

# 2010 Annual Report

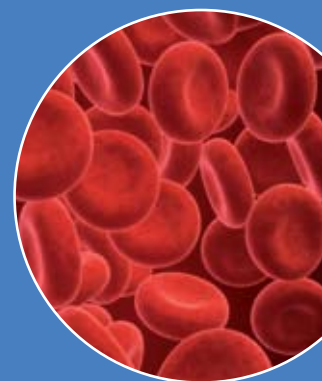
Education



Wellness



Research





## The Diabetes Research & Wellness Foundation's Aims & Objectives

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Our mission is to support people with diabetes, through the provision of advice and services, while the researchers we fund continue to work towards finding a cure.

DRWF is intent on raising public awareness of diabetes and especially the risk factors and symptoms associated with the condition.

### We seek to achieve these goals through:

- The funding of scientific and clinical research studies
- The promotion of screening, wellness and other health related programmes
- The operation of a membership Wellness Network encouraging the sharing of knowledge and the provision of professional advice
- The organisation of educational events focused on the provision of practical advice and information
- The dissemination of information on diabetes for the purpose of informing the general public on the causes, symptoms and effects of diabetes
- The provision of advisory literature to diabetes and related healthcare professionals for distribution to patients
- The establishment of community out-reach programmes

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## A Message from Michael Gretschel Chairman



Dear Friend of the Diabetes Cure,

How do I best express my thanks for all you have done to help keep our research and educational programmes moving forward? If I simply said, "Thanks old friend, together we are going to get this thing done" ... that would certainly be my style.

Finding a cure for diabetes is a personal battle for many of us. Our donors, our supporters, children, siblings, spouses, parents, ourselves personally. Day in, day out, we are dealing with diabetes and all that it entails.

What is it like to "feel bad" every day? To "live in fear", to "not trust your body", to know you could "fail to function" – all thoughts which have a serious impact on our health and wellbeing when living with such a chronic condition.

Hypoglycaemic unawareness – where you don't get symptoms of a hypo (low blood sugar level) attack coming on – is a seriously debilitating and life-threatening complication of diabetes. It is a key criteria in assessment for an islet cell transplant.

Islet cell transplants have proven to restore hypo awareness, improve quality of life and even eliminate the need for insulin injections in some cases.

Islet cell transplants are offered in the UK to a selection of people with Type 1 diabetes, fitting a very strict criteria, on a referral basis.

Amongst other things, a lack of donor organs is a significant limiting factor in the availability of this treatment. So, what can we do to help increase awareness and advance these efforts?

I would urge people to think about becoming an organ donor. A sensitive subject, I know! Encourage family and friends to consider leaving a legacy of hope and think about the good that could come from a sad loss.

Beyond our support of islet cell work in the UK, we continue our efforts to find an alternative, sustainable source of islet cells. Our focus is fixed on the Spring Point Project, where pig cells have proven to reverse diabetes in primates, time and time again. The Project has advanced significantly with the support of DRWF and other charitable and not-for-profit groups. The next challenge is to gain FDA approval for clinical trials and we have every reason to believe that this will happen very soon.

Amongst all of our other ongoing research funding commitments and provision of information and educational support programmes, these two key areas of our work are our **NUMBER 1 PRIORITY!**

Personally, I have devoted a huge part of my life to raising funds for research that seeks to improve treatments and find a cure. I am working every day for its success—for my children and grandchildren. We cannot fail this generation living with diabetes and the fear and suffering that it brings!

Your support means more than you probably know. There is absolutely no doubt, that we could not have come so far without you. I truly thank you and hope your faith remains strong in our efforts to find a cure.

Mike Gretschel  
Chairman



## A Message from Sarah Bone Chief Executive



2010 was another very busy year for us here at DRWF. At a time when all eyes were focused on talk of a reformed NHS; the Government's comprehensive spending review and an unstable economic climate, our efforts, as always, were focused on how we could best serve the people we aim to support, with the resources available to us.

We exist largely on voluntary donations and associated tax relief — we do not receive any government funding — and fundraising has become much harder in the past few years as committed supporters have been forced to review their financial position and tighten their belts. In the main we are spending a similar amount of money each year to generate a lower level of voluntary income. We constantly monitor fluctuations in levels of voluntary support and have to seek out new and innovative methods of fundraising, to raise money in an increasingly competitive environment.

As a small 'family' of just nine employees — where the Chief Executive answers the 'phones the same as everyone else — we were delighted that, at 2010 year end, our expenditure showed that 89.6p in every £1 spent was on our charitable activities. This is a small increase of 1.7p in the £1 on 2009 and, we believe, represents real 'value for money' in our research funding, information and educational programme provision. We hope you agree that this demonstrates our commitment to spending wisely and being answerable to the community we serve.

Essentially, DRWF is as successful as its supporters, employees and dedicated board of trustees are committed. This report shows ongoing advances in all of our programme activities and I hope helps readers to appreciate 'the spirit' with which we work. We strongly urge everyone with an interest in diabetes to join us as a donor, a member, an advocate or a volunteer as together we grow stronger and have an increased chance of success!

Recently we were contacted by a lady who had received support from DRWF in 2003 and had nominated the charity for an award, she said:

'I was among those who nominated you for the award of Health Charity of the Year. In fact it was not specifically for 'this year' I nominated you, but for years back, when you provided some really constructive advice to me, personally, as the partner of a type 1 diabetic going through a bad patch. This appeared to me distinctively useful. Although I have not needed to actively call upon your help since that time, you send me your mailings so I keep track of what you are doing and I find it better than the usual run of charity mailing. I try to send you contributions from time to time. But when I came to nominating a charity for this award, yours was one prominent in my viewfinder. Good luck with all the work you do.'

DRWF was one of five groups nominated for this award — the 'small fish' in a shoal of major charities. We didn't win — but we didn't need to. Being thought of as 'worthy' players and considered as we were in this way, was all the encouragement and recognition we need. Perhaps being a smaller organisation gives us an 'edge' at times — it means we don't lose the personal 'feel' for the work we do. I sincerely hope that this comes across in our 2010 annual report.

I look forward to advancing our efforts in 2011 and would like to add my thanks to that of our Chairman — to DRWF supporters for continued commitment to our cause; to DRWF staff for hard work and dedication; and to the DRWF board of trustees — for their unwavering efforts and vision.

Sarah Bone  
Chief Executive



## Professor Paul Johnson Director DRWF Islet Isolation Facility, Oxford



### Report on Oxford DRWF Islet Isolation Facility 2010

#### INTRODUCTION

The DRWF Human Islet Isolation Facility in Oxford continues to be one of the leading islet isolation facilities in Europe. The Oxford team isolate human islets for the UK Clinical Islet Transplant Programme, as well as a wide range of basic research programmes within the UK and mainland Europe, that rely on the provision of quality human islets. In addition, the Oxford Programme continues to be at the forefront of important research aimed at optimising human islet isolation. This includes research projects on the biochemistry of pancreas digestion, as well as projects on understanding pancreas donor variability at the molecular level.



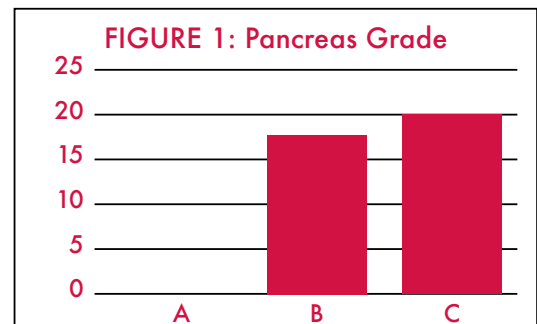
#### THE OXFORD TEAM

During 2010, the Oxford Islet team continued to expand, and now comprises two Professors, six Postdoctoral Scientists, three Research Technicians, two Research Fellows, and a regular supply of short-term research students. An islet administrator coordinates the team. Whilst the programme has a number of different funding streams, the three posts (the Facility Manager, the Deputy Manager, and the Administrator) funded by DRWF are absolutely crucial for the running of the Facility, and the team remain totally indebted to DRWF and its financial donors for their ongoing support.

#### HUMAN ISLET ISOLATION JAN 1ST – DEC 31ST 2010

Throughout 2010, clinical islet isolation was carried out at the Oxford facility during the alternate 'on-call' weeks (Oxford operates a 1 in 2 clinical 'on call' rota with the London islet isolation labs). One of the main challenges continued to be the shortage of quality pancreases being referred for islet transplantation. This was partly due to the overall shortage of organ donors, but was compounded by the preferential allocation of donor pancreases to whole pancreas transplantation. Indeed, in order to monitor the situation, all pancreases accepted into the Oxford programme were graded according to an Oxford-developed / nationally agreed grading system (relating to donor and retrieval parameters) as either grade

A (meeting all acceptance criteria), grade B (some extended criteria or one of the criteria not met) or grade C (two or more criteria not met; islet isolation attempted by the expected outcome is poor). No pancreases accepted into the programme during 2010 matched grade A criteria (Figure 1), the majority being grade C then grade B (as can be seen above, right, although Grade B and C pancreases are sub-optimal, they can still be used for clinical and research use). However, after endless discussions at a National level, a new national pancreas allocation scheme was introduced on Dec 1st 2010 to attempt to even out the distribution of quality pancreases between whole organ and islet transplant programmes. Essentially this involves a scoring system for recipients waiting on the waiting lists for both treatments, and quality pancreases are now allocated according to recipient scores, rather than whole pancreas transplantation still being inherently prioritised. This is a huge advance for islet transplantation in the UK, and we await the benefits from this scheme to be realised within the islet programme.



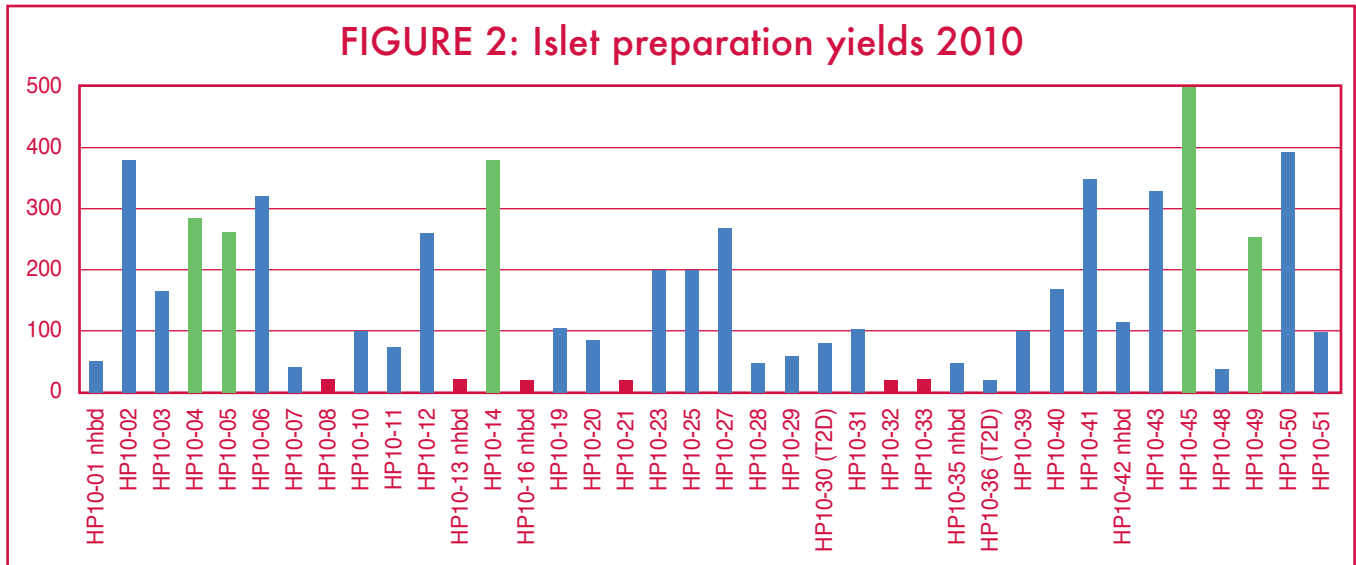
#### CLINICAL ISLET ISOLATION

Despite the problems with pancreas allocation during the year, 42 human pancreases were accepted into the clinical programme for islet isolation. Nine other pancreases were accepted for tissue specimen collection only because they were of too poor quality for clinical processing (as assessed at the time of offer).

Five preparations were excluded on inspection at the lab as they were unsuitable for clinical islet isolation due to a variety of reasons.



**FIGURE 2: Islet preparation yields 2010**



A total of twelve preparations achieved yields greater than 250,000 IEQ, normally considered the minimum number required for transplantation (see Figure 2) (although the precise requirement is based on a dose related to the patient body weight i.e. 5000 IEQ per kg for a first transplant). Five preparations were transplanted either locally or sent to other transplant centres in the UK (shaded in green). Additionally seven other preparations which had met this criteria were unfortunately not transplanted for the following reasons: the recipient was withdrawn from the transplant list due to insulin resistance [1]; donor age exceeded the agreed UK criteria [2]; insufficient yield for transplant at the dose required for waiting recipients [3]; yield declined after overnight culture [1] (reassessment of islet grafts is one of the real benefits of culturing islets pre-transplantation, rather than transplanting islets immediately after isolation). Six preparations were not completed (shown in red), and stopped prior to purification because the islets were identified as of poor quality or of low number.

Islet isolation from non-heart beating donors (NHBD) (where organ retrieval takes place after cardiac death) produced preparations of poor quality, either poor yields or viability or poor function (see below).

In cases where islet preparation yields were not sufficient for transplant, the islets were used for research (see below). However, seven islet preparations came from donors where there was no research consent given and so the islets were destroyed as per agreed protocols and in accordance with the Human Tissue Authority guidelines.

## ISLET FUNCTION

The function of all islet preparations was assessed by a glucose stimulation test in vitro. This was measured as the ratio of insulin released at high-stimulatory glucose concentration over that released at basal glucose concentration. The mean stimulation index was  $3.35 \pm 0.40$ . Mean insulin content of the human islets was  $19.98 \pm 2.34$  ng/ islet. Glucagon secretory function of the islets was assessed as the % secretion in the presence of 6 mM glucose relative to basal glucose (1 mM); that is the inhibition of secretion. Mean glucagon secretion was  $52 \pm 7$  % relative to that observed under basal conditions. Glucagon content of the islets varied from 236- 936 pg/ islet.

## CLINICAL ISLET TRANSPLANTS

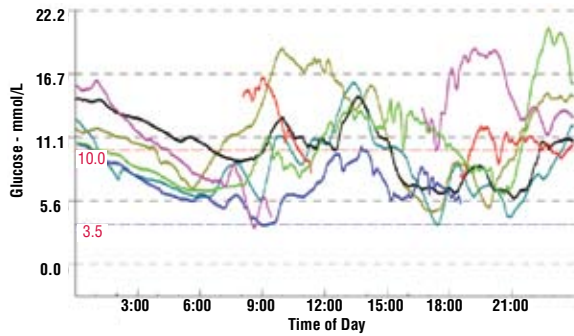
All five transplanted preparations resulted in resolution of life-threatening hypoglycaemic unawareness and in good post-transplant islet function. Of the Oxford patients transplanted, 75% resulted in insulin-independence. Figure 3 nicely demonstrates the glycaemic control achieved six months following one of our islet transplants. This particular patient also achieved insulin-independence. However, the stabilisation of glycaemia is also seen almost universally in patients who still require some insulin, and it is important to remember that the outcome measures that organisations such as NICE are most interested in following islet transplantation are not insulin-independence, but rather resolution of hypoglycaemic unawareness (as this is life-threatening), and the stabilisation of HbA1C (which is an indirect measure of secondary complication prevention).

During this period, human pancreatic islets were used for research from 29 pancreases (23 which were passed down from the clinical programme and six which were isolated specifically for research). These preparations were used locally in Oxford and where possible sent to other research

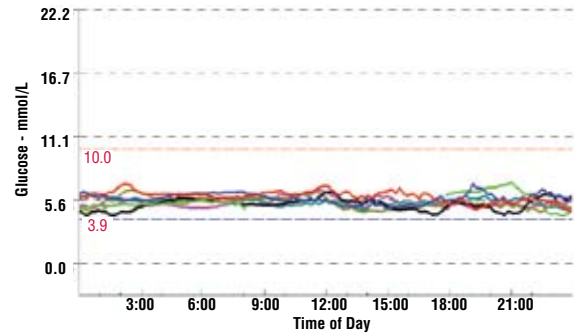


**FIGURE 3: Seven day Continuous Glucose Measurements pre- and post islet transplantation in one recipient Human Islets used for Research**

**A. Pre Transplant:**



**B. Post transplant:  
3 month Insulin reduction 75%**



labs in the UK. The limiting factor was either yield (insufficient islets for supply outside Oxford) or the isolation was carried out at the weekend and so distal research centres were not contactable.

In addition, two noteworthy islet preparations (HP10-30, HP10-36) were carried out from donors with Type 2 diabetes and distributed to various research centres (Oxford, London, Newcastle).

All islet preparations isolated in Oxford underwent detailed quality testing including electrophysiology. Therefore, the only potential concern with transported islets is possible deterioration following transport. However, the quality of islet preparations received and used by research centres outside Oxford (London and Newcastle, Bristol, Peninsula, Aberdeen) during this period was reported as being good to excellent in 89% of cases, which is impressive given that many of these pancreases were extremely suboptimal.

## RECIPIENTS OF RESEARCH ISLETS AND EXPANSION OF DISTRIBUTION NETWORK

The following research groups were supplied with research islets during 2010:

Patrik Rorsman; Mark McCarthy; Anna Gloyn; Anne Clark (Oxford University)

Mark Walker, Jim Shaw (University of Newcastle upon Tyne)

Guy Rutter (Imperial College, London University)

Kevin Docherty (Aberdeen University)

Noel Morgan (Peninsula University, Exeter-Plymouth)

Neil (Manchester University)

Kathleen Gillespie (Bristol University)

Irene Cozar Catellano (Cadiz, Spain)

New research groups that have been added to the original Oxford distribution list include teams led by Prof. Kevin Docherty, Prof Noel Morgan, Dr Kathleen Gillespie and Prof Neil Hanley. The latter was supplied with exocrine and ductal material for crucial research on islet development. We also began to supply islets to Dr Irene Cozar Catellano in Cadiz, Spain. We will continue to expand the distribution network where it is logistically possible. DRWF is acknowledged in presentations or publications from all groups receiving islets from our Facility.

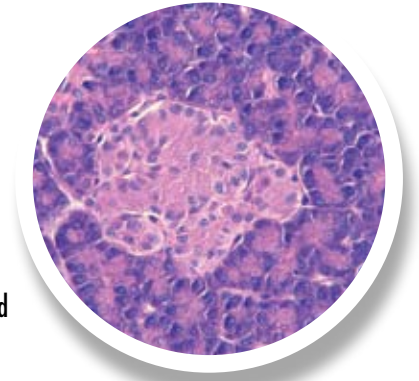


The number of research Islet preparations will also be significantly increased as we plan to isolate islets for research regularly during our non clinical 'on call' weeks. A nationwide system is now in place and a rota agreed for supply of research pancreases to isolation labs by the national organ allocation organisation (NHSBT).

## RESEARCH PROJECTS USING HUMAN ISLETS.

The following is a summary of the ethically-approved research projects using islets isolated from the Oxford DRWF Human Islet Isolation Facility:

- Optimising Human Islet function for transplantation using novel culture systems. (Prof PRV Johnson, Oxford)
- Genomic Studies of Human Donor Pancreatic Islets ( Professor Mark McCarthy and Dr Anna Gloyn, Oxford). Studies to investigate genes implicated (and their regulation) in diabetes susceptibility and blood glucose control.
- Studies on the function of human pancreatic islets (Prof Patrik Rorsman, Oxford). The study focuses on hormone secretory function (monitoring the ability of cells within the islets to release hormones in response to normal– physiological and/or pharmacological stimuli) and the mechanisms underlying this (secretory granule fusion events, mitochondrial function, electrical activity and Ca<sup>2+</sup> ion oscillatory activity).
- Transplant studies using a humanised-mouse model (Prof Kathryn Wood, Oxford). The aims of the study are (a) to establish and optimise a model whereby human peripheral blood mononuclear cells (PBMC) used to reconstitute a human immune system in immuno-deficient mice initiate rejection of allogeneic human islets. (b) To determine if human T cells with regulatory activity can protect allogeneic human islets from rejection. (c) To explore the mechanisms responsible for regulation.
- Signal transduction in isolated human islets: regulation by glucose and other stimuli (Prof Guy Rutter, Imperial London). The research is aimed to enhance beta cell survival by identifying mechanisms through which cells may die prior to and after to transplantation and understanding the basic physiology of insulin secreting cells. Specific projects include:
  - Role of TCF7L2 in pancreatic islet function. By over-expressing the T2D associated gene TCF7L2 in human islets to look at the effects of this on pancreatic islet function. The expression of potential novel splice variants of TCF7L2 in donor islets is also assessed.
  - Role of ZnT8 in pancreatic islet function: Measuring the expression of various zinc transporter isoforms in donor islets and how the expression of ZnT8 is regulated in islets of Langerhans.
  - Role of PASK in the regulation of glucagon secretion: By over-expressing PASK in donor islets to look at the effects on glucagon secretion; this is to corroborate with preliminary findings in rodent islets.
- Does decreased mitochondrial DNA copy number with ageing impair pancreatic beta-cell function? (Prof M Walker, Newcastle). The objective is to count mitochondrial copy number in human islet beta-cells and to correlate this with donor age.
- Isolation, characterisation and  $\beta$ -cell differentiation potential of pluripotent stem cells derived from adult human pancreas. (Prof James Shaw, Newcastle) The objective is to fate-mark stem cell and differentiated cell phenotypes in proliferative cells established from human pancreas to determine replicative and beta-cell differentiation potential in vitro.
- Enhancement of  $\beta$ -cell mass and function in human islets by physiological factors up-regulated in pregnancy. (Prof James Shaw, Newcastle). The objective is to evaluate whether prolactin and other pregnancy-related hormones can enhance mass and/or function of beta-cells in intact human islets in vitro.
- Characterisation of maternal micro-chimerism in human pancreatic islets. (Dr Kathleen Gillespie, Bristol University)
- Studies of beta cell regeneration from human adult pancreas (Prof Neil Hanley, Manchester).
- Cell therapy for diabetes (Prof Kevin Docherty, Aberdeen)
- Effects of pro- and anti-inflammatory cytokines on the function and viability of human islets (Prof Noel Morgan, Peninsula University)





## PUBLICATIONS ARISING FROM STUDIES USING OXFORD DRWF ISOLATED ISLETS (2010)

- Dupuis J, Langenberg J, Prokopenko I, Johnson PRV et al. New genetic loci implicated in fasting glucose homeostasis and their impact on type 2 diabetes risk. *Nat Genet* 2010 42;(2):105-16
- Cnop M, Hughes SJ, Igoillo-Esteve M, Hoppa MB, Syyed F, van de Laar L, Gunter JH, de Koning EJP, Walls GV, Gray DWG, Johnson PRV, Hansen BC, Morris JF, Pipeleers-Marichal M, Cnop I, Clark A. The long lifespan and low turnover of human islet beta cells estimated by mathematical modeling of lipofuscin accumulation. *Diabetologia* 2010; 53(2):321-330
- Voight BF, Scott LJ, Steinthorsdottir V, Morris AP, Dina C, Welch RP, Zeggini E, Huth C, Aulchenko YS, Thorleifsson G, McCulloch LJ, Johnson PRV et al. Twelve type 2 diabetes susceptibility loci identified through large-scale association analysis. *Nat Genet* (2010); 42(7):579-89
- Braun M, Ramracheya R, Bengtsson M, Clark A, Walker JN, Johnson PRV, Rorsman P. GABA is an autocrine excitatory transmitter in human pancreatic beta-cells. *Diabetes* 2010; 59(7):1694-701
- Ramracheya R, Ward C, Shigeto M, Walker JN, Amisten S, Zhang Q, Johnson PRV, Rorsman P, Braun M. Membrane potential-dependent inactivation of voltage-gated ion channels in alpha-cells inhibits glucagon secretion from human islets. *Diabetes* 2010; 59(9):2198-208
- Meur, Rutter et al. Nucleo-cytosolic shuttling of foxo1 directly regulates mouse ins2 but not ins1 gene expression in pancreatic beta cells (MIN6) (2010) *J. Biol Chem* 286 :13647-56

## ABSTRACTS PRESENTED AT CONFERENCES BY DRWF ISLET ISOLATION FACILITY PERSONNEL (2010)

- Maillard E, Juszczak M, Hughes SJ, Clark, A, Johnson PRV. An Oxygen Fibrin Clot system for Islet Culture. AIDPIT, Igls, January 2010.
- Walker JN, Wheeldon S, Ramracheya R, Rorsman P, Morten K, Johnson PRV. The Effect Of Donor BMI On Mitochondrial DNA Copy Number In Isolated Human Pancreatic Islets. AIDPIT, Igls, January 2010.
- Speight J, Woodcock AJ, Reaney MD, Amiel SA, Johnson PRV, Parrot N, Rutter MK, Senior P, Smith R, Shaw JAM. The QoL-Q Diabetes: a novel instrument to assess quality of life for adults with Type 1 diabetes undergoing complex interventions including transplantation. *Diabetes UK Annual Congress, Liverpool, March 2010.*
- Walker JN, Shigeto M, Zhang Q, Tajer A, Clark A, Johnson PRV, Rorsman P. Functionally normal beta-cells in islets isolated from a patient with established type-1 diabetes. *Diabetes UK Annual Congress, Liverpool, March 2010.*
- Maillard E, Cross, S, Johnson PRV. Addition of perfluorocarbons to fibrin gels improve secretory capacity of human islets in culture. *The Transplantation Society Annual Congress, Vancouver, August 2010.*

## INVITED LECTURES AND PEER-REVIEWED AWARDS

During 2010, Professor Paul R V Johnson (Director of the Oxford Islet Transplant Programme) gave a number of prestigious lectures on islet isolation and islet transplantation to different learned societies. These included invited lectures at the Royal College of Surgeons of England Overseas Meeting in Dubai, the Transplantation Society Congress in Vancouver, the Association of Upper GI Surgeons of Great Britain and Ireland, and the International Paediatric Surgery Scientific Meeting in Melbourne, Australia. He was also awarded an Honorary Fellowship of the American Academy of Paediatrics for the research conducted in the DRWF Facility, as well as a prestigious James IV Travelling Fellowship to visit Islet Centres in Japan and North America. DRWF was acknowledged in each of these lectures / awards.

*Professor Paul R V Johnson  
Director of the Oxford  
Islet Transplant Program*



## Bernhard Hering, MD

Professor of Surgery; Eunice L. Dwan Diabetes Research Chair; Director, Islet Transplantation; Scientific Director, Diabetes Institute for Immunology and Transplantation; Co-founder of Spring Point



### IMAGINE THE CURE OF DIABETES

Current diabetes treatments attempt to regulate blood glucose levels via insulin injection. Transplantation of insulin-producing islet cells from the pancreas offers to normalize blood glucose levels without constant monitoring and associated insulin injections – a cure.

Islet cell replacement in diabetic patients promises to cure diabetes in its entirety, eliminating complications and improving quality of life. Clinical islet cell transplantation (using islets from the pancreas of human cadaveric donors) has improved substantially after an acceptable immunosuppression regime, the so-called “Edmonton Protocol”, was implemented in 2000.

Today, successful islet cell transplants are performed at more than 35 institutions worldwide. The Schulze Diabetes Institute at the University of Minnesota was the first to achieve consistent diabetes reversal using transplantation of islets from a single donor (so-called marginal-dose islet transplantation). Two of the first patients who received single-donor human islet transplants at the Schulze Diabetes Institute recently celebrated their tenth year of insulin independence.

“Replacing pancreatic islets is the only way to restore normal blood glucose levels and insulin independence,” says David Sutherland, M.D., Ph.D., Head of the University of Minnesota’s Division of Transplantation and Director of the Schulze Diabetes Institute, and widely regarded as the world’s pioneer of pancreas and islet transplantation.

Final clinical trials in human islet transplantation are ongoing with much success and the procedure is on its way to becoming approved as a practice of medicine by the FDA. But, the widespread applicability of these islet-replacement therapies

suffers from the limited supply of donor tissue. To solve this, researchers considered using islets from another animal —pigs.

Research conducted by Dr. Bernhard Hering, Scientific Director and Director of Islet Transplantation at the Schulze Diabetes Institute, and his colleagues resulted in a landmark achievement on the path to a cure: pig islet transplantation reversed diabetes for more than 6 months in diabetic monkeys, who were no longer dependent on insulin after transplantation. These unprecedented results in an animal model most close to the human situation is regarded as proof-of-concept enabling us to proceed and prepare for clinical studies.

### WHAT IS BEING DONE NOW?

To move this research breakthrough towards a clinical applicability, work has continued to refine a safe immunosuppression regime. To accomplish this, Bernhard Hering, M.D., and his group at the Schulze Diabetes Institute have launched a fast-track project to refine and reduce the immunotherapy needed to prevent rejection of transplanted pig islets. Meanwhile, a means is needed to supply the pigs to serve as pancreas donors from whom islets are to be isolated.

Donor pigs need to be of high-health “medical-grade” status to minimize the potential of disease transmission upon transplantation into patients. Raising these “medical-grade” pigs requires special biosecure (barrier) facilities in which the air is filtered, water is disinfected, specialty feed is irradiated, staff enters and exits via shower in/shower out stations, and don special clothing when in contact with the animals - among other things. Spring Point Project was established as a nonprofit organization to build and operate such biosecure facilities to raise these very special pigs.

Spring Point Project’s mission is “to provide an unlimited source of pig islet cells to accelerate the availability and affordability of islet transplantation to cure diabetes”, and has the task to supply suitable pigs, from which islet tissue is to be isolated, to the clinical trials when they commence. To make this possible, business executives and leading scientists have joined forces, capitalising on their passion and complementary expertise to make the cure a reality. The result is the partnership between two separate initiatives the Schulze Diabetes Institute and Spring Point Project - perfecting the scientific breakthrough and producing high-health pigs, respectively. The goal is to work in parallel to have suitable donor pigs available by the time the scientists have refined the immunosuppression to a point that makes it safe for use in patients.

“We have assembled a highly committed, motivated, passionate, experienced group of people with the talent and the resources to see this project through,” said Thomas Cartier, founder and Chairman of the Board of Directors of Spring Point Project.

“With Dr. Hering’s breakthrough science and Spring Point’s relentless pursuit of the supply source, we are moving from hope to a cure. Every day brings us closer to the time when clinical trials may begin. I don’t make this claim lightly. We are also most grateful to the Diabetes Research and Wellness Foundation (DRWF) for their generous support to the construction and operation of this state-of-the-art animal facility.”

In December 2008 the Richard M. Schulze Family Foundation announced a major \$40 Million pledge to support the diabetes research. At this occasion the Institute changed its name from the Diabetes Institute for Immunology and Transplantation to the Schulze Diabetes Institute. This pledge was the second largest in the history of the University,



and the second largest in the history of diabetes research in the United States. One of the programs supported by this generous gift is the pig islet transplantation program, with which Spring Point Project is heavily involved, to bring this technology from research into clinical application for diabetes patients!

## SPRING POINT PROJECT MAJOR ACCOMPLISHMENTS

In 2004, Spring Point Project initiated work on the design of a biosecure animal facility resulting in a favorable response from the Food and Drug Administration (FDA) regarding the facility design, husbandry, and health monitoring plans of the “medical-grade” animals.

The construction of the facility started in 2006 and was named the DRWF Islet Resource Facility - to acknowledge the major support from DRWF at its opening in 2007. Immediately following completion the facility was populated with pigs.

To prepare for the population of the facility, Spring Point Project began to collect pigs that were specially selected, based on years of research conducted by Dr. Hering, for high yields of islets upon isolation from the pancreas.

An internal breeding programme commenced and we were very proud when the first animals in second generation were born by the end of April 2008!. This was an important date in our history, as regulatory authorities prescribe that animals used as donors should be within the barrier and of the second or subsequent generation. Therefore, as of 2008 we were already in full operation with our internal breeding program, the facility was fully populated and we were supplying the animal needs of our colleagues at the Schulze Diabetes Institute.

At the end of 2008 we had a meeting with the FDA and gave an update on our “medical-grade” pigs. We received a favorable response, in particular regarding the so-called “designated pathogen-free” status of our animals. The review panel of the FDA answered positively to our question whether we could use the animals as donors in clinical islet transplantation.

It is easy to talk about producing “medical-grade” or “designated pathogen-free” pigs whereas in actuality it is not. Our staff needs to be on

continual alert and has to take all precautions to avoid any disease-inducing pathogen to enter the barrier. Our facility operations are in compliance with current Good Manufacturing Practice (cGMP) as well as with United States Department of Agriculture (USDA) animal welfare regulations, and Association for Assessment and Accreditation of Laboratory Animal Care, International (AAALAC) guidance. Spring Point Project has an excellent staff and with their attentive care and extensive testing have shown that animal care practices fulfill the highest standards including the implementation of an environmental enrichment program to foster the general well-being of the animals.

## SPRING POINT PROJECT IN 2010: MAJOR ACCOMPLISHMENTS

Late in 2009, we established a new collaboration with the Minnesota Medical Foundation (MMF). The Minnesota Medical Foundation, founded in 1939, is an independent nonprofit organization which supports the advancement of health-related education, research and service at the University of Minnesota. It is governed by a volunteer board of trustees. Our Founder and President, Tom Cartier, joined the organization as a board member.

Under the new collaboration, Spring Point fundraising was coordinated by MMF so Spring Point was better able to focus on the science and research associated with pig islet cells and to prepare for the anticipated expansion of DRWF facilities to handle the expected demand for pig islet cells. This change provided a more coordinated fundraising effort in pig islet cell transplantation research at the University of Minnesota. Spring Point Project participated in several joint outreach and fundraising opportunities with MMF throughout the year.

After its first, thorough, peer reviewed assessment of the Diabetes Research and Wellness Islet Resource Facility in Western Wis., the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International awarded full international accreditation for the animal care and use program of Spring Point Project in June 2010.

“The management and staff are commended for providing quality facilities and programs for the care and use of laboratory animals,” said Dorcas P. O’Rourke, D.V.M., M.S. President Pro Tem, Council on Accreditation, AAALAC.

“Especially noteworthy were the strong administrative support for the program; the dedicated and knowledgeable staff at all levels of the organization; the detailed documentation of the Institutional Animal Care and Use Committee (IACUC), husbandry program, medical records, and standard operating procedures SOPs); the exceptional care provided to the animals; and the high level of sanitation throughout the facility.”

Spring Point Project joined more than 800 animal care and use programs in 32 countries which have earned AAALAC International accreditation, the gold standard of laboratory animal care. AAALAC International is the only international accrediting organization for animal research that is awarding accreditation based on a global standard.

Spring Point Project transferred the technology necessary to procure pancreata on site at the DRWF Islet Resource Facility, a necessary step towards clinical pig islet transplantation. Final procurement process validation is anticipated to be completed in 2011.

In 2010, Spring Point Project provided the Schulze Diabetes Institute with nearly one hundred pigs to facilitate ongoing research, finalize preclinical studies and prepare for clinical studies. Spring Point Project Quality and Regulatory operations continued throughout the year to build the systems and documentation necessary for the Investigational New Drug (IND) application to the FDA, needed to open the door to clinical trial activities.

Spring Point Project received quite some attention from the scientific field. Colleagues from around the world continued to visit us with regard to discussions and information exchange about building, populating, and operating biosecure animal facilities. The partnership between Spring Point Project and the Schulze Diabetes Institute is unique in the world, and continues to attract attention and interest. Additionally, our staff gave presentations at scientific and general meetings and continues work to publish in peer-reviewed biomedical scientific journals.



# 2010 Grant Awards

## Non-Clinical Fellowship Award

**RECIPIENT:** Dr Sarah Richardson

**INSTITUTION:** Peninsula Medical School, Plymouth

**PROJECT:**

Enteroviral infection as a causative factor in human type 1 diabetes

### **SUMMARY:**

Our recent work has given substantial support to the hypothesis that enteroviruses might be a trigger for type 1 diabetes. It is now important to verify this by identifying which particular enteroviral serotype(s) are involved. In addition, we aim to develop a greater understanding of how these viruses can trigger the demise of the insulin-secreting beta cells. The research will make use of a unique collection of human pancreases obtained from patients who died soon after developing type 1 diabetes. We hope that this research will reveal whether viruses can trigger type 1 diabetes and that it will demonstrate how they do this.

**AMOUNT:** £164,547.00 (three years)

## 2011 Open Funding Awards

Awarded in 2010 for 2011 start and supported by an unrestricted grant from Diabetes Wellness Network Sverige (DWNS)

**RECIPIENT:** Dr Catherine Arden

**INSTITUTION:** Newcastle University

**PROJECT:**

Investigation of the association between glucokinase and the pro-apoptotic protein BAD in pancreatic beta-cells

### **LAY SUMMARY:**

Type 2 Diabetes develops when the pancreas fails to release enough insulin to meet demand due to both decreased function of pancreatic beta-cells and through loss of beta-cell number. The current study aims to investigate how an enzyme important in regulating the function of insulin secretion (glucokinase) binds to a protein important in regulating beta-cell number (BAD) and will determine whether communication between these two proteins provides a link between the regulation of beta-cell function and beta-cell mass. Understanding these mechanisms is essential to enable the development of new treatments for Type 2 Diabetes.

**AMOUNT:** £13,665.00  
(one year)

**RECIPIENT:** Professor Gwyn Gould

**INSTITUTION:** University of Glasgow

**PROJECT:**

Analysis of tethering factors in the regulation of Glut4 spatial dynamics

### **LAY SUMMARY:**

Insulin stimulates glucose transport into fat and muscle by promoting the movement of specialised transporter proteins from an internal storage depot to the cell surface. These transporter proteins function as specialised doorways through which glucose can move from the blood into fat and muscle for storage after a meal. By increasing the number of 'doorways' present in the boundary membrane of cells, insulin drives glucose into storage organs. This key action of insulin is known to be impaired in type 2 diabetes, resulting in insulin resistance and aberrant glucose homeostasis. This proposal is directed towards understanding how the distribution of these doorways is controlled within fat cells.

**AMOUNT:** £20,000.00 (one year)

**RECIPIENT:** Dr Neil Reeves

**INSTITUTION:** Manchester Metropolitan University

**PROJECT:**

Peripheral neuropathy and muscle weakness: how do they influence the safety of daily gait tasks for people with diabetes?

### **LAY SUMMARY:**

People with diabetes may not know exactly when their foot makes contact with the ground while walking because of the lack of sensation in their feet. This will mean that their muscles, which are already weakened, may not react quickly enough to adequately support the body. The major muscles of the leg in people with diabetes are weaker than those of individuals without diabetes, which may mean that people with diabetes are operating closer to their muscle's maximum capacity when walking and performing everyday tasks. These factors are likely to increase the chance of people with diabetes falling and injuring themselves. This project will identify problems that people with diabetes face when walking and performing other everyday tasks such as going up and down stairs. People will be assessed during these everyday activities in our laboratory by measuring the body's movement and muscle responses as they walk. A special device monitoring eye movements will test whether people with diabetes look closer to their feet as they walk to compensate for the lack of sensation in their feet. This work will help us to understand the reasons why walking may become dangerous for people with diabetes and may lead to the development of strategies or interventions that help make everyday tasks safer for people with diabetes.

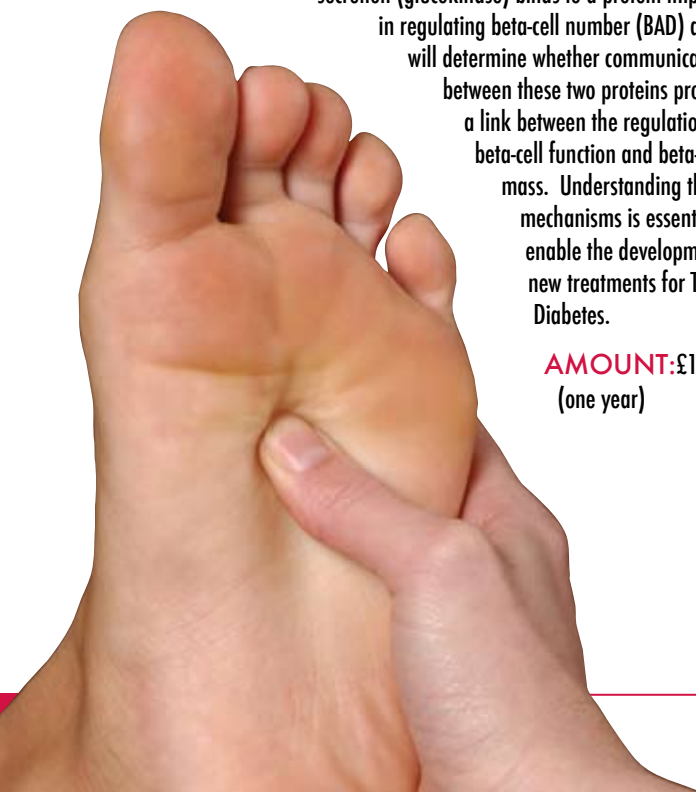
**AMOUNT:** £19,423.00 (one year)

**RECIPIENT:** Dr Jeremy Turner

**INSTITUTION:** University of East Anglia

**PROJECT:**

The regulation of metalloproteinases and tissue inhibitors of metalloproteinases in adipose inflammation and type 2 diabetes





## LAY SUMMARY:

Fat tissue in obese people is affected by a form of inflammation, and this is thought to be important in the development of diabetes. A family of proteins known as metalloproteinases may contribute to causing diabetes, by controlling this inflammation and affecting how fat tissue changes in size when we gain weight. We want to expose fat cells from healthy non-diabetic people to conditions in the laboratory that mimic inflammation and diabetes, to see how the levels of these metalloproteinases change in response to this. Doing so will allow us to start understanding the function of these proteins, and help us to develop new diagnostic tests and new drugs for treating and preventing diabetes in the future.

**AMOUNT:** £9,628.00 (one year)

## RECIPIENT: Dr Lazaros Foukas

**INSTITUTION:** University College London

### PROJECT:

Role of the adipose tissue in age-dependent beneficial effects of PI 3-Kinase pathway inactivation on glucose and lipid homeostasis

### LAY SUMMARY:

Modern lifestyle and an increasing life expectancy have made the burden of age-related diseases, such as obesity and type-2 diabetes, a very significant problem of public health. There is an urgent need for development of medicines that prevent or treat these conditions.

Using mice as model organisms, we have found that an enzyme, named PI 3-kinase p110alpha, is part of the mechanism by which the hormone insulin controls the metabolism. Remarkably, genetically

engineered mice in which the p110alpha gene has been inactivated do not accumulate as much fat as

normal mice as they age and have lower blood sugar levels. Inactivation of p110alpha by drugs is therefore a promising treatment for metabolic diseases.

Our research seeks to uncover the molecular pathway by which inactivation of p110alpha results in such improvements in metabolism. We anticipate that this knowledge will greatly facilitate efforts to develop therapeutic agents to treat obesity and associated type-2 diabetes and to extend the healthy lifespan of humans.

**AMOUNT:** £19,662.00 (one year)

## RECIPIENT: Dr Gaya Thanabalasingham

**INSTITUTION:** Oxford Centre for Diabetes, Endocrinology & Metabolism (OCDEM)

### PROJECT:

Investigation of the incretin pathway in Maturity Onset Diabetes of the Young (MODY) secondary to heterozygous hepatocyte nuclear factor 1 alpha (HNF1A) gene mutations

### LAY SUMMARY:

After eating a meal hormones are produced by the gut (called incretin hormones) which promote insulin release from the pancreas and lead to lowering of blood sugar levels. In diabetes there are defects in the production and action of these incretin hormones. Recently medications that target

incretin hormones have been licensed for use in treating patients with type 2 diabetes. This study will assess whether there are defects in incretin hormones in a genetic type of diabetes called Maturity Onset Diabetes of the Young (MODY). It is not entirely clear why people with MODY have reduced insulin secretion and develop diabetes. This study will provide insights into whether defects in the incretin system are involved in the development of diabetes in MODY. The results could also indicate whether therapies that target the incretin hormones will have a role in MODY patients. This study emphasises the need to offer personalised care to patients with diabetes as those with different underlying causes of diabetes do not respond uniformly to treatments.

**AMOUNT:** £19,211.40 (one year)

Dr Kos thanked DRWF for their grant and said 'The grant we received enabled the Diabetes and Endocrinology department to pilot a novel hypothesis and obtain data which may lead to the discovery of new therapeutic targets for diabetes.'

## RECIPIENT: Dr Katarina Kos

**Institution:** Peninsula Medical School

### PROJECT:

Are human SPARC isoforms suitable peripheral markers of insulin resistance and diabetes-related complications?

### LAY SUMMARY:

SPARC (Secreted Protein, Acidic and Rich in Cysteine) is a protein produced in all tissues, but especially in body fat (adipose tissue). SPARC promotes scarring of fat tissue. Whilst fat tissue is progressively scarred in obesity, our latest findings show that SPARC levels are elevated in subjects with obesity as well as insulin resistance suggesting a key role of SPARC in linking obesity to the development of diabetes. Scarring restricts deposition of surplus dietary fats which are in the circulation in the form of lipid into fat tissue. These surplus lipids are subsequently diverted to pathological lipid deposits in inner organs leading to obesity related complications, insulin resistance and eventually to Type 2 diabetes. This project examines the existence of genetic SPARC variants with the aim to identify a form of SPARC which is at the same time genetically expressed in fat and blood cells and which may not only mirror SPARC's regulation in fat tissue but relate to obesity related complications and diabetes. This will subsequently allow analyses of data from epidemiological cohorts derived from blood samples rather than fat tissue. The investigators hope to identify SPARC variants which are suitable new risk markers and which may lend itself as a new therapeutic target.

**AMOUNT:** £19,260.00 (one year)



# Achievements and Performance

**Awareness:** extensive awareness raising activities were undertaken during the year to achieve the charity's objectives, for the benefit of the public:

- More than 2 million mail packs carrying 'calls to action' and information about diabetes and the charity's activities were distributed during the course of 2010
- 1137 general information packs were distributed to members of the public requesting information about the support services offered by the charity
- 3671 diabetes awareness necklaces were distributed to members of the public
- More than 53,000 E-News letters were distributed to subscribers during the year containing key up to date diabetes and related news items
- Provision of a diabetes awareness symposium at the Lions 105D Regional Congress in support of Lions Diabetes Officers and their wider membership
- Participation as a key supporter within the health zone of the South Coast Mela Festival providing pre-diabetes risk assessment/GP referral alongside Lloyds Pharmacy with follow-up provision of information and educational materials
- Participation in Community Health Matters – a south coast public health event to promote good health and awareness of diabetes and related complications

## IMPACT:

- More than 316,000 positive responses were received on receipt of the charity direct mailings – an indication that more than 15% of total recipients of these mailings had been exposed to the awareness raising and educational information contained with the mailing. It's likely that many more recipients also opened the pack and read the content, but chose not to respond directly to DRWF at that time
- DRWF was approached by a number of organisations to help them raise awareness to diabetes amongst their membership. Working with Lloyds Pharmacy enabled DRWF to provide lifestyle assessment to ascertain level of risk of Type 2 diabetes prior to blood glucose monitoring, with recommendation of further testing to those considered medium-high risk and with a blood glucose level of over 6.1mmol/l. This awareness activity demonstrates DRWF's commitment to reach people who already have the condition, but don't know it and to enable preventative action where possible
- There was an increase of around 13% in the number of diabetes and related healthcare professionals registered on the DRWF healthcare professional database. These people receive complimentary copies of the charity's awareness and patient information resources, which they can order in bulk for their clinics and surgeries, and are free of charge

**Education & Support:** to provide good quality, effective and relevant information and support to people with diabetes, their carers and healthcare providers, in order that they can be effective in their self-care; to distribute 'gifts in kind' appropriate to the charity's objectives and target audience in underdeveloped countries where diabetes and related health items are not readily available:

- 176,888 copies of the Diabetes Wellness News were circulated to members of the public, DRWF supporters and healthcare providers in the year
- 22,152 diabetes patient information leaflets were distributed on request by healthcare professionals through the charity's quarterly leaflet re-order service, in support of their clients with diabetes
- 4303 patient information leaflets were downloaded from the DRWF website – 64% of these were in pdf format / 36% in audio format
- As a provider of health and social care information, DRWF applied to commence the Department of Health Information Standard accreditation process. This is an independent, non-statutory scheme through which organisations have to demonstrate that they have the necessary methods and systems to ensure that the health and social care information they produce is accurate, impartial, balanced, appropriately researched, accessible and well-written
- 5 Diabetes Wellness educational events were held throughout the year in locations around the country. All events have the aim of improving people's understanding of diabetes and its related complications to enable the establishment and maintenance of good self-management skills, thereby reducing the risk of associated complications and improving quality of life
- DRWF received gifts in kind with a wholesale value of around £3.043 million for redistribution to appropriate recipients



## IMPACT:

- A small increase in the circulation levels of the Diabetes Wellness News by around 1% on 2009
- 473 healthcare professionals were recruited to the diabetes and related healthcare professional database at the 2010 Royal College of Nursing Congress, increasing the number of outlets for DRWF patient information resources and widening our reach to promote awareness and self-management skills
- 255 people with Type 1 and Type 2 diabetes attended Wellness educational events during the year and benefitted from the support network that these informal events provide both from relevant healthcare professionals, DRWF staff and like-minded individuals. Star outcome charts were implemented during the 2010 event programme, analysis of which indicate that these events play a key role in keeping

# Achievements and Performance



people motivated in their self-care approach to diabetes and learning development

- DRWF was accepted onto the Information Standard scheme with a bursary for full cost recovery provided certification is achieved by 28 February 2011.
- DRWF received gifts in kind of diabetes and related medicines from World Help Inc and The Stars Foundation. These gifts were distributed to Ghana, Honduras and Guatemala via 2 organisations, the Rotary Club of Accra North and the Sovereign Order of Malta. Field reports from these groups declare that the medicines donated would treat more than 1200 individuals suffering diabetes and related complications where medicines were unavailable or individuals did not have funds to pay for treatment

**Research Funding:** to support vital diabetes research projects with a view to discovering the causes, new and improved treatments for diabetes and its complications, whilst working towards finding a cure:

- 8 research awards were granted during 2010 totalling £285,396
- Additional funding was granted to the Spring Point Project in the year with £132,677 paid
- DRWF was selected by the AMRC to present a research poster during their Summer Reception at the House of Commons. This was to demonstrate the crucial part that charities play in the medical/health research funding arena. DRWF was selected to present its funding of islet cell research and the provision of an islet isolation facility at the Churchill

Hospital, Oxford. This research was to demonstrate the infrastructure support provided by DRWF to enable advancement of islet cell research from the bench to the bedside

- All interim and annual reports received during the year from ongoing research funding commitments, were assessed and approved by the Chair of the Research Advisory Board

## IMPACT:

- 18% of research grant applications were funded in the year, a small increase on the level of applications funded in 2009
- Selection to present a research poster provided the opportunity to demonstrate a measurable outcome from the charity's research funding, for the benefit of a selection of people with Type 1 diabetes
- Approval of all interim and annual reports for ongoing payment of grant awards demonstrates commitment to ensuring that only research that is on track, as set down in the original grant application, continues to be funded in line with the charity's research strategy.

DRWF uses qualitative and quantitative approaches to monitor and evaluate in order to ensure that the outcomes aimed for through awareness raising, information and support, and research funding activities, are achieved. Stakeholders and beneficiaries are involved in learning processes with feedback of results in order to demonstrate accountability. Understanding both the soft and hard outcomes from activities, and learning to measure outcomes effectively, is important for retaining good relations with staff, beneficiaries, stakeholders and donors.

# 2010 Income/Expenditure Profile



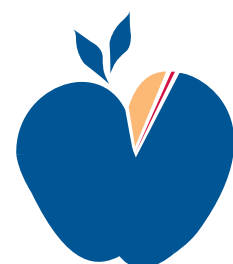
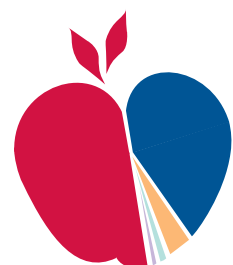
The information presented here is not the full statutory accounts but a summary of the information which appears in the full accounts for financial year ending 2010. This summary information may not contain sufficient information to allow for a full understanding of the financial affairs of the Diabetes 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.

## 2010 INCOME PROFILE

■ Donations (41%)	£2,430,995
■ Gift Aid (7%)	£418,297
■ Gifts in Kind (51%)	£3,043,929
■ Interest (0%)	£698
■ Other (1%)	£82,165
<b>TOTAL</b>	<b>£5,976,084</b>

## 2010 EXPENDITURE PROFILE

■ Charitable Activities (Awareness, Grants, GIK) (90%)	£5,599,941
■ Fund-raising & Publicity (10%)	£623,300
■ Governance (0%)	£24,225
<b>TOTAL</b>	<b>£6,247,466</b>





# DRWF Diabetes Wellness Network



The purpose of DRWF's Diabetes Wellness Network is to bring people with diabetes closer through the sharing of knowledge and experience, as well as providing important professional health advice. Through membership DRWF provide the inspiration and encouragement, as well as the practical advice, necessary to help people really get to grips with their diabetes.

Membership of the Diabetes Wellness Network is for people with diabetes or anyone who can benefit from an improved understanding of the condition.

## Benefits of membership

- Monthly issues of the *Diabetes Wellness News*
- Quarterly good health pocket diaries
- Discounted attendance of residential diabetes wellness events
- Practical advice via DRWF diabetes information leaflet series
- Diabetes awareness necklace
- Medical check-up card
- Personal written advice from our team of diabetes and related health specialists
- Discounted rates on leading diabetes and related health publications

'Thank you for the information leaflets and newsletter, they were very helpful. It would have been a struggle to understand how to manage my type 2 diabetes without your informative assistance.'

R Marks, Carmarthenshire



'Congratulations on a well written publication, relevant to both medical workers and individuals who have diabetes.'

B. Samson,  
Practice Nurse, Kent





Lee Calladine, DRWF Event Coordinator is proud that DRWF events help to provide people living with diabetes with the skills, knowledge, practical knowhow and confidence to better manage their condition.

First time walkers, Wendy and John Beecher said, "Thank you and congratulations for organising such a splendid walking holiday for people with diabetes."

## DRWF WALKERS GET "ACTIVE WITH DIABETES"

In Ceredigion and on the Pembrokeshire Coastal Path, Wales

from 19th - 24th May 2010



## DIABETES WELLNESS DAY SOUTH

Saturday, 19th June 2010

The DRWF Wellness Day South, held in conjunction with regional diabetes healthcare organisations, took place in Southampton, Hampshire and marked the end of National Diabetes Week.



A message from DRWF network member, Imogen Foster:

"DRWF has given me confidence and helps me to stay motivated in dealing with my Type 2 Diabetes. It supports vital research, publishes an excellent newsletter, and at the same time is human and accessible, especially with its outstanding programme of events."

## DIABETES WELLNESS WEEKEND, Milton Hill House, Oxfordshire

The annual Diabetes Wellness Weekend took place at Milton Hill House, Oxfordshire in October, 2010. It brought people with diabetes together with healthcare professionals to share ideas and knowledge on how to achieve good self-management.

## DRWF WELLNESS DAY NORTH MARKS WORLD DIABETES DAY

on 14 November 2010

The Diabetes Research & Wellness Foundation and the specialist diabetes team from the University Hospital of Hartlepool held a Diabetes Wellness Day at the Hartlepool Maritime Experience for people living with diabetes in the North East to coincide with World Diabetes Day on 14th November 2010.





# Support DRWF by getting involved

## THE DIABETES WELLNESS NETWORK

is the name given to our growing membership. Its purpose is to bring people with diabetes closer through the sharing of knowledge and experience, as well as providing important health advice.



Network member, Heather Davie says 'The excellent monthly Diabetes Wellness News gives education, information, inspiration, encouragement and hope to all of us living with diabetes, wanting to learn more and accepting the challenge of trying to manage the condition. It is eminently readable and I recommend it highly.'

Members of the Network receive 12-monthly issues of the Diabetes Wellness News, quarterly good health pocket diaries and discounted attendance of residential Diabetes Wellness Events. We hope that through membership we can provide the inspiration and encouragement, as well as the practical advice, necessary to help people really get to grips with their diabetes.

## Partners for the Cure

We'd be delighted to welcome you to our elite group of supporters who make a regular monthly, quarterly or annual direct debit donation. By making this financial commitment to DRWF, you will help to ensure that we always have the steady flow of income required to continue our support of vital research and educational programmes.

DRWF receive no government funding so it is important for the charity to recruit new regular givers to fund our research objectives.

For instance, if 556 supporters donated £3 per month to DRWF over the course of a year, this would cover the cost of just one DRWF Open

Funding grants (£20,000), of which six are allocated each year.

This secure programme works directly with your bank by way of a direct debit instruction – in just the same way as paying your utility bills. All transactions are electronic, debiting your bank account automatically to an agreed frequency and monthly payment date. It is hassle-free and you are totally in control.

To become a 'Partner', just complete the simple direct debit instruction on the Partners for the Cure Enrolment Form on our website [www.drwf.org.uk](http://www.drwf.org.uk) and send the form to us or telephone 023 92 636136 to discuss with a member of our staff.

## OTHER WAYS TO DONATE

If you would like to make a donation to support our work you can do so in a variety of ways.

- **Cheque or credit card**  
made payable to DRWF and sent to: Diabetes Research & Wellness, 101-102 Northney Marina, Hayling Island, Hampshire, PO11 0NH.
- **On-line**  
Donate securely online. DRWF complies with the Payment Card Industry Data Security Standard requirements (PCI DSS).

*giftaid it*

## Increase the value of your gift

If you decide you would like to support our work you may be able to increase the value of your gift by 25%, at no extra cost to yourself!

For every £1 you give us, we can claim an extra 25p back from the taxman - and it won't cost you any extra at all!

If you have any questions about Gift Aid or about making a donation to Diabetes Research & Wellness Foundation, please call us on 02392 636136 or email [enquiries@drwf.org.uk](mailto:enquiries@drwf.org.uk)

## FUNDRAISING

Hold a fundraising event. In order to help our supporters as best we can, we have put together

a 'Fundraising Activity Pack' with some helpful suggestions and considerations to make, when planning an event of any kind. If you need our help at any time just give us a call on 02392 636138. We'd love to hear how your plans are shaping up! We can also tell you how to set up your own JustGiving fundraising page online for DRWF.

## TRUSTS

Through the generous giving of charitable trusts the Diabetes Research & Wellness Foundation is able to continue to fund valuable, pioneering research and expand our information and education programme

'When tragic events relating to diabetes happen to those whom one holds so dear and in such high esteem, it becomes essential to commit oneself to such practical undertakings as a bequest to contribute to eradicating diabetes and I hope and trust my legacy will be useful in achieving this.'

DRWF legator

## 'IN MEMORY' GIFTS

Giving "in memory" is a special way of remembering and honouring a loved one. Your gift, will enable us to continue to help people with diabetes "stay well until a cure is found".

## LEGACIES

Legacies are vital to every charity. They provide the bedrock financial support we rely upon to look ahead and progress effectively.

**Diabetes Research & Wellness Foundation**  
101-102 Northney Marina, Hayling Island, Hampshire  
PO11 0NH  
Registered charity No: 1070607

## VOLUNTEER

DRWF have a small workforce so volunteer assistance is really appreciated. Please get in touch by calling us on 023 9263 6131.

# Trusts, Legacies and 'In Memory' Gifts



## DRWF LEGACY

William Robinson Allen  
Valerie George Davies  
Dennis William Greenslade  
Roberta Morgan Heason  
Prudence Isobel Johnstone  
Barry William Maxim  
Hella Richman  
Brian Swan  
Daphne Williams

Clare Priscilla Burnham  
Shirley Ann Ellingford  
Jessie Gunn  
J K C Henderson  
Henry Albert Limb  
Margaret Alice Nisbet  
William Arthur Scammell  
Margaret Hilda Warr  
Patricia Ann Willmott

Esmee Cromarty  
Jocelyn Freda Foulger  
Elizabeth Grace Hanmer  
Betty Jean Howatson  
Helen MacPhee  
Valerie Susan Owen  
Catherine Snaith  
Elizabeth Mary Weston  
Eileen Louisa Wise

## TRUST DONATIONS

The Coulthurst Trust  
The Joseph & Mary Hiley Trust  
Shield in Action Limited

The Arnold Burton 1998 Charitable Trust  
The Thomas C Maconochie Trust

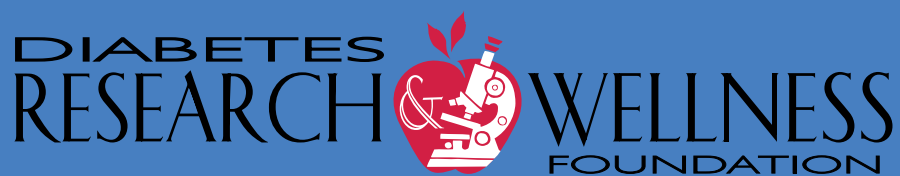
## 'IN MEMORY' GIFTS

Ms Noreen Patricia Allen  
Ms Pauline Baskeyfield  
Mr David William Bowd  
Mr Maxwell Fenwick Brown  
Mrs Mavis Carrick  
Mr Christopher John Coe  
Ms Alice Crisp  
Mr Brian Giffard  
Mrs Kathleen Harrison  
Mrs Madge Hill  
Mrs Annie Hynd  
Ms Irene Jacques  
Mr Raymond Leakey  
Hikla Lofthouse  
Mr Tim Miller  
Mrs Rose Murphy  
Mrs Beatrice Maud Philp  
Mr Gordon Ratman  
Mr Holland Roberts  
Mr K Shead  
Ms Sandra Smith  
Renie Stone  
Mr Cecil George Albert Thomas  
Mr Alan Turner  
Mr Alan Welton

Mr Mark Arnold  
Miss Carol Ann Bean  
Mr Bert Bright  
Mr Frank Bullows  
Mrs Doreen E. Cheetham  
Ms Sheilagh Aileen A. Connolly  
Mr Geoffrey Damant  
Mr James Graham  
Mr Roy Edgar Hemstedt  
Mr Richard Horndge  
Dr Ralph Iley  
Mr Vic Kirchin  
Ms Mavis Amy Lear  
Mrs Norma M Lowe  
Mrs Savitri Mungol  
Ms Elsie Murphy  
Mrs Plaster  
Mrs Beryl Richardson  
Mr Shan Elizabeth O. Roberts  
Mrs Suzanne Elizabeth Shipp  
Mrs Gladys Steele  
Mr W J Tanner  
Mrs Mary Elizabeth Torbet  
Mr James Henry Wallbank  
Mr Cecil Herbert WilesPat Wilson

Mr Albert C. Barnes  
Mrs Beatrice May Bowd  
Mr Max Brown  
Mrs Joan Butt  
Ms Yvonne Cockburn  
Mr Cotton  
Mr Russell Douglass  
Ms Joan Patricia Hanbury  
Mrs Joan Heslop  
Mr Kenneth Hurst  
Mr David Jackson  
Ms Vivien M Law  
Ms Joan Loader  
Mrs Margaret McMillan  
Mr Douglass William Murphy  
Ms Esther Ndukwe  
Ms Julie Pountney  
Mrs Anita Rickett  
Mrs A Y Savie  
Mr Alan Smethurst  
Mr J Stephenson  
Mr William Thomas  
Ms Mary Townsend  
Mr Allan Welton  
Mr Robert Wooler

The Diabetes Research & Wellness Foundation would like to take this opportunity to gratefully acknowledge the generosity of our one thousand and fifty 2010 major donors as well as the thousands of supporters who consistently prove their commitment to and belief in the charity's aims by continuing to support DRWF.



101-102 Northney Marina, Hayling Island, Hampshire PO11 0NH

Telephone: 02392 637808 Email: [enquiries@drwf.org.uk](mailto:enquiries@drwf.org.uk)

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

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