicine. Dr Gloyn is involved in several efforts to integrate genetic data on diabetes heterogeneity into human islet research within the Human Islet Research Network (HIRN). She is currently responsible for the genetic characterization of human islet donors for both the Integrated Islet Distribution Program (IIDP) where she heads the Human Genotyping Initiative (HIGI) and the Human Pancreas Atlas Program (HPAP) where she is responsible for the genotyping all donors. She has developed tools and methods to make genetic data available to islet users on ancestry and genetic risk for type 1 and type 2 diabetes.

Anna is an active member of multiple internal genetic discovery efforts including: NIH/Pharma funded Accelerated Medicines Partnership, DIAGRAM (Diabetes Genetics Replication and Meta-analysis), MAGIC (Meta-analysis of Glucose and Insulin traits Consortium), Type 2 Diabetes Genetic Exploration by Next-generation sequencing in multi-Ethnic Samples (T2D-GENES) and the Genetics of Type 2 Diabetes (GoT2D). She was also involved in the IMI funded STEMBANCC project which focused on delivering human IPS cell derived beta-cell models for drug discovery efforts.

Teaching

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Lucy Zhang

Postdoctoral Faculty Sponsor

Tamadher Alghunaim, Yunkyeong Lee, Hector Ortega, Seth Sharp

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Endocrinology (Fellowship Program)
- Genetics (Phd Program)
- Medical Genetics (Fellowship Program)
- Medicine (Masters Program)
- Pediatric Endocrinology (Fellowship Program)

Publications

PUBLICATIONS

- **Diabetes mellitus-Progress and opportunities in the evolving epidemic.** *Cell*
  Abel, E. D., Gloyn, A. L., Evans-Molina, C., Joseph, J. J., Misra, S., Pajvani, U. B., Simcox, J., Susztak, K., Drucker, D. J.
  2024; 187 (15): 3789-3820

- **A global initiative to deliver precision health in diabetes.** *Nature medicine*
  Cefalu, W. T., Franks, P. W., Rosenblum, N. D., Zaghloul, N. A., Florez, J. C., Giorgino, F., Ji, L., Ma, R. C., Mathieu, C., Misra, S., Ramirez, A. H., Roden, M., Scherer, et al
  2024

- **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

- **CD39 delineates chimeric antigen receptor regulatory T cell subsets with distinct cytotoxic & regulatory functions against human islets** *FRONTIERS IN IMMUNOLOGY*
  Wu, X., Chen, P., Whitener, R. L., MacDougall, M. S., Coykendall, V. N., Yan, H., Kim, Y., Harper, W., Pathak, S., Iliopoulou, B. P., Hestor, A., Saunders, D. C., Spears, et al
  2024; 15: 1415102

- **Electrophysiological characterisation of iPSC-derived human #-like cells and an SLC30A8 disease model.** *Diabetes*
  Jaffredo, M., Krentz, N. A., Champon, B., Duff, C. E., Nawaz, S., Beer, N., Honore, C., Clark, A., Rorsman, P., Lang, J., Gloyn, A. L., Raoux, M., Hastoy, et al
  2024

- **Multiplexed CRISPR gene editing in primary human islet cells with Cas9 ribonucleoprotein.** *iScience*
  Bevacqua, R. J., Zhao, W., Merheb, E., Kim, S. H., Marson, A., Gloyn, A. L., Kim, S. K.
  2024; 27 (1): 108693

- **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

- **Second international consensus report on gaps and opportunities for the clinical translation of precision diabetes medicine.** *Nature medicine*
  Tobias, D. K., Merino, J., Ahmad, A., Aiken, C., Benham, J. L., Bodhini, D., Clark, A. L., Colclough, K., Corcoy, R., Cromer, S. J., Duan, D., Felton, J. L., Francis, et al
  2023

- **The use of precision diagnostics for monogenic diabetes: a systematic review and expert opinion.** *Communications medicine*
  Murphy, R., Colclough, K., Pollin, T. I., Ikle, J. M., Svalastoga, P., Maloney, K. A., Saint-Martin, C., Molnes, J., Misra, S., Aukrust, I., de Franco, E., Flanagan, S. E., Njølstad, et al
  2023; 3 (1): 136

- **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

- **Safe use of the ketogenic diet in an infant with microcephaly, epilepsy, and diabetes syndrome: a case report.** *BMC pediatrics*
  Zegarra, W. A., Gallentine, W. B., Ruzhnikov, M. R., McAndrews, C. A., Gloyn, A. L., Addala, A.
  2023; 23 (1): 453

- **Management of Neonatal Diabetes due to a KCNJ11 Mutation with Automated Insulin Delivery System and Remote Patient Monitoring.** *Case reports in endocrinology*
  Lee, M. Y., Gloyn, A. L., Maahs, D. M., Prahalad, P.
  2023; 2023: 8825724

- **An Atlas of Variant Effects to understand the genome at nucleotide resolution.** *Genome biology*
  Fowler, D. M., Adams, D. J., Gloyn, A. L., Hahn, W. C., Marks, D. S., Muffley, L. A., Neal, J. T., Roth, F. P., Rubin, A. F., Starita, L. M., Hurles, M. E.
  2023; 24 (1): 147

- **A comprehensive map of human glucokinase variant activity.** *Genome biology*
  Gersing, S., Cagiada, M., Gebbia, M., Gjesing, A. P., Coté, A. G., Seesankar, G., Li, R., Tabet, D., Weile, J., Stein, A., Gloyn, A. L., Hansen, T., Roth, et al
  2023; 24 (1): 97

- **Small but mighty: microexons in glucose homeostasis.** *Trends in genetics : TIG*
  Garcia, K., Gloyn, A. L.
  2023

- **Type 2 Diabetes risk alleles in Peptidyl-glycine Alpha-amidating Monooxygenase influence GLP-1 levels and response to GLP-1 Receptor Agonists.** *medRxiv : the preprint server for health sciences*
  Umapathysivam, M. M., Araldi, E., Hastoy, B., Dawed, A. Y., Vatandaslar, H., Sengupta, S., Kaufmann, A., Thomsen, S., Hartmann, B., Jonsson, A. E., Kabakci, H., Thaman, S., Grarup, et al
  2023

- **The Type 2 Diabetes Knowledge Portal: An open access genetic resource dedicated to type 2 diabetes and related traits.** *Cell metabolism*

Costanzo, M. C., von Grotthuss, M., Massung, J., Jang, D., Caulkins, L., Koesterer, R., Gilbert, C., Welch, R. P., Kudtarkar, P., Hoang, Q., Boughton, A. P., Singh, P., Sun, et al

2023

- **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 #-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

- **The contribution of functional HNF1A variants and polygenic susceptibility to risk of type 2 diabetes in ancestrally diverse populations.** *Diabetologia*

  Stalbow, L. A., Preuss, M. H., Smit, R. A., Chami, N., Bjørkhaug, L., Aukrust, I., Gloyn, A. L., Loos, R. J.

  2022

- **Genetic regulation of RNA splicing in human pancreatic islets.** *Genome biology*

  Atla, G., Bonas-Guarch, S., Cuenca-Ardura, M., Beucher, A., Crouch, D. J., Garcia-Hurtado, J., Moran, I., T2DSystems Consortium, Irimia, M., Prasad, R. B., Gloyn, A. L., Marselli, L., Suleiman, M., et al

  2022; 23 (1): 196

- **Every islet matters: improving the impact of human islet research.** *Nature metabolism*

  Gloyn, A. L., Ibberson, M., Marchetti, P., Powers, A. C., Rorsman, P., Sander, M., Solimena, M.

  2022

- **Multi-ancestry genetic study of type 2 diabetes highlights the power of diverse populations for discovery and translation.** *Nature genetics*

  Mahajan, A., Spracklen, C. N., Zhang, W., Ng, M. C., Petty, L. E., Kitajima, H., Yu, G. Z., Rueger, S., Speidel, L., Kim, Y. J., Horikoshi, M., Mercader, J. M., Taliun, et al

  2022

- **TIGER: The gene expression regulatory variation landscape of human pancreatic islets.** *Cell reports*

  Alonso, L., Piron, A., Moran, I., Guindo-Martinez, M., Bonas-Guarch, S., Atla, G., Miguel-Escalada, I., Royo, R., Puiggros, M., Garcia-Hurtado, X., Suleiman, M., Marselli, L., Esguerra, et al

  2021; 37 (2): 109807

- **Genetics of Type 2 Diabetes: Opportunities for Precision Medicine: JACC Focus Seminar.** *Journal of the American College of Cardiology*

  Kim, D. S., Gloyn, A. L., Knowles, J. W.

  2021; 78 (5): 496-512

- **A brief history of diabetes genetics: insights for pancreatic beta-cell development and function.** *The Journal of endocrinology*

  Ikle, J. M., Gloyn, A. L.

  2021

- **There is more than one way to reach type 2 diabetes.** *Nature metabolism*

  Gloyn, A. L., Powers, A. C.

  2021

- **The trans-ancestral genomic architecture of glycemic traits.** *Nature genetics*

  Chen, J., Spracklen, C. N., Marenne, G., Varshney, A., Corbin, L. J., Luan, J., Willems, S. M., Wu, Y., Zhang, X., Horikoshi, M., Boutin, T. S., Magi, R., Waage, et al

2021

- **Monogenic diabetes: a gateway to precision medicine in diabetes.** *The Journal of clinical investigation*
  Zhang, H., Colclough, K., Gloyn, A. L., Pollin, T. I.
  2021; 131 (3)

- **A Multi-omic Integrative Scheme Characterizes Tissues of Action at Loci Associated with Type 2 Diabetes.** *American journal of human genetics*
  Torres, J. M., Abdalla, M., Payne, A., Fernandez-Tajes, J., Thurner, M., Nylander, V., Gloyn, A. L., Mahajan, A., McCarthy, M. I.
  2020

- **Response to Comment on Misra et al. Homozygous Hypomorphic HNF1A Alleles Are a Novel Cause of Young-Onset Diabetes and Result in Sulfonylurea-Sensitive Diabetes. Diabetes Care 2020;43:909-912.** *Diabetes care*
  Misra, S., Hassanali, N., Bennett, A. J., Juszczak, A., Caswell, R., Colclough, K., Valabhji, J., Ellard, S., Oliver, N. S., Gloyn, A. L.
  2020; 43 (10): e155–e156

- **Identification of type 2 diabetes loci in 433,540 East Asian individuals.** *Nature*
  Spracklen, C. N., Horikoshi, M., Kim, Y. J., Lin, K., Bragg, F., Moon, S., Suzuki, K., Tam, C. H., Tabara, Y., Kwak, S., Takeuchi, F., Long, J., Lim, et al
  2020

- **Endocrine-Exocrine Signaling Drives Obesity-Associated Pancreatic Ductal Adenocarcinoma.** *Cell*
  Chung, K. M., Singh, J., Lawres, L., Dorans, K. J., Garcia, C., Burkhardt, D. B., Robbins, R., Bhutkar, A., Cardone, R., Zhao, X., Babic, A., Vayrynen, S. A., Dias Costa, et al
  2020

- **From Genetic Association to Molecular Mechanisms for Islet-cell Dysfunction in Type 2 Diabetes** *JOURNAL OF MOLECULAR BIOLOGY*
  Mattis, K. K., Gloyn, A. L.
  2020; 432 (5): 1551–78

- **Editorial Overview: "Islet Biology in Type 2 Diabetes"** *JOURNAL OF MOLECULAR BIOLOGY*
  Gaisano, H. Y., Jonas, J., Gloyn, A. L.
  2020; 432 (5): 1307–9

- **Insights into pancreatic islet cell dysfunction from type 2 diabetes mellitus genetics.** *Nature reviews. Endocrinology*
  Krentz, N. A., Gloyn, A. L.
  2020

- **Deep learning models predict regulatory variants in pancreatic islets and refine type 2 diabetes association signals.** *eLife*
  Wesolowska-Andersen, A. n., Zhuo Yu, G. n., Nylander, V. n., Abaitua, F. n., Thurner, M. n., Torres, J. M., Mahajan, A. n., Gloyn, A. L., McCarthy, M. I.
  2020; 9

- **Unsupervised Clustering of Missense Variants in HNF1A Using Multidimensional Functional Data Aids Clinical Interpretation.** *American journal of human genetics*
  Althari, S. n., Najmi, L. A., Bennett, A. J., Aukrust, I. n., Rundle, J. K., Colclough, K. n., Molnes, J. n., Kaci, A. n., Nawaz, S. n., van der Lugt, T. n., Hassanali, N. n., Mahajan, A. n., Molven, et al
  2020

- **Genetic variant effects on gene expression in human pancreatic islets and their implications for T2D.** *Nature communications*
  Viñuela, A. n., Varshney, A. n., van de Bunt, M. n., Prasad, R. B., Asplund, O. n., Bennett, A. n., Boehnke, M. n., Brown, A. A., Erdos, M. R., Fadista, J. n., Hansson, O. n., Hatem, G. n., Howald, et al
  2020; 11 (1): 4912

- **Homozygous Hypomorphic HNF1A Alleles Are a Novel Cause of Young-Onset Diabetes and Result in Sulphonylurea-Sensitive Diabetes.** *Diabetes care*
  Misra, S. n., Hassanali, N. n., Bennett, A. J., Juszczak, A. n., Caswell, R. n., Colclough, K. n., Valabhji, J. n., Ellard, S. n., Oliver, N. S., Gloyn, A. L.
  2020

- **Analysis of Differentiation Protocols Defines a Common Pancreatic Progenitor Molecular Signature and Guides Refinement of Endocrine Differentiation.** *Stem cell reports*
  Wesolowska-Andersen, A. n., Jensen, R. R., Alcántara, M. P., Beer, N. L., Duff, C. n., Nylander, V. n., Gosden, M. n., Witty, L. n., Bowden, R. n., McCarthy, M. I., Hansson, M. n., Gloyn, A. L., Honore, et al
  2020; 14 (1): 138–53

- **Exocrine or endocrine? A circulating pancreatic elastase that regulates glucose homeostasis.** *Nature metabolism*
  Gloyn, A. L.
  2019; 1 (9): 853-855

- **METABOLIC SYNDROME Exocrine or endocrine? A circulating pancreatic elastase that regulates glucose homeostasis** *NATURE METABOLISM*
  Gloyn, A. L.
  2019; 1 (9): 853–55

- **Fostering improved human islet research: a European perspective** *DIABETOLOGIA*
  Marchetti, P., Schulte, A. M., Marselli, L., Schoniger, E., Bugliani, M., Kramer, W., Overbergh, L., Ullrich, S., Gloyn, A. L., Ibberson, M., Rutter, G., Froguel, P., Groop, et al
  2019; 62 (8): 1514–16

- **Developing a network view of type 2 diabetes risk pathways through integration of genetic, genomic and functional data** *GENOME MEDICINE*
  Fernandez-Tajes, J., Gaulton, K. J., van de Bunt, M., Torres, J., Thurner, M., Mahajan, A., Gloyn, A. L., Lage, K., McCarthy, M. I.
  2019; 11: 19

- **Loss of ZnT8 function protects against diabetes by enhanced insulin secretion.** *Nature genetics*
  Dwivedi, O. P., Lehtovirta, M. n., Hastoy, B. n., Chandra, V. n., Krentz, N. A., Kleiner, S. n., Jain, D. n., Richard, A. M., Abaitua, F. n., Beer, N. L., Grotz, A. n., Prasad, R. B., Hansson, et al
  2019; 51 (11): 1596–1606

- **Plasma Fucosylated Glycans and C-Reactive Protein as Biomarkers of HNF1A-MODY in Young Adult-Onset Nonautoimmune Diabetes** *DIABETES CARE*
  Juszczak, A., Pavic, T., Vuckovic, F., Bennett, A. J., Shah, N., Medvidovic, E., Groves, C. J., Sekerija, M., Chandler, K., Burrows, C., Putarek, N., Lovrencic, M., Knezevic, et al
  2019; 42 (1): 17–26

- **A CRISPR/Cas9 genome editing pipeline in the EndoC-#H1 cell line to study genes implicated in beta cell function.** *Wellcome open research*
  Grotz, A. K., Abaitua, F. n., Navarro-Guerrero, E. n., Hastoy, B. n., Ebner, D. n., Gloyn, A. L.
  2019; 4: 150

- **Translational genomics and precision medicine: Moving from the lab to the clinic.** *Science (New York, N.Y.)*
  Zeggini, E. n., Gloyn, A. L., Barton, A. C., Wain, L. V.
  2019; 365 (6460): 1409–13

- **Fine-mapping type 2 diabetes loci to single-variant resolution using high-density imputation and islet-specific epigenome maps.** *Nature genetics*
  Mahajan, A., Taliun, D., Thurner, M., Robertson, N. R., Torres, J. M., Rayner, N. W., Payne, A. J., Steinthorsdottir, V., Scott, R. A., Grarup, N., Cook, J. P., Schmidt, E. M., Wuttke, et al
  2018

- **Understanding human fetal pancreas development using subpopulation sorting, RNA sequencing and single-cell profiling** *DEVELOPMENT*
  Ramond, C., Beydag-Tasoz, B., Azad, A., van de Bunt, M., Petersen, M., Beer, N. L., Glaser, N., Berthault, C., Gloyn, A. L., Hansson, M., McCarthy, M., Honore, C., Grapin-Botton, et al
  2018; 145 (16)

- **Patterns of differential gene expression in a cellular model of human islet development, and relationship to type 2 diabetes predisposition** *DIABETOLOGIA*
  Perez-Alcantara, M., Honore, C., Wesolowska-Andersen, A., Gloyn, A. L., McCarthy, M. I., Hansson, M., Beer, N. L., van de Bunt, M.
  2018; 61 (7): 1614–22

- **NKX6.1 induced pluripotent stem cell reporter lines for isolation and analysis of functionally relevant neuronal and pancreas populations** *STEM CELL RESEARCH*
  Gupta, S., Wesolowska-Andersen, A., Ringgaard, A. K., Jaiswal, H., Song, L., Hastoy, B., Ingvorsen, C., Taheri-Ghahfarokhi, A., Magnusson, B., Maresca, M., Jensen, R. R., Beer, N. L., Fels, et al
  2018; 29: 220–31

- **Regulatory variants at KLF14 influence type 2 diabetes risk via a female-specific effect on adipocyte size and body composition** *NATURE GENETICS*
  Small, K. S., Todorcevic, M., Civelek, M., Moustafa, J., Wang, X., Simon, M. M., Fernandez-Tajes, J., Mahajan, A., Horikoshi, M., Hugill, A., Glastonbury, C. A., Quaye, L., Neville, et al
  2018; 50 (4): 572-+

- **A Partial Loss-of-Function Variant in AKT2 Is Associated With Reduced Insulin-Mediated Glucose Uptake in Multiple Insulin-Sensitive Tissues: A Genotype-Based Callback Positron Emission Tomography Study** *DIABETES*
  Latva-Rasku, A., Honka, M., Stancakova, A., Koistinen, H. A., Kuusisto, J., Guan, L., Manning, A. K., Stringham, H., Gloyn, A. L., Lindgren, C. M., Collins, F. S., Mohlke, K. L., Scott, et al
  2018; 67 (2): 334–42

- **Sequence data and association statistics from 12,940 type 2 diabetes cases and controls (vol 4, 170179, 2017)** *SCIENTIFIC DATA*
  Flannick, J., Fuchsberger, C., Mahajan, A., Teslovich, T. M., Agarwala, V., Gaulton, K. J., Caulkins, L., Koesterer, R., Ma, C., Moutsianas, L., McCarthy, D. J., Rivas, M. A., Perry, et al
  2018; 5: 180002

- **Type 2 diabetes risk alleles in PAM impact insulin release from human pancreatic #-cells.** *Nature genetics*
  Thomsen, S. K., Raimondo, A. n., Hastoy, B. n., Sengupta, S. n., Dai, X. Q., Bautista, A. n., Censin, J. n., Payne, A. J., Umapathysivam, M. M., Spigelman, A. F., Barrett, A. n., Groves, C. J., Beer, et al
  2018; 50 (8): 1122–31

- **Maturity onset diabetes of the young due to HNF1A variants in Croatia** *BIOCHEMIA MEDICA*
  Pavic, T., Juszczak, A., Medvidovic, E., Burrows, C., Sekerija, M., Bennett, A. J., Knezevic, J., Gloyn, A. L., Lauc, G., McCarthy, M., Gornik, O., Owen, K. R.
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