DIABETES UK RESEARCH 2023 FUNDING OUTCOMES AND SUCCESS RATES

Published 2024

DIABETES UK
KNOW DIABETES. FIGHT DIABETES.

Contents

OUR PORTFOLIO

Our portfolio

Our current research portfolio comprises of 135 grants worth over £48 million*. This includes Diabetes UK led funding schemes, the Type One Diabetes Grand Challenge and grants funded via partnership schemes.

*This figure and statistics below are correct as of February 2024. It does not include the AMS grants awarded in 2023 as they were in the process of being finalised during data analysis

Type of Grant

Figure 1 shows the amount of current grant awards that can be categorised into each grant type. The highest percentage our active grants can be categorised as Project Grants (48%).

Figure 1: All active grants categorised into type of grant scheme
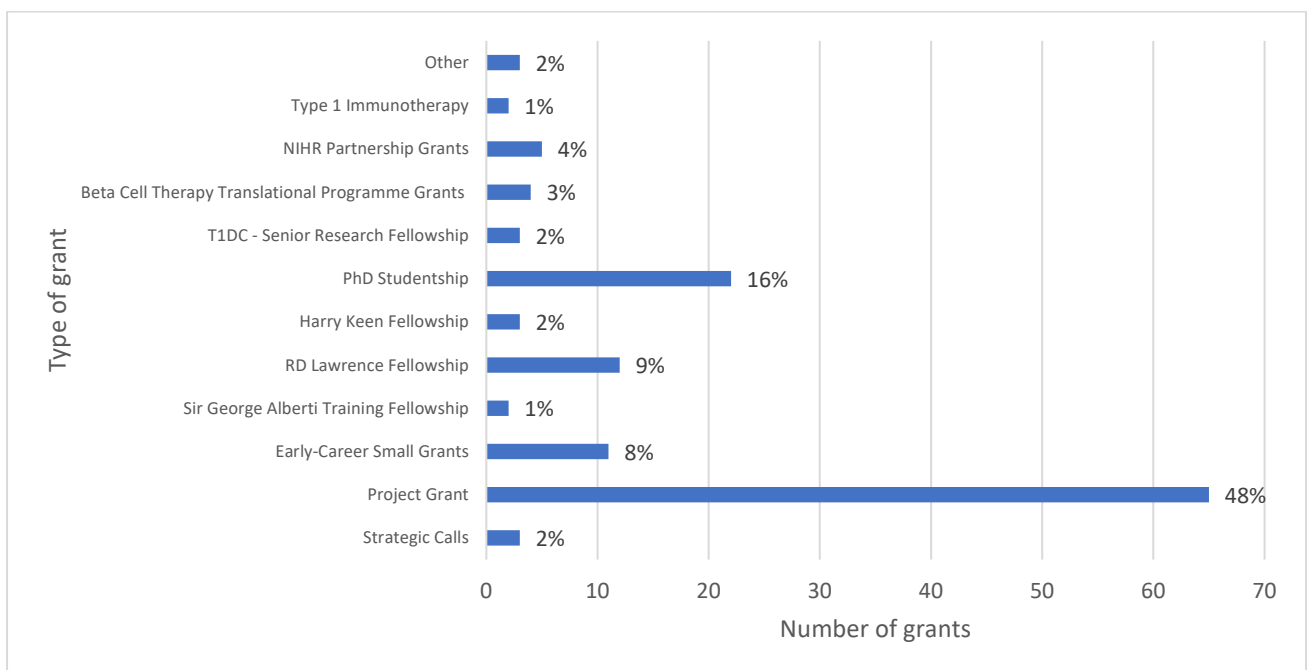
Diabetes Type

Diabetes UK funds research into all types of diabetes. The majority of our current portfolio is focused on type 2 diabetes (42%). This is followed by 28% of grants funded focusing on type 1 diabetes. Projects relating to general relevance for all forms of diabetes make up 24% of grants funded. Gestational diabetes is the focus of 6% of funded projects. A small percentage of grants awarded were for projects are focusing on rarer types of diabetes (4%) such as monogenic and steroid induced diabetes. Figure 2 shows the split of grants by type of diabetes.

Figure 2: All active grant awards categorised by type of diabetes.
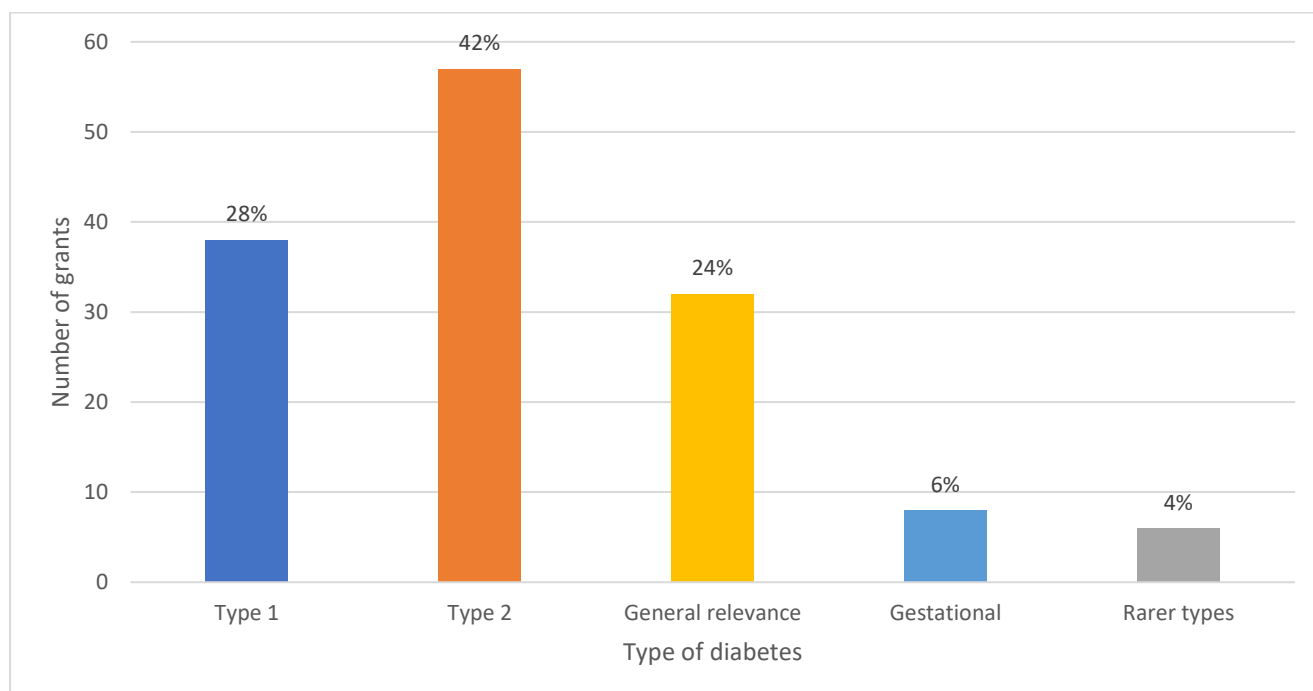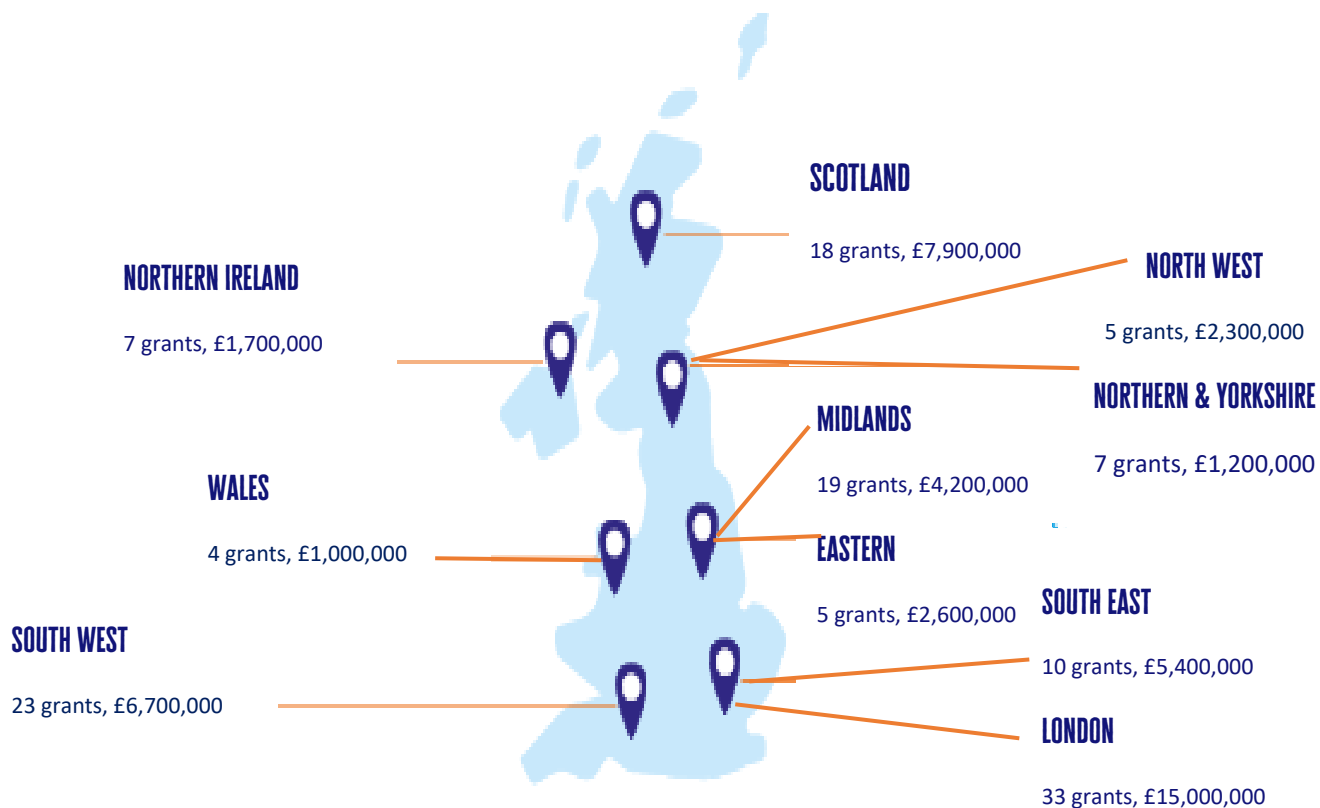

Note: the total is not the sum of the frequency as some grants cover more than one type of diabetes e.g. gestational and T2. The percentage shown uses the number of active grants in total as the denominator.

Regional Breakdown

Diabetes UK funds research taking place at institutes across the UK. **Figure 3** shows a regional breakdown of where we have active grants and the percentage of our investment in each.

Figure 3: Map of all active grants by region and investment in each region (including grants funded in partnership excluding AMS)

SCOTLAND

18 grants, £7,900,000

NORTHERN IRELAND

7 grants, £1,700,000

NORTH WEST

5 grants, £2,300,000

NORTHERN & YORKSHIRE

7 grants, £1,200,000

MIDLANDS

19 grants, £4,200,000

WALES

4 grants, £1,000,000

EASTERN

5 grants, £2,600,000

SOUTH EAST

10 grants, £5,400,000

SOUTH WEST

23 grants, £6,700,000

LONDON

33 grants, £15,000,000

Note: Amount is rounded to nearest hundred thousand (e.g. for Scotland actual value is £7,868,867.37)

Type of Science

Most of the projects we fund can be classified as basic science (54%). Basic research refers to early-stage research whose findings will provide more understanding on the underlying biology of a disease. We have a growing number of clinical research projects in our portfolio (35%). Clinical research directly involves people with the aim of finding out more about an illness, condition, treatment, therapy, or care. A small percentage of our portfolio use a combination of both (11%).

Donut chart legend:
- Basic: 54%
- Clinical: 35%
- Basic & Clinical: 11%
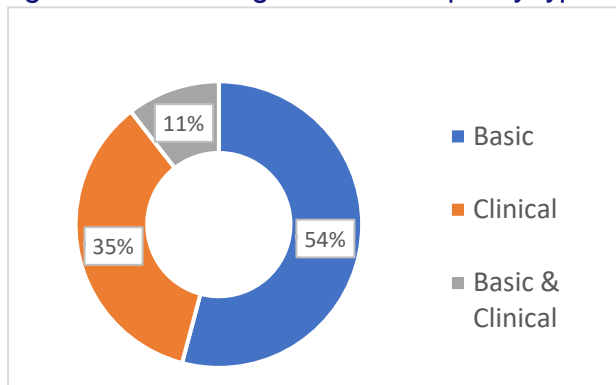
Strategic Outcomes

Diabetes UK has 5 strategic outcomes:

1. 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. More people will be in remission from type 2 diabetes
3. More people will get the quality of care they need to manage their diabetes well
4. Fewer people will get type 2 and gestational diabetes
5. More people will live better and more confident lives with diabetes, free from discrimination

All funded grants are classified into these, some relating to more than one category. The majority of active grants in our current portfolio (61%) fit into our strategic objective of "*More people will get the quality of care they need to manage their diabetes well.*" This is followed by 41% relating to our objective "*More people with type 1, type 2 and all other forms of diabetes will benefits from new treatments that cure or precent the condition.*" Figure 5 shows the breakdown of our current active grants by strategic outcome.

Figure 5: All active grant awards categorised by organisational strategic outcome
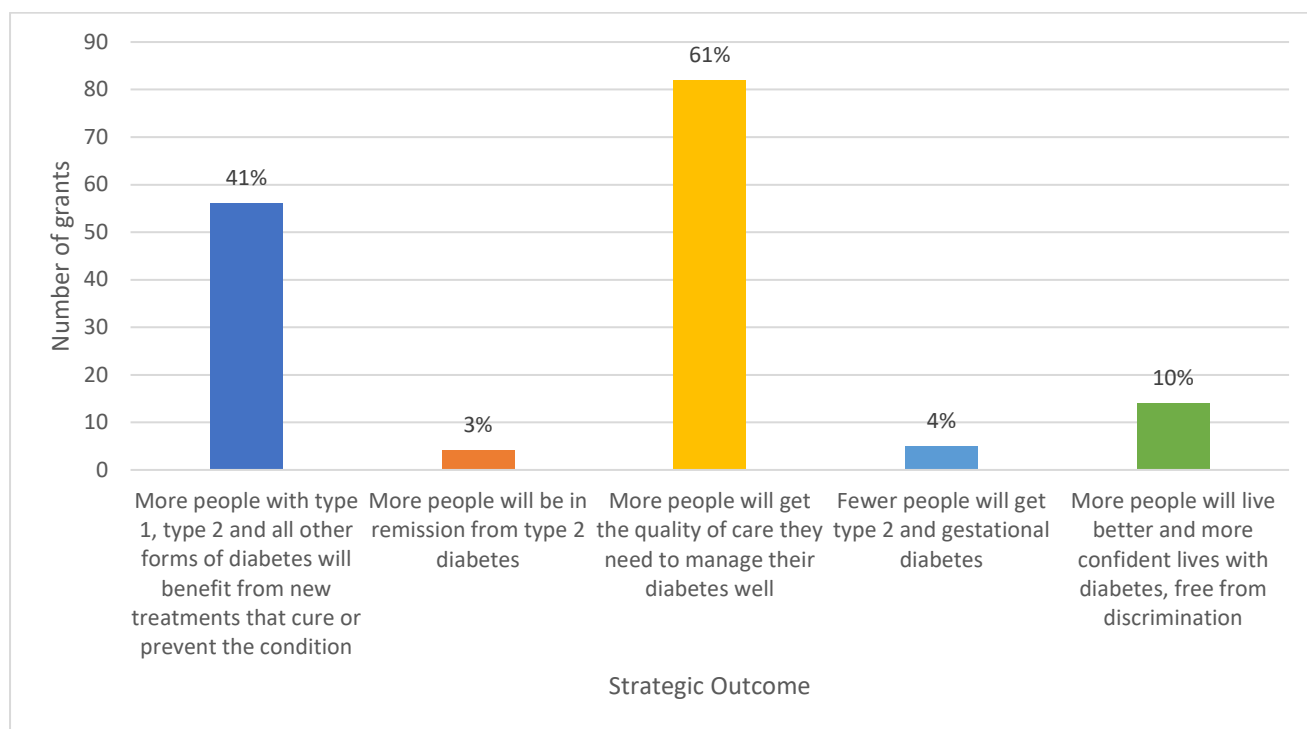
Note: the total is not the sum of the frequency as some grants can be classified into more than one strategic outcome. The percentage shown uses the number of active grants in total as the denominator.

2023 awards

In 2023, we funded **42** new research projects. These can be divided into Diabetes UK led funding schemes, the Type One Diabetes Grand Challenge and several partnership schemes. The combination of all these schemes resulted in us investing over £25.1 million in diabetes research in 2023.
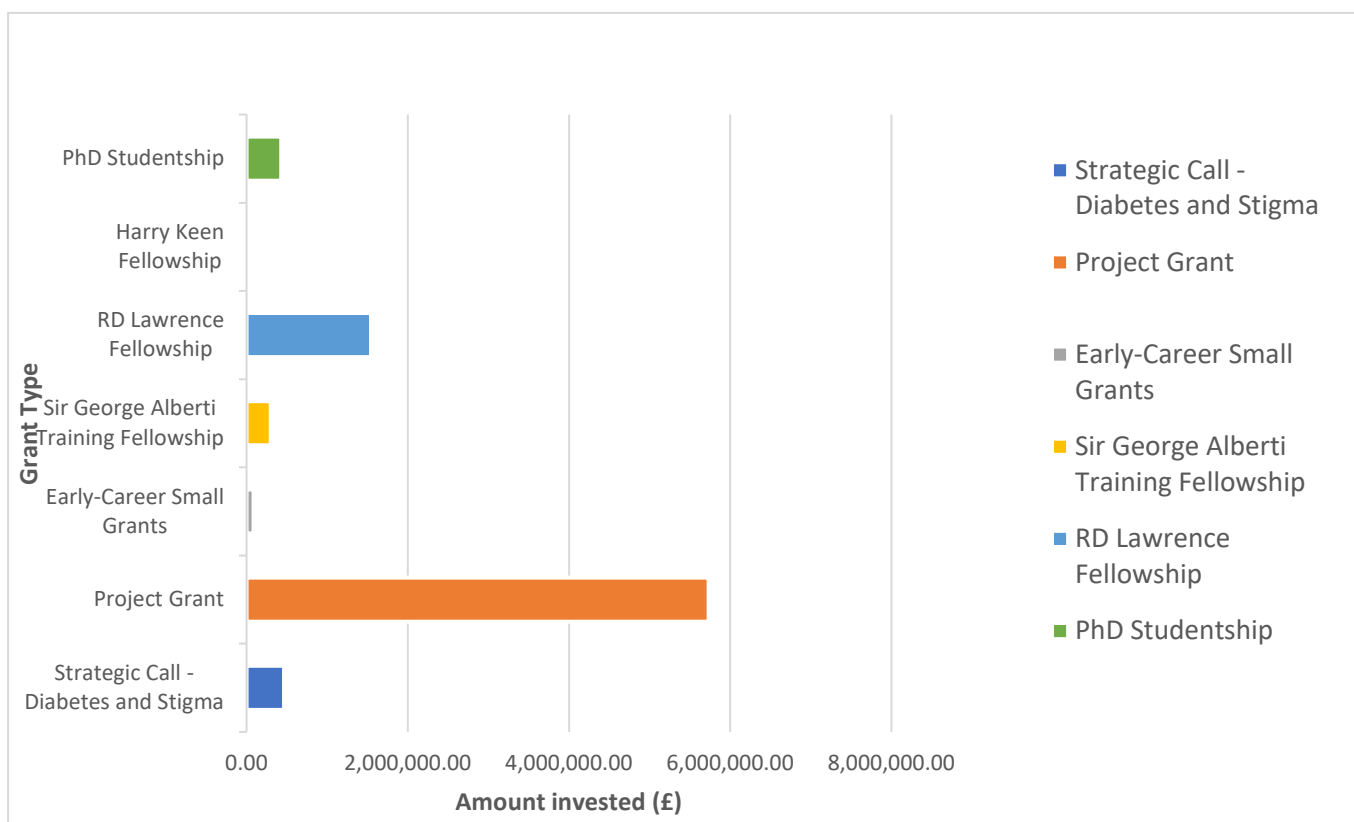
Diabetes UK Funding Schemes

In 2023, through our core funding schemes, we funded 33 new research projects. The total lifetime costs of these approximately add up to £8.5M. This is comprised of £7.3M Diabetes UK funded and £1.3M leveraged through partnership. The awards (also shown in Figure 6) are categorised into:

- 4 Fellowships (£1.8M)
- 4 PhD studentships (£430,000)
- 6 early career small grants (£87,000)
- 17 research projects (£5.7M)
- 2 projects through our strategic call on Diabetes and Stigma (£465,000)

These figures include six awards made through partnerships with JDRF, Moorfields Eye Charity, Macular Society, Fight for Sight, Pharmacy UK and BIRAX.

Note: Amounts have been rounded to the nearest 100,000 if figure is in the millions and nearest 1,000 if in the 10,000 range. Actual amounts are available upon request.

Figure 6: Investment into Diabetes UK-led funding schemes in 2023

Note: Values are amount (£) and % of total investment in 2023. This includes money leveraged via partnerships.

Of the 116 applications submitted across Diabetes UK run funding schemes, 53 applications were scored as fundable by our Scientific Research Committee and Grants Advisory Panel. Of these, we were able to fund 33 applications, which is 62% of applications that were deemed to be high quality by our Committees and Panels. Our award success rate for applications submitted to all funding schemes was 28%. This is similar to that in 2022, when our success rate was 29%. Figure 7 shows the number of applications submitted, fundable and funded to Diabetes UK.

Figure 7: Number of submitted, fundable and funded applications per scheme in 2023.
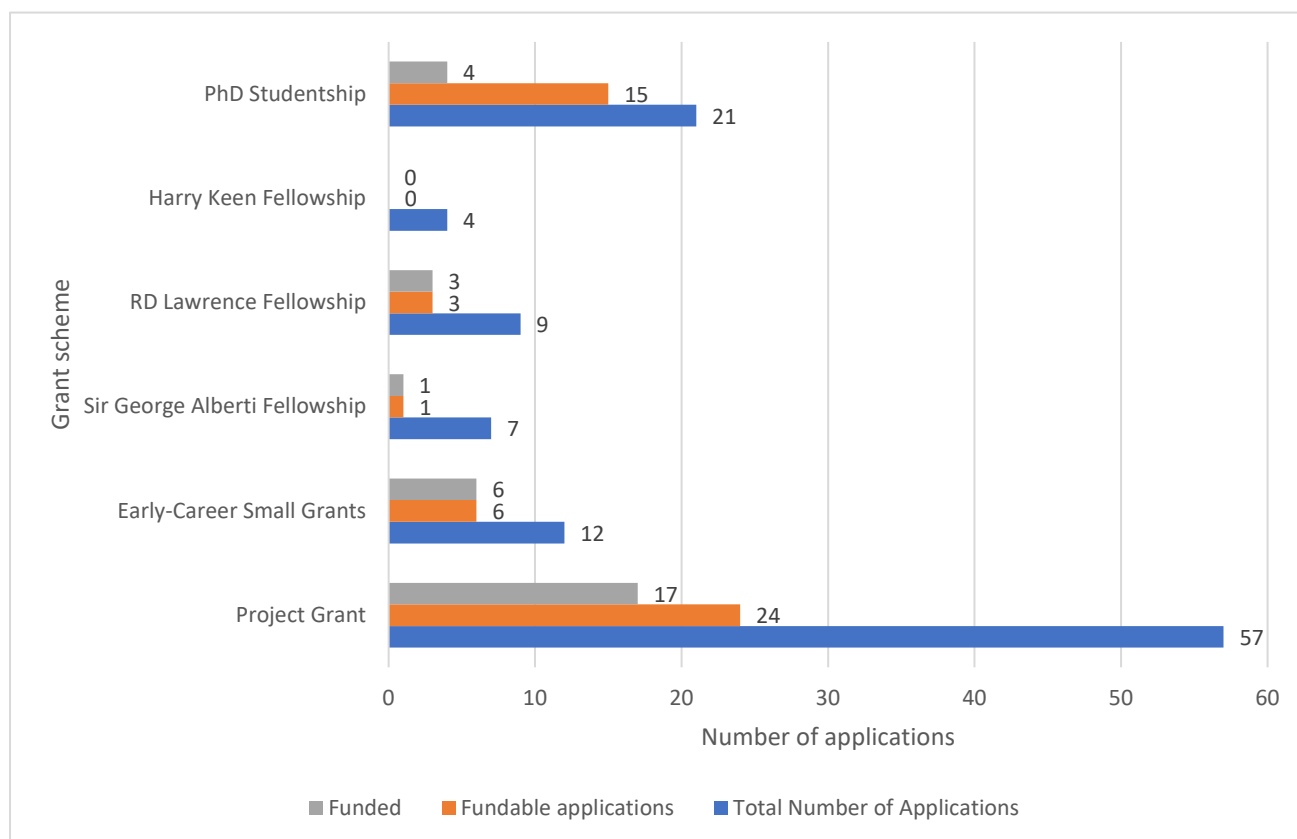
Highlight Notices

Highlight notices are calls for projects to answer a specific research question that has been identified by our Diabetes Research Steering Groups. In 2023, we had three highlight notices:

- Understanding the link between Covid-19 and Diabetes
- Identifying and addressing problematic polypharmacy in people with diabetes
- Reducing sight loss in people living with diabetes

In 2023 we received 14 applications related to our highlight notices (25% of all project grant applications). Three out of these 14 applications were funded, which is a 21% success rate. This also means that of the 17 Project Grants we funded in 2023, 18% were grants submitted through our highlight notices. We invested just under £1.1 million into these three grants. This includes £530,000 leveraged through partner organizations including Macular Society, Moorfields Eye Charity, Fight for Sight and Pharmacy Research UK.

Diabetes Type

Diabetes UK funds research into all types of diabetes. Last year, 36% of our grants were related to type 2 diabetes. This is followed by 30% of grants funded relating to general relevance for all forms of diabetes. Projects focusing on type 1 diabetes made up 21% of grants funded. Gestational diabetes was the focus for 15% of funded projects. A small percentage of grants awarded were for projects are focusing on rarer types of diabetes (9%) such as monogenic and steroid induced diabetes.

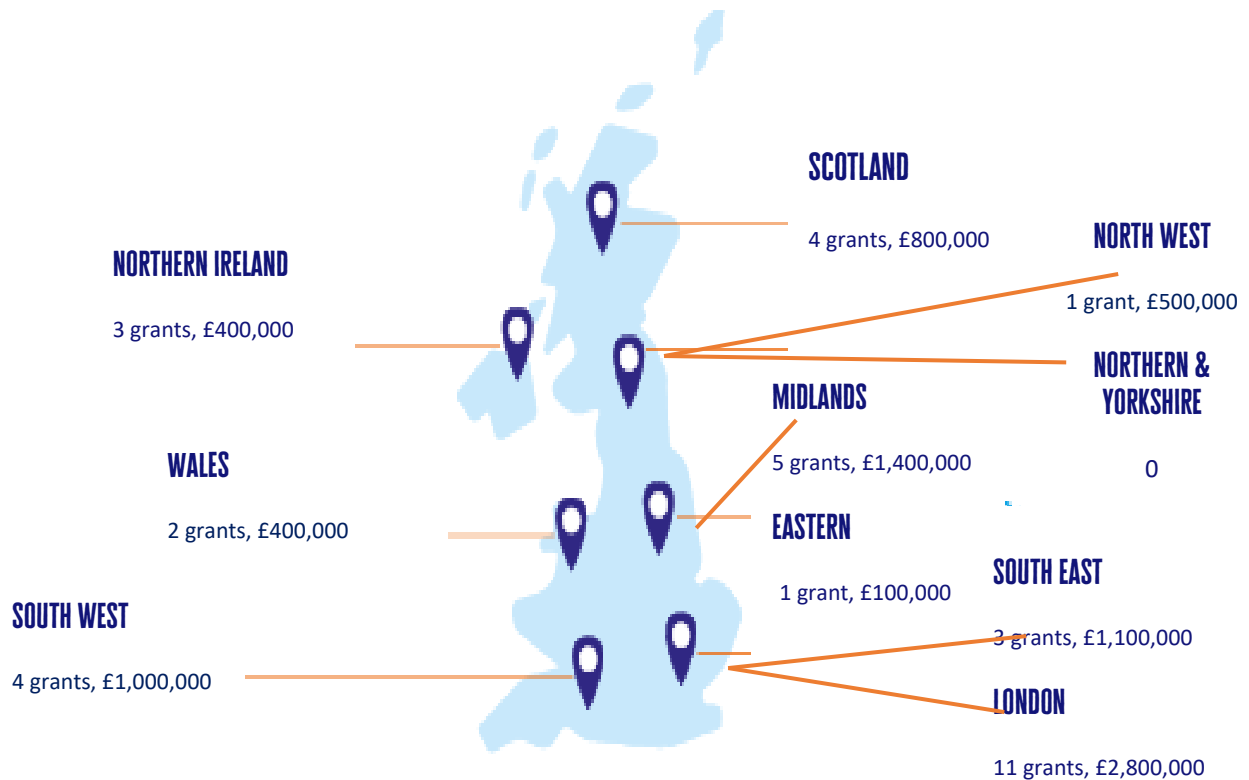Figure 8: 2023 grant awards categorised by type of diabetes.
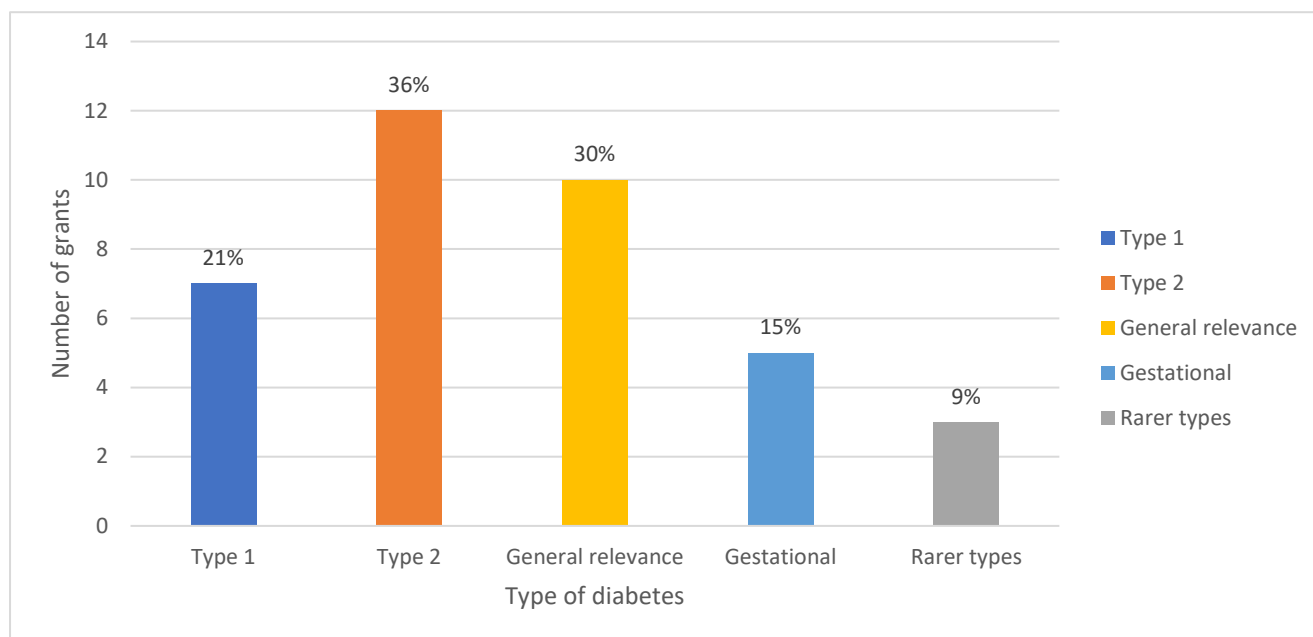
Note: the total is not the sum of the frequency as some grants cover more than one type of diabetes e.g. gestational and T2

Regional breakdown

The figure below shows a regional breakdown of the awarded grants in 2023 and the total amount invested in each region (including grants funded in partnership).

Figure 9: Map of 2023 grants by region and investment in each region (including grants funded in partnership)

SCOTLAND
4 grants, £800,000

NORTH WEST
1 grant, £500,000

NORTHERN IRELAND
3 grants, £400,000

NORTHERN & YORKSHIRE
0

MIDLANDS
5 grants, £1,400,000

WALES
2 grants, £400,000

EASTERN
1 grant, £100,000

SOUTH EAST
3 grants, £1,100,000

SOUTH WEST
4 grants, £1,000,000

LONDON
11 grants, £2,800,000

Note: Amount is rounded to nearest hundred thousand (e.g. for Scotland actual value is £758,407.08)

Type of Science

The majority of grants funded in 2023 were basic science projects (52%). Clinical projects made up 33% of grants funded last year. The remaining were mixed-methods, having elements of both basic and clinical science (15%).

Figure 10: 2023 grant awards categorised by type of science

- 15%
- 52%
- 33%

- Basic
- Clinical
- Basic & Clinical
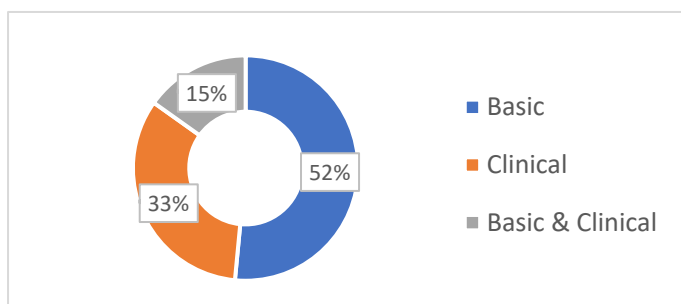
Strategic Outcomes

Figure 11 shows the split of grants that are related to each of our strategic outcomes:

1. 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. More people will be in remission from type 2 diabetes
3. More people will get the quality of care they need to manage their diabetes well
4. Fewer people will get type 2 and gestational diabetes
5. More people will live better and more confident lives with diabetes, free from discrimination

The majority of projects fit into the *"More people will get the quality of care they need to manage their diabetes well"* outcome (85%). The breakdown of our grants by organisational outcome is displayed in Figure below.

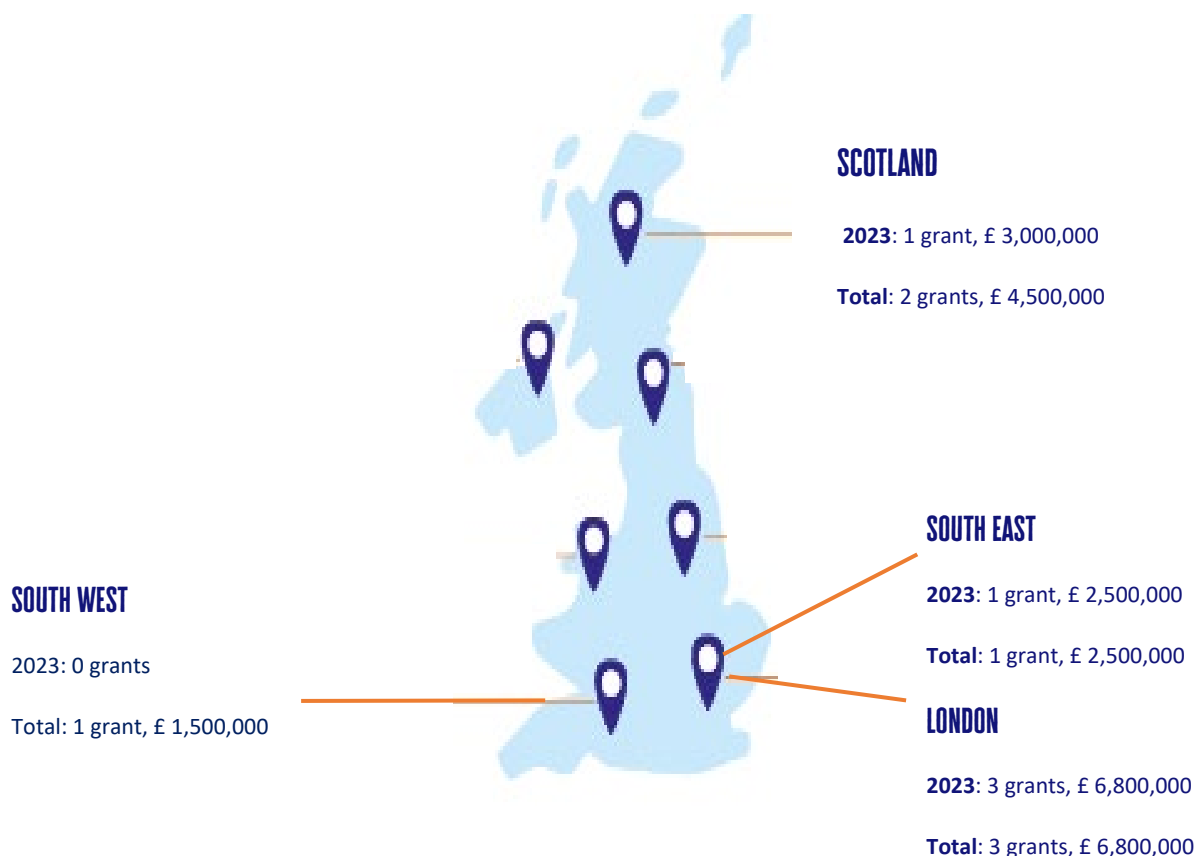Figure 11: 2023 awards categorised by organisational strategic outcome
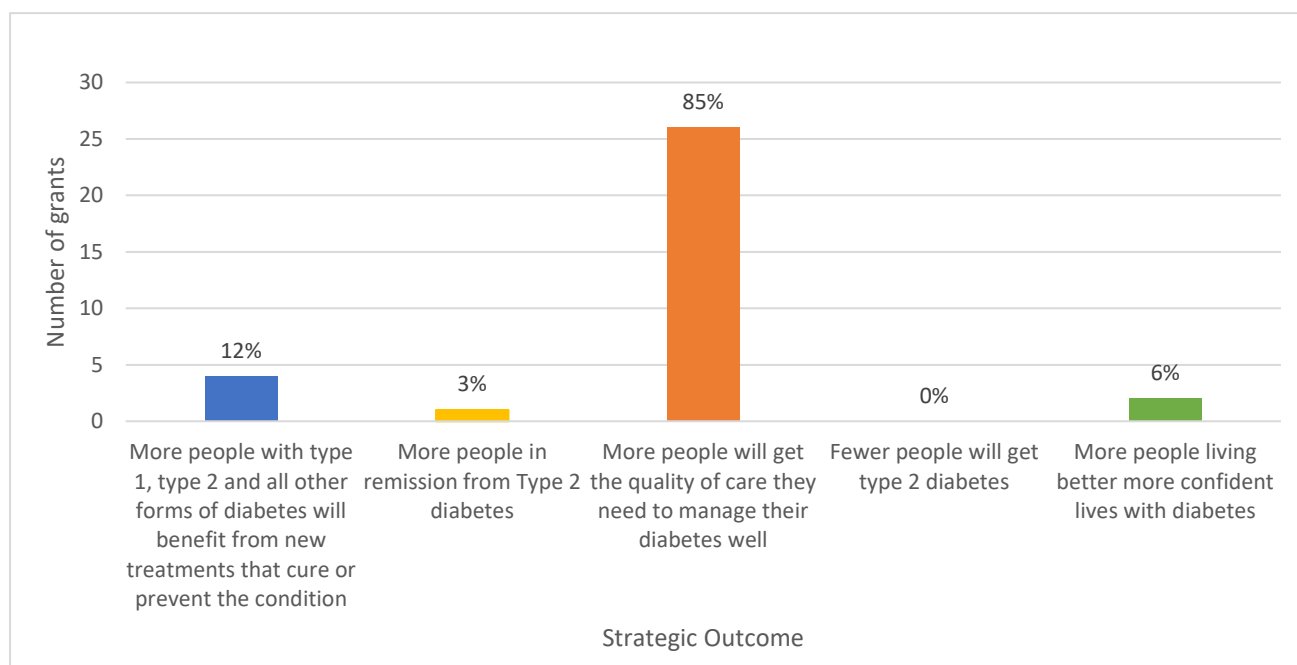
Steve Morgan Foundation Type One Diabetes Grand Challenge

The exciting Type One Diabetes Grand Challenge run in partnership with the Steve Morgan Foundation and JDRF. By the end of 2023, the T1DGC had run three unique grant rounds and received a total of 11 applications. Of these applications, 64% have resulted in grant awards. The Grand Challenge's first investment was in 2 Senior Research Fellowships in 2022 (£2,983,138.75). In 2023, an amazing £12.3M was invested into new research. This included 1 Senior Research Fellowship (£1.9M) and 4 Beta Cell Therapy Translational Programme Grants (£10.3M).

Note: Amounts have been rounded to the nearest 100,000. Actual amounts are available upon request.

Regional breakdown

The figure below shows a regional breakdown of the awarded grants in 2023 and the total amount invested in each region (including grants funded in partnership).

SCOTLAND

2023: 1 grant, £ 3,000,000

Total: 2 grants, £ 4,500,000

SOUTH EAST

2023: 1 grant, £ 2,500,000

Total: 1 grant, £ 2,500,000

SOUTH WEST

2023: 0 grants

Total: 1 grant, £ 1,500,000

LONDON

2023: 3 grants, £ 6,800,000

Total: 3 grants, £ 6,800,000

Note: Amount is rounded to nearest hundred thousand (e.g. for London actual value is £6,779,656.52)

Type of Science

The majority of projects funded in 2023 were basic science (60%). However, the Senior Research Fellowship funded and 1 of the translational projects are using a combination of basic and clinical science (40%).

By the end of 2023, the overall SMF Type One Diabetes Grand Challenge portfolio comprised of 71% basic science projects and 29% mixed-methods.

Strategic Outcomes

All grants awarded via the Type One Diabetes Grand Challenge fit into our strategic outcome of "*More people with type 1, type 2 and all other forms of diabetes will benefit from new treatments that cure or prevent the condition.*"

Academy of Medical Sciences Partnership

In 2023 we funded 2 awards through our partnership with the Academy of Medical Sciences: 1 AMS Clinical Lecturer Starter Grant (£30,000) and £100,000 towards the AMS Springboard Grant for Basic Scientists. The Springboard is a consortium scheme and our support contributed to the awardees made, 2 of which were projects directly in the remit of Diabetes UK.

National Institute of Health Research Partnership

We funded 2 grants through our partnership with the National Institute of Health Research. Our partnership with NIHR leveraged £4.3M *. The individual grants and their values are listed below:

- 1 NIHR PGFAR Diabetes Distress- 2023 (£2.9M, £200,000 funded by Diabetes UK)
- 1 NIHR HSDR Improving Diabetes Services- 2023 (£1.8M, £200,000 funded by Diabetes UK)

List of 2023 Awards

Here you can see the list of our 2023 grant awardees.

Core Funding

Project Grants

Assessing endogenous insulin secretion in UK biobank to improve diabetes classification and treatment
Dr Angus Jones, University of Exeter

Identifying the unique experiences of perimenopause and menopause amongst women with Type 1 or Type 2 diabetes to inform future practice
Professor Vivien Coates, University of Ulster

Advancing blood vessel organoids to model diabetic vascular complications
Professor David Long, University College London

Accuracy and clinical utility of Fibrinopeptide A measurement: a novel biomarker for the diagnosis of gestational diabetes
Professor Claire Meek, University of Cambridge

Identifying the mechanisms of gut–brain axis to sweet sensing in patients with type 2 diabetes using neuroimaging techniques
Dr Sally Eldeghaidy, University of Nottingham

Magnesium deficiency as a reversible driver of vascular complications in type 1 diabetes
Dr Alan Stewart, University of St Andrews

Unravelling a mechanistic role for SGLT2 inhibitors in the diabetic kidney
Professor Claire Hills, University of Lincoln

Ethnic differences in susceptibility to fatty liver, cardiovascular disease and type 2 diabetes in white Europeans, South Asians and African-Caribbean
Professor Daniel Cuthbertson, University of Liverpool

Preventing Diabetic Peripheral Neuropathy Using Technology To Transform Clinical Outcomes
Professor Robyn Tapp, Coventry University

Enabling Precision Medicine in Obesity: Unravelling the Genetic Basis of Adiposity Subtypes and their Implications for Type 2 Diabetes & Complications
Dr Hanieh Yaghootkar, University of Lincoln

Establishing an Islet Autoantibody Positive Registry for children and adults in the UK: the UK-Islet Antibody registry
Dr Rachel Besser, University of Oxford

Nrf2 targeting to improve transgenerational islet function
Dr Sarah Chapple, King's College London

Defining novel regulators of human beta cell specification for transplantation therapy of type 1 diabetes

Professor Shanta Persaud, King's College London

Understanding problematic polypharmacy in people with diabetes – *funded in partnership with Pharmacy UK*
Professor David McAllister, University of Glasgow

Linking circadian disruption and diabetic eye disease- *funded in partnership with Macular Society*
Dr Eleni Beli, Queen's University Belfast

MarvelD3 in diabetic retinal disease – funded in partnership with Fight for Sight, Macular Society and Moorfields Eye Charity
Professor Karl Matter, University College London

Examination of pancreatic exocrine function/mass after type 1 diabetes diagnosis
Dr Claire Williams, University of Bristol

The effect of frequent activity breaks in a free-living environment on glucose control and insulin dose in people with type 1 diabetes
Dr Katie Hesketh, University of Birmingham

Understanding the role of the vascular clock in diabetic retinopathy
Dr Eleni Beli, Queen's University Belfast

A 3D biomimetic in vitro model of obesity-associated insulin resistance and type 2 diabetes
Dr Nicola Contessi Negrini, Imperial College London

Immunometabolic disruption of monocytes by gestational diabetes underpins an accelerated inflammatory phenotype
Dr April Rees, Swansea University

Brain endothelial cell dysfunction links type 2 diabetes and Alzheimer's disease: An Ironclad mechanism?
Dr Fiona McLean, University of Dundee

Unlocking the translational potential of extreme forms of autoimmune diabetes by uncovering heterogeneous mechanisms of beta-cell autoimmunity- *funded in partnership with JDRF*
Dr Matthew Johnson, University of Exeter

Targeting pericytes through LRG1 to prevent vision loss in diabetic retinopathy- *funded in partnership with Moorfields Eye Charity*
Dr Giulia De Rossi, University College London

Profiling beta cell protein synthesis dynamics in health and type 2 diabetes
Dr Daniela Nasteska, University of Oxford

GLP-1 Analogues for Steroid Diabetes: Effects and Mechanisms
Dr Katharine Lazarus, Imperial College London

Untangling type 2 diabetes and depression
Dr Jessica Tyrrell, University of Exeter

Massively Parallel Interrogation of Insulin Receptor Function to Accelerate Diagnosis and Facilitate Translational Research
Professor Robert Semple, University of Edinburgh

Defining direct effects of selective serotonin reuptake inhibitors at islets to improve glucose homeostasis
Dr Bo Liu, King's College London

Relationships between gestational diabetes subtypes and fetal growth and adiposity
Dr Sara White, King's College London

Strategic Call: Diabetes and Stigma
T1D-Stigma study: looking at the evolution of type 1 diabetes stigma through mixed methods to identify who it impacts and how to reduce it
Professor Nick Oliver, Imperial College London

Multimedia messaging to reduce diabetes related stigma for women with gestational diabetes mellitus, a mixed-methods study
Dr Rita Forde, King's College London

Steve Morgan Foundation Type 1 Diabetes Grand Challenge

Senior Research Fellowship
Bioengineering a cell-based cure for type 1 diabetes
Dr Victoria Salem, Imperial College London

Beta Cell Therapy Translational Programme Grants
Towards translation: improving the functional survival of stem cell-derived beta cells
Professor Shanta Persaud, King's College London

Translating GLP Compatible Immunomodulatory and Pro-regenerative Particles To Promote The Function Of Islets Following Transplantation In Humans.
Professor Shareen Forbes, University of Edinburgh

Engineering prosurvival synthetic microenvironments by modulating extrinsic and intrinsic factors in stem cell-derived islet-cells
Professor Francesca Spagnoli, King's College London

Leveraging GLP1R and GIPR as molecular addresses for precision beta cell therapy/replacement during type 1 diabetes
Professor David Hodson, University of Oxford

Academy of Medical Sciences Partnership

Academy of Medical Sciences Clinical Lecturer
Enhancing routine healthcare data to compare frailty and multimorbidity in randomised controlled trials versus routine care
Dr Peter Hanlon, University of Glasgow

National Institute of Health Research Partnership

National Institute of Health Research and Diabetes UK - Research to identify the potential benefits of preventing, identifying and managing diabetes distress in routine diabetes care pathways
Optimising the delivery of Diabetes Distress informed care for its prevention, detection, and management in adults with type 1 diabetes: a hybrid effectiveness – implementation programme (D-stress study)
Professor Jackie Sturt, King's College London

National Institute of Health Research HSDR Improving Diabetes Services- 2023
Digital multi-component intervention to IMPROVE the care of older people living with Diabetes and chronic Kidney Disease: a type 2 hybrid effectiveness-implementation cluster randomised trial in primary care (Short title: IMPROVE DKD Trial)
Professor Indranil Dasgupta, University Hospital Birmingham