APPENDIX 1

DIABETES UK RESEARCH PORTFOLIO AND 2024 FUNDING OUTCOMES

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DIABETES UK
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OUR CURRENT PORTFOLIO

Overview of our portfolio

Our current research portfolio includes 128 grants worth over £46 million*. This includes Diabetes UK funding schemes, the Type 1 Diabetes (T1D) Grand Challenge and grants funded in partnership with other research funders. This is a small decrease from last year when our portfolio contained 135 grants worth over £48 million.

The T1D Grand Challenge represents significant recent investment into type 1 research and is a partnership with the Steve Morgan Foundation and Breakthrough T1D. The remainer of this portfolio analysis will focus on Diabetes UK core funding and more information on the T1D Grand Challenge is included in a separate section.

**All figures are correct as of February 2025 and include 12 grants that are not yet active and will start later this year. For co-funded partnership grants, the amount contributed by Diabetes UK is used for analysis.*

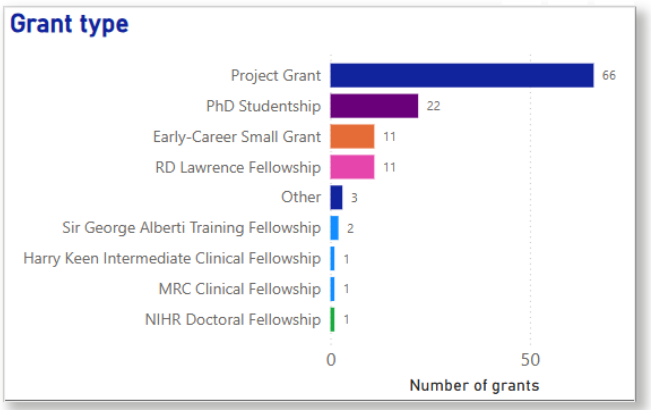
Our core research portfolio

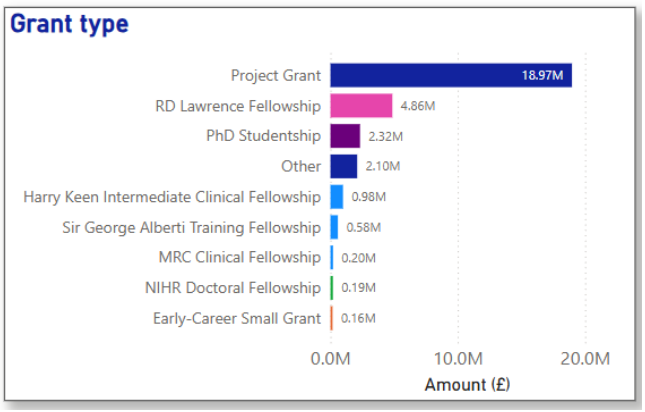
Excluding funding through T1D Grand Challenge, our current research portfolio includes 118 grants with a total lifetime value of over £30 million. These are grants that are currently active (as of February 2025) or due to start this year. This includes all new grants awarded in 2024.

Type of Grant

Figure 1 shows the number of current grants by each grant type. The majority of our grants are Project Grants (56%). We are also funding 11 Early-Career Small Grants and 38 Fellowships and PhD Studentships.

Figure 1: Distribution of grant types by number of grants (left) and total amount (right).

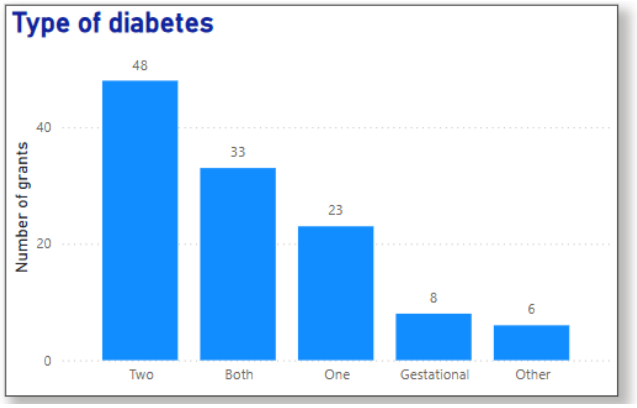


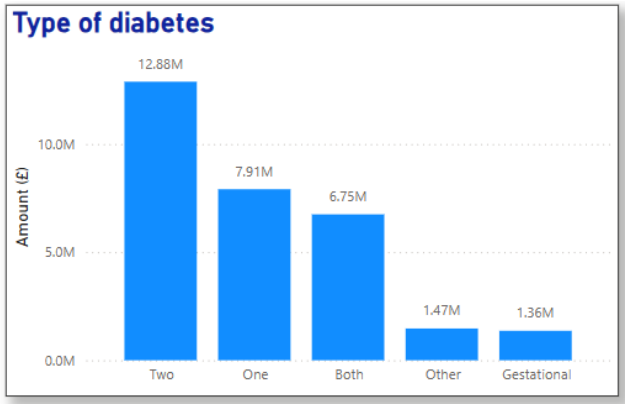


Diabetes Type

We fund research into all types of diabetes. 41% of the grants we currently fund are focused on type 2 diabetes, 20% are focused on type 1 diabetes and 28% relate to both type 1 and 2 or have general relevance for all forms of diabetes ("Both") (**Figure 2, left**). Gestational diabetes is the focus of 7% of funded projects, and 5% are focused on other rarer types of diabetes (e.g. type 3c, steroid-induced, rare monogenic). This overall distribution is similar when analysed by amount invested (**Figure 2, right**).

Figure 2: Distribution of research into different types of diabetes, by number of grants (left) and total amount (right).



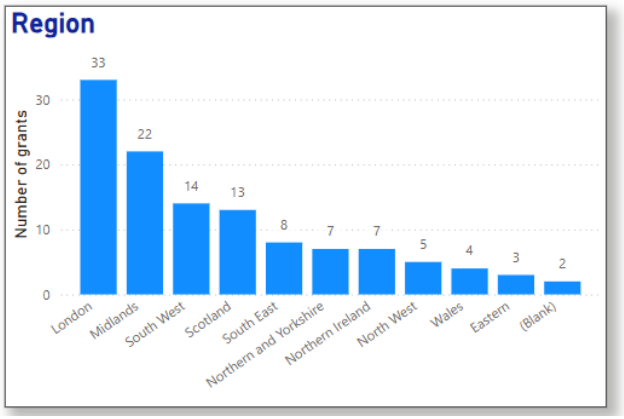


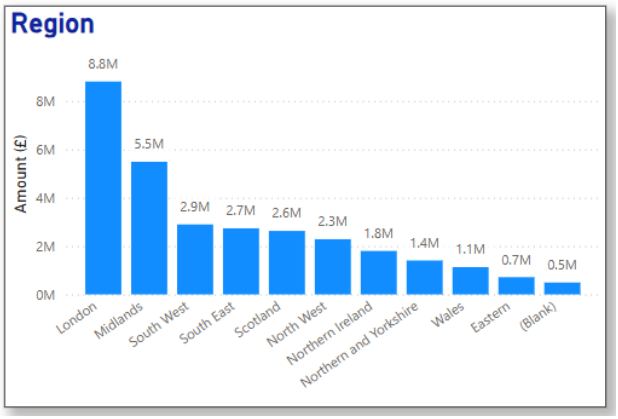
Regional Breakdown

We fund research taking place at institutes across the UK. Over one quarter (28%) of our grants are in London, which accounts for 29% of investment. **Figure 3** shows a regional breakdown of our active grants.

Note: this is the region where the primary institution (associated with the lead investigator) is located. Some projects are collaborations across multiple institutes across the UK and that is not reflected in these numbers.

Figure 3: Regional breakdown by number of grants (left) and total amount (right).

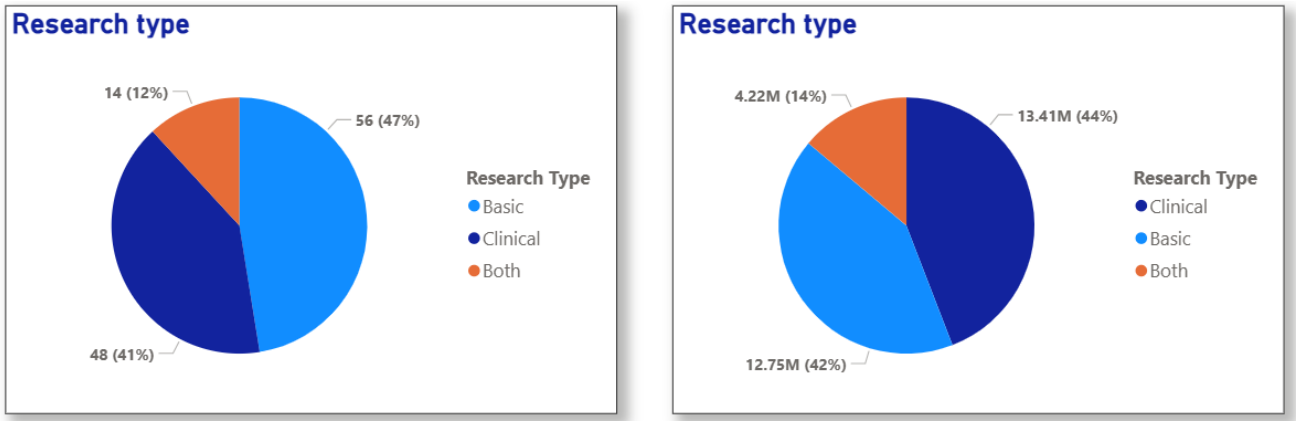




Type of Research

The projects we fund can be classified as basic science (47%) or clinical research (41%). Basic research refers to early-stage research using whose findings will provide more understanding on the underlying biology of a disease. Clinical research directly involves human participants with the aim of finding out more about an illness, condition, treatment, therapy, or care. A small percentage of our portfolio uses a combination of both (12%).

Figure 4: Grants classified by research type, by number of grants (left) and total amount (right).



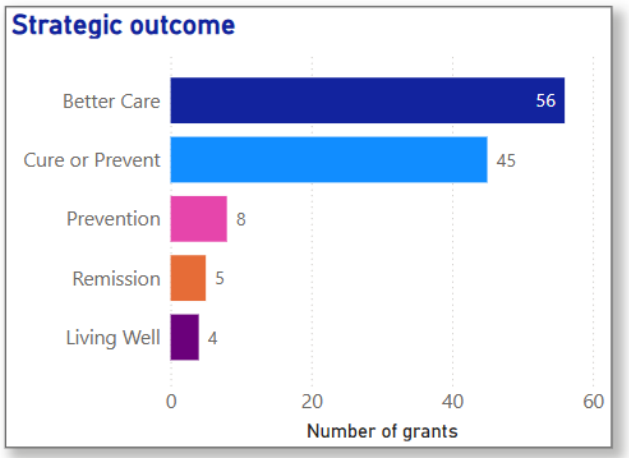
Strategic Outcomes

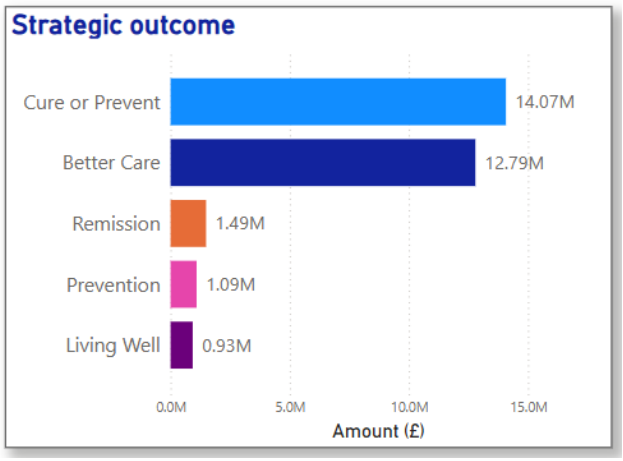
Diabetes UK's 2020-2025 organisational strategy is focused on 5 strategic outcomes:

1. **Cure or Prevent:** More people with type 1, type 2 and all other forms of diabetes will benefit from new treatments that cure or prevent the condition
2. **Remission:** More people will be in remission from type 2 diabetes
3. **Better Care:** More people will get the quality of care they need to manage their diabetes well
4. **Prevention:** Fewer people will get type 2 and gestational diabetes
5. **Living well:** More people will live better and more confident lives with diabetes, free from discrimination

We have classified our grants by these outcomes. Some may relate to more than one, but each grant has been assigned the most relevant outcome. Figure 5 shows the breakdown of our current grants by strategic outcome. Almost half of our grants fit into **Better Care** (47%), which also includes research addressing complications resulting from diabetes. More than 1/3 fit into **Cure or Prevent** (38%), which also includes understanding the fundamental mechanisms behind all types of diabetes.

Figure 5: Grants categorised by the most relevant organisational strategic outcome, by number of grants (left) and total amount (right).





Type One Diabetes Grand Challenge

The T1D Grand Challenge is run in partnership with the Steve Morgan Foundation and Breakthrough T1D. We are leading on delivering the Beta Cell Therapy challenge area, which is one of 3 challenge areas alongside insights into the root causes of type 1 diabetes and developing novel insulins.

Information about the 10 grants that are currently active, totalling £16.5m, is included in Table 1. The 3 Innovation Project Grants were awarded in 2024.

These grants are basic research awards in the translational space, aiming to inform and generate new beta cell therapies. They are all relevant to the Diabetes UK organisational strategy outcome **Cure or Prevent,** "*More people with type 1, type 2 and all other forms of diabetes will benefit from new treatments that cure or prevent the condition.*"

Table 1. T1D Grand Challenge grants.

Grant type	Title	Principal Investigators	Institutes	Amount
Senior Research Fellowship	Leveraging new knowledge from the human pancreas to advance and improve understanding and treatment of Type 1 diabetes	Sarah Richardson	University of Exeter	£1.5m
Senior Research Fellowship	Development of Therapeutic Strategies to Regenerate Pancreatic Beta Cells: Towards a Disease-Modifying Treatment for Type 1 Diabetes.	James Cantley	University of Dundee	£1.5m
Senior Research Fellowship	Bioengineering a cell-based cure for type 1 diabetes	Victoria Salem	Imperial College London	£2m

Translational Programme	Translating GLP Compatible Immunomodulatory and Pro-regenerative Particles To Promote The Function Of Islets Following Transplantation In Humans.	Shareen Forbes, Lisa White	University of Edinburgh, University of Nottingham	£3m
Translational Programme	Towards translation: improving the functional survival of stem cell-derived beta cells	Shanta Persaud, Aileen King	King's College London	£1.9m
Translational Programme	Leveraging GLP1R and GIPR as molecular addresses for precision beta cell therapy/replacement during type 1 diabetes	David Hodson, Johannes Broichhagen, Ildem Akerman	University of Oxford, Leibniz-FMP, University of Birmingham	£2.6m
Translational Programme	Engineering prosurvival synthetic microenvironments by modulating extrinsic and intrinsic factors in stem cell-derived islet-cells	Francesca Spagnoli, Rocio Sancho, Molly Stevens	King's College London, University of Oxford	£2.9m
Innovation Project Grant	Enhancing islet and beta-cell transplant engraftment by targeting chemokine-driven inflammation	Shoumo Bhattacharya, David Hodson	King's College London, University of Oxford	£399,963
Innovation Project Grant	Brain cells for beta cells	Craig Beall, Thomas Piers	University of Exeter	£399,956
Innovation Project Grant	Exploring miRNA heterogeneity within pancreatic beta-cell subpopulations to improve beta-cell therapies	Aida Martinez-Sanchez, Prashant Srivastava	Imperial College London	£324,434

2024 FUNDING OUTCOMES

Funding Outcomes and Success Rates

In 2024 we invested over £5.4 million in new diabetes research through 25 new research projects. This includes:

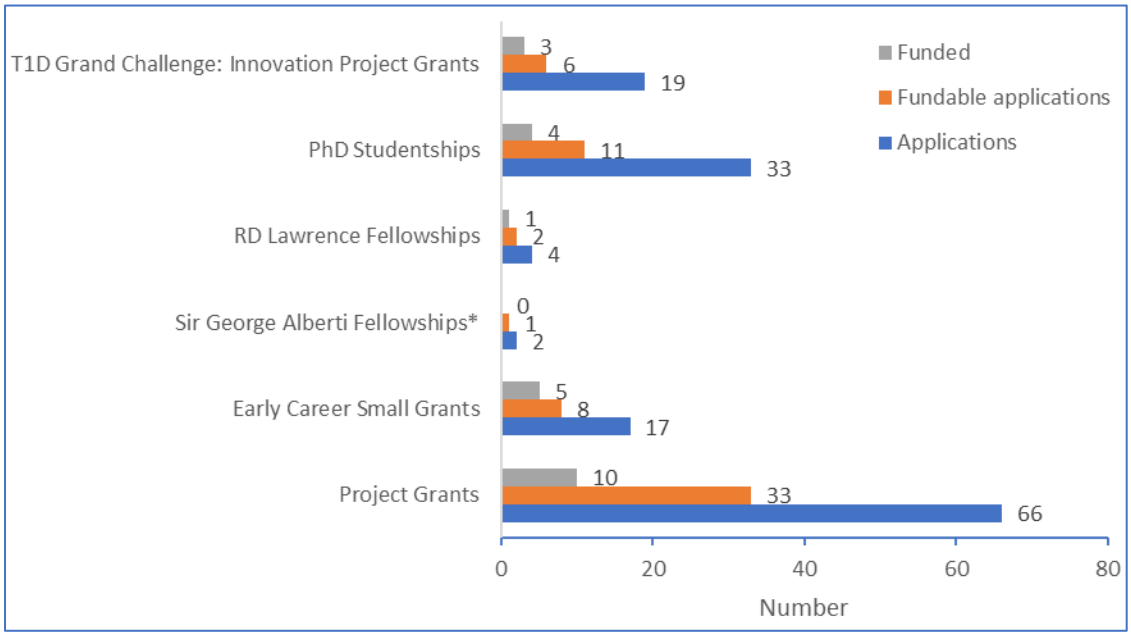
- 20 projects through Diabetes UK funding schemes (£3.93 million)
- 3 projects through the T1D Grand Challenge (£1.12 million)
- 2 projects funded in partnership

- 1 Medical Research Council (MRC) Clinical Fellowship – £199,940 from Diabetes UK and £199,940 from the MRC
- 1 National Institute for Health and Care Research (NIHR) Doctoral Fellowship– £192,704 from Diabetes UK and £192,704 from NIHR

Across all funding schemes led by Diabetes UK (excluding the 2 projects funded in partnership), we received 141 applications, of which 61 (43%) were scored as fundable by our committees and advisory panels and 23 (16%) were funded. Figure 6 shows a breakdown across grant schemes of the number of applications received, number deemed fundable, and number ultimately funded.

The success rate has decreased from 28% in 2023 to 16% in 2024, due to a reduced research budget in response to a challenging economic environment.

Figure 6: Number of submitted, fundable and funded applications per scheme in 2024.



** One Sir George Alberti Fellowship was awarded but then withdrawn. This was because the applicant was subsequently awarded a Medical Research Council Clinical Fellowship, which we have agreed to co-fund in partnership with the Medical Research Council.*

Highlight Notices

The Project Grant figures above include Highlight Notices, which are calls for projects to answer a specific research question that has been identified by our Diabetes Research Steering Groups. In 2024, we had three highlight notices:

- Implementing glucose monitoring technologies in hospitals and care homes for people living with diabetes

- Improving access to, and understanding of, support for people with type 2 diabetes who want to put their condition into, or maintain remission
- Early onset type 2 diabetes

A closer look shows that in 2024 we received 14 applications related to our highlight notices (21% of all project grant applications). 3 out of these 14 applications were funded, which is a 21% success rate. This also means that of the 10 Project Grants we funded in 2024, 30% were grants submitted through our highlight notices. We invested just under £1 million into these three grants.

2024 Awards

Below is a full list of the 2024 grant awardees.

Project grants

Dr Holly Wilkinson	University of Hull	Modulating Host-Microbial Pathways to Prevent Diabetic Foot Ulcer-Related Amputations
Dr Anna Zampetaki	King's College London	Developing a Personalized Drug Screening Platform for Diabetic Microangiopathy
Dr Charlotte Boughton	University of Cambridge	Understanding and supporting automated insulin delivery use in a diverse population with type 2 diabetes
Professor Helen Colhoun	University of Edinburgh	Real World Pharmacoepidemiology of Drugs used in Diabetes: Harnessing e-heath records and artificial intelligence
Professor James Shaw	University of Newcastle	Towards reversal of type 3c diabetes through anti-fibrotic therapy with marketed therapeutics
Dr Sharon Mackin	University of Glasgow	Extended linkage of data to understand causes of serious adverse neonatal outcome in pregnancy complicated by pregestational diabetes in Scotland
Professor Peter Scanlon	Gloucestershire Hospitals NHS Foundation Trust	Scanning CONfoCal Ophthalmoscopy foR DIAbetic eye screening (CONCORDIA 2) in Asian and Afro-Caribbean Groups

Projects grants related to our highlight notices

Dr Parizad Avari	Imperial College London	Networked continuous glucose monitoring within the Intensive Care Unit (ICU-TeleCGM)

Dr Michelle Hadjiconstantinou	University of Leicester	To explore the uptake, engagement and implementation of a digital package for early onset type 2 diabetes: a mixed-methods study
Professor Claire Meek	University of Leicester	Supporting Your Pregnancy Programme: developing and piloting a digital-based self-management education tool to improve pregnancy outcomes in EOT2D

Early Career Small Grants

Dr Naila Haq	King's College London	Cilia: a new therapeutic target for type 1 diabetes?
Dr Cristiano Scotta	Brunel University	Exploring Regulatory T Cells' Impact on Endothelial Dysfunction in Gestational Diabetes Mellitus Using a Vasculature-on-a-Chip Model
Dr Ahmad Al-Mrabeh	University of Edinburgh	Developing an optimal in vitro cellular model to study the mechanism(s) of pancreas lipotoxicity in type 2 diabetes
Dr Karla Suchacki	Scotland’s Rural College	Regulation of glucose metabolism by the skeleton: From individual pathways to systems biology
Dr Paul Hiebert	University of Hull	Exploring the Potential of Nrf2-Controlled ECM in the Healing of Diabetic Wounds

RD Lawrence Fellowships

Dr Karis Little	Queen's University Belfast	Deciphering the role of the ocular glymphatic system in diabetic retinopathy

PhD Studentships

Professor Roman Hovorka	University of Cambridge	Optimising fully closed-loop insulin delivery
Dr Rebecca Thomas	Swansea University	Human Agency & Leveraging Technology (HALT) to prevent diabetes complications
Professor Claire Meek	University of Leicester	Continuous glucose monitoring in women with early onset type 2 diabetes in pregnancy

Dr Mark Russell	University of Exeter Medical School	Using repurposed HDAC inhibitors to promote beta-cell survival

Partnerships

Dr Sophie Jones - *MRC Clinical Research Fellowship*	Imperial College London	Comparing the physiological effects of low-calorie diets in South Asian and White European individuals with early-onset Type 2 Diabetes
Miss Ifra Ali - *NIHR Doctoral Fellowship*	Department of Health and Social Care	British-Pakistani women with Gestational Diabetes: Understanding the antenatal and postnatal factors contributing to their future risk of developing Type 2 Diabetes

T1D Grand Challenge: Innovation Project Grants

Professor Shoumo Bhattacharya, Professor David Hodson	University of Oxford	Enhancing islet and beta-cell transplant engraftment by targeting chemokine-driven inflammation
Dr Aida Martinez-Sanchez, Dr Prashant Srivastava	Imperial College London	Exploring miRNA heterogeneity within pancreatic beta-cell subpopulations to improve beta-cell therapies
Dr Craig Beall, Dr Thomas Piers	University of Exeter	Brain cells for beta cells