

ANNUAL  
REVIEW 2018



Diabetes Research &  
Wellness Foundation

# Working together to find a cure for Diabetes



Celebrating  
**20 Years**  
1998-2018

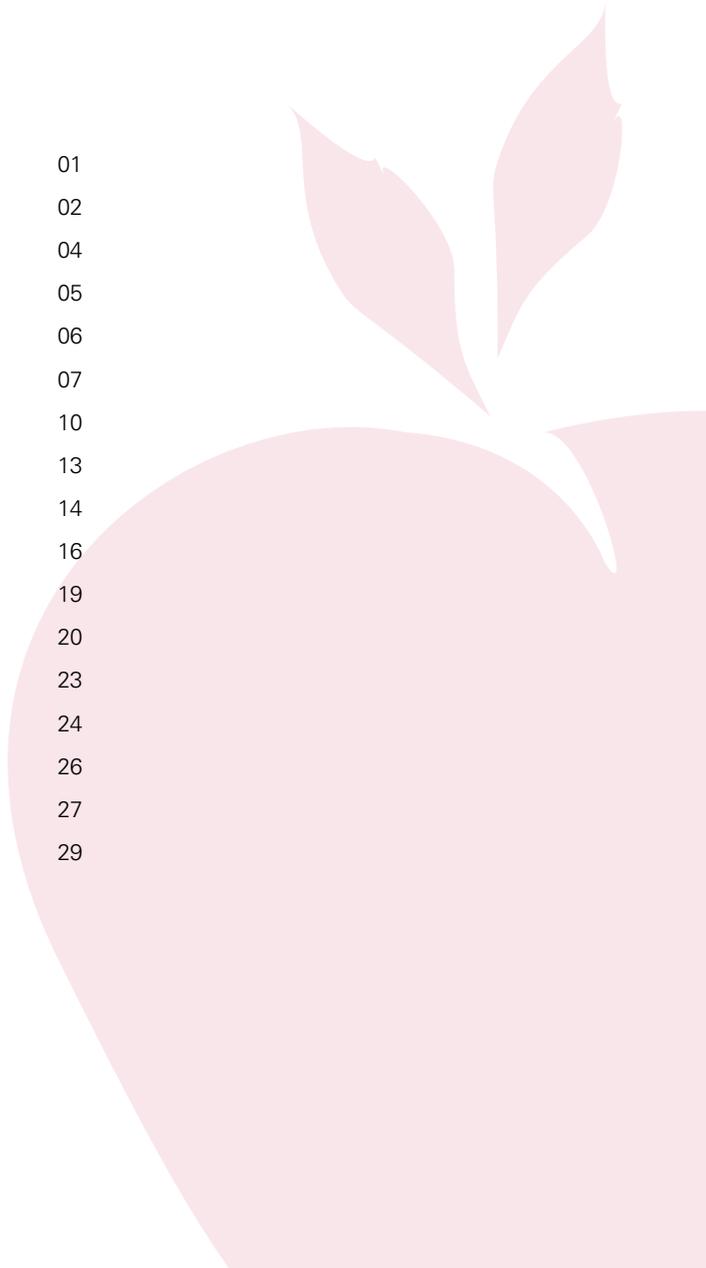


DRWF Staff and Volunteers manning our stand on World Diabetes Day

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# Message from the DRWF Chairman and Chief Executive



In 2018, we celebrated our 20th Anniversary - two decades of commitment to researching the cure for diabetes, to raising public awareness to its devastating consequences and impact on our communities, both in the UK and globally.

During this time, we have seen an explosion in the number of people diagnosed with diabetes. In fact, numbers have more than doubled in the last 20 years with around 90% of this being associated with type 2 diabetes. There are now almost 4 million people diagnosed with diabetes in the UK and it's thought that around another half a million adults have type 2, but don't know it.

It is shocking that our NHS spends around £10 billion each year on treatment and care of diabetes. That's £1 million an hour, every day, throughout the year. And much of this cost is spent on treating complications that can often be avoided.

We recognise that there is no room for complacency. As awareness to DRWF and the support it offers has grown, more people are coming to the charity for information and support than ever before. It is clear to us, that our work is more important than ever!

In 20 years, we have raised almost £71 million in the UK with an average spend over this period of around 82% on awareness, information & educational support programmes, and vital medical research funding.

There have been some significant and exciting changes in health technology, treatment development and research advances. One of our biggest achievements has been the support that we have given through our funding of islet cell research and transplant. In 2004 we made a significant commitment to the Nuffield Department of Surgery and Oxford University - an unprecedented award of £1.2 million, to provide the DRWF Islet Isolation Facility at the Churchill Hospital. In 2008 the NHS started funding the clinical element of islet transplantation, providing an alternative treatment option for a selection of people with type 1 diabetes - a huge breakthrough in translating research into clinical practice. The DRWF facility plays a pivotal role in this programme by providing insulin-producing islet cells for transplant across the UK. This facility, and the Oxford team, is recognised as a leading centre in islet cell research and transplant, and we continue to provide contract funding for 3 personnel to this day.

One of our greatest strengths is the knowledge, experience and understanding that we have gained over the past 20 years, through the relationships that we have built with people living with diabetes. We have worked hard to ensure that everything we do is with those people and their needs in mind.

This was demonstrated by our winning of a Quality in Care award for our Diabetes Wellness Event programme in 2017; shortlisted as Charity of the Year at the Asian Voice/Charity Clarity Awards in 2018 and being named as the Diabetes Professional Care Charity of the Year partner in 2018.

We are still a small group of dedicated trustees, staff and volunteers in the UK but considered a medium sized charity in terms of income, resource and impact.

Whilst independent, we collaborate with other groups where there is a synergy and mutual benefit. We have helped to facilitate a growing network of DRWF groups through the US, UK, France, Sweden, Finland and Norway and whilst all groups are autonomous, we share a mission and vision, enabling us to work in partnership to deliver funding for multi-year high value international research programmes.

It is important to us that we are responsive and flexible in approach to ensure that we meet the needs of all beneficiaries and stakeholders and none of this would be possible without the on-going commitment of all who contribute so willingly, to our work. We are both proud and humbled to work with some amazing people, to whom we would personally like to say a huge Thank You.

This report shares our achievements and performance in our 20<sup>th</sup> Anniversary Year; identifies some challenges that will present themselves and sets out how we will go about meeting those, whilst ensuring that people with diabetes are 'Staying well until a cure is found...'




**W. Michael Gretschel**  
Chairman

**Sarah Tutton**  
Chief Executive

# The impact of diabetes

**Diabetes is a chronic, progressive disease that can have a debilitating impact on almost every aspect of life.**

Type 1 diabetes cannot be prevented. It occurs when the pancreas doesn't produce any insulin and is considered to be an auto-immune response in the body.

Type 2 diabetes is considered to be largely related to lifestyle factors. It can be prevented, or at least its onset delayed, in many cases by changing diet and exercise habits.



Diabetes, its care and treatment, is reported to cost the NHS almost 10% of its annual budget which is approximately £10 billion.

It is thought that around 80% of these costs is attributed to treating the complications of diabetes - many of which can be avoided.

# The scale of the problem



Latest figures indicate (2019 update) that around 3.8 million people in the UK have diabetes and it is thought that around a further 1 million adults have T2 but are yet to be diagnosed. More than 5 million people in the UK could have diabetes by 2025.



Diabetes is a global issue with more than 425 million people living with the condition around the world in 2017. This is expected to reach 629 million by 2045.

Self-management is the cornerstone of diabetes care and to be effective, requires strong partnerships with health care providers and support networks.

**We provide the information and tools to encourage and support a proactive approach to self-care.**

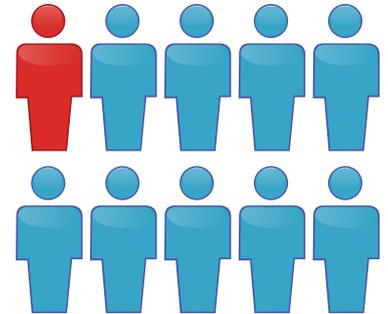
# There are 2 main types of diabetes



## Type 1

cannot be prevented

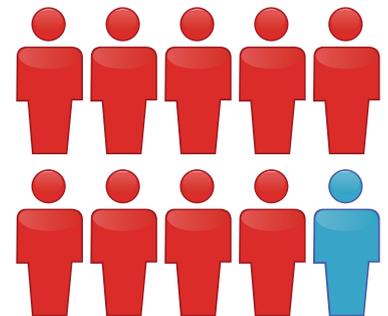
- Type 1 diabetes accounts for around 10% of those diagnosed with diabetes in the UK



## Type 2

can be prevented

- Type 2 diabetes accounts for around 90% of all those diagnosed with diabetes in the UK



All of the people living with diabetes in the UK could fill Wembley Stadium more than **52** times over!



## DRWF Fundraising: Father and son expedition team scale Mount Kilimanjaro and raise £14,000



**A father and son team from London recently scaled the imposing heights of the tallest mountain in Africa to raise money for DRWF.**

A father and son team from London recently scaled the imposing heights of the tallest mountain in Africa to raise money for DRWF.

Bimal Shah and his son Xaviar, 14, of London travelled to Tanzania to scale the dormant volcano Kilimanjaro, which is around 4,900 metres from its base, and 5,895 metres above sea level.

The pair set a fundraising target of £5,000 - with Bimal's company Elemental Concept and Aladdin Blockchain Healthcare match funding all donations. Having smashed their original amount, a grand total of £14,056.85 was donated to DRWF.

Bimal said: "The most important thing is to thank everyone who sponsored Xaviar. We beat the £5,000 target so DRWF will get more than £14,000 towards their fight against diabetes.

"Thank you to all of you who supported us and helped us raise an incredible amount of money for a very worthwhile charity. The money raised will enable DRWF to help change the lives of people with diabetes for the better.

"Xaviar and I are hanging up our hiking boots to dry out for a while before we plot our next adventure."

Bimal and Xaviar followed in the footsteps of explorers Hans Meyer and Ludwig Purtscheller, who were the first known people to have reached the summit in 1889.



# Trustees

DRWF was born from a very personal connection with type 1 diabetes. Having two children diagnosed with the condition made for a commitment and dedication to the cause from Mike Gretschel and his business partner, John Alahouzos, that has never wavered and remains true to its original desire - to find a cure for diabetes.

The DRWF group was established in 1993 in the U.S. and in 1998, DRWF was incorporated and registered as a charity in the UK. Over the last 19 years we have become a recognised provider of awareness, educational support programmes and leading funder of diabetes research. The DRWF Board of Trustees are an engaged and committed group of individuals who bring a significant level of expertise to the governance of the charity in the fields of law, business strategy & management, international fundraising, psychology, healthcare and education.

## Michael Gretschel

### Co-Founder Chairman of the Board

Volunteer fundraiser for diabetes research for over 30 years. Mike has a very personal interest in diabetes, with two children having Type 1. In 1993, Mike – along with others – founded the Diabetes Research & Wellness Foundation (DRWF). Since then, the DRWF International Network of charities has grown to include the Diabetes Research & Wellness Foundation (DRWF) in the UK; Association pour la recherche sur la diabete (A-rd) in France; Diabetes Wellness Network Sverige (DWNS) in Sweden and a new group just starting out in Finland. All groups work autonomously, but with the same objective, and work collaboratively on international awareness and research funding campaigns. Collectively, the groups have committed more than £55 million in awareness, education and research funding since inception.



## John Alahouzos

### Co-Founder Volunteer fundraiser for diabetes research since 1978

John Alahouzos is a marketing executive by profession and a volunteer for 'The Diabetes Cure' by choice. For almost 38 years he has worked alongside his friend Mike Gretschel to raise funds and awareness for the need to cure diabetes. After many years of volunteer fundraising for the Juvenile Diabetes Research Fund in the US, John, Mike and their wives founded the Diabetes Research & Wellness Foundation (DRWF) in 1993. John is the Chairman of the Board of Trustees of the Diabetes Research & Wellness Foundation in the US and serves as a trustee on the board of the Diabetes Research & Wellness Foundation in the UK, as well as their affiliates in France, Sweden, and Finland.



## Jeffrey Harab

### Bachelor of Arts, Juris Doctor. Attorney-at-Law, 1979

Jeff has been a member of the Board of Trustees of the Diabetes Research & Wellness Foundation (DRWF) since 2001. He is also a board member of the Association pour la recherche sur le diabete (A-rd) and is an alternate board member for Insamlingsstiftelsen Diabetes Wellness Network Sverige (DWNS). Each of these groups, along with DRWF in the UK, form part of the International Diabetes Wellness Network, and collaborate on global diabetes awareness campaigns, educational programmes and research funding initiatives.



## Valerie Hussey

### Retired Nurse, Musgrove Park Hospital, Taunton

Val has been a member of the Board of Trustees of DRWF since 1999. She is also an alternate board member for Insamlingsstiftelsen Diabetes Wellness Network Sverige (DWNS). Having worked as a nurse within the NHS for many years, Val has a keen interest in ensuring that people with long-term conditions have the resources available to them to self-manage their condition as effectively as possible. She is a keen supporter of the charity's educational event programme.



## Rae-Marie Lawson

### Retired Psychotherapist MA.Dip; CertEd., Warsaw College, West Midlands

Rae was diagnosed with Type 1 diabetes more than 30 yrs ago and experienced a debilitating lack of hypo awareness which impacted on all aspects of her life. She received two islet cell transplants at the Oxford Centre for Diabetes, Endocrinology & Metabolism (OCDEM) in 2010 which houses the DRWF Human Islet Isolation Facility and has been insulin injection free since then.



## DRWF Research: Dr Shivani Misra named as one of leading health influencers in London



**DRWF-funded researcher included in the Evening Standard's annual Progress 1000 list of influential Londoners.**

Dr Shivani Misra, Honorary Research Fellow in the Department of Medicine at Imperial College London and Consultant in Metabolic Medicine at Imperial College Healthcare NHS Trust, was one of 18 key individuals featured in the list's Health category.

The 2018 list recognised 1,000 leading London-based figures across a range of industries, from comedy to social media to tech.

Dr Misra was awarded a place on the influencer's list for her research into the causes of diabetes found that thousands of patients may have been misdiagnosed because of misconceptions about the role of ethnicity.

Dr Misra set up the DRWF-funded MY DIABETES study in 2013, with recruitment support from the NIHR Clinical Research Network.

The study focuses on classifying types of diabetes in people with young-onset diabetes from different ethnic groups, to investigate the question of ethnicity's impact on diabetes presentation and type.

Dr Misra said: *"I am so happy and grateful that the work we are undertaking to address misclassification of diabetes types in people from different ethnic groups [the MY DIABETES study] has gained recognition in this way.*

*"The success of the study is really down to all the people with diabetes who have given up their time to participate and the recruiting sites across England who work so hard. Of course, without that initial funding from the DRWF, I would never have got started.*

*"As an early career clinician scientist I am extremely proud to have been in the Progress 1000 list and I hope with the support of my fantastic clinical and research colleagues we can continue to do important work in this area."*

The MY DIABETES study currently runs at 40 different sites across England, and has recruited more than 1,400 people from South Asian, African-Caribbean or White ethnic backgrounds. One of the key findings from the study was that genetic forms of diabetes are being misdiagnosed in people from ethnic minority groups.

Maturity onset diabetes of the young (MODY) is a rare form of diabetes which runs in families and is caused by a mutation in a single gene and is found in all ethnic groups. MODY is very rare compared with type 1 and type 2 diabetes and around 20,000-40,000 people in the UK have it. Unlike type 1 diabetes, people with MODY may not need to take insulin for their condition.

As MODY is so rare, it is estimated that about 80% are mistakenly diagnosed with type 1 or type 2 diabetes at first as doctors are not always aware of it.

As part of her research Dr Misra has outlined that healthcare professionals are missing cases of MODY in south Asian and African Caribbean individuals – who then may not receive the right treatment compared with White Europeans.

Dr Misra also found that using broader criteria such as whether a person is making their own insulin identified undiagnosed cases of MODY in non-white ethnic groups. Dr Misra suggested that using these new guidelines could help doctors to better diagnose MODY and refer more patients for genetic testing.

Dr Misra aims to use the findings of her study to stratify patients with young-onset diabetes to improve diagnosis and to deliver precision diabetes care.

Dr Eleanor Kennedy, DRWF Research Manager, said: *"I am so pleased that Dr Misra's contribution to medicine is being acknowledged. As a former DRWF-funded fellow, we knew years ago that she was one to watch and the organisation has continued to follow her progress as she develops her skills and reputation in the world of diabetes research. With awards coming both nationally and internationally, Dr Misra is definitely a force to be reckoned with and, here at DRWF, we couldn't be happier for her!"*

Image © Imperial College London



# Editorial Advisory Board

## Dr Sarah Brewer

### GP, Health Journalist and Specialist in Nutritional Medicine

Dr Sarah Brewer MSc (Nutr Med), MA (Cantab), MB, BChir, RNutr, MBANT qualified from Cambridge University with degrees in Natural Sciences, Medicine and Surgery. After working in general practice, she gained a master's degree in nutritional medicine from the University of Surrey. As well as being a licensed doctor, Sarah is now also a Registered Nutritionist, a Registered Nutritional Therapist and an award winning health writer. Sarah is the author of over 50 popular self-help books, including *Overcoming Diabetes* (Duncan Baird) and *Natural Approaches to Diabetes* (Piatkus). Her latest books are *Live Longer Look Younger*, and *Eat Well, Stay Well*, published by Connections. Sarah is the editor of *YourWellness* magazine [www.yourwellness.com](http://www.yourwellness.com). Follow her occasional nutritional Tweets at [www.twitter.com/DrSarahB](http://www.twitter.com/DrSarahB).



## Dr Deborah Broadbent MRCOphth,

### Ophthalmologist / Director of Liverpool Diabetes Eye Centre

Deborah Broadbent MB ChB (Liverpool) DRCOG (London) DO (London) MRCOphth graduated from Liverpool University in 1976 and has been working as an ophthalmologist since 1978. In conjunction with colleagues she set up the Liverpool Diabetic Eye Study in 1991 and in 1996 she became the full-time Director of the Liverpool Diabetes Eye Centre.

Over the past 20 years she has developed an expertise in the epidemiology, diagnosis and management of diabetic eye disease. She has presented original papers and been an invited speaker at both national and international meetings. In September 2002 she was appointed as the Lead in Workforce, Training and Education to the English National Screening Programme for Diabetic Retinopathy, and has worked with Skills for Health, NHSU, the National Open College Network and City and Guilds to develop National Occupational Standards in retinopathy screening and a suite of mandatory national qualifications awarded by City and Guilds for all personnel involved in the identification of sight threatening diabetic retinopathy across the UK. She was appointed as Honorary Associate Clinical Professor with Warwick University, advising on the Masters in Diabetic Retinopathy programme, in 2010, and as Honorary Senior Lecturer in the Department of Eye and Vision Science at the University of Liverpool in 2013.

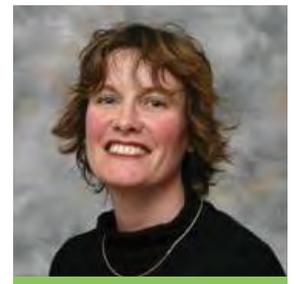
She acts as a peer reviewer for ophthalmic and diabetes journals and is the Section Editor for Retinopathy in *Diabetes Digest*. She is also on the Advisory Board for the Diabetes Research and Wellness Foundation and is a trustee for The Eye Fund, a charity providing counselling support for people coming to terms with untreatable visual impairment. She continues to be actively involved in research into the epidemiology of diabetic retinopathy, screening for diabetic retinopathy and new therapies.



## Andrea Cameron

### Head of the School of Social and Health Sciences, Abertay University

Andrea has worked in Health Care since 1982. After qualifying as a nurse she specialised in Coronary Care Nursing before becoming a Nurse Teacher. She then moved to teaching Sports Science, but remains a registered nurse and qualified exercise instructor. She has undertaken doctoral studies examining the information given to patients with Diabetes by health professionals in the primary care sector and has published in the area of volunteering and employment skills. Andrea has also run for Scotland at international veteran events, and has been a contributor for DWRF since 2004.



## Professor Edzard Ernst

### Professor in Complementary Medicine, Exeter

Professor Edzard Ernst is Chair in Complementary Medicine and Director of Complementary Medicine at Peninsula Medical School in Exeter. His expertise lies in acupuncture, autogenic training, herbalism, homeopathy, massage and spinal manipulation. He has published more than 1,000 articles in peer reviewed medical literature, 500 original research papers and has written, or been editor, of more than 40 books. Edzard is Editor-in-Chief and founder of two medical journals, and sits on the editorial board for 20 other journals, including DRWF's *Diabetes Wellness News*.



## Azmina Govindji

### Registered Dietitian and TV Nutritionist

Azmina is a registered dietitian, consultant nutritionist, broadcaster and best-selling author. She is director of Azmina Nutrition [www.azminanutrition.com](http://www.azminanutrition.com) and shares daily tips at <http://on.fb.me/AzNutrition>. Azmina has written 15 books including the Gi Plan with Nina Puddefoot and The Diabetes Weight Loss Diet with Antony Worrall Thompson. She was Chief Dietitian to Diabetes UK from 1987-1995 and is currently a media spokesperson for the British Dietetic Association.



## Gwen Hall

### DSN, Community Diabetes Services Portsmouth, Primary Care Team

Gwen Hall, Independent Diabetes Specialist Nurse, trained as a Mental Health Nurse in Scotland and, having moved to England, completed her general training in Surrey. She worked for many years as a Practice Nurse/Nurse Practitioner, Practice Nurse Trainer and Diabetes Facilitator. Latterly she became a Diabetes Specialist Nurse in Primary Care and this year took up a post with the award winning Community Diabetes Team in Portsmouth.

Gwen is Associate Editor-in-Chief of *Diabetes & Primary Care* and on the editorial board of the *Journal of Diabetes Nursing* and *Diabetes Digest*. She has regularly published articles in these and other journals. In 2005 Gwen was elected Vice-Chairman of the Primary Care Diabetes Society. She was responsible for updating Mary MacKinnon's book *Providing Diabetes Care in General Practice* and was awarded the Mary MacKinnon lecture at Diabetes UK's Annual Professional Conference in 2008. She continues to lecture widely on diabetes nationally. She is an Associate Clinical Teacher for the University of Warwick and a past Visiting Fellow of the University of Surrey.



## Emma Howard

### Community Diabetes Lead Podiatrist, Oxford Health NHS Foundation Trust

Emma qualified with a BSc Hons Podiatry from the University of Brighton in 1997 and began working as a community podiatrist for the NHS in Shropshire. During this time she completed the Society of Chiropractors and Podiatrist Diabetic Foot Module and began working in acute diabetic foot clinics in Telford and Shrewsbury. After nearly 10 years she moved to work at Knowsley PCT on Merseyside as a Diabetes Team Leader in a community trust.

In 2009 she accepted a position for Oxford Health NHS Foundation Trust where she works as a Community Diabetes Lead Podiatrist. She specialises in the care of the diabetic foot and high risk wound care. The clinics run across community settings and within OCDEM (Oxford Centre for Diabetes, Endocrinology and Metabolism).

She has worked with DRWF since 2007 developing the foot care advice leaflet and has attended the Walking holidays and Wellness Weekends to give presentations and informal advice on foot care in diabetes.



## Dr Alison Kirk

### Lecturer in Physical Activity for Health, University of Strathclyde, Glasgow

Alison was appointed in January 2009 as a Lecturer in Physical activity for Health at Strathclyde University, Glasgow. She completed a BSc in Physiology and Sports Science at the University of Glasgow (1998) before undertaking a PhD through the same university (completed 2003). She was then appointed as Lecturer at Dundee University before moving to Strathclyde University. Alison currently teaches on the BSc Sport and Physical Activity degree course. She teaches various aspects of physical activity and health and clinical exercise science.

Alison's specialist research area is in behaviour change of physical activity and sedentary behaviour with emphasis towards prevention and management of chronic disease. She has particular focus towards diabetes but with past and current funded research in breast and colon cancer, respiratory and cardiovascular disease. Alison has a drive towards implementation of research findings and knowledge exchange within community and clinical practice and has worked with a number of community and clinical groups on related projects and guidelines.



**Dr Alastair Leckie****MBChB DRCOG MRCP FFOM, Consultant in Occupational Medicine, OHSAS**

Alastair is a consultant in occupational medicine and director of OHSAS, an NHS based service provider for occupational health. He graduated from Edinburgh University in 1986 and initially trained and worked as a general practitioner. He trained in occupational medicine at the Institute of Occupational Medicine before moving into his current role. Alastair is involved in postgraduate training for GPs, specialist trainees, and occupational health colleagues. He is an honorary senior clinical lecturer at the University of Glasgow. He frequently sees people in his clinic with diabetes to advise them and their employer regarding any work issues or work based assistance that may be required. Alastair is currently President of the Society of Occupational Medicine.

**Henrietta Mulnier****RGN MSc PhD, Lecturer in Diabetes Nursing/DSN, King's College London and Guy's & St Thomas' Trust**

Henrietta Mulnier RGN MSc PhD is a Lecturer in Diabetes Nursing at the Florence Nightingale School of Nursing and Midwifery, King's College London. She also works clinically as an Honorary Diabetes Specialist Nurse at St Thomas' Hospital London. She has been nursing for nearly 30 years; specialising in diabetes since 1995. Having completed a Doctorate in 2008 her current focus is on research to benefit patient care for those with diabetes. Henri has published widely and is a reviewer for several journals. She is a member of the current National Institute for Health and Clinical Excellence Guidance Development Group for type 1 diabetes and is also on the editorial board for Diabetes & Primary Care.

**Dr Mayank Patel****Consultant Physician in Diabetes, University Hospital Southampton NHS Foundation Trust**

Dr Mayank Patel has worked as a Consultant Physician in Diabetes and Acute Medicine at University Hospital Southampton since 2008. Since starting as a Consultant, he has overhauled and developed the trusts adult inpatient diabetes service and worked with commissioners to bring new adult multidisciplinary insulin pump and diabetic foot services to the trust. He co-developed 'DiAppbetes', the smartphone application to help healthcare professionals manage inpatients with diabetes. He also contributes to medical undergraduate and postgraduate diabetes training, as well as regularly delivering diabetes education to patients, public and other healthcare professionals in primary and secondary care.

**Professor Philip Preshaw****Specialist in Periodontics, University of Newcastle**

Philip Preshaw is Professor of Periodontology and Consultant in Restorative Dentistry at Newcastle University, UK. He received his Dental Degree from the University of Newcastle in 1991 and his PhD in 1997. He is a registered specialist in Periodontics and is a Fellow of the Royal College of Surgeons of Edinburgh. His main research interests are investigations of the pathogenesis of periodontal disease, and links between diabetes and periodontal disease. Professor Preshaw lectures frequently, and has numerous publications in peer-reviewed scientific journals. He has been awarded a UK NIHR National Clinician Scientist Fellowship, a Distinguished Scientist Award from the International Association of Dental Research, and a King James IV Professorship from the Royal College of Surgeons of Edinburgh for his contributions to research.



# Awareness, information & support

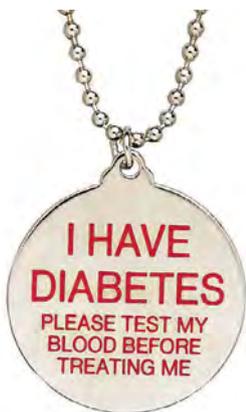
The number of people diagnosed with diabetes in the UK has more than doubled in the last 20 years. There are now more than 3.8 million people diagnosed with diabetes in the UK, an increase of around 1.8 million on the numbers of people recorded in 1998. It is also believed that there could be as many as 1 million more who have diabetes, largely type 2, but have yet to be diagnosed. Add to this the estimated 12 million who are at higher risk of diabetes, and the need for greater awareness becomes ever more apparent and urgent.

The treatment of diabetes in the UK costs the NHS around 10% of its annual spend, this is around £10 billion per year of which around 80% is spent on treating associated complications, many of which can be avoided.

Diabetes can be successfully managed, and complications often prevented, particularly with early detection. Furthermore, diet and exercise related lifestyle changes can significantly reduce the risk of type 2 diabetes. All of which can help to reduce the debilitating impact that diabetes has on all aspects of life, as well as the overwhelming financial burden that it brings to bear on healthcare services.

To this end, we continued to raise awareness via multi-media channels with consistent messaging to differentiate between type 1 and type 2 diabetes, helping people to understand that whilst type 1 diabetes cannot be prevented, much can be done to prevent or delay the onset of type 2.

We distributed more than 401,000 direct mail campaigns in 2018 containing awareness information and calls to action. With a positive response from 13.5% of those mailed, we know that at least 54,000 people across the country read the information contained within the campaign. We know from experience that it is likely that many more opened and read the information but chose not to make direct contact with us at that time. Historically, we have seen numbers of people respond to communications that have been distributed many months before, even years, as they have held onto the information provided for future reference. Additionally, we tested a new direct mail approach reaching a further 99,000 households across the country.



Our Diabetes Awareness Necklace is distributed free of charge to people with diabetes and healthcare professionals for onward distribution. These necklaces provide emergency identification for those with diabetes should they be unable to alert the emergency services to their condition. They carry the wording 'I have diabetes, please test my blood before treating me'. They are distributed along with medical check-up cards that are used to record tests and results to inform self-management strategies. More than 7400 necklaces were distributed during the year to diabetes and related health care professionals and those living with diabetes, as a result of a direct request. This represents a 10% reduction on the numbers distributed to direct requests in 2017, however high volumes of necklaces are also taken away from events that we attend or hold. Requests are received via the charity's website, DM programmes and social media channels, particularly Face Book, and very often are as a result of other organisations and companies directing traffic to the charity's offer. During the year, several 'free offer' sites steered around 900 requests alone.

Our awareness messages are reaching wider audiences than ever before through social media channels and enabling us to interact with more diverse communities where the risk of diabetes is sometimes higher.

Almost 58,000 people visited the charity's website in 2018 with the diabetes news and event section being the most popular, in particular the news items related to advances and breakthroughs in research, treatment and care.



*"We both read your newsletter all the way through and enjoy the content and seeing the positive aspects of research on people with the condition, thank you"*

*"My husband has recently been diagnosed with Type 2 Diabetes but suffers from heart and vascular conditions as well, which means he could potentially collapse anywhere and at any time. We both feel these necklaces could prove extremely invaluable in the future. We just wanted to say what a fantastic service you provide. The information on your website has been very important to us as well"*

## NHS England Information Standard accredited health and social care information

NHS England Information Standard accreditation demonstrates that the information provided is relevant, clinically evidenced and up-to-date, and that a robust production process, including peer and lay review, is performed on each publication. Patient information resources are available free of charge in print format. They can be downloaded from our website as pdf or audio files or requested in large print format.

Diabetes and related healthcare professionals request these leaflets in bulk to distribute within their clinics and surgeries. More than 39,035 leaflets were distributed in hard copy during the year, with more than 7855 downloads from our website, an increase of 16.5% on the previous year.

During the year, we worked with **Barnard Health Research** to gather information from recipients and users of the charity's information leaflet series, to ensure that they are fit for purpose.

More than 123,691 copies of our monthly newsletter, Diabetes Wellness News, were distributed to subscribers and regular givers in our Partners for the Cure programme during the year. The newsletter is circulated to annual subscribers and on a complimentary basis to healthcare providers who share the information with their patient communities. It is difficult to accurately predict the true readership of the newsletter but through anecdotal evidence, it is clear that it is much wider than those who have specifically requested to receive it. The number of healthcare professionals on our database during the year had reduced by 4.5% standing at 3928 at year-end.



A mixed methods approach was adopted including a review of existing materials, semi-structured interviews with experts and users, questionnaires for healthcare professionals and people with diabetes separately and targeted approach to existing contacts who regularly order and re-order the leaflets.

In conclusion, it was clear that the leaflets have a positive impact and a utility within clinical practice and beyond for some people with diabetes and healthcare professionals. Limitations of the leaflets, in terms of design particularly, can be overcome without too much difficulty. This should not, however, detract, from the important role these leaflets play in providing much-needed information both as a clinical aid and a useful resource outside of clinic.



## Diabetes Wellness educational events

Diabetes structured education aims to provide people with diabetes with the knowledge and confidence to self-manage a long-term condition effectively. The offer of structured education has improved over the last three years. However, the rates of attendance are still very low and disparate across the country. Self-management is central to diabetes care. Yet, it is reported that four in ten people with diabetes experience emotional or psychological problems, such as depression, anxiety and diabetes distress, all of which can impact the ability and motivation to self-manage effectively. This leads to poorer health outcomes, reduced quality of life and increased healthcare costs. Being able to access appropriate psychological support is an integral part of self-management and a core service component in the NHS Right Care pathway for diabetes. However, recent reports suggest that more than three quarters of people with diabetes were not offered emotional or psychological support when they needed it.

We have been running an annual programme of Diabetes Wellness events since 2001. We work with diabetes, and related, healthcare professionals to facilitate workshops that provide relevant, up-to-date, evidence-based information covering all aspects of diabetes and related health. Delegates choose the sessions and talks that they attend meaning that they create their own agenda for the day, improving engagement and supporting better outcomes. These events bring together a wealth of information and expertise under one roof.

The event programme is devised and delivered by experts and offers rotating workshops that focus on the day-to-day management of diabetes and also prevention and management of associated complications. An exhibition hall provides a central hub where delegates can access a range of support from primary, secondary and community organisations.



We know that managing diabetes is challenging and so effective coping strategies are crucial to support optimal health. These coping strategies are important not just to people living with diabetes but their family, friends and carers. Peer support plays an important part in emotional wellbeing and this in turn can have an obvious impact on the ability to self-manage effectively. For this reason, we feel it is important to include family, friends and carers in workshops and discussions which facilitates discussion around managing diabetes, perceptions and expectations, in an environment where everyone has experienced or is experiencing something similar. These events are relaxed and welcoming in approach. They are inclusive and provide for diverse needs. They also provide an amazing opportunity to spend time with a whole host of health care professionals asking the questions that really matter to the individual, in a relaxed and informal environment.

National guidelines recommend that people living with diabetes should be offered structured diabetes education that involves a range of activities to increase knowledge and skills around self-management. Our Quality in Care Diabetes (QIC) award-winning Diabetes Wellness events are complimentary of the structured education courses on offer via the NHS and are supportive of the ongoing need to refresh and gain new knowledge throughout the lifetime of a long-term chronic condition. We see a high volume of people that come back year on year for this reason, as well as newly diagnosed who have been recommended to attend by their own healthcare professional. In 2018, we held 3 events across the country accommodating around 300 delegates.

*"I learned more at your day than I have learned in the last fourteen years living with my diabetes. Thank you for the day and your time."*



## Diabetes Professional Care 2018

14th - 15th November 2018 | Kensington Olympia, London

DRWF were the registration sponsors for this event for the third year running. This is a 2-day, free-to attend conference and exhibition for healthcare professionals involved in the prevention, treatment and management of diabetes. It focuses on real-world, practical education aiming to provide HCP visitors with the skills and knowledge they need to deliver the very best diabetes and related health care for their patients. It is the only free-to-attend CPD accredited diabetes event in the UK.

There were 4195 attendees in 2018 almost trebling its attendance numbers from 1589 over the past 3 years. Visitors were -

- 86% Health Care Professionals
- 4% scientists / researchers / educators and medical students
- 8% CCG board members / diabetes / obesity / LTC leads
- 2% Business development & marketing.

## Diabetes Professional Care - Charity of the Year

In 2018, DPC launched the Diabetes Professional Care Industry Awards in association with The Diabetes Times to celebrate achievements, standards of excellence and commitment to quality and positive outcomes by companies and organisations working in the field of diabetes. We were delighted to be named as the DPC Charity of the Year in our 20th anniversary year. DPC founders and organisers are committed supporters of DRWF and routinely volunteer their time and services at Diabetes Wellness Events and fundraisers.

DRWF has committed to registration sponsorship of DPC 2019 which moves into the Grand Hall at Olympia due to the popularity and increasing footfall of the event. DPC has secured a partnership with the ABCD (Association of British Clinical Diabetologists) for 2019 and the event promises to be the biggest and best yet. The DRWF Chief Executive has been selected to the steering committee for the programme, giving DRWF further exposure in its capacity of a charitable organisation supporting the continuing professional development of diabetes healthcare professionals in the UK.



Sarah Tutton CEO and Sarah Brown Research Administrator receive the award from Stephen Matthews Mail Online Health Editor.

## Gifts in Kind

Gifts in Kind are non-cash donations made to the charity, such as medical supplies, which the charity redistributes to other organisations that may benefit, where these diabetes and related health medicines may not otherwise have been available or are in short supply. In 2018, we received one donation of type 2 diabetes and related health medicines with a wholesale value of approximately £600,155.00. This donation offer came from Aid Unlimited via our service partner, Charity Services International. These medicines were gifted onwards to our programme partner, Dominican Republic Instituto Dominicana de Accion (IDAC). The medicines were utilised in hospital and clinics in the city and outlying rural areas, enabling the treatment of 887 adults aged 20-59 years; 1008 adults aged 60+ for diabetes and diabetic neuropathy. These medicines improved access to diabetes treatment; increased opportunity for new patient and follow-on treatment. Additionally, they increased access to medicines for the treatment of diabetes related complications and decreased the severity of some of these complications which had been exacerbated by lack of access to appropriate medications.

The administration and distribution costs of these medicines were approximately £10,980 meaning that every £1 (£608,155) donated cost us 0.018p. The cost of treating 1895 patients was equal to around £5.79 per person.



# 1998

## 1998

- DRWF is incorporated as a registered charity and company limited by guarantee - our objective



**‘To raise awareness and assist people living with diabetes and similar or related conditions, their incidence, cause, treatment, avoidance and relief.’**

- Dr Roslyn Elson (above), then Managing Editor of *Practical Diabetes International*, was recruited as Executive Director of DRWF.

## 2000

- The charity awards its first 3-year Non-Clinical Research Fellowship to Dr Luke Chamberlain (Glasgow) for £106,456.

## 2003

- DRWF becomes a member of the Association of Medical Research Charities (AMRC) establishing robust peer review processes for applications for its annual research funding awards.
- The first Active with Diabetes Walking Holiday is held at Hassness in the Lake District. A support team of diabetes specialist nurses and a podiatrist advise on how to make walking part of a daily exercise programme whilst managing diabetes medications and blood glucose levels accordingly.
- A new range of diabetes information leaflets are introduced to the charity's repertoire of support literature.



## 1999

- Debra Peett and Sarah Tutton are recruited to get various activities underway for the charity.
- The charity commences its initial fundraising programme raising its first £1 million by November 1999.
- The first small research awards are made, 8 in total, to various institutions in the UK totalling £84,610.
- DRWF launches the *Diabetes Wellness News*, a subscriber-based monthly newsletter containing specially commissioned self-management articles, news and research updates.



## 2001

- The charity awards its first 3-year Clinical Research Fellowship to Dr Karen Anthony (Kings College London) for £120,000.
- As part of a new outreach programme, DRWF holds a Diabetes Wellness Retreat providing expert diabetes healthcare workshops, as well as a social programme, for people with all types of diabetes, in Chichester, West Sussex.

## 2002

- The charity sets up a multi-disciplinary Research Advisory Board (RAB) and launches an annual research funding programme of 3-year Fellowships and 1-year Research Grant awards. The RAB is chaired by Professor David Matthews, Oxford, whose research focuses on type 2 diabetes. Professor Matthews was also deputy co-ordinator of the Executive and Policy Advisory Committee for the UK Prospective Study of Diabetes (UKPDS) and founder member of the Oxford Health Alliance.

## 2004

- DRWF make an unprecedented award of £1.4 million to the Nuffield Department of Surgery to establish a Human Islet Isolation Facility at the Churchill Hospital, Oxford.



## 2005

- DRWF makes a grant for the set-up of a sister group in France, the *Association pour le recherché sur la diabete (A-rd)* in order to grow the International Diabetes Wellness Network.
- With a commitment to islet cell research and transplant, the charity makes a multi-year grant in collaboration with groups in the US and France in support of the Spring Point Project (Wisconsin) which seeks to find an alternative, sustainable supply of islets suitable for human transplant.

## 2006

- The DRWF Human Islet Isolation Facility is launched in Oxford (above) which marks a long-standing commitment to islet cell research and transplant for the charity.

## 2007

- DRWF supports the International Pancreas and Islet Transplant Association (IPITA) meeting in Minneapolis demonstrating its desire to support international knowledge sharing in this emerging field of diabetes research.



## 2008

- The NHS make clinical funding available for Islet Cell Transplants for a selection of people with type 1 diabetes, meaning that the DRWF Islet Isolation Facility in Oxford becomes the key provider of islets for this national treatment programme.
- The first Diabetes Wellness Day South is held – a change to the ad-hoc Diabetes Wellness Workshops that the charity had previously held, with an established home in Southampton, serving the south coast.
- DRWF provides an institutional grant of £81,000 for the completion of the Stephanie Marks Diabetes Resource Centre at St. Peter's Hospital, Chertsey (pictured right).
- The charity makes a grant for the set-up of a sister group in Sweden, the Diabetes Wellness Network Sverige (DWNS) in order to grow the International Diabetes Wellness Network.



## 2010

- DRWF gains the Department of Health Information Standard accreditation for its adult health and social care information. This is a kite mark which demonstrates that patient information goes through a peer review process, is appropriately written for its intended audience, clinically evidenced/referenced and up-to-date.
- As part of the Diabetes Wellness Event programme, the first Wellness Day North is held in Hartlepool, serving the diabetes community in the north-east.

## 2011

- DRWF is a finalist in the Medical Journalists Association, Health Charity of the Year, awards. (pictured right)

## Celebrating 20 Years 1998-2018



## 2013

- The charity launches a new website focused on providing access to information resources, news and research updates with a 'community' feel.
- DRWF plays an integral part in the set-up of a Research Advisory Board for its sister group in Sweden. This is to ensure a consistency of research funding and to enable robust peer review processes to be adopted across Sweden and a newly established group in Finland.

## 2014

- DRWF is shortlisted in the Best Use of Web category at Times Awards.



## 2015

- DRWF attends the European Association for the Study of Diabetes annual conference in Stockholm with colleagues from Diabetes Wellness Network Sverige, to meet with DRWF-funded researchers from around the world.

## 2016

- The charity is invited to become a key sponsor of the newly established Diabetes Professional Care (DPC) conference at Olympia, London. This event supports the upskilling of diabetes and related healthcare professionals, for whom the event is free to attend.

## 2017

- DRWF is shortlisted in the *Empowering people with diabetes in self-management* category of the Quality in Care Diabetes (QiC) awards going on to gain a highly commended award. The charity also goes on to win the Judges' Special Award, from all entries received across all categories, for providing an outstanding educational event programme for people with diabetes (pictured right).
- At the end of the financial year for 2017, the charity has committed more than £11.5 million to diabetes research alone in 19 years; 93p in every £1 spent on charitable activities. The charity now has 12 staff and around 24 volunteers.



## 2018

- DRWF is shortlisted in the *Charity of the Year* category at the Asian Voice Charity Clarity awards.



# 2018

# Research Advisory Board

Our Research Advisory Board comprises experts in a wide variety of research disciplines to ensure that all applications are assessed knowledgeably and fairly. As a member of the Association of Medical Research Charities we are committed to maintaining a rigorous peer review process for the assessment of research applications, for which the Advisory Board are responsible. This process ensures that only the highest quality research at the best institutions receives DRWF funding. When we are awarding a DRWF Fellowship, we are also intent on rewarding determined and committed individuals who have a proven track record in diabetes research and can display an intention to continue working in the field. It is our hope that a DRWF Fellowship can serve as a significant and fruitful step in the career of a bright, young and ambitious researcher.

## Chairman - Professor David R Matthews, MA, DPhil, BM, BCh, FRCP

Professor of Diabetes Medicine, University of Oxford. Medical Tutor and Vice Principal at Harris Manchester College, Oxford. Emeritus founding chairman of the Oxford Centre for Diabetes, Endocrinology and Metabolism. David's interests include mathematical modelling of insulin resistance, homeostatic model assessment of beta-cell function and insulin resistance. He is the author of the HOMA model; has a long-standing interest in new therapeutic agents for type 2 diabetes, and was a co-investigator of the UKPDS. A founding trustee of the Oxford Health Alliance, he was the first Executive Director of the Global Alliance for Chronic Disease; a world-wide association of six research councils collaborating in the fight against Chronic Disease. He is Co-Director of the UK Diabetes Research Network; has over 230 publications and is on the editorial boards of several professional journals.



## Dr. Ian Salt PhD

Senior Lecturer at the Institute of Cardiovascular & Medical Sciences, University of Glasgow. Ian graduated as a biochemist at the University of Bristol prior to gaining his PhD in beta-cell biochemistry from the University of Dundee in 1997. He held fellowships from the British Heart Foundation and Diabetes UK before taking up his current academic post at the University of Glasgow. Ian is currently a senior lecturer in the Institute of Cardiovascular and Medical Sciences at the University of Glasgow. His principal research interests are the molecular mechanisms that link diabetes, insulin resistance and the risk of developing cardiovascular disease.



## Dr Rob Andrews

Rob Andrews is an associate Professor of Diabetes and Endocrinology at the University of Exeter and an Honorary Consultant Physician at Musgrove Park Hospital Taunton.

At the University he leads a group that researches the role that exercise and diet can play in the prevention and management of Diabetes. Ongoing studies include the long term effects of diet and diet and exercise interventions in patients with newly diagnosed Type 2 Diabetes (ACTID follow up); the role that sedentary time has in the metabolic characteristics of patients with Type 2 diabetes (STAMP 2); how exercise can affect beta cell function in Type 1 diabetes (EXTOD). He is also leading a project that aims to develop and pilot an education programme for patients with Type 1 Diabetes and health care professionals to guide insulin and carbohydrate adjustment for safe and effective exercise.

At Musgrove park hospital as well as doing regular Diabetes and Endocrine clinics he runs specialist adult, adolescent and paediatric sports clinics to give advice to sports men, women and children who have Type 1 diabetes.



### Professor Luigi Gnudi

Professor Luigi Gnudi of Diabetes & Metabolic Medicine, King's College London School of Medicine, Cardiovascular Division, Waterloo Campus, London, UK obtained his MD with Honours from the University of Parma (Italy) in 1988. He subsequently joined the residency programme in Diabetes and Endocrinology at the University of Padua Medical School - Italy (1989-1993). During 1992-1995 he worked as a postdoctoral fellow with Prof Barbara B Kahn at Beth Israel Hospital, Harvard Medical School in Boston. In 1999 he obtained a PhD in Endocrinological Sciences from the University of Milan and in 2005 he became a Fellow of both the Royal College of Physicians and the American Society of Nephrology.

In 1997 Luigi Gnudi was appointed Senior Lecturer in the Unit for Metabolic Medicine within the Cardiovascular Division of King's College London School of Medicine, and in 2011, was promoted to Professor of Diabetes & Metabolic Medicine. He has been Head of the Unit for Metabolic Medicine since 2010. He is an Honorary Consultant Physician in Diabetes, Endocrinology and Metabolic Medicine at Guy's and St. Thomas' Hospital NHS Foundation Trust in London.

He is an active researcher, clinician, and teacher with major research interests in the study of diabetic nephropathy and diabetic vascular complications in man. He has published more than 70 original papers, books and monographs and meeting proceedings on these topics.



### Professor Angela Shore

Professor Angela Shore is the inaugural Vice-Dean Research for the University of Exeter Medical School, and was previously Interim Vice-Dean Research for the Peninsula College of Medicine and Dentistry since 2009. She is the Scientific Director of the NIHR Exeter Clinical Research Facility for Experimental Medicine and Associate Director for Experimental Medicine for the UKCRN diabetes research network.

Professor Shore graduated in Physiology from the University of Newcastle and was awarded her PhD for an investigation of the vascular mechanisms underlying fluid homeostasis in patients with Liver Disease. Following postdoctoral positions at the University of London where she expanded her research into the vascular aspects of hypertension, Professor Shore moved to the Postgraduate Medical School Exeter in 1987 to establish the clinical microvascular research unit funded by the Wellcome Trust. Currently Professor Shore's work which is funded by the British Heart Foundation, Diabetes UK, European Union IMI JU and NIHR investigates novel approaches to the identification of early vascular complications and patient stratification for cardiovascular risk.

She was appointed Professor of Cardiovascular Science in 2000.



### Professor Peter Jones

Peter Jones is Professor of Endocrine Biology in the Diabetes Research Group at the Guy's campus of King's College London. Peter obtained his PhD at the National Institute for Medical Research (London) studying peptide hormones in the central nervous system. He started working on beta-cell function in diabetes as a postdoctoral fellow at Queen Elizabeth College in 1984. He was awarded an R.D. Lawrence Fellowship by the British Diabetic Association, followed by a Medical Research Council Senior Research Fellowship, after which he took up an academic position as Lecturer in Physiology at King's. He was awarded the British Diabetic Association R.D. Lawrence Lecture for 1997 and the Diabetes UK Dorothy Hodgkin Lecture for 2015 in recognition of his work on beta-cell function. His research interests remain with the beta-cell, with current focus on cell-cell interactions within islets of Langerhans, strategies for improving islet transplantation therapy for Type 1 diabetes and novel therapeutic targets for Type 2 diabetes.



### Professor James Shaw

James Shaw is Professor of Regenerative Medicine for Diabetes at Newcastle University and Honorary Physician at the Newcastle Diabetes Centre and Freeman Hospital.

Following PhD completion as an MRC fellow with Kevin Docherty exploring gene and cell replacement therapy for diabetes, a Glaxo-Smith-Kline Senior Fellowship enabled him to move to Newcastle and join the world-acclaimed diabetes team there.

In addition to setting up a translational research laboratory he has established a regional insulin pump service, is a member of the Newcastle pancreas transplant team and clinical lead for islet transplantation. He is Chief Investigator for the multicentre Diabetes UK-funded HypoCOMPASS RCT comparing optimised insulin analogue with pump therapy and conventional with continuous glucose monitoring in type 1 diabetes complicated by impaired awareness of hypoglycaemia. He led the successful United Kingdom Islet Transplant Consortium bid for dedicated NHS funding of this intervention as an established clinical procedure in 2008. This has underpinned a further multicentre Diabetes UK grant to prospectively evaluate biomedical / psychosocial outcomes in all UK islet recipients; and most recently participation in an international RCT evaluating the potential of a novel anti-inflammatory agent to maximise engrafted islet mass post-transplantation

His laboratory group is exploring mechanisms underlying loss of beta-cell mass and function in diabetes in addition to further innovations in islet transplantation. Potentially reversible beta-cell dedifferentiation as a common mechanism underlying beta-cell dysfunction in type 1, type 2 and cystic fibrosis-related diabetes in addition to post-transplantation is becoming a major focus, facilitated by recent Strategic Research Centre funding from the CF Trust. Progress has been considerably accelerated by inauguration of the Newcastle University Islet Isolation and Innovation Hub providing dedicated access to clinical grade research islet preparations.



### Dr Mark Evans

Mark Evans is a University Lecturer in the Institute of Metabolic Science and Department of Medicine, University of Cambridge and an Honorary Consultant Physician in Medicine and diabetes at the Addenbrookes teaching hospital in Cambridge (Cambridge University Hospitals NHS FT).

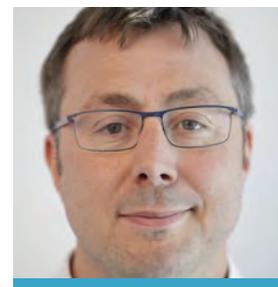
He qualified in Medicine at St Bartholomews Hospital in 1988 and then subsequently worked and trained as a junior doctor at a number of hospitals in London and South East. He completed an MD at University of London and then spent 3 years at Yale University in USA (1999 to 2002) in the laboratory of Professor Robert Sherwin before returning to his current UK post in 2002.

His particular interests are in type 1 diabetes, structured education, devices and technology including insulin pumps, continuous glucose monitors and automated insulin delivery, hypoglycaemia and brain nutrient sensing.



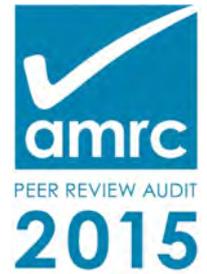
### Dr Angus Jones

Angus is a NIHR Clinician Scientist at the University of Exeter and an Honorary Consultant Physician in the Royal Devon and Exeter Hospital. His research focuses on clinical questions directly relevant to the management of diabetes. Interests include developing a stratified (or personalised) approach to the management of Type 2 diabetes, diabetes classification and the assessment of endogenous insulin secretion (C-peptide) in the clinical management of diabetes. He trained in medicine in London and worked as a clinician in London, Southampton, Malawi and Southwest England before undertaking an NIHR Doctoral Research Fellowship with Professor Andrew Hattersley in Exeter from 2011 to 2014. He received an NIHR Clinician Scientist Fellowship in 2016 to investigate and integrate biomarkers and clinical features for diabetes classification in adults, research that is using a combination of existing datasets, electronic healthcare records and prospective studies to develop a fully validated prediction model (clinical calculator) for diabetes classification at diagnosis. He was awarded the Diabetes UK Type 2 Diabetes Research Prize in both 2014 and 2015 and a European Foundation for the Study of Diabetes Rising Star Award in 2016.



# Research Funding

We provide research grants to researchers whose work we consider offers the best hope and most expedient path to improved understanding of T1 and T2 diabetes; new and improved treatments and management strategies and ultimately a cure. Awards are offered as a 3-year Clinical and Non-Clinical Fellowship and 1-year Pump Priming project awards. Institutional awards are available when funds allow on a multi-year basis. Contract funding of key personnel within the DRWF Human Islet Isolation Facility at the Churchill Hospital, Oxford is provided on a 2-3-year basis dependent upon results.



We are a member of the Association of Medical Research Charities (AMRC), and as such, support the use of a rigorous peer review procedure in the allocation of our research funding. Our Research Advisory Board (RAB) is a multi-disciplinary panel of clinicians and scientists who assess applications for funding. Our processes are audited every 5 years by AMRC, the last time being 2015, when once again, we successfully passed this independent evaluation.

## Islet Cell Research & Transplant

DRWF has made a considerable contribution to the funding of islet cell research and transplant in the UK and the US. The DRWF Human Islet Isolation Facility at Churchill Hospital, Oxford plays a pivotal role in providing islets for research and transplant as part of a national treatment programme, the clinical element of which is funded by the NHS.

Three personnel are funded within the facility. In 2015, we secured funding from a major donor via New Philanthropy Capital to cover 2 of these contracts, the Laboratory Manager and the Post-Doc researcher for 3 years (2018) and 2 years (2017) respectively, for a specific proposal **'Improving human islet provision for clinical and research use within the UK by optimisation of human islet yield, islet function and islet survival'**



This project continues to deliver world-leading outcomes in terms of post-transplant resolution of life-threatening hypoglycaemia, and in terms of research productivity and translational impact. The provision of high-quality human islets for clinical and research uses is a unique and invaluable resource and has resulted in numerous high impact publications and novel discoveries that will impact patients with type 1 and type 2 diabetes across the world.

The team publishes their research findings regularly and present their work at the major diabetes and transplantation meetings.

The restricted major donor award supporting the Islet Laboratory Manager and Post-Doc roles concluded at the end of May 2018. The project met or surpassed each of the identified outcomes and milestones set out within the proposal for funding to NPC. The key achievements from work conducted in 2017 - 2018 were:

- 10 successful transplants performed using islets from the DRWF facility in Oxford, Manchester, and Edinburgh. Additionally, 4 islet preparations were successfully transplanted into Oxford patients using shipped islets. The outcomes continue to be impressive with > 90% patients achieving resolution of life-threatening hypoglycemia.
- In order to address donor shortage many pancreases from 'marginal' (non-ideal) donors were processed. Eighteen out of 42 pancreases resulted in an islet yield of >200,000 IEQ (the revised minimum transplant requirement); 14/42 yielded >250,000 IEQ. These outcomes match leading worldwide centres for this range of donors.
- We continue the vital resource of islet provision to the key diabetes researchers in the UK with distribution of 30 research islet preparations.
- The Oxford international research programme has developed a novel islet culture media and research is being conducted into islet co-culture with mesenchymal stem cells and pancreatic matrix proteins. The Oxford team are a key partner in a Horizon 20/20 European Grant and integral to the NIHR Oxford Biomedical Research Centre.

The Oxford team is working to address the current challenges presented in terms of availability of organs for transplant; improving islet isolation techniques in order to increase the number of insulin producing cells isolated from donor organs to improve function and survival of cells post-transplant.

DRWF funds three personnel within the islet isolation facility, making a further 3-year commitment to the Lab Manager role commencing 1st May 2018 and terminating at the end of April 2021 for a maximum value of £209,899.41.

Two calls for applications were advertised in 2018 - A 3-year Non-Clinical Fellowship and a 1-year Pump Priming round with the following awards being allocated -

# 2018 Research Grant Awards



## Non Clinical Fellowship

**Institution:** King's College London

**Recipient:** Dr Chloe Rackham

**Project:** Improving islet transplantation outcomes by harnessing the mesenchymal stromal cell secretome to target the donor islet graft and host environment

**Funding Type:** The Professor David Matthews Non-Clinical Fellowship

**Amount:** £194,934



**Summary:** This research aims to define the mechanisms through which Mesenchymal Stromal Cells (MSCs) or the biologically active substances that they produce should be used to improve the efficiency of clinical islet transplantation. Our experiments have shown that MSCs produce Annexin A1 (ANXA1) and that ANXA1 partially mimics the beneficial effects of using MSCs. We aim to define a 'cocktail' of therapeutic factors produced by MSCs, that can be used instead of the MSCs, to fully reproduce the beneficial effects of MSCs in transplantation protocols. Defining MSC-derived biotherapeutics will allow simple modifications to clinical transplantation, that will help to overcome some of the safety concerns of using MSCs directly and allow safe and reproducible modifications to be carried out. The proposed work will help design and start a clinical trial within the next five years. Through improving the efficiency of the transplant procedure, clinical islet transplantation can be offered as a therapeutic option to the greatest possible number of patients with Type 1 Diabetes and improve outcomes for individual transplant recipients.

## Pump Priming Awards – Six research awards have been made totalling **£116,534** in the charity's Pump Priming funding round from a total of 29 applications.

**Institution:** King's College London

**Recipient:** Dr Patricio Atanes

**Project:** Defining the role of chemokine receptor CCR9 in islet function: potential for therapeutic intervention in type 2 diabetes

**Amount:** £19,995



**Summary:** Type 2 diabetes (T2D) occurs when blood sugar (glucose) levels are too high because the specialised islet beta-cells do not release enough insulin, or insulin does not work properly. T2D can be treated by drugs that stimulate insulin secretion but some patients cannot properly regulate their glucose levels using these therapies and may suffer from side effects. Some chemicals regulate beta-cell health and function by binding to "receptor" proteins. We know that obesity stresses beta-cells and we have identified that islet cells from obese organ donors show alterations in the amounts of particular receptors that they contain. We are particularly interested in a receptor called CCR9, which is nearly 100-times more abundant in islets from obese donors than islets from normal weight donors. In this small project we will investigate whether this increase in CCR9 has a protective function or is involved in the beta-cell damage associated with obesity. This study will therefore provide essential feasibility information for further development of drugs targeting CCR9 to treat T2D.

**Institution:** University of Oxford

**Recipient:** Dr Goher Ayman

**Project:** A James Lind Alliance Priority Setting Partnership to define the research priorities in diabetes and pregnancy

**Amount:** £19,567



**Summary:** Diabetes affects over 5% of all women giving birth in the UK. It increases the risk of complications during pregnancy and birth for the mother and her baby, and can also affect them in the long-term. More research is needed to help provide the best health care for women with or at risk of diabetes, who are planning or are pregnant. This project aims to help direct the research which is done in diabetes and pregnancy towards addressing the areas which are considered most important by the people impacted by it. Over approximately 12-18 months we will work with women and their families affected by diabetes in pregnancy, and health care professionals, to identify where little is known, or there are uncertainties about, the effects of treatments and health care in diabetes and pregnancy. A top ten list of priority research questions will be jointly agreed and shared with the public and research funders. Where possible, research projects will be developed and submitted for funding.

**Institution:** University of Oxford  
**Recipient:** Dr James Cantley  
**Project:** Investigating the role of Viperin in beta cells as a mechanistic link between enteroviral infection and the development of type 1 diabetes  
**Amount:** £20,000



**Summary:** We want to understand the role of Viperin, a protein that the body makes as part of the immune response to viral infection, in the development of type 1 diabetes (T1D). As viral infection of the insulin-producing pancreatic beta cells has been linked to the onset of T1D, we want to understand if Viperin plays a role in this process. This knowledge may enable the development of drugs/treatments to prevent or intervene early in the disease, potentially avoiding many of the severe complications of T1D such as diabetic ketoacidosis.

In particular, we want to find out:

- 1) How much Viperin people with recent-onset T1D have in their pancreas.
- 2) How much Viperin there is in a human pancreatic beta cell model (cell line maintained in a test tube) infected with virus (like a person developing T1D).
- 3) The role played by Viperin in beta cell dysfunction and death, using cell models relevant to T1D (cells infected with virus or exposed to proteins called cytokines produced by the immune system).

**Institution:** Blizard Institute, Barts and the London School of Medicine and Dentistry  
**Recipient:** Dr Sarah Finer  
**Project:** Uncovering novel, rare genetic causes of type 2 diabetes in people of Bangladeshi and Pakistani heritage participating in East London Genes and Health  
**Amount:** £19,771



**Summary:** We aim to investigate new genetic causes of type 2 diabetes (T2D) in people of Bangladeshi and Pakistani heritage, who have been recruited to a community genomics study called East London Genes and Health (ELGH). ELGH is investigating the cause of diseases, e.g. T2D, which disproportionately affect people of this heritage and yet are under-researched, and has involved 30,000 volunteers so far. Preliminary work has identified people with specific, and rare, gene changes that might predispose, or protect, them from T2D. We would now like to invite approximately 100 people with and without these gene changes to participate in more detailed studies to investigate the effect of these gene changes on their health. These studies will include a detailed assessment of their medical and family history, a physical examination and fasting blood sample. Information obtained from these volunteers will be used to perform additional laboratory tests (e.g. measurement of blood glucose, lipid levels, and DNA studies) to investigate if, and how, these gene variants might be linked to disease.

**Institution:** King's College London  
**Recipient:** Dr Nicola Guess  
**Project:** Towards remission of type 2 diabetes without weight loss  
**Amount:** £18,196

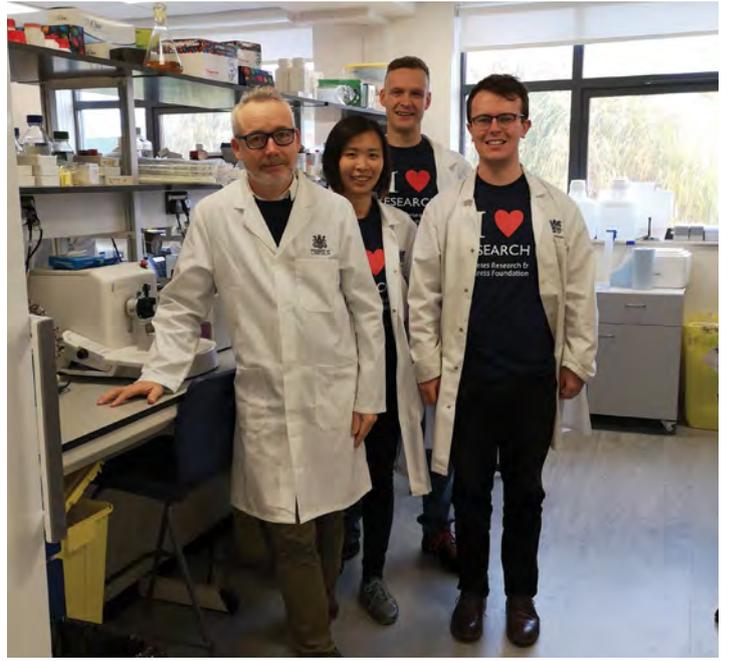


**Summary:** Significant weight loss (>10kg) can help a large majority of people to come off their medications and achieve remission of their type 2 diabetes. However, for many people, weight loss might not be possible or desired. Promising studies show that low-carbohydrate diets can reduce blood sugar to the level of someone without type 2 diabetes without any weight loss. However, these low-carbohydrate diets also included a lot of high-protein foods. Protein might help the pancreas produce more insulin. Therefore it is not clear whether carbohydrate restriction alone is enough to normalise blood sugar. This study will test the effect of changing the amount of protein in the diet while people are on a low-carbohydrate diet in people with and without type 2 diabetes. We will increase and decrease the protein in random order but keep the carbohydrate intake unchanged to see what happens to blood sugar levels. This will tell us if added protein is specifically needed for carbohydrate restriction to lower blood sugar in people with type 2 diabetes.

**Institution:** University of Lincoln  
**Recipient:** Professor Terence Herbert  
**Project:** RNA binding proteins (RBP) and insulin secretion: an unexplored area of diabetes research  
**Amount:** £19,005



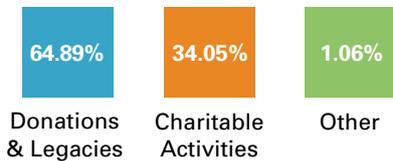
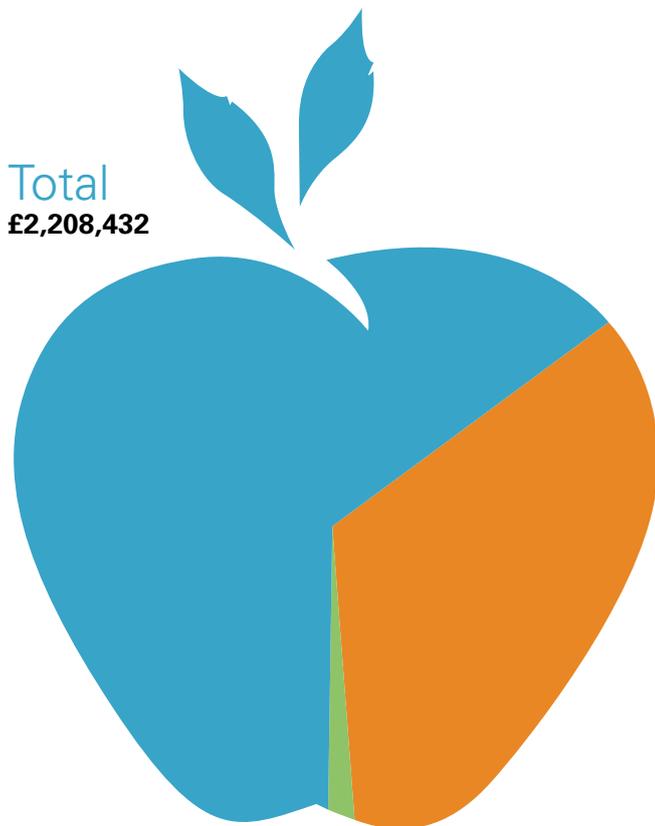
**Summary:** Specialised cells called beta-cells make and release the hormone insulin which reduces the levels of sugar in the blood. Diabetes occurs when these cells fail to secrete enough insulin leading to raised blood sugar. We have discovered, in beta cells, a new set of proteins that we have named 'secretory RBPs'. We believe that these novel proteins play a vital role in making and releasing insulin and may play an important role in causing the beta cells to 'fail'. With the generous support of the DWRP we wish to follow up this exciting discovery to find out more about the role of these secretory-RBPs in beta cells. This will lead to a better understanding of how the insulin is made and released and what causes the beta cell to stop working as it does in people with diabetes. We anticipate that the results of the project will ultimately lead to the development of new treatments for the prevention and management of diabetes.



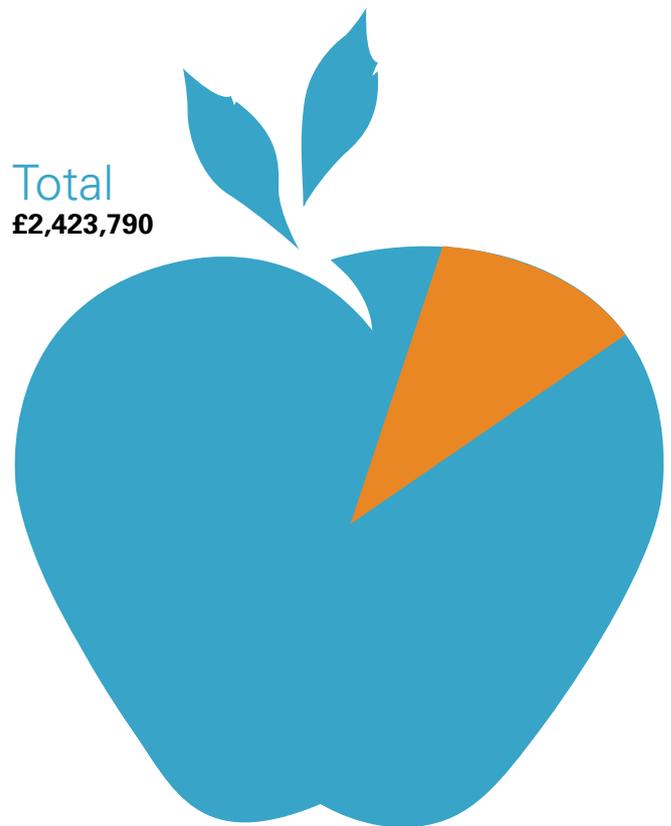
# Income: Expenditure Profile 2018

The information presented here is not the full statutory accounts but a summary of the information which appears in the full accounts for financial year ending 2018. This summary information may not contain sufficient information to allow for a full understanding of the financial affairs of the Diabetes Research & Wellness Foundation (DRWF). The full statutory accounts can be supplied on request or accessed via the Charity Commission website by entering the charity registration number 1070607 in the search box.

## Income



## Expenditure



# Highlights from 2018



## Hampshire-based diabetes support group take on hiking challenge and raise £2,790.

Members of the Hampshire-based diabetes support group Sugarbuddies recently raised £2,790.91 for DRWF as they reached the summit of Mount Snowdon.

The hiking challenge saw members of the group scale the heights of the highest peak in Wales – at 1,085m above sea level.

The Sugarbuddies team taking on the Mount Snowdon challenge included people living with both type 1 and type 2 diabetes, as well as some of their friends, family and healthcare professionals.

Clad in red DRWF t-shirts the group began their day at 9.30am in sweltering hot conditions and took the Llanberis Path, eventually reaching their mountain top destination in good spirits, happy to have achieved their goal.

Members of the group who were unable to climb were able to take the Mountain Railway line to meet the rest of the team at the peak.

In preparation for this challenge Sugarbuddies members went on a number of walking weekends together.

Sugarbuddies is a peer-to-peer support group for adults who have been diagnosed with diabetes. Their aim is to offer friendly and understanding support in all the range of challenges facing them day-to-day.

DRWF relies on voluntary income and donations from fundraising events and challenges, such as this to raise the funds which we commit to awareness, educational support programmes and research funding awards.

Karen Scott, DRWF Community Fundraiser, said: "Thank you to the Sugarbuddies team for their amazing efforts. Their contribution allows us to continue our work supporting people with diabetes and investing in much needed research."



**Rhys Meale skydiving.**

# Highlights from 2018



**Karen Scott and Sarah Tutton collect a cheque from the Thomas Bennett Lodge.**



**Debra Peett at one of our church outreach days.**



**Kelly, Sarah and Matt all doing the Prudential Ride 100.**



**Julia and Vicki doing the Vitality London 10K.**

# Fundraising News

## Get involved

We receive **no income** from the Government. We rely 100% on voluntary donations, so every penny you raise really will help us make a difference. Over 90% of the money raised is directly invested into our charitable work, making us an extremely efficient and cost-effective charity.

We hope that lives of millions of people in the future will be dramatically improved thanks to our work today - but we know, **we couldn't do this, without you!**

## Fundraisings Opportunities

Whether you want to run a marathon, jump from a plane at 15,000ft, hold a pub quiz, take part in one of our national fundraising campaigns, or even shave off your beloved beard! We have something for everyone, and our fundraising team are ready to support you every step of the way!

Whether you're a first timer or a regular fundraiser, everybody needs a little inspiration:



## Feeling brave and energetic – Let our challenges inspire you!

- 👉 Diabetes Dawdle 2020 - Our first ever family walk!
- 👉 Simplyheath Great South Run
- 👉 Prudential RideLondon-Surrey 100
- 👉 Abseil
- 👉 Skydive
- 👉 Vitality London 10k

Interested, but not quite the thrill for you - we have many more running, walking, cycling and adrenaline challenges available!



## Volunteering

We need volunteers to join the DRWF family and support our small team of full team staff. The roles vary and range from; helping us in the office with day to day tasks, assisting our national Diabetes Wellness Days around the country, to representing the charity and manning our stall at forthcoming fundraising events.

Whether you have a couple of hours, or a couple of days, we would love to hear from you!



For fundraising related volunteering, please contact our Community Fundraiser, Karen Scott, on **02392 637808** or email [fundraising@drwf.org.uk](mailto:fundraising@drwf.org.uk).

For general charity related volunteering, please contact our Office Manager, Steve Lille on **02392 637808** or email [steve.lille@drwf.org.uk](mailto:steve.lille@drwf.org.uk).

## Ways to Donate

We rely solely on voluntary income. If you would like to make a donation to support our work, you can do so, in a variety of ways.

### Cheque or Charities Aid Foundation (CAF)

Cheques and CAF Cheques **payable to 'DRWF'**, Building 6000, Langstone Technology Park, Havant, PO6 1SA

### Debit / Credit Card

If you would like to donate via your Debit or Credit Card, our friendly team will happy assist with that - please just give them a call on **02392 637808** and have your card to hand.

### Direct Debit

Become a *'Partner for the Cure'* and set up a regular monthly / quarterly or annual donation directly from your bank account. You can set this up by **visiting [www.drwf.org.uk/donate](http://www.drwf.org.uk/donate)** or by calling **02392 637808**.

### Online

Make your one-off donation through our secure DRWF payment gateway - simply visit **[www.drwf.org.uk/donate](http://www.drwf.org.uk/donate)** and follow the on-screen instructions.

Whichever way you choose to support our work, we are extremely grateful - every penny really does count! **Thank you**

## 2018 Charitable Trusts and Grants Received

We are very grateful to the charitable trusts and foundations who have so generously invested in the DRWF, facilitating the expansion and continued development of our education and research programmes.

**The Thomas C Maconochie Trust**

**The Tonge Family Trust**

**Kolyom Trust Limited**

**NatWest anon Charitable Trust**

**Beefy's Charitable Foundation (grant)**



## Legacies received in 2018

Legacies are vital to every charity as they provide the bedrock financial support we rely upon to look ahead and progress effectively. Leaving a 'Legacy of Hope' enables DRWF to continue supporting leading researchers, some of whom have been named among the most influential figures studying diabetes complications.<sup>1</sup>

Thomas D E Aubrey

John W Aylin

Geoffrey L Bennett

William Bestford

Owen Birch

Anthony G Bishop

Robert A Burns

Rudolf J A Capek

Raymond Edward Chapman

Russell Crane

Rosa Ethel Crow

Terence M Cummins

Edwin "Tim" E Davies

James Dickie

Donald V Evans

Megan P Foster

Helen Goodwin

Alan G Grover

Jack W Jones

Margaret H Jones

Rev Alwyn Jones

Oded Katzler

Edith Vera Main

Betty Newnham

Renee R Rosenberg

Dorothy I E Sanders

Marjorie Smith

May Smith

Alan John Stringfellow

Graham C Wagstaff

Una A Walton

Vera H Whitlam

<sup>1</sup><https://diabetestimes.co.uk/uks-leading-diabetes-complications-researchers-revealed/>

## Gifts given in memory of a loved one

Donations given in memoriam are a valuable and positive way of celebrating the life of someone special and help DRWF continue with their long-term mission - to find a cure for diabetes. Giving 'in memory' is a distinctive way to remember and honour family and friends. In 2018, those who have supported us in the past were remembered in this special way.

Frederick M Barber	Gillian Duberley	Barbara Partt
Paul James Bellamy	Robert Faulkner	Ray Pearson
Barney Brotheron	Raymond George Folkard	Molly Priestley
Clarence Buck	Wynne Hancock	Sagar Ramnath
Isobel Butt	Paul Nigel Hart	Natalie Rosario
Michael Caffrey	Gerald Hughes	John Ross OBE
Malcolm Calderwood	Christine Hunt	Robert Saunders
Michelle Christmas	John Kinnersley	Bryan Stables
Doreen Clerk	Christopher Lacey	Keith Swettenham
Aiden Cox	Helen Lander	Michael Teece
Ross Alexander Craig	Isobel Luke	Caroline Thomson
Craig Crapper	Patricia Martin	Margaret Turnbull
Mary Daniels	Wilfred McConnell	Dorothea West
Sukhdv Kaur Danio	Geoffrey Minto	Ann Wheeler
Michael Dare	Phyl Mitchell	Albert Wilson
Josefine Deebank	John Thomas Murray	James Anthony Young
Major General Roy Dixon	Aitay Ozkan	

Our work is made possible only through our supporters' commitment and generosity for which we say a heartfelt **THANK YOU!**

## Our focus in 2019 and beyond

As we move into our 21st year and beyond, resilience and sustainability are at the top of our agenda, to ensure that we can continue to meet the ever-changing needs of our beneficiaries.

The last few years have presented many challenges in fundraising where there is increasing competition for voluntary donations; in improving and maintaining public trust, whilst meeting ongoing regulatory and legislative changes - not to mention the concern over what impact Brexit may bring to bear on our activities and income streams.

Reports show a general trend of fewer people making donations through historically strong methods; wanting choice of engagement/donation platforms and greater control over how they interact with charities, particularly online.

Historically, we have relied heavily on income from Direct Mail and Regular Giving programmes to sustain voluntary donations. These programmes will continue, but in order to ensure that we are competitive and responsive to our supporter needs, current and new, we must ensure that we offer engagement choice and an experience that ensures we maximise recruitment opportunities and capitalise on retention and loyalty.

Community fundraising activities have grown somewhat over the past couple of years and we see the potential to grow a network of regional community fundraisers. Our plan is to widen the Diabetes Wellness Network through an increasing level of community activity and this will require the recruitment of an experienced senior fundraiser or head of community fundraising.

We will invest greater funds next year in our online presence and test inbound marketing campaigns to steer lead generation to multiple conversion points on our website. To do this effectively, we will recruit a Digital Marketing and Communications Officer to our small team.

We believe that there is opportunity to create meaningful relationships with like-minded partners. Where there is a synergy in mission, vision and values and to this end, we intend to explore corporate sponsorship opportunities more vigorously than we have in the past.

Our aim with these new approaches, is to widen our reach for awareness of DRWF and its support services to people living with all types of diabetes and healthcare professionals working in diabetes and related health; to secure new subscribers to the Diabetes Wellness Network and to increase engagement and therefore income in all fundraising channels.

We will build an excellent fundraising team with a strong strategy and to do this effectively, we have implemented a Core Fundraising Group (CFG). This group will bring together all of those working in the different fundraising functions, as a team, to plan and execute our fundraising strategy and associated activities.



### The underlying principles of this group are to -

- Adopt shared values
- Agree realistic fundraising goals and strategies by channel
- Set up sufficient systems to support and manage activities
- Promote information sharing and a collaborative approach to common goals
- Identify opportunities and challenges
- Support competency and increase the sense of satisfaction and achievement
- Promote learning and professional development
- Increase impact and success

**Creating and growing our fundraising team enables DRWF to pursue more funding sources; grow our activities and programmes and ultimately increase our impact in response to beneficiary need.**

Through our awareness raising, information provision and educational support programmes, we enable people with Type 1 and Type 2 diabetes to learn more about their condition. We provide the tools to motivate, empower and engage people to take a positive approach to their self-care. Through supported self-management they can reduce the risk of associated complications, improve quality of life and control their diabetes effectively.

Don't let diabetes control you!

We fund some of the best and brightest diabetes researchers in the UK and around the world. We support Fellowships, Open Funding Projects, Institutional grants and Studentships. We fund peer-reviewed work that we believe will help us to understand the causes; find new treatments; provide insight into effective therapies and management strategies and ultimately, find a cure for diabetes.

You help us to achieve these objectives -

THANK YOU!

## to find out more...

Diabetes Research & Wellness Foundation,  
Building 6000, Langstone Technology Park,  
Havant PO9 1SA



[www.drwf.org.uk](http://www.drwf.org.uk)

Registered Charity in England & Wales,  
Registration no: 1070607  
Company No 03496304  
Company Limited by Guarantee

Statistics/ Figures stated correct at FYE 2018

# Staying well until a cure is found



## Diabetes Research & Wellness Foundation