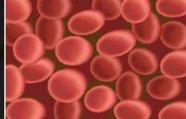
# 2005 ANNUAL REPORT

# A Year of NEW HOPE











#### **Board of Directors**

John Alahouzos, Chairman William Arrington John Denis Christian Gretschel Jeffrey Harab, Esq.

#### **Medical Advisory Board**

Walter Bortz II, MD, Chairman Daniel Finkelstein, MD Kathleen Gold, RN, MSN, CDE William Kaye, MD Richard Rubin, PhD, CDE Gordon C. Weir, MD

**Volunteer President** W. Michael Gretschel

**Executive Director** Andrea G. Stancik

#### Foundation Staff:

Kathleen Gold, RN, MSN, CDE Charlotte Green Valerie Jeremiah Sabine Myers Jen Scharrer

# An Organization for People Who Live with Diabetes Every Day.

The mission of **Diabetes Research & Wellness Foundation**<sup>®</sup> (DRWF) is to help find the cure for diabetes, and until that goal is achieved, to provide the care and self-management skills needed to combat the life-threatening complications of this terrible disease.

# To accomplish this mission...

**DRWF** provides funds to researchers whose work offers the best hope and most expedient path to a cure for diabetes.

**DRWF** provides funds to researchers whose work has already provided substantial insight into the causes, early detection, or treatment of diabetes complications.

**DRWF** encourages and facilitates the development of fledgling researchers in the field of diabetes research.

**DRWF** promotes public education about the causes, prevention, and treatment of diabetes and its complications.

DRWF provides services and products to people with diabetes.

**DRWF** supports the education and training of health care professionals in order to improve the quality of the diabetes care they deliver.

DRWF provides hope to millions of diabetes sufferers.

# 2005 CHAIRMAN'S MESSAGE

#### Dear Friends,

It is with great pride that I submit to you our Annual Report for 2005, which highlights the important scientific, clinical, and educational advances we've achieved during the last year. Thanks to thousands of wonderful people, the Diabetes Research & Wellness Foundation<sup>®</sup> (DRWF) continues its mission of empowering people with diabetes by providing them with hope, support, and the information needed to stay healthy until THE CURE is found.

Truly 2005 will go down as a banner year for DRWF, but also history may well record that THE CURE for Type I and some forms of Type 2 diabetes was initiated in 2005. You see, under the auspices of the three organizations that make up our worldwide Diabetes Wellness Network®, the Diabetes Research & Wellness Foundation® (US), the Diabetes Research & Wellness Foundation (UK), and the Association pour la Recherche sur le Diabète (France), Dr. Bernhard Hering of the University of Minnesota began the Spring Point Project in 2005. As many of you know, Dr. Hering is a leader in the field of human islet transplantation and has received DRWF's support for some time now.

Early in 2005, Dr. Hering successfully reversed diabetes in monkeys using transplanted islet cells from pigs. The survival of pig islet transplants was made possible with a novel immunosuppressive protocol. This is especially important because the supply of human islets for transplantation will never match the demand; and a safe, reliable, and abundant supply of islet cells must be found to cure diabetes. With this information in hand, the Spring Point Project was initiated to build and operate a biosecure barrier facility to raise high-health pigs as suitable donor animals in compliance with federal regulations for planned pig islet transplant trials in humans. The Diabetes Wellness Network has committed more than \$2,120,000 to the Spring Point Project and is working very hard to raise the additional funds needed to complete construction, produce safe pig islets for the clinical trial phase, and ultimately to CURE diabetes!

As you read this Annual Report for 2005, you will note with pride that we produced the most important new book about diabetes in years, *Diabetes Danger*, written by the chairman of DRWF's Medical Advisory Board, Walter M. Bortz II, M.D. If you haven't already read this frank and informative book, I urge you to buy a copy today.

On a personal note, I hope you will be inspired and motivated by the promising research projects, the clinical care programs, and the self-management educational programs that you helped make possible. I am personally inspired by the many friends and supporters, without whom we could not have accomplished so much. I thank each and every one of them and applaud the tireless efforts of DRWF's Volunteer President, W. Michael Gretschel, the Board of Directors, the Medical Advisory Board, and the dedicated staff and volunteers of the Diabetes Research & Wellness Foundation.

I promise we will keep you informed about the progress of the Spring Point Project and guarantee that DRWF will stay true to its mission of empowering people with diabetes by providing them with the information they need to stay healthy until THE CURE is found. Thank you for your faith and support.

John Alahouzos, Jr. Chairman, DRWF Board of Directors





John Alahouzos, Jr.

### THE DIABETES CURE...AT LAST



### Why give your money to cure diabetes?

#### Dear Friends,

I want you to know that every penny you and other private citizens donate to diabetes research is very much needed. You are among a small but very important portion of the entire United States community that donates to diabetes research. In fact, less than \$150,000,000 was donated to the top five diabetes organizations in the U.S. in 2005! If the average gift was \$150, that means only 1,000,000 Americans made a gift to diabetes research. That means only 4 people in 1,500 made such a modest gift to defeat a disease that has struck over 20,000,000 Americans.

Furthermore, less than 2 in 20 people with diabetes have made a gift at all! I've been thinking about this for quite some time. What is the reason for such low participation in the search for a cure? I believe the answer is lack of hope!

It is easy to be hopeless when researchers tell you that progress is decades away. It is easy to give up when years go by without a comprehensive plan being formulated.

But 2005 was a year of NEW HOPE.

Finally...a plan to cure diabetes.

I'm happy to report to you that the special Spring Point Project that we have enthusiastically embraced, is moving forward on schedule. While much needs to be done before we can claim final victory over diabetes, I am ever more confident that Dr. Hering's work at the Diabetes Institute at the University of Minnesota will converge with the raising of the Spring Point biosecure pigs within the foreseeable years. Islet cells definitely cure diabetes. New surgical locations, new local immunosuppressants, and inoculating the islet cells before transplantation will make transplants more successful and less likely to be rejected.

Dr. Hering has cured diabetes in monkeys with porcine islet cell transplants. Human trials are next.

All of us at DRWF are feeling very good about the response from around the world to this uniquely practical project. Millions of dollars are pledged toward the \$20,000,000 goal.

Pig parts have proven to be very safe and adaptable to humans. Over 300,000 Americans are living today with pig heart valves. Alzheimer victims have been safely treated with injections of pig brains, and of course people with diabetes have lived healthy lives on pork insulin for nearly 100 years.

The Spring Point pigs can save the lives of virtually unlimited numbers of people suffering from diabetes and other serious health problems.

You can be proud of your support of this historic undertaking. Your DRWF in the United States, France, and the United Kingdom is aggressively supporting Dr. Hering and Spring Point.

You are truly part of the cure!

Thank you and please keep hope alive and continue to support our grand cause.

W. Michael Gretsche Volunteer President

# DIABETES DANGER 2005

Dear Friends,

2005 was a terrible, dismal year for the disease, diabetes. All the numbers went in the wrong direction. More persons with the disease, More trying to get it, More with diabetic complications, More dying from it, and oh yes; don't forget about the money. It is costing more and more and putting low-income people in worse and worse shape.

And it's not just in America. Everywhere the alarm is sounded! Rich countries, poor countries. Western countries, Eastern countries, all being burned by the diabetes Inferno.

The Yale School of Public Health released a report "Diabetes 2030," projecting the situation 25 years from now. If you think things are bad now, wait. How about three times as bad in 2030?

Part of the ugly face of diabetes was revealed in the aftermath of Hurricane Katrina in September. Our TV screens were crowded with the distressing pictures of thousands of persons fighting for their lives. Many of these people had diabetes. DRWF responded immediately, just as it had in the aftermath of the Sumatra tsunami. DRWF mobilized its global resources to provide help. I wrote a personal appeal to the membership in the November newsletter and together with Novo Nordisk we were able to ship massive amounts of diabetes supplies to the stricken areas.

At the DRWF office the new web site was launched on July 15th. This provides an expanded interactive opportunity for all to participate in the crucial work we are pursuing.

Meanwhile, Medicare passed new guidelines of importance for persons with diabetes. New rules about payment for equipment and supplies and training for self-management were released. Patient payments for eye exams, and hemoglobin A1C level testing and flu vaccines were initiated. I still feel, however, that until Medicare and Medicaid come out with substantial increased support for diabetes education that their efforts are miniaturized.

For me the year 2005 was mostly notable for its November 1, 2005 release date for my book "Diabetes Danger," which was generously sponsored and supported by DRWF. With the excellent assistance of the

DRWF staff, we produced a book that I feel has immense importance.

It is not a gentle or self-congratulatory book. Instead, it is specifically an in- your- face display of how poorly we are dealing with the huge numbers that threaten to engulf us. The entire book writing and publication was greatly enriched by the powerful prologue written by long-time family friend Rhett Currier and the introduction by Governor Mike Huckabee of Arkansas. Most all of America is aware of Governor Huckabee's personal confrontation with diabetes, and his heroic personal and administrative response. He is a legitimate American hero.

I meet Governor Huckabee in Washington as he ran the Marine Corps Marathon while I ran a half marathon. We had a boisterous greeting afterwards in which each of us celebrated the other's role in drawing attention to our issue. Please visit our website at www.diabetesdanger.com for some wonderful film clips of our conversation.

In Governor Huckabee's recent book, "Quit Digging Your Grave with a Knife and Fork," which effectively reiterates what my physician father taught me long ago, "Half of what we eat keeps us alive, the other half keeps the doctors alive." At Governor Huckabee's executive offices, we reviewed our respective circumstances and offered our support for the energetic work he is doing in crafting an inspired public health strategy to reduce diabetes. In many ways, his effort is economics. He identifies how many of the basic citizen services in Arkansas - education for example - are severely compromised by the high costs of taking care of diabetes. He reckons that the prime strategy to reducing this rate is the avoidance of diabetes in the first place. Prevention!

So while 2005 is a year in which the disease of diabetes further raised its ugly head, DRWF is committed to a wide array of counter-attack activities. Please help us to sustain these in this year and beyond.

Sincerely,

Walter M. Bortz, II, MD J Chairmen of Medical Advisory Board



Walter Michael Bortz, II, M.D. Chairman DRWF Medical Advisory Board



# JOHNS HOPKINS' WILMER EYE INSTITUTE

THE WILMER OPHTHALMOLOGICAL INSTITUTE THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE THE JOHNS HOPKINS HOSPITAL





In the United States, diabetes is responsible for 8 percent of legal blindness, making it the leading cause of new cases of blindness in adults 20-74 years of age. Each year, from 12,000 to 24,000 people lose their sight be-cause of diabetes. People with diabetes are twice as likely to be diagnosed with glaucoma or cataracts as those without diabetes, and to contribute to the high rate of blindness.

The key to preventing diabetes-related eye problems is good control of blood glucose levels, a healthy diet, and good eye care. The Wilmer Eye Institute is doing its part to help prevent further blindness in the U.S. The number of people being seen at the Wilmer Eye Institute's Free Diabetic Retinopathy Screening Clinic in Baltimore, Maryland continues to increase with each year. Two hundred and thirty-one new patients received treatment at the clinic in 2005, and thirty-seven patients were diagnosed with retinopathy. Three hundred and thirty patients were seen in return visits, and one hundred and thirty-six patients were diagnosed with retinopathy. On average, the clinic sees 3 to 4 patients a day for the treatment of diabetic retinopathy. In 2005, twenty-eight retinopathy patients needed and received laser treatment.

The clinic, run by Daniel Finkelstein, MD, is a godsend for those needing care...but unable to afford it. Testing and treatment are available at the clinic for anyone seeking care. Patients with diabetes should have an annual eye exam by a medical specialist who has laser treatment available. This is very difficult for people who have no insurance. To our knowledge, the Wilmer Eye Institute is the only free screening service for diabetic retinopathy in this part of the country, perhaps, in the entire United States. Without the support from the Diabetes Research & Wellness Foundation<sup>®</sup>, we would not be able to provide this life-saving service.

# How can we prevent retinopathy and ther eye diseases?

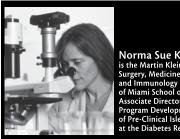
Diabetic retinopathy is the most common cause of blindness or visual impairment in someone with diabetes. The disease presents no symptoms in the early stages, but left undiagnosed and

untreated, puts a person at a high risk for blindness. A person with diabetes can have retinopathy and not know it. Having a regular eye exam could help detect retinopathy early and possibly prevent blindness in a person; but the sad fact is that people do not routinely get their eyes examined, and this is why the public needs to be made aware of this problem. People with diabetes can reduce their risk for complications if they are educated about their disease, learn and practice the skills necessary to better control their blood glucose levels, and receive regular dilated eye exams from their health care team. Dr. Finkelstein and the Diabetes Research & Wellness Foundation's goal is to prevent blindness. Dr. Finkelstein and all of the trained professionals at the free clinic welcomed new and return patients throughout 2005 and continue to provide their patients with expert eye exams, specific education regarding the condition and care of their eyes, and the necessary treatment - at the highest level - at all visits. It is so very important to have programs like these to educate and prevent blindness, and to provide health assistance to those in need.

Diabetes Research & Wellness Foundation provides funding to the Wilmer Eye Institute's Free Screening Clinic because we want to do everything in our power to see that the tragedy of unnecessary blindness does not continue to rise. Vision is too often taken for granted... imagine life without it. DRWF is happy to be a part of this process and to help make it possible for those who would otherwise have to risk their precious eyesight, to get the help they need. Thank you for contributing to DRWF to help bring us closer to our goal.

Reference: Wilmer Eye Institute, Johns Hopkins University American Diabetes Association, Facts and Figures

# IMMUNE SYSTEM MONITORING OF ISLET TRANSPLANT RECIPIENTS



Norma Sue Kenyon, Ph.D., is the Martin Kleiman Professor of Surgery, Medicine, Microbiology and Immunology at the University of Miami School of Medicine, and Associate Director of Research and Program Development and Director of Pre-Clinical Islet Transplantation at the Diabetes Research Institute.

Clinical islet transplantation under the cover of steroid-free immune suppression has led to 100% insulin independence and generated significant excitement. At 4-5 years post-transplant, however, only 10%-20% of patients remain insulin independent. Among the possibilities

for the failure of islet transplants are toxicity of immunosuppressive drugs towards islets, loss of islets due to the stress of having an inadequate number to provide normal metabolic control, failure of transplanted islets to self-renew, and/or immunemediated islet destruction.

With the support of DRWF, we have been able to expand our studies and undertake comprehensive immunologic analyses that support the immune system's central role in islet transplant destruction. These studies are important, not only for demonstrating a potential cause of islet loss, but also for assisting us in the identification of alternate approaches to immune suppression that can lead to enhanced islet survival and function.

As reported last year, the use of a sensitive molecular method to detect immune activation in samples of peripheral blood provides an early indication that an islet recipient will soon begin to reject the transplanted islets. Cytotoxic lymphocytes are the cells that actually kill islets and these cells up-regulate the expression of cytotoxic lymphocyte genes (CLG) as they mature into killers.

Many of the commonly used methods to detect changes in the recipient's immune response are cell-based. Such assays can be extremely informative with regard to the functional nature and specificity (donor antigen vs islet autoantigen) of an immune response, but are not as sensitive in their ability to detect rare cells. We know that donor and autoantigen-specific cells will be present at a very low frequency in the blood, and in general, we will need to stimulate and expand those rare cells to be able to study them at the cellular level. In addition, cell-based assays are undertaken with samples collected at infrequent intervals (3-6 months). They require large blood volumes, are labor-intensive and costly, and may not yield

useful information if the recipient has already progressed to the stage where the destructive T-cells have already migrated to the transplant site (i.e., they are not present in the peripheral blood).

For our newly transplanted recipients, therefore, we are prospectively utilizing elevation of CLG expression as a molecular flag that signals immune activation. After first repeating the assay with a blood sample collected within 1-2 weeks of the first sample and verifying elevation of CLG, we will then collect the larger blood sample required for cell-based assays and undertake tests to assess the recipient's response to donor cells and autoantigen. Dr. Alberto Pugliese has taken on the responsibility for establishing the tetramer assay for autoantigen-specific T-cells, and Drs. Pugliese and Kenyon will share the cells obtained from the patient's blood sample in order to get a more complete picture of what the recipient is responding to - the mismatched donor antigens (rejection) or islet autoantigen (autoimmunity). Using this approach, we are hopeful that we will be able to understand the nature of islet loss over time and apply this knowledge to the design of enhanced immune intervention strategies. This year, we have firmly established advanced methods for cellular analysis of the recipient anti-donor response. In the past, we could only look at the ability of recipient cells to proliferate in response to donor cells. We could look at the cell surface, antigens of cells in the blood and at the secreted immune products made by the recipient's cells made in response to the donor. We have now setup flow cytometry-based methods to simultaneously look at specific cell subsets, determine how much each cell subset is proliferating and identify which immune molecules are being made by the cell. We can use this approach to look at the response to each donor, and ultimately, to assess the recipients' reactivity to preparations of islet autoantigens, as the tetramer-based technology that Dr. Pugliese will use to assess the autoimmune response is only applicable to recipients with HLA-DR4.

In addition, we will undertake extensive molecular analyses on recipient blood using a technique called microarray, which will allow us to look at thousands of genes in one blood sample. We may be able to identify molecular flags that predict rejection at in earlier time frame or distinguish between rejection and recurrence of autoimmunity.



# ISLET CELL TRANSPLANTATION AT THE JOSLIN DIABETES CENTER

### Goals of the Islet Transplantation Program

Promote clinical trials of islet transplantation

Find a source of insulinproducing cells to supply all those in need

Protect transplanted islets from immune destruction

#### Gordon C. Weir, M.D.

Diabetes Research & Wellness Foundation Chair,

Professor of Medicine at Harvard Medical School,

Head, Section of Islet Transplantation and Cell Biology, Joslin Diabetes Center



# Clinical Trials and Work to Improve Outcomes

Clinical trials. The clinical islet transplantation program continues to be active, but as is being found at other major centers, recipients are typically losing some graft function within two years. In spite of this disappointment, it is important to note the significant or key accomplishments with islet transplantation of the past five years. It is now firmly established that islet transplantation can produce insulin independence for valuable periods of time and even continuing clinical benefit when small doses of insulin are required, in terms of smoother control and protection from severe insulin reactions. A total of 19 individuals have now received islets from the Joslin Islet Core, with these transplants being carried out in collaboration with hospitals associated with Harvard Medical School and the University of Massachusetts Medical Center. The transplants continue to be successful in restoring insulin production and providing clinical benefit with two approaches. The first is the Edmonton approach in which islets are given to individuals with severe hypoglycemia who have not had a previous kidney transplant. These individuals must start immunosuppressive medication. The second trial involves individuals who have had kidney transplants, and are already on immunosuppressive medication. The current state of transplantation usually requires islets from two donor pancreases to render recipients insulin independent. One of our patients became insulin independent with only one pancreas. In 2005-2006, we plan to use a new medication, glucagon-like peptide 1 (GLP-1) to improve the survival and function of the transplanted islets. GLP-1 is a natural hormone that enhances insulin secretion, generates new insulin-producing cells, and makes these cells resistant to cell death.

**Improving islet quality.** A high priority over the past year has been to find ways to improve the health of the islets we transplant. We have made considerable progress in the past year in finding ways to assess islet health prior to transplantation. This is essential

because there are now a variety of agents that should enhance islet health and performance, so we need methods to precisely measure the efficacy of such approaches. The Joslin islet team continues to work closely with collaborators, which was evident by multiple presentations at the Cell Transplant Society International Congress in Boston in November 2005, and the International Pancreas and Islet Transplantation Association Meeting in Geneva in May 2005. Measurements of oxygen consumption have been performed and are turning out to be very useful. Another important advance has been in finding a way to accurately determine the number of insulin-producing cells in an islet preparation; this is now being done with the new technique of nuclei counting and electron microscopic identification of the different islet cell types. Other progress is being made with the analysis of different tissue culture conditions, finding that some media are better than others, and the addition of a GLP-1-like agent improves islet survival.

### B Alternative Sources of Insulin-Producing Cells

The quest to find a new source of insulin-producing cells continues to be a top priority of the diabetes community and the highest priority of Joslin's. It has become increasingly apparent that there are not nearly enough cadaver donors to meet the demand of all those who could benefit from islet transplantation. The team of Drs. Weir, Bonner-Weir, and Sharma continues to pursue this goal on several fronts, often in collaboration with scientists in different parts of the world.

1. **Human pancreatic precursor cells** can make new islets. This pioneering work is led by Dr. Susan Bonner-Weir, who has been able to make new islets in laboratory dishes from precursor cells of human pancreases. Dr. Bonner-Weir has been able to obtain a highly purified population of pancreatic duct cells, which we hypothesize are the precursor cells for beta cells. Now it is possible to take a population of duct cells that contain no insulin and - with the right



conditions - produce cells containing insulin. Once the precursor cells can be definitively identified, strategies can be applied to expand these cells and then direct them to become beta cells.

2. **Molecular analysis of new beta cell formation.** Drs. Bonner-Weir and Arun Sharma of the Section of Islet Transplantation and Cell Biology have made considerable progress in characterizing how genes are turned on and off as precursor cells become new beta cells and then complete the maturation process to become fully functional. This work is being carried out in mice and rats, which are the experimental models most suited for these kinds of molecular studies.

As part of the work, the role of a new key transcription factor called a MafA - which was discovered by Dr. Sharma - is being intensively evaluated. There appear to be a small number of controlling genes called transcription factors that account for the specialized nature of beta cells. Understanding how MafA and these other factors interact should allow us to be able to turn on the master switches that control development. This basic science can then be applied to the precursor cells of the pancreas to fulfill the promise of embryonic stem cells. The results were presented at the 2005 American Diabetes Association annual meeting.

3. **Embryonic stem cells** continue to be a promising source of new insulin-producing cells. We are encouraged by a new approach of using embryonic stem cells that have undergone molecular engineering to turn green (using green fluorescent protein) when insulin is being made. This greatly facilitates being able to screen various conditions that make cells turn green. Using a combination of culture conditions and growth factors, the team has been able to produce a population of bright green cells that contain insulin. Joslin continues to build its stem cell program through the combined efforts of the Section on Islet Transplantation and Cell Biology and the new section on Stem Cell Biology with Drs. Keith Blackwell and Amy Wagers. Within the next year, we expect to start work on human embryonic stem cells at Joslin.

4. **Pigs as a source of islet tissue.** The possibility of using pig cells for transplantation has been overshadowed by stem cells, but it continues to be a potentially important source of insulin-producing cells as a backup strategy. At present, some work is continuing with porcine islets and this is expected to continue during the next year.

### Protection of Islets from Immune Destruction

1. **Immunobarrier protection.** This technology employs alginate, which is a gel obtained from seaweed. Islets are contained within small gel beads and are protected from immune destruction. Joslin continues to work closely with colleagues at the Massachusetts Institute of Technology and has been making progress with changes in capsule construction and exciting new ways to improve oxygen delivery. One approach is to use the oxygen carrier perfluorocarbon inside the capsule, which we expect will deliver higher concentrations of oxygen to islet tissue in the center of the capsule. Another approach is to create smaller aggregates of islet tissue, which is predicted to provide better survival and insulin secretion. We are not optimistic that these capsules will be useful for the islets obtained by cadaver donors that are now working well in our patients. The problem is that islets in capsules are not as efficient in producing insulin as islets that are in a vascularized site in the liver. We still feel that immunobarrier approaches may be important for the future because it may be more efficient to encapsulate small clusters of insulin-producing cells produced from stem cells. We also expect to return to the use of pig islets once the capsule technology is further advanced.

2. **Immunomodulation.** Having finished several projects employing gene therapy, we are exploring new ways to prevent islets from being destroyed by the immune system. Dr. Weir is a member of the JDRF Harvard Tolerance Center led by Drs. Diane Mathis and Christophe Benoist of Joslin. This is an exciting group of scientists working on a variety of new ways to induce tolerance to islets. Tolerance induction means that the immune system is retrained to accept transplanted cells without the need for immunosuppression drugs. In a variety of mouse experiments, it has been possible to administer drugs for a short period at the time of the transplant and then have the transplanted cells do well without further treatment. This work in mice has been so promising that the same approaches will soon be tried in humans. In the meantime, the basic science work will continue to learn more about mechanisms and to develop new treatments. An important strength of the Harvard collaborations is that promising results with mice are then assessed with monkey islet transplants to better evaluate the prospects for success in people. The monkey islet transplants are performed at Massachusetts General Hospital using islets isolated by Dr. Weir's laboratory at Joslin.

# SPRING POINT PROJECT



**Bernhard Hering, M.D.** 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 for Diabetes

Current diabetes treatments attempt to regulate blood glucose levels via insulin administration. Transplantation of insulin-producing islet cells from the pancreas offer a biological means to normalize blood glucose levels without constant monitoring – a cure.

Islet cell replacement in diabetic patients promises to cure diabetes in its entirety, eliminating complications and improving quality of life.

The potential to transplant islets isolated from the pancreas improved substantially after an acceptable immunosuppression regime, the so-called "Edmonton Protocol," was developed in 2000. Today, successful islet cell transplants are performed at more than 35 institutions worldwide.

The Diabetes Institute for Immunology and Transplantation at the University of Minnesota was the first to achieve consistent diabetes reversal using transplantation of human islets. In October 2005, the first University of Minnesota islet transplant recipient celebrated her fifth year of insulin independence after a singledonor islet transplantation.

"Replacing pancreatic islets is the only way to restore normal blood glucose levels and insulin independence," says David Sutherland, M.D., Ph.D., director of the University of Minnesota's Division of Transplantation and Diabetes Institute for Immunology and Transplantation, and widely regarded as the world's pioneer of pancreas transplantation. "Islet replacement can be achieved by whole pancreas transplantation or by the much less invasive transplantation of isolated islets," notes Sutherland.

It now appears that human islet transplantation 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.

### The Proposed Procedure of Porcine Islet Transplantation in a Patient with Diabetes

There was little reason to believe this could succeed. Transplantation across species barriers, called xenotransplantation, causes intense rejection responses by the immune system.

Very fortunately, insulin-producing islet cells are among the very few pig cells that do not have a reactive s-Gal antigen, suggesting unprecedented feasibility as donor cells. "This provides us with an extraordinary opportunity — it almost seems a sign — to use these cells to cure diabetes," says Bernhard Hering, M.D., director of islet transplantation and holder of the Eunice L. Dwan Diabetes Research Chair at the Diabetes Institute of the University of Minnesota. And, indeed, Dr. Hering and colleagues reported a landmark achievement on the path to a cure: in the March 2006 issue of the prestigious scientific journal *Nature Medicine*, they reported that pig islet transplantation reverses diabetes for more than six months in diabetic monkeys.

This research breakthrough is unprecedented, and both goals — unlimited islet supply and safe immunosuppression— appear attainable in the foreseeable future.



This woman is only 32 years old, and 29 years diabetic. The first photo was taken before transplant surgery. The second just weeks after her kidney-islet transplantation . . . she received her miracle cure!



# What needs to be done now?

To move this research breakthrough towards a clinical applicability, work has to be continued to refine the safe immunosup-

pression regime. In collaboration with leading transplant immunologists and surgeons from around the country, the University of Minnesota has launched a fast-track project to refine and reduce the immunotherapy needed to prevent rejection of transplanted pig islets. Using a new technique to administer immunosuppression locally to the transplant site, rather than by mouth or intravenous injection, side effects should be greatly reduced. These studies will be performed in diabetic monkeys, which are only a small step from humans, and will build on the extraordinary success already achieved.

Second, the supply of pigs to serve as pancreas donors from which islets are to be isolated needs to be secured. Pigs need to be of high-health status so as to avoid disease transmission upon transplantation in patients. This requires special biosecure facilities in which such high-health pigs are raised. Spring Point Project has been established as a nonprofit organization to build and operate biosecure facilities to raise high-health pigs.

Thus, business executives and leading scientists have joined forces, capitalizing on their complementary expertise to make the cure a reality. In partnership between the Diabetes Institute and Spring Point Project, the two initiatives, perfecting the scientific breakthrough and producing high-health pigs, proceed on a parallel track. The goal is to have suitable donor pigs available by the time the scientists have refined the immunosuppressive treatment to a point that makes it safe for clinical trials to begin. "We've assembled a highly committed, motivated, passionate, intelligent group of people with the talent and the resources to see this project through," said Thomas Cartier, founder and president 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. We have three years to go before Phase I clinical trials can begin. I don't make this claim lightly," states Cartier.

Standing behind this commitment are the Hutterian Brethren and the University of Minnesota Animal Biotechnology Center. The Hutterites are a Christian Community who are also savvy agribusinessmen, raising annually about one million pigs in North and South Dakota. They will ensure that the pigs are raised in an efficient and cost-effective manner.

### **Spring Point Project**

Spring Point Project is a Minnesota nonprofit corporation whose mission is to expedite the widespread availability of islet tissue for diabetes care by developing premier source pigs for islet xenotransplantation. The work is done in partnership with the University of Minnesota's Diabetes Institute for Immunology and Transplantation, where the preclinical research is conducted to make suitable clinical islet tissue supplies available at the time clinical trials are to commence.

Spring Point Project was founded in late 2004 by a group of passionate individuals — most of them being affected by diabetes either personally or in their immediate family — to provide this crucial supply chain. This unprecedented strategy highlights the confidence in the research being accomplished at the University of Minnesota's Diabetes Institute for Immunology and Transplantation, and the passion held by the founders that the cure for diabetes must be achieved in years, not decades.

During 2005 and early 2006, Spring Point Project achieved a number of milestones. The first steps in staffing have been completed by the recruitment of Henk-Jan Schuurman, Ph.D., as its chief executive officer. Dr. Schuurman has long-standing experience in xenotransplantation research in the industrial setting, and collaborated with Dr. Hering's group in the preclinical islet transplantation studies recently published in *Nature Medicine*.

In collaboration with Ryan Companies, Minneapolis, the design of a source-animal facility suitable for the production of animals to yield islet tissue for transplantation into humans was completed in April 2006. A suitable property in western Wisconsin, on which to build this 21,000-square-foot source-animal facility, was purchased, and the groundbreaking ceremony for this source-animal facility was held on June 7, 2006.





# SPRING POINT PROJECT



Very fortunately, insulin-producing islet cells are among the very few pig cells that <u>do not</u> have **x**-Gal antigen (which causes rejection).

This provides us with an extraordinary opportunity - it almost seems a sign - to use these cells to cure diabetes.

To accomplish great things, we must not only act, but also dream, not only plan, but also believe.

Anatole France

### The Groundbreaking Event of Spring Point Project's Source - Animal Facility - June 7, 2006

Spring Point Project has established its Safety Advisory Board, comprising experts in swine infectious diseases and animal husbandry. With the help of this board, documentation on the source-animal facility and high-health status of animals generated by this facility was submitted to the Food and Drug Administration, with a successful response. In association with this achievement, Spring Point has — in collaboration with the Hutterian Brethren — introduced specific pathogen-free piglets into a multiplier facility in eastern South Dakota to build the genetic diversity of the progenitor animals for subsequent population of the source-animal facility. Also, sponsored research at the University of Minnesota has been initiated to screen for and generate animals incapable of transmitting certain viruses to humans.

These activities highly depend on the generosity of philanthropic gifts. The actual cost of the project — to move forward to clinical trials — is estimated at \$20 million.

To date, Spring Point Project has already raised in excess of \$15 million. Spring Point Project sincerely appreciates the support of the Diabetes Research & Wellness Foundation<sup>®</sup> in this fundraising campaign. Apart from mailings and grant applications to foundations, potential donors were approached in receptions recently during a gala celebration held in Duluth, MN.

"We must believe that diabetes is a curable disease. The partnership between Spring Point Project and the University of Minnesota is the best basis to bring these results to a clinical applicability as soon as possible. We will not be deterred. A cure for diabetes is possible in the very near future; and we thank the Diabetes Research and Wellness Foundation<sup>®</sup> in realizing our mission," says Henk-Jan Schuurman.

# PRESERVING PANCREATIC ISLETS FOR CLINICAL TRANSPLANTATION



Since the introduction of the "Edmonton Protocol", significant advances in pancreas preservation and islet isolation techniques and purification technology, novel immunosuppressants and tolerance strategies have renewed interest in clinical islet transplantation for the treatment of type 1 diabetes mellitus.

However, many factors still limit the successful clinical application of islet transplantations, one of which is current pancreas cold preservation method. A decrease in temperature from 370C (body temperature) to 40C will decrease the metabolism of cells. Consequently, the preferred method for long-term organ preservation is through reduced temperature. However, energy synthesis s down regulated during cold preservation. ATP is an essential source of energy to repair damaged cells; it is likely that ATP augmentation plays a key role in restoration of the ischemically damaged pancreas, maintains cellular integrity and controls ischemic cell swelling during preservation. We believe the reason is that hypoxia remains unsolved there. Therefore, although transplant statistics have increased on a worldwide basis, there is still a progressive deterioration of cellular survival over time.

Recently, we realized that the Two-Layer-Method (Current method in oxygenating pancreas) could not overcome the hypoxia associated with pancreas preservation, consistently. (Related manuscript has been accepted for publication in Transplantation). During last year our efforts focused on testing different strategies of providing oxygen and solving some of the problems associated with recovering and preserving well-functioning islet cells used in the Edmonton Protocol. We believe that supplying oxygen will help prevent cell death in islets and promote their function during the preservation and islet isolation procedures. A manuscript is in progress. Currently, Dr. Mirbolooki is looking at changes in inflammatory responses, different pathways of apoptosis and antioxidant capacity of pancreatic tissue to find the mechanisms of effect.



Dr. Lakey Associate Professor of Surgery Director, Clinical Islet Laboratory University of Alberta

# COMMUNITY OUTREACH

### **Diabetes Education Classes**

DRWF's Certified Diabetes Educator (CDE) runs a diabetes clinic at the District of Columbia Community for Creative Non-Violence (CCNV) Center and has had over 300 sessions this year. Patients are individually counseled by our CDE or they attend small group sessions to assist them in gaining control over their diabetes.

Let me share a typical day at the clinic as told by our CDE: Mr. H. arrived at my office door accompanied by the clinic doctor. "Mr. H. needs help, do you have some time for him today?" By mid-morning, I have four new patients, waiting for information that hopefully will change their life for the better. As all five of us crowd into my office, I distribute free DRWF ID necklaces and ID cards to each of the patients. I download a patient blood glucose results into my computer, graphing his results on the screen for the group to review. Although this is a clinic for the underserved of the district, DRWF has arranged for the donation of a computer and software, which allows me to provide state-of-the-art care for these patients. As I review the patient's blood glucose results, the group learns firsthand the effectiveness of exercise in lowering blood glucose levels. I am also able to demonstrate insulin's peaks and duration. These eager learners are able to see that if you take your medication at the correct time, eat the correct amount of food, and engage in physical activity, blood glucose levels can be maintained at a normal level.

Ms. C states, "No one ever told me to take my medicine before I ate; I have learned more about my diabetes in the past 20 minutes than I have in the last five years. Why didn't someone teach me before?"

In a partnership with DRWF and Bayer, the patients were given a free glucometer and taught how to use it.

The patients have seen great success in their blood glucose levels since they have been involved in their care. They are able to visualize their progress at each doctor's visit. This graphing capability has not only helped the patient but has made a difference in provider to make better decisions regarding their patients diabetes management. Mr. H stays after everyone else has gone. "I have been a diabetic for 30 years, no one told me all this before," he notes. We discuss where he can obtain his meals while living in the shelter. His blood glucose has tested very high and in the course of our discussion he informs me he missed taking his insulin this morning. So I ask him to give it to himself now in my office. I observe Mr. H as he draws up the insulin. I note that he has trouble seeing the numbers on the syringe and only gives himself one-half of his prescribed dosage. After providing Mr. H with a pair of donated magnifying glasses, he is able to see the numbers, and hopefully the next time Mr. H. comes to the clinic his blood glucose control will have improved and he will be administering the correct dosage at the correct time. We can then move forward with our teaching/learning sessions and Mr. H can continue with the progress he is making with the management of his diabetes.

The key to these patients success is that they walk daily. The benefit of physical activity cannot be overstated, and since the homeless cannot stay in the shelters during the day, they walk the streets, effectively lowering their blood glucose levels. The staff at Unity Healthcare works closely with our CDE in providing outstanding medical care to this population.

At a second Unity Healthcare site, we have a bilingual diabetes group class, which allows our CDE to provide a diabetes educational program for the Hispanic population. A medical assistant from Cuba has assisted in the development of a pertinent and interactive education curriculum. Our group classes are frequently very lively, with a sharing of ideas, meal planning and food preparation tips. We begin each class with a short arm -chair video workout to reinforce the importance of physical activity in the management of diabetes. All patients are given a free glucometer from Bayer Pharmaceuticals to encourage daily testing. The class also provides information about nutrition, which is provided by a dietitian from the University of the District of Columbia extension program. Our classes and counseling sessions served over 500 individuals with diabetes in 2005.

### **Staff Education Programs**

Since the inception of the bilingual diabetes education class, an interest among the staff resulted in a year-long diabetes education program for the medical assistants at the CCNV center and the Upper Cardoza clinic. Classes were offered monthly and were run by medical assistants who are the primary resource for the patients seen at the clinic. The medical assistants were taught how to do foot exams using a monofilament, and a program was instituted to ensure all patients received a documented yearly foot exam. Information regarding proper nutrition, blood glucose goals, the use and care of the glucometer, diabetic retinopathy, neuropathy, heart disease, and an explanation of the medications and insulins was provided. With this information, the medical assistants were able to reinforce the messages provided in the class as well as recognize the importance of diabetes education, therefore increasing the number of patients referred. As members of the community, it was beneficial to make them a part of the solution in dealing with the patients suffering from diabetes; it also



provided a feeling of satisfaction among the staff that they had the tools at their disposal to make a difference in the health of their patients. Upon completion of the class, 25 medical assistants received a certificate acknowledging their efforts.

DRWF and Aventis sponsored an in-service program for RN's and LPN's from various Unity Healthcare clinics in the hope that group education classes could get started at the various clinics. Staffs were provided educational materials, audiovisual aids, and information on adult learning. As a result of this program, four clinics have developed bi-weekly education programs that have become extremely popular and have raised the level of care.

### **Community Outreach**

This year, we participated in over 80 health fairs to seniors, schools, businesses, and the underserved offering educational sessions, materials, blood glucose testing, and counseling by our Certified Diabetes Educator. Our presence at health fairs has enabled us to raise the awareness of the seriousness of diabetes and the importance of blood glucose control and self-management. We have interacted with over 6,000 individuals in our outreach efforts this year and screened over 600 individuals.

We were fortunate to have been given the opportunity to make presentations at the National Diabetes Education Program's annual meeting in Atlanta on our outreach efforts in the District of Columbia and to high school students at the Youth Leadership Conference regarding the value that nursing plays in diabetes care, as well as to researchers at Bowie State University regarding seniors and diabetes care. George Washington University Graduate School's interdisciplinary program continued for a sixth year led by our CDE. The students wrote articles for the homeless newspaper regarding affordability of food in the District of Columbia and the seriousness of diabetes among the homeless population. We continue to raise awareness of diabetes through prevention, education and screenings through the university's educational outreach program at shelters.

Sarah's Circle houses seniors on a limited income. With the help of our CDE, Sarah's Circle launched "Food Smart"—a weekly educational program to promote physical activity and good nutrition. Participants ranged in age from 80-102. A wide variety of programs and activities were presented, from herb planting and cooking classes, to lively discussions on how to prepare for an emergency, sharing cooking techniques, and sharing a meal. Each week was a unique and rewarding experience for all, and attendance increased as the year progressed.

### **DRWF** Community Involvement

Our CDE is currently serving on numerous advisory boards on behalf of DRWF in an effort to help raise the awareness of the seriousness of diabetes. This year we have been able to serve on the following boards to help those living with diabetes.

 The joint efforts of the nutritionist at the University of the District of Columbia Extension Program and DRWF have resulted in DRWF being appointed to the advisory board of UDC's Extension Program, in order to facilitate partnerships with other groups in the District of Columbia.

- DRWF is a member of the Virginia Diabetes Council, a group of stakeholders in the state of Virginia organized to improve the quality of care offered to those with diabetes. The council includes the Virginia Health Department, the University of Virginia, insurers, industry partners, diabetes educators, pharmacists, physicians, podiatrists, and patients with diabetes. This council has developed a number of educational tools, offered informational programs, screenings and outreach efforts to the residents of Virginia. Their efforts have raised the awareness of diabetes and the importance of good control among the health care professionals and the citizens.
- DRWF also represents those suffering from diabetes in the District of Columbia's Diabetes Control Program. This program has begun a process to raise the level of care for individuals with diabetes. An advisory board has been established and DRWF is at the forefront of this effort.
- In November, in a state-wide program sponsored by Novo Nordisk<sup>®</sup>, our Certified Diabetes Educator was appointed chairman of a statewide effort to establish a program to improve the care of those with diabetes in the state of Maryland.
- As a member of the Public Affairs Committee for the American Association of Diabetes Educators, our educator works with other members of this committee to raise the awareness of the importance of diabetes education among policy decision makers in local, state and federal governments. The Public Affairs Committee members advocate strongly for a higher level of care and health education for all individuals with diabetes and those at risk of developing diabetes.

# HURRICANE KATRINA REPORT

IMAGINE WHAT IT MUST HAVE BEEN LIKE TO SURVIVE HURRICANE KATRINA? WE ALL WATCHED IT UNFOLD BEFORE OUR UNBELIEVING EYES...WITHOUT FOOD AND WATER. WITHOUT BASIC SHELTER, PEOPLE CRAWLING THROUGH THE FILTHY WATER. AND SOME WITHOUT INSULIN.

Within days of the storm, as news of the extent of the devastation was reaching around the country, RAM mounted an emergency mission of volunteer doctors and nurses to help in the efforts of thousands to bring urgent emergency assistance. DRWF, had been the coordinating contact for RAM after the tsunami and again after Hurricane Katrina. DRWF put together the donated meters, test strips and supplies. Some supplies came from the piecemeal efforts of DRWF members, and some were from large pharmaceutical company donations.

Some of the supplies were delivered to RAM's headquarters, in an old high school building in Knoxville, Tennessee, to be airlifted aboard RAM's historic DC-3 to the forward base of operations in Baton Rouge. Much of the supplies were shipped to a Louisiana's home refrigerator.

RAM fielded 150 volunteer doctors and nurses in the early stages of the disaster reaching to the outer parishes by car, RV, truck and boat.

Stan Brock, RAM's founder, pilot, and director of operations said he knew right then that the emergency response would not be enough. From his years of experience leading relief efforts in the Amazon, remote areas of Africa, and Southeast Asia after the Tsunami. Stan knew that several months later there would be the need for a massive follow-up. After the triage would be the lingering problems of broken supply chains and the lost access to practitioners. The effects would be chronic and ongoing.

In February of this year, Health Recovery Week was staged at the New Orleans Audubon Zoo. Over 1,350 RAM doctors, nurses. and other volunteer health professionals from 38 states mounted what was probably one of the largest free medical clinics ever held in the United States. Thousands of Katrina victims received



Hurricane Katrina victim waits patiently while his family is treated at the make shift free medical site.

much-needed medical, dental and vision care. Diabetes educators were coordinated through DRWF and the pharmacy was stocked with insulin and testing equipment donated by Eli Lilly, Novo Nordisk and DRWF.

Barbara Page was one of those evacuated after the storm by boat. She'd returned home but was living without electricity. She was quoted in a "The NewsHour with Jim Lehrer" interview at the RAM Zoo event saying, "My hands and my feet

are numb and tingly all the time." A diabetic, she had not eaten for two days. At the health fair she passed out while standing in line.

Thousands stood in the long lines, and by week's end 5,212 patients had registered and received 13.389 services – free to them at a total value of \$1,893,040.

RAM, (Remote Area Medical®) Volunteer Corps is a non-profit, volunteer, airborne relief corps dedicated to serving mankind by providing free health care, dental care, eye care, veterinary services, and technical and educational assistance to people in remote areas of the United States and the world.



### **Diabetes Wellness News**

A penny for your thoughts? For less than a penny a day, we share with our readers the thoughts, insight and knowledge of our writers, researchers, medical practitioners, certified diabetes educators, and other readers. The monthly newsletter provides current information on the latest research in the fight against diabetes, new treatments and care being made availabl, new medications, and other useful tips.

Our newsletter speaks directly to the diabetes patient. It doesn't require our readers to solicit the help of a medical professional to interpret the information for them. We provide information for the newly diagnosed diabetic, as well as the veteran sufferer. The newsletter also includes helpful book reviews, product reviews, recipes, updates on research being done by our grant recipients, and not least of all, the many articles from our writers that inspire, motivate and offer hope.

The membership also includes a pocket-sized bimonthly diary for them to use to record, on a daily basis, their blood glucose readings, medications, weight, physi-

Diabetes Wellness News

The Sprawl Const

WELLNESS 🎒 NETWORK

Until a Cure

Sleep and Diabete

cal activity and appointments. This diary works as a companion tool for patients, to carry along with them to their regular doctor's appointments.

> If you are interested in becoming a member of the Diabetes Wellness Network<sup>®</sup> and would like to benefit from the newsletter, and many other offerings please contact our subscription office at 1-866-293-3155.

### **Diabetes Helpline**

Our toll-free Diabetes Helpline has been busy this year; our Certified Diabetes Educator answered questions from over 500 individuals regarding diabetes self-management. Callers have the opportunity to speak to a registered nurse who is a Certified Diabetes Educator to help them gain further understanding of their diabetes. Questions range from blood glucose goals, medication regimens and how medications work, nutrition, information about the many complications of diabetes and their treatments, to finding a diabetes doctor or education program, as well as finding centers for islet cell research. Information gained from the helpline service suggests that many of the patients that call are not seeing an endocrinologist - a specialist in the diabetes field. Diabetes research, medications, and technology are changing every day, and it is important to be knowledgeable about diabetes in order to treat your disease as best you can.

The helpline started with the hope that we could provide additional resources for the patient. Callers re provided with information on the latest medications. research and trials, as well as counseling about their personal diabetes control via the phone. The need for this service is so great that we have serviced over 13,000 individuals since 1993. Oftentimes patients will call after having just come from a doctor's appointment, seeking further explanation for a recommendation made by their doctor.

This unique service provided by DRWF allows individuals to ask questions and seek information from a qualifed health professional, that they, unfortunately, can't get in a 10-minute doctor's visit. Please take this opportunity to contact our Diabetes Helpline at 1-800-941-4635 for any non-urgent self-management questions concerning diabetes. We are ready for your call.

### **FREE** Diabetes Identification

Are you prepared in case of an emergency situation? Be sure to have your diabetes identification.

DRWF is proud to report that we are in our ninth year of distributing FREE Identification Necklaces nationwide, for all those in need. This year DRWF distributed more than 30,000 necklaces nationwide. Diabetes is a condition that has the potential to change from day to day, year to year. It's unpredictable. The day may come when you need help, and are unable to speak for vourself. The identification necklace could be a lifesaving device at a critical moment when you cannot help yourself. By offering this service, we are doing all we can to see that each and every person with diabetes has some form of diabetes identification.



If you don't already have some form of diabetes identification, then we urge you to send in your request today. It can save your life. Send your request with a stamped, self-addressed envelope today to:

> DRWF Attn: Free Diabetes Necklace PO Box 96046 Washington, DC 20090

### **DRWF** International

On the international front, DRWF-USA was given the opportunity to exhibit at the FEND and EASD conferences in Athens, Greece. These two conferences represent the nursing profession and health care providers who care for individuals with diabetes throughout Europe. We were very successful in networking with a variety of organizations and individuals in an effort to expand our organization to other European nations.

# DRWF GOLF TOURNAMENT

# Fourth Annual F. Keane Eagen Diabetes Golf Classic takes place on May 9, 2005 in Leesburg, Virginia

Diabetes Research & Wellness Foundation<sup>®</sup> kicks off the Fourth Annual F. Keane Eagen Diabetes Golf Classic to benefit the programs and services of the foundation.

Many golfers entertained friends, clients, and employees as a release from the daily grind. The day was filled with sunshine and great golf. The foundation is happy to report that the Diabetes Golf Classic raised over \$64,000 for diabetes research and programs. These funds will be donated to the islet research projects at Diabetes Institute at the University of Minnesota, Joslin Diabetes Center and Diabetes Research Institute.

DRWF thanks all of its donors and golfers for taking part in the Fourth Annual F. Keane Eagen Diabetes Golf Classic. As always, we thank you for your continued support.



### Ed Trevisan Memorial Golf Tournament

The Diabetes Research & Wellness Foundation<sup>®</sup> was honored to accept the proceeds from the Ed Trevisan Memorial Golf Tournament that took place on June 13, 2005 in Maryland. It was a beautiful day of golf for the 133 players that participated in memory of Ed Trevisan. The tournament raised more than \$17,000.

DRWF thanks the Ed Trevisan Memorial Golf Tournament and Keith Mayo, for allowing us to participate in the tournament. The much-needed money will benefit diabetes research and ongoing educational programs.

# **GRAND CANYON**

### 4th Annual Grand Canyon Challenge January 13, 2006

A group of nine individuals took DRWF up on its "challenge of a lifetime" to hike the Grand Canyon in two days, and raise money for diabetes research. The two-day, 17-mile journey certainly challenged the athlete in all of us! Each hiker had the task of not only hiking the canyon, but also to raise \$3,000. These important funds are needed to support innovative research projects to curing diabetes.

The Grand Canyon definitely lives up to its reputation of being the "Seventh Wonder." This is a challenge. The hikers reported that the Canyon was breathtaking and well worth the aches and pains they had suffered. It was truly memorable and a challenge for all.

The foundation is happy to report that the hikers raised more than \$28,000. We thank all of our donors and hikers and hope that next year we will have even more hikers and raise even more funds. Thanks for helping us make a difference in diabetes.

Start training today! We hope that we have inspired you to be the next one to join up for the Grand Canyon Challenge next year. Experience the ultimate high; please join us for the next hike! This event is not to be missed. For more information, please contact us at 202-454-1606 or diabeteswellness@diabeteswellness.net and reserve your spot today.

Diabetes Research & Wellness Foundation<sup>®</sup> would like to thank all of its sponsors. Your participation made this event a wonderful success. Thanks again.

irect Impresions irect Source & G Outfitters	Mar Nut Poh		
		Keane Eagen Scholarship Fund	Sha
		< & R Industries	The

Market Development Group NutraVail Technologies Pohanka Lexus Shaw Creations The E Group

# GET INVOLVED TODAY

### How can YOU help DRWF?

**The Diabetes Research & Wellness Foundation**<sup>®</sup> is a committed partner in providing funding for diabetes research to universities, clinics, and hospitals to further their research alongside other notable organizations. Part of our mission is to provide educational materials, along with programs and services to ensure that the public is armed with the proper information on diabetes that will empower them to take action for their health and possibly prevent diabetes complications.

Your past financial donations have been invaluable in helping to fund various research, education, and behavioral studies on the subject of diabetes. Your donations keep these research studies going through the years.

Every donation - large and small - will help fund services, programs, and research to benefit our communities suffering from diabetes and the complications of diabetes. Honor a loved one with a donation in their memory.

Your gift is a thoughtful and caring way to remember a dear friend, family member, or co-worker who has passed. Send a gift donation in honor of a loved one who suffers from diabetes each day. An Honor Gift in the name of a friend or loved one is the perfect way to express your feelings for someone special.



Your gift will help alleviate the burdens of 20.8 million Americans with diabetes. Your contribution will fund research to find a cure, provide free services and programs to those in need, provide diabetes counseling, and allow us to support scientific, educational research.

# Are you interested in becoming a Diabetes Research & Wellness Foundation<sup>®</sup> Legacy?

The foundation would like to honor each donor that has named the foundation in his or her will. We will announce the members in our Annual Report. We hope that you will let us recognize your wonderful pledge to the foundation in this special way. If you would like to be a part of the Legacy Program, please contact our office at 202-298-9211 for more information.

#### Please send your tax-deductible contribution to:

Diabetes Research & Wellness Foundation® 5151 Wisconsin Avenue, NW, Washington, DC 20016 202-298-9211 • www.diabeteswellness.net

# GET INVOLVED TODAY

### Upcoming Events: Save the Date Spring Point Project

If you would like to attend one of Dr. Bernhard Hering's research update receptions, please contact our office for the dates. Listed below are the current available dates. Please note that these dates are subject to change. Please contact our office at 202-298-9211 or email diabeteswellness@diabeteswellness.net to make reservations.

Nantucket – July, 2006 South Florida – February, 2007 Dallas Columbus Los Angeles – August, 2006 Silicon Valley – November, 2006 Washington, DC New York Seattle

#### **Grand Canyon Challenge** - May, 2007 6th Annual Grand Canyon Challenge

Join hikers for a 2-day journey through the beautiful Grand Canyon while raising money for diabetes research and education programs.

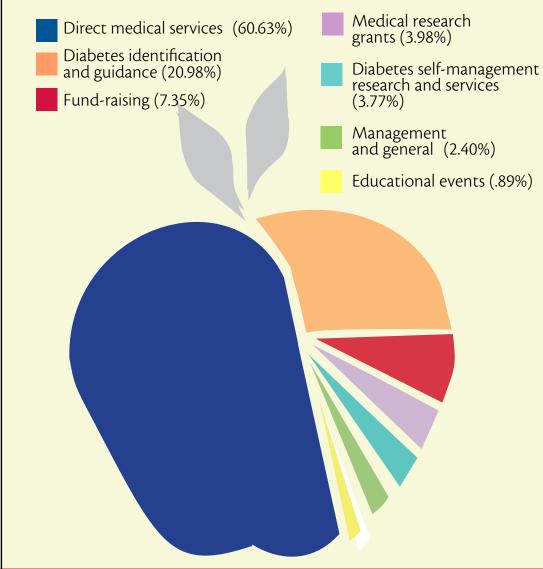
\*Spaces are limited, so please contact DRWF today and reserve your spot for the 6th Annual Grand Canyon Challenge taking place on May, 2007

Sign up TODAY: 202-298-9211 or visit our website: www. diabeteswellness.net

### Sixth Annual F. Keane Eagen Diabetes Golf Classic - May, 2007

\*Please check our website for additional upcoming events.

# 2005 USE OF FUNDS



#### **American Association of Diabetes Educators**

Sponsorship of Educational Conferences for Health Care Professionals (1996)

American Diabetes Association, Maryland Affiliate Diabetes Education Projects at Camp Glyndon (1993)

American Diabetes Association, Washington, D.C. Area Affiliate Peer Pals Project (1996)

Baylor College of Medicine

Studies of the Genetics of Type 1 Diabetes (1993) Principal Investigator: Kenneth Gabbay, M.D.

**California College of Podiatric Medicine** Free Foot Screening and Research Project (1996)

**Case Western Reserve University** Diabetic Neuropathy Clinical Studies (1993 - 1996) Principal Investigator: Liliana Berti-Materra, Ph.D.

**Children's National Medical Center** Clinical Research with Diabetic Children (1993) Principal Investigator: Audrey Austin, M.D.

**Barbara Davis Center for Childhood Diabetes** 

Laboratory Equipment for Genetic Research (1998) Principal Investigator: John Hutton, Ph.D.

**Diabetes Institute at University of Minnesota** 

Islet Transplantation Research & Trials (2004-2005) Principal Investigator: Bernhard J. Hering, M.D., David E.R. Sutherland, M.D., Ph.D.

#### **Diabetes Research Institute**

Islet Cell Transplantation Studies (1993, 2000, 2001, 2004) Principal Investigator: Camillo Ricordi, M.D.

#### **Diabetes Research Institute**

Immune System Monitoring (2004 – 2005) Principal Investigator: Norma Sue Kenyon, Ph.D.

#### **Emory University**

Studies in the Immunology of Type 1 Diabetes (1993) Principal Investigator: Peter Jensen, M.D.

#### International Diabetes Center

Design and Development of Educational Program for Diabetic Children (1993) Project Director: Kathy Mulcahy, R.N., M.S.N., C.D.E. Johns Hopkins University -

### Wilmer Eye Institute

Free Diabetic Retinopathy Screening Project (1993 - 2004) Program Director: Daniel Finkelstein, M.D.

#### **Joslin Diabetes Center**

Islet Cell Transplantation Research Program (1996-2004) Program Director: Gordon Weir, M.D. Genetic Causes of Diabetic Renal Disease (1996) Principal Investigator: Masakazu Hattori, M.D.

#### **Medical University of South Carolina**

Diabetic Retinopathy Research (1993 - 2001) Principal Investigator: Timothy Lyons, M.D.

#### New England Medical Center

Mechanisms of Pancreatic Insulin Secretion (1993) Principal Investigator: Aubrey Boyd, M.D.

**Oregon Health Sciences University** Research into Causes of Diabetic Renal Disease, (1993) Principal Investigator: Sharon Anderson, M.D.

### S.O.M.E. Medical Clinic - Washington, D.C.

Laboratory Equipment for Measurement of Glycated Hemoglobin Levels (1995 - 1998) Provided C.D.E.

#### **Spring Point Project**

Pig islets for clinical trials research (2005) Principal Investigator: Bernhard J. Hering, M.D.

### State University of New York at Stoney Brook

Diabetic Renal Disease Studies (1993) Principal Investigator: Kathleen Dickman, Ph.D.

#### Unity Health Care Clinic Federal City Shelter

Provided C.D.E. (1998), Diabetes Clinic (1999 - 2004) Clinical Administrator: Sister Eileen Reid

#### University of Miami

Family Intervention for Youngsters With Diabetes Study (1995 and 1996) Principal Investigator: Alan Delamater, Ph.D.

#### University of Mississippi Medical Center

Mechanisms of Kidney Disease in Type 1 Diabetes (1993 - 1996) Principal Investigator: Jane F. Reckelhoff, Ph.D.

#### University of Nebraska College Of Nursing

Diabetes Rural Mobile Clinic (1995 and 1996) Project Director: Kathleen Mazzucca, R.N., Ph.D.

#### University of Pittsburgh

Epidemiology Studies of Childhood Diabetes in the Caribbean (1993) Principal Investigator: Eugene Tull, Ph.D.

**Vanderbilt University School of Medicine** External and Implantable Insulin Pump Research (1993) Principal Investigator: Roger Chalkeley, Ph.D.

**Visiting Nurse Association of Northern Virginia** Sponsorship of Educational Programs Related to Diabetes (1995)

#### Washington Regional Transplant Consortium Public Education Initiatives Promoting Organ Donation

Public Education Initiatives Promoting Organ Donation (1993) Project Coordinator: Lori Brigham

#### Washington University

Research into Renal Growth Factors (1993) Principal Investigator: Marc Hammerman, M.D.

GRANTS

### MAJOR CONTRIBUTORS (partial listing)

Ms. Esther Abbott Mr Charles P Abel, Sr Ms. Ian C. Abell Mr Richard Ablertson Mr. & Mrs. Michael L. Accardi Ms. Mariorie Achton Ms. Mariorie Adams Mr. Jeffrey Adkins Ms. Myra Adlington Ms. Kathryn Ahmed Mrs. Carol Brooke Aird Mr. Nicholas Z. Aiav Mr. & Mrs. John Alahouzos Ms. Eileen M. Albanses Mr Edward Albert Ms. Iulia Albertalli Mr. William G. Albertson W Allen Ms Loretta L Alois Mr Albert Altorfer Ms Greta Anderson Mr. Ellsworth Anderson Mr. Chad Anderson Ms. Agnes A. Andracki Ms. Ellen Andruzzi Ms. Peggy D. Apjoke W. F. Appleby Dr. Jaon Aprry Mr. & Mrs. Philip Archambault Mr. George Arko Ms. Betty Armor Ms. Ioan Armour Col. Lauren A. Arn Mr. John E. Arnesen Mr M F Arnold Ir Mrs. Florence Arnoldi Mr. William Arrington Mr. Loren Artz Mr. Kenneth L. Asbury Mr. Erdogan Atasov Mrs. Lucille Atkinson Mr. William H. Atkinson Mr. Stanley Avres Mr. Llovd W. Backus Mr. Emil Bahary Mr David Bahr Ms. Ann Bailey Mr. Charles C. Bailey Mr. Carleton H. Baker

Mr. Donald F. Baldocchi Ms. Betty Banks Ms. Leota J. Banks Mr. lack Bao Ms. Barbara Ms Esther Bare Mr. Randall Barker Miss Juanita Barkley Mr. Kenneth W. Barlow Mr Frederick Barrett Mrs. Mary Barrett Mr. Keith S. Barrett Mr Paul I Bartek Ms. Eloise Barthold Mr. C. I. Bauer Mr. Constantin Becali Mr. Ludwig J. Bednar Mr. Andrew Begoss Ms Eva Belcher Mr. Michael I. Bellini Mrs David P Bennett Ms. Catherine Bennett Ms. Mary Bennett Ms. Rhoda Benson Mr. Russell Berg Mr. Otto Bergmann Mr. Fred M. Bering Mr. William Berk Ms. Martha Berry Mr. Joseph F. Bewick Amila B. Bewtra Ms. Dorothy E. Bibb Mr. Sylvester N. Bibbs. Ir. Ms. Lenore Biebel Mr & Mrs Steven N Bieber Ms. Lynne Biegler Ms. Georgia Bien Mrs. I. S. Bird Mr. Harold R. Bishop Mr Donald R Bittner Ms Donna Blackmon Ltc Earl G. Blake, Ret. Ms. Jane Blazina Mrs. Mildred Bliss Mr. Ralph Bloomball Araminta S Blowe Mr. Donald Blum Ms. Jean I. Blum Ms. Gladys Bobo

Mr. Howard R. Bock Mrs Ruth Anne Bockelman Mr Ben M Boddle Mr Clifford C Boice Mr. Rav Bolding Mr. Robert J. Bolger Mrs. Blane M. Bollinger Mr Harold R Bonar Ms. Catherine I. Bond Mr. lames H. Bond Mr. Bruce Bonhard Mr Victor Boone Ms T G Bourke Mrs. M. W. Bouwensch Ms. Betty Bowen Mr. Aaron D. Bowles Mr. John C. Bovd Ms Carmen Bozak Mr. John M. Bracken Mr. Robert Bradlev Mr. Colin E. Brady Ms. Ora S. Brane Mr. I. C. Brannan Mr. Harry Bratt Mr. William E. Braunig Mr. William H. Brawner Ms. Dorothy Bready Mrs Heinz Breit Mr Howard S Bremond Mrs B Brender Mr Thomas D Brennan Mr. Harold I. Brensilber Mr Fred H Brewer Mr. Karl Briers Mr. Robert E. Brinev Ms. Nancy L. Brinker Ms Benita M Bristol Ms. Martha Broach Mr. James Brodie Ms Ann M Brodock Ms Janet Brooks Mr. Harry L. Brothers Mr. Robert A. Brown Mr & Mrs William Brown Mr Clement T Brown Mr Frank M Brown Mr Terron Brown Frances W Brown Mr. Norman Brown

Mr. Rufus Brown Mr. & Mrs. Roger Brown Mr. Robert A. Brown Ms Elizabeth D Bruce Mr. A. Bruckner Ms. Nancy W. Brundage Mr. George M. Brunner Ms. Billie Brvan Mr Fred Brzozowski Mr Shawn Buchanan Mr. Joseph Budd Ms. Cathy Budd Ms. Alice H. Bugel Ms. Ruth Bulington Mr. Harry Bullis Ms. Anne Bumsted Mr. & Mrs. Buonantony Ms. Hazel M. Burgert Mr William H Burke Win Burkhardt Ms. Margie Burleson Mr Loretto R. Burmester Mr. & Mrs. Rudolf Burri Mrs Delores I Burrus Mr. Frederick G. Butler Mr. David A. Bvck Ms. Virginia Bysshe Ms. Ruth Cabler Ms. Fannie Campana Mr. Donald A. Campbell Mr. Salvatore Cantarella Ms. Galina K. Capelson Lenan Cappel Ms. Mary C. Carbone Mrs Charles Carlson Mr. Dan A. Carmichael Mr. David Carothers Mr. Aaron Carpenter Mr Marion Carruthers Mrs Abbie Carter Ms Pam Carter Ms Berenda Carter Mr Edward Catlin Ms. Katherine M. Cave Ms. Virginia Chalik Mr. William K. Champ Mr. George S. Chapman, III Wattie Char - Olson Mr. Stanley Charm

Ms. Betty J. Charnock Mr. Rav Chavez Mr. Manuel Chayrez Mr. Jacob Chemaly Mr. Yung S. Chen Ms. Martha Cherry Ms. Edwina Chesky Mr. & Mrs. Guy Chicchirichi Ms. Barbara Childs Mr. Everett M. Christensen Mr. Henry Christopherson Ms. Laura Chu F Circirchi Mr. Robert Clark Ms. B. L. Clayton Mr. Sherwood A. Cleaveland Mr. lames Clemmer Mr Arthur B Cleveland Ms Flma C Cohen Ms. Margaret Cohen Ms. Shellev Cohen Ms. Marie L. Cokkinias Mr. Frank Colbert Ms Mildred B Cole Mr. Paul R. Coleman Mr. Garrett S. Coleman Ms. Leona Coleman Ms. Billee A. Collins Mr Frnest C Collins Ms Barbara G Collison Dr. Ruth Comens Ms. Carol Comparsi Mr. George C. Conrov Mr. Thomas P. Conway Mrs. June Coonev Col. Roger L. Cooper Dr. & Mrs. Frank J. Coppa R. L. Corbin Mr & Mrs Martin Cornick Ms. Marie B. Cote Mr. John W. Cowling Mr. Logan Cox Mr. Harry Craig Ms. Norma E. Cramer Mr. Stephen S. Crane Ms. Georgia Crawford Ms. Juanita Crews Ms. Mary Cristelli Dr. Ellen Crockett

# - WITHOUT WHOSE SUPPORT WE WOULDN'T EXIST

Mrs. Dorothy D. Cross Mr. Jesse Crouch Ms. Kathy Crowder Mrs. Carole Crudi Ms Linda Cruz Mr. John W. Crver Mrs. James F. Cubbidge Mr. John Culbreath Ms. Barbara Cullom Mrs. Margaret Cummings Mr. Adrian Cummins B. W. Cunningham W. Curlee Mr. Charles Curley Mr. Raymond Czarnica Ms. Avala Daban Mr. Edmund C. Dabrowski Ms. Debra Dalesandro Mr. Charles Dalrymple Ms Kathleen Dancisin Mr. Arnold P. Darsch Bikas K. Das Mrs. Lee Dasilva Ms. Agnes Daugherty Ms. Julie Dauksza Mrs. Margaret E. Davenport Mr. Ted David Ms. Marv M. Davis Ms Sharon Davis Mr Wallace F Davis Mr Arlan Davis Mr. Lewis Dawson Mr. Gavlon Davton Ms. Margarida Dederick Ms. Beatrice Degeorge Mr. Vincent Dellapietra Ms. Norma lean Denney Mr. Richard Deno Mr. Ralph E. Dever, Ir. Ms. Amber E. Devine Mr. Ioel Devrieze Ms Fleanor W Dewald Mr. Richard Diak Mr. lames Dicks Mr. Wavne Diekrager Ms Trish Dillmon Ms Helen Dilworth Ms. Marnie Dilworth Ms Laura Dinda

Ms. Helen V. Dixon Mr. George Doerr, Jr. Mr Paul Dolan Mr. Hillard Donner Mr Thomas P Doran Ms. Shirley Dornfest Mrs. Melvin G. Dorrance Mr. Ralph E. Dorsev Ms. Polly Doughty Dr. George Dovle Mr. Vernon Dragt Mr. Robert Drolenga Mrs. Isabel B. Drzewiecki Ms Flaine Dubose Mr. Robert F. Dubuss Mr. Leonard L. Dueker Mr. Edwin Dunlap Mr Harold I Dunn Mr. John Dunne Ms. Madalyn Dunville Mr. Cvril I. Dupuis Mr. Stuart Durkheimer Mr. & Mrs. Frederick Dury Ms. Gloria Dwver Ms. Lois Dyson Mr. & Mrs. Robert S. Earl Ms. Helen R. Economy Mr. Howard Edelstein Mr Homer Edner Ms. Dixie B. Eger Mr. Matthew Eilers Ms. Chervl Elkins Ms. Elenore Elkins Mr. Harry Elster Ms. Jeanne B. Elster Mr Louis V Emerick Ms. Mildred Emerson Mr. Frank J. Endres Mr. Robert I. Englander Mrs. Florence Epstein Ms. Beverly Erickson Ms Anna Frlich Mr. Joseph Errico Mr Allen Estis Ms. Thelma Estrin Mr. loe T. Evans Mr Glen Evans Mr William Evenson Mr & Mrs Edward H Evenson

Mrs. Evelvn Farncis Ms. Lessie Feichtinger Mr. David I. Feierer Mr Paul R Felci Mr. Sam Feralio Mr. William P. Ferguson Mr. Robert W. Ferguson Ms. Catherine Feste Mr Robert Field Mr. Gene F. Fields Ms. Deborah Finch Mr. Robert F. Finegan Mr. William Finglass Mr. Charles A. Fischer Mrs. lean Fisher Ms. Carmel Fitts Mr. George Fitzgerald Mr. William Fitzgerald Mr Richard D Flinn Mr Carl F Floren Mr William Flowers Ms. Mary Fochesato Ms. Mary R. Foley Ms Barbara Foreman Ms. Rebecca Fortune Ms. Betty Foster Mr. Ernest Fountain Mr. Rex Fralev Ms Carmen Érancis Mr William F Francis Mr. Harry E. Frantz Mr. Lemuel Fraser D. B. Fraser Mr. Henry H. Frederick Mr Richard Fredholm Mr. Rodney B. Freeman Ms. Ioan French Mrs. Emma Frev Ms. Marguerite Friederich Mr Alfred B Friedman Ms Elizabeth Friemann Col Horace F Frink I C Frink Ms. Anne Fritz Ms Marie Frohlich Ms Anne Frost Mr. Bruce Fukuda Mr. Joseph C. Furcron

Mr. & Mrs. Robert W. Falco

Mr. Robert Gallagher Mr. Lacy Galland Mr. Quentin Gandall Ms. Helen Gangas Ms. Donna I. Garbrick Mr. & Mrs. Otto Garcia Mr. Herbert L. Gardner Ms. Clarina W. Garegrover Mr. Rex Garv T. W. Gaston Ms. Margaret Gaudenti Ms. Wilma Gebhard Mrs Elizabeth S Gebhart Ms. Regina Gelpar Ms. Lillian L. Gennrich Ms. Opal Gentner Ms. Beulah M. Gentry Mr. William D. George, II Ms. Emilie Gerke Mr. Bernard Giangiulio Mr. Lionel C. Gibson, Jr. J. C. Giglio Ms. Dorothy Gill Mrs. Ruth Gillespie Ms Dena H Gilsdorf Mr. Alvin Gingerich Mr. Billy J. Gladden

Ms. Lvnn Glaze Ms. Angela M. Glaze Mr. Charles Goldfare Ms. Sande Grant Goldman Ms Rebecca L Gomez Mr. Howard Gordon Ms. Mary Goriian Mr. Dennis E. Gosney Ms Ruth Gottshall Mr Nicholas Goudes Mr. & Mrs. Ansel Gower Ms. Mary Grant Mrs. Else Graupe Mrs. Alma Gravely Mr. Floyd W. Graves Mr F Graves Mrs. Pat Graviano Mr Robert Green Ms. Lena E. Greene Mrs. Joyce L. Gregg Mr. Henry Gregorian Mr. John W. Grehan Ms. Glennys G. Grenda



### MAJOR CONTRIBUTORS

Mr. & Mrs. W. Michael Gretschel Mr. Stanley B. Grey Mr. Paul Grillo, Ir. Mr. & Mrs. Robert Groom Ms. lane Gross Ms. Shirley Grossman Mr William F Grunert Ms. Diane J. Gruper Mr. Mendel Grynsztein Ms. Nina Gunawan Mr Evert O Gustafsson Mrs. Shirlev Haase Mr. lerry Hacker Mr Russell Haddock Mr. Arden H. Hadwin Ms. Mary R. Haines Mr. William R. Haines Mr. Stanley Hairston Ms. Gini Haley Ms. Marian F. Hall Mr. Al Hamilton Mr. Paul I. Hamm Mr. Morton W. Hampton Mr Fuel Hanna Mr. Lambert Hanses Ms. Mathilda Hapke Mr. & Mrs. leffrey Harab Mr. Harvey L. Hardy Mr. Flovd L. Harlan Ms. Mary K. Harns Ms. Rebecca Harper Mrs. Debbie Harpole Mr. Don & Sharon Harris Ms. Shirley I. Harris Mr. David E. Harris Mr. Edgar Harrison Ms. Lois C. Harrison Ms. Gladys S. Hartsell Ms. Karen Hasselbrink Mr Robert Haubrich Miss Margaret Ann Haumesser Ms. Alice R. Hawkins Mr. John E. Havden Mr. Scott Haves Ms. Alice L. Haves Mr. Robert S. Haynes Ms. Eve G. Headley Mr. William L. Healey Mr. Milton Heath

Mr Allan Heath Mr. Roy Heavenston Mrs. Nina Hecker Mr. Coy L. Heisler Mrs. Marie Hellriegel Ms. Margaret L. Helton Mrs. Mildred Henry Mr. William Henry Mr. Melvin S. Henry Ms. Sally P. Hensley Mr. Maurice Herron Mr Samuel F Hibben Ms Gertrud H Hicks W Hill Mrs. Freddie Hinklev Mr. Thomas D. Hobbs Mr. I. Houston Hodges Mr James W Hoff Ms. Viola Hoffman Mr. Joseph J. Hoffman Ms. Nelly Hoffman Mr. John Hoffman Mr. leffrev A. Hoffman Mr. Charles R. Holcomb Ms. Iosephine E. Holler Mr. Raymond Holmes Ms. Marian Holstrom Ms. Marv Holt Mr James Hom Ms. Jacqueline W. Honek Mr Edward E Hood Mr. lames V. Hooton Mr. Handy Horive Mr. William Hornby Mr. Ray Horner Mr. Earl V. Horning Mr. Ronald Hosterman Ms. Yvonne Howard Mr. lack Howard Ms. Shirley B. Howkins Mr. Norman C. Hoyer Mr. John Hudspeth Mr. James Huffman Mr. Charles A. Hugg Ms. Jane Hughev Mr. William Hultman Ms. Margaret Humes Mr. John Hunter Mr. Keith Hunter

Mr. Richard Hurley Ms. Evelyn Hwang Mr. William Hyman Mr. Aaron K. Hvneman Miss Saiko Ikemura Mr. John C. Imber Mr. John A. Immel Ms. Georgette M. Innes Ms. Concitta M. Iorio Mrs. Frank Iorio Mr John H Irons Mr. Howard L. Irvine Ms. Fave Ivor W. L. lackson Mr. Andrew R. Jackson Ms. Carolyn Jackson Storer Ms. Patricia lacobs Mr. Neil H. Iacoby, Ir. Ms. Lorena laeb Mr. Cecil W. lames Ms. Ann lames Ms. Juanita lefferson Mr. Edward lenkins Mr. Clarence Jepperson Ms. Marv leter Ms. Sally Jobson Mr. John V. Johnson Mr. John A. Johnson Mrs. Betty Johnson Ms. Linda C. Johnson Ms. Elizabeth Johnson Mr. Joseph H. Johnson Mr. C. E. Johnson, Ir. Mr. Flovd V. Johnston Mrs. Barbara Johnston Mr. Allen Iones Mr. Dale C. Jones Ms. Sondra lones Ms. Elizabeth S. Jones Anh Tran Jonhson Mr. John Jovce Mr. Keith Judy Mr. & Mrs. Earl Julo Mr. Paul Jungquist Ms. Irene lurkowksv C. D. lustis Mr. Edward T. luth Mr. Joshua Kaminstein Ms. Gerda Kassner

Ms. Patricia Katona Mr. Julian Katzenberg Mr. William Kauffman Mr. William I. Keane Mr. lesse C. Keenon T. E. Keever Mrs. James R. Keller Mr. Frederic E. Keller Ms. Veronica Kellv Ms. Nancy Kemsey Ms. Rita M. Kennedy Mr. lames Kenny Ms. Charlotte Kent Mr. Brian Keogh Ms Vonda Kerr Mr. & Mrs. I. D. Khandekar Ms. Eva Khavat Ms Winifred Kimmell Ms. Sally L. King Ms. Gladys M. King Mr. lames Kiser Ms. Anne Buccilli Klein Mr Don Kline Mr. Gordon Klockow Mrs. Phyllis M. Koch Mr. Darwin I. Koester Ms. Charlotte Kornbluh Mrs. Theodore Koziar Ms Harriet S Kozlowski Mr. Richard Kretz Mr. Harold D. Kriebel Ms. Sarah Krieger Mr Herbert C Kriesel Mr. Norman Kristal Mr. Fred V. Kroeger Mr Michael Kruk Mr Sam Kuhn Mr. Anthony I. Kupniewski Col. Howard F. Kurtz Ms Helen Kwasnik Ms. Iane O. Kvle Mr. Walter Kyles Mrs. Marv La Rosa Ms. lean M. Lamb Mr. Roger W. Lamothe Mr. Thomas H. Land Mrs. Mary Lander Mr. Norman L. Langlois H. L. Larimer

Mr Dale R Laster Mr. Donald N. Lathem Mrs. Walter Lathrop Mr. Horace A. Latta Mr. Harold P. Laves Dr. Harrison Law Mr Steve H Lazarian Ms. Dorothy Lea I. R. Lebel Mrs. loe Ledbetter Ms Sarah Leeds Mr Francis P Lehar Mr. Henry Lehne Mr. & Mrs. Richard Leiner Ms. Marguerite Leininger Mr. & Mrs. Muriel Leland Mrs. Mildred Lenburg Mr. Orbert Lesage Ms. Doris Lesk Mr Peter Leuzzi Mr. Sidney Levine Ms. Margaret D. Lewis Ms. Nancy Lewis Mr. Claude H. Lewis Mrs. Marv L. Lev Mr Maurice Lezzer Mr. Nicol Liberal Mr. Richard Lieber Mr. loseph Ligas Mr. Richard L. Lightman Mrs Gene C Lind Mr. & Mrs. Robert B. Lind Ms. Mabel Lindsev Mr. Howard Link Ms. Betty J. Link Mr. Theodore Linzev Ms Arlene S Litow Mr. Leonard Litwin Mr. David Lockshin Mr Melville Lockwood Ms. Luella L. Loewen Ms Luz S Londono Mr. William R. Lonergan, Jr. Ms. Berniece Long Mr. Francis M. Long Ms. Mayme W. Long Mr. Robert F. Longstreet Mr. Ezra Lorber Mr. Edward Love

Ms Frances Lowe Mr Robert S Lowen Mr. Lloyd J. Lowetz Mr. Horace Lowman. Ir. Mr. G. J. Lucas Mr. & Mrs. J. D. Luckhaupt Mr. Thomas A. Lunnev Mr. Donald Lusk Kamalnath Lver Mr. Robert Lynch Mr. Billy P. Lynn Mr. Harold Lyons Mrs. Julia Lyons Mrs. Betty T. Mabry Ms. Diane B. Mac Gregor Ms. Paula L. MacDonald Mr. & Mrs. George MacDonald Mr. lacques Machol Mr. Stanley J. Maclelag Mr. William Madro Mrs. Marilvn Maer Mr. Charles H. Mahler Mr. John F. Malley Mr. Theodore R. Malmberg Mrs. Ruth E. Maloney Mr. Wallace Manning Mrs. Iris Manset Ms. Patricia Mansmann Mr. Henry I. Maranowski Mr. John A. Maraz Ms. Iulia Marcis Mr. Elton D. Marcus Mr. Luis Garcia Margarida Mr. Anthony Maricich Mr Kenneth Marks Mr. Donald Marksberry Mr. Charles Marsh Mr. Paul A. Marsh Mrs. Sally S. Marshall Ms. Mary Martin Ms. Deena Martin Mr. Craig Martin Mrs. Robert I. Martizia Mrs. Donna Massey Ms. Estelle Massoni Ms. Marv Mathis Dr. Rick Matthias Ms. Anna Mattimore Ms. Edna H. Maul

Ms. Dolores A. Mauloff Mr. Garv Mav Mrs. Jane Mayo Ms. Eleanor C. McAfee Mr. Brian McAulev Ms. Mary J. McCabe Ms. Amélia McCall Mr. Don V. McCallum Mr. William A. McClenaghan Mr. & Mrs. Virginia McCormick E. W. McCrakin Algerine McCray Miss Louise McFarland Mr. Charles R. McFarland Ms. Evelvn S. McFerren Cisci McGarry Desch Ms. Kathleen McGowen Ms Martha H McGraw Ms Donna McGuire Ms. Ethel M. McIntosh Ms. Mary McKendry Mr. George L. McKnight Mr. James H. McKoy Mrs. Betty A. McLelland Mr. Carl McNair Mr. Tom McNernev Mr. Thomas Meachem Mrs Vera Mead Mr. Milan Mecklenburg Mr. loe Medina Mr Walter R Meier Mr Alvin Mendoza Mr. Martin Menez Mrs. Vasant V. Merchant Mr Charles Merrill Ms. Alice Mervicker Ms. Shirley Meyer Mr. Robert E. Meyer Ms. Eva M. Mever Ms Denise Michaelene Mr Patrick Michenaud Mr. lames Mielke Mr. Rally Migliaccio Mr. Marty Miklusek H. I. Mikulkrett Mrs. Marv Milam Ms. Ruth Milchin Mr. Garv Milgrom Mr. Charles L. Miller

Mr. Jake Miller Ms. Ruby H. Miller Mr. Dan Miller Mr. Ronald C. Miller D. I. Miller Mr. Edward D. Miller, Ir. Mr. Anthony I. Minichiello Mr. Allen Minnigh Mr. Richard C. Minter Mr R Carlisle Minter Ms. Marianne Mione Mr Marion M Mirehouse Mrs Ellen Miscoski Mr. Hubert Mobley Ms. Ioan Moffatt Mr. Frank Molisar Mrs Mildred G Monroe Ms. Maria C. Montero Ms. Revonda Moody Ms Helen Moore Mr Willie R Moore Ms. Betty S. Moore Mr. Allen Moore Mrs Maxine Ruth Moore Ardean Moore Mr. Fred Morales Mr. Charles R. Morgan Mr. Henry C. Morris Mr. lames Moss Mr. August Mueller Mrs Ulla F Muller Mr. Marvin Munchrath Mr. James R. Murphy Mr. Horace P. Murphy Mr. T. P. Murray Mr. Elijah L. Musick Mrs. Shirley Mussari Ms. Gail Myker Mr. George Nakano Mrs. Ann Nalle Hira N. Narang Ms. Lois Natusch Ms. Carol A. Naumann-Frock Ms. Roxanne Nearv Ms Martha A Neil Ms Barbara Nelson Ms. Maxine Nelson Mr. Bernard Newman Sidney B. Newman, Ir.

Mr. Robert S. Newton Mr John K Newton Mr. George J. Nias Mr. lames L. Nixon Ms. Laurence C. Nolan Ms Fleanor Nolz Ms. Ethel V. Nordling Mr. V. L. Norris Mrs. Patricia Norton Ms. Darlene I. Norton Ms. Gertrude Notarte Mr. Milton G. Nottingham, Jr. Mr. Howard Oakley Mrs. Helen Obuch Mr. & Mrs. Edward Occhipiinti Mr. William O'Connor Miss Marion Odabashian Mr Michael O'Hanlon Mr. & Mrs. Arthur I. Ohlsson Mrs. Frances O'Hornett Mrs Aksel Olesen Mr. Arthur I. Olhsson Ms. Lucy M. Oliva Ms Ramona Oliveira Ms. Gertrude Oltchick Lav Lav Ona Mr. James F. O'Neil

Mr. Horace Z. Opel Mr. Joseph J. Oravits Mr. Norman M. Ordene Mrs. June Ornsteen Mr. and Mrs. Thompson Orr Mr. William O'Shea Mrs Edward R Outland Ms. Dorothy H. Owen Mrs. Jessie Ówvang Mr. Leo Ovama Mrs. Barbara R. Ozga Mr. Tony Pajaczkowski Ms Elizabeth Palmer Ms. Iulia R. Palmer Ms Edith P Palmer Ms. Catherine Panak Mr. Charles E. Paquet Ms. Lauretta Park Mr. Duane Parker Mr Frank Parzatka Mrs Ann Patterson Mr. Joseph Paumier Ms. Paula J. Pavlosky



### MAJOR CONTRIBUTORS

Dr. & Mrs. W. Vincent Payne Mrs Charles A Pedrazzini Ms. Sarah Peebles Mr Harold Pelham Ms Maria Pelikan Ms. Mary M. Pelikan Mr. James A. Pendergrass Mrs. Laura Pendleton Ms. Thelma M. Penny Mr. Horacio Pereziuico Ms. Marvann Perrv Mr. & Mrs. Henry Peters Ms Ellen Peters Miss Doris Peterson Mr Thomas F Peterson Rev. W. E. Petty Ms. Patricia H. Phelps Mrs. Don Phillips Mr. Morris Piccolo Ms. Roberta R. Pieczenik Mrs Lauretta Pierce Ms Kate Pierce Ms. Irene Pierozynski Mr. Donald Piper Mr. William Pirtle Ms Ann C Pitman Mr Ken I Pitts Mr Frank Piumarta Mr Ronald Platt Ms. Eileen Pluger Mr. Harold Poling Mr. Andrew I. Polishuk, Sr. Mr & Mrs Abner Pols Mr. John S. Poole Mr Oscar F Porter Ms. Edna M. Powell Mrs. Robert M. Powell Ms. Ruth Preminger Dr. Anne E. Price Mr. Albert H. Pridgen Ms. Delores C. Proctor Mr. Robert Prokopec Ms. Lorraine Provost Ms. Helen Pugh Ms. Angela S. Pumarada Mr. Raiiu Puri Ms. Marie Ouaranta Mr. Edward Ouiglev Mr. Michael Quigley Mr. John Quinn Ms. Maureen Quintal

Mr. Yousef Rabizadch Mr. Rademaker Dr. Roughangiz Radfar Ms. Pauline Rahael Ms. Sue Rainev Mr. Ralph Rall Ms. Sally K. Ramaglia Mr. Billy C. Ramirez Mr. Allen Rammelsberg Mr. James Ratcliffe Mr Richard Raube Mr. William Rav Mr & Mrs William Reed Mr. William Regan Mr. David Regula Mr. lacob I. Reicen Ms Corrine V Reichert Miss Vivian Reid Ms. Svlvia Reiner Mr. Lester Reines Mrs. Annette Reinhart Mr & Mrs William I Reitsma Mr Robert C Remhild Keturah L Renshaw Mr. Pablo Revnes Ms. Mary A. Reynolds Mr. Ronald Revnolds Mrs. Ann L. Reynolds Ms. leanne Rice Miss Catherine Rice Ms. Dotti Ann Rice Mr. Thomas A. Rich Mr. Joseph Richard Mr. Allan R. Richards, Sr. Mr. Fred Richardson Ms. Virginia Y. Richardson Mr. Jack Richman Ms. Irene I. Riddle, PhD, RN Mrs. Mary V. Rife Mrs. Judy Riffel Ms. Barbara Rilev Ms. Slyvie Ringpeterson Mr. Lawrence Ripich Mr. Morris Ripps R. A. Ritter **R** Robbins Mr. James H. Robbins Mr Robert P Roberson Ms Linda Roberts Ms. Edith P. Roberts Ms Shirlee A Roberts

Mr. Peter Robinsohn Ms. Flora I. Robinson Ms. Dorothy M. Robinson Mrs. Vera Rock Mr. Mario Rodriguez Mr Robert Roettker Mr. A. W. Rogers Mr. John R. Rogers Ms. Patricia Rogers Mr. Ramon C. Roig Mr Leoanrd N Rollins Ms Ann Rollins Ms Maria Romero Mr. Kletus Rood Mr. Aleiandro Rosado Mr. Sandra G. Rose Mr. Ionathan Rosen Mr. Robert L. Rosenberg Ms. Cira Ross Ms. Lena Rosselott Mr. John S. Rothschild Mr. James Rowan Mr. Stanley Rubinstein Mr. Lawrence Rudie Ms. Elizabeth M. Ruffin Mr Hank F Ruiz Ms. Lina Ruppel Ms. Mary Rustad Mrs Martha Sadler Mr. Gene C. Salav Mr. Robert D. Salk Mr. Saul Salka Ms Clara V Salsberry Mr. & Mrs. Warren E. Saltz Mrs Lavalle Sandblom Ms. Alice W. Sandstrom Mr. Wong Sang Ms. Muriel Santanello Mr Steve Sarnoff Ms. Dolores Saswav Mr Sheldon Satlin Ms. Wanda Saveska Mr. William Schaeffer Ms June Scharwachter Ms. Elizabeth V. Scheindelman Ms Ruth M Scherbarth Mr. Robert Schieferstein Mr Robert I Schiltz Ms. Elizabeth Schindler Mr. George R. Schink Mr. Eric Schlechte

Mr Haim Schlick Ms Bobbette Schlussel Mrs. Fred Schmidt Ms. Marguerite V. Schneeberger Mrs. Lillian F. Schneider Ms Elsie Schneider Mr. Edwin R. Schnupp Mrs. Mary Scholer Ms. M. Eleanor Schoolev Mr. Tom Schroeder Mr Leland Schwartz Mr. Richard C. Sconverss Mr. Paul A. Seabolt Mr. Charles Seav Ms. Thelma Selby Mr. Gerald Seligsohn Ms. June A. Selke Mr. Salvatore Senzatimore Chalavy Sethbutra Ms. Jane K. Setlow Ms. Geeta S. Shah Atif Shaikh Mr. Ravi Shankar Ms Bharatee M Sharma, MD Ms. Vivian Shaw Mr. & Mrs. Gail Shellberg Mr. Kenneth P. Sherrill Ltc lack R Shields Mrs. Pauline C. Shields Ms. Dorothy P. Shiner Mr. Earl Lee Shirke, Ir. Miss Kiyome Shishido Mr. John I. Shubiak Mr. Wesley Shyer Mr. Eliot M. Siblev Mr. lames L. Siers Ms. Marcia Sigler Ms. Rose Marie I. Silva Ms Leona Simon Mr Frank Simonetti Mr. Llovd W. Simonson Mr. Emmett Singletary S. Sirvi Mr. Eric A. Skipsev Mr. Marion Skowron Mrs Cecilia Slonina Ms. Mary G. Smith Ms. Shirley Smith Mr. George B. Smith Mr. Robert F. Smith Ms Frances I Smith

Mrs. G. Smith Ms. Betty D. Smith Mrs. Caroline Smith Mr Valentine A Smith Mr Herbert H Smith Ms. Juliette V. Smith Ms. Josephine F. Smith Mr. Paul C. Smith Dr. Alice L. Smith Ms. Rosalie T. Smythe Mrs. Betty J. Sobin Mr. Hy Sockel Mr Lawrence D Soens Ms Helen Soffer Ms Glenda H Sohl Mr. Walter Sokel Mr Richard Solomon Mr. Charles F. Sonneborn, Ir. Ms. Mary Sorokapud Mrs. Bernardita Sorrentino Mr. Kirk Spangler Mr. Paul Speier Mr. M. B. Spencer Ms. Shirley Spielberger Mr. Don Springer Ms. Bonnie R. Spurling Ms Katherine Staack Mrs. Marv R. Stackiewicz Mr & Mrs Victor Stackiewicz Ms Alice Stafford Mr. Laurence Stafford Ms. Sara Stalnaker Mr. L. W. Stammeriohn Mr. & Mrs. Mark Stancik Mr. Martin Stanger Char A. Stanko Mr. Peter Starkey, Jr. Ms. Lillian L. Starkman Mrs. Guy W. Starling Ms. Myra Stauffer Mr. Gregg Steadman Ms. Anne M. Stearns Mr. & Mrs. Allen Steele Ms Joan Ruth Stefan Ms Doris Stefani Mr Karl Steinmetz Mr. Ken Stelmach Mr. Philip J. Stenger Mr. Louis Stephon, Ir. Ms Walter F Stern Mr. Sebastiano Sterpa

### MAJOR CONTRIBUTORS

Ms. Patricia Stevenson Col. James S. Stewart Mrs. Charles E. Stewart Ms. Sherry Stockton Ms. Jean Stodghill Mr. & Mrs. Carroll Stojanoff Ms Vonna Stoker Ms Huella Stone Mr. & Mrs. M. L. Storch Mr. Walter Strack Mr Robert Stranahan Ms. Trudy Stratman Ms. Ruby T. Stratton Mr. Williams Straub Mr. Hamilton Strayer Rev. Charles W. Strom Mr. & Mrs. Murray Strongwater Ms. Linda Stuart Mr. Lawrence E. Stubbs Mrs. Phillip R. Stull Mr. James Sturdavant Mr. Michael Suder Mrs. Elizabeth T. Sullivan Mr. I. Robert Sullivan Ms. Marleen Sullivan Mr. Nai Sung Ms. Dolores Sura Ms Lois A Surlak Mrs Sallie Swain Mrs. Dolores Swepston Ms. Harriet Swinford Mr. Robert F. Switney Mr John A Szefler Mr. Mahmoud Tabassi Ms Eva Taddei Mr. Tommy S. Tan Mr Michael Taub Mr. Robert M. Taubman Ms. Florence V. Taylor Mr. Cedric D. Taylor Mr. Reginald Taylor Ms. Dorothy E. Teffeau Mrs. Gloria Temchin Mr W R Thomas Mr. George Thomas, Jr. Mr. Paul W. Thompson Mrs. Elsie Thompson Mrs. Mary Lou Thompson Mrs. Louise P. Thompson R Thornton Mr. Kenneth Tibbe

Mr. Edward R. Tiegens Mr. William Tietelbaum Ms. Carolyn Q. Timpany Mr. Richard K. Tobin Mr. Philip Tobin Yukie Tomooka Ms. Eva Tomsic Mr. John Tonetti Mr. William K. Tong Mr. William H. Toppan Mr. Phillip Torf Ms. Elodia S. Torres Ms. Beth Trager Yen N. Tran Ms. RosalynTrapp Ms. Dana Trask Mr. Tom Treverton Ms. Patricia A. Trice Mr. Peter Tso L. M. Tucker Ms. Ella M. Tucker Mr. Casiano T. Tundag, Jr. Mr. Charles L. Turbyfill Mr. Frank Uchida Mr. Fred B. Ugast Ms. Irmgard A. Ullius Mr. Chuck Unkefer Mr. Shingenari Usui Ms. Marilyn Vachon Ms. Barbara Van Alstine Ms. Charlotte Van Briggle Mrs. Francis L. Van Dusen Mr. Thomas R. Vanmeter Mrs. Rosemary Vassiliadis Mr. Walter R. Vazquez Mr. Ronnie T. Vernon Ms. Nita Vigneaux Mr. Bob E. Vincent Mr. William Volavka Mr. & Mrs. Robert M. Von Schlemmer Mr. Matthias Vonrotz Ms. Nada Wager Dr. Janette M. Wahba Megahed Mr. Joseph K. Wald Mr. Robert Walker Mr. Walter H. Walker Mr. Walter J. Walker Mr. George Walker Mr. Albert M. Walkup Mr. Donald Wallace

Mr. & Mrs. Martin Walsh Ms. Josephine Walter Mr. Col Paul R. Walters Ms. Marion Warbasse Ms. Hazel I. Ward Mr. & Mrs. Stanley A. Waren Mr. John W. Wasicki Ms. Audrey Watt Mr. John S. M. Wayland Mr. Robert S. Weathers Ms. Louise F. Weber Mr. Thomas Weisner Mr. Lawrence Weiss Ms. Wilma F. Weiss Mr. John Welch Mr. William C. Weller Ms. Elisabeth Wells Ms. Margaret E. Wells Mr. Rogers A. Wells Mr. Alfred F. Werner Ms. Alma T. West Ms. Catherine S. West E. M. White Mr. loe White Mr. Michael White Ms. Nora Whyte Ms. Nancy S. Wicks Mrs. Joann P. Wiese Mr. Michael A. Willard Mr. Richmond Williams Ms. Alice M. Williams Mr. & Mrs. Lonie C. Williams Ms. Doris Williams Ms. Joy S. Williams Mrs. E. A. Williamson Ms. Mary Willy Ms. Susan Wilson A. Wilson Ms. Carrie Wilson Mr. Ernest Windsor Ms. Mara Winkler Mr. Joseph A. Wirsich Mr. & Mrs. Otto A. Wolff Ms. Jean Wolff Mr. John M. Wondergem Mr. Kin Sang Wong Ms. Ester H. Wood Mr. Russell Woodard Mr. Richard S. Woodruff Ms. Carolyn T. Woods

Mr. Bernard R. Woodson, Jr. Yalemzewd Woredekal Ms. Mary Wright Mr. Rickey Wright Mr. David B. Wycoff Ms. Mariorie N. Wynn Mr. Gerson Yalonitz Mr. Lowell Yamashita Mrs. Kathryn Yarger Mr. E. Yates, Jr. Mr. Sonny Yee Mr. Kwan T. Yeung Ms. Guarina Yingling Ms. Lillian E. Yochim Mr Fred M Yori Mr. Roland I. York Mr. Dave Young Ms. Eva Young Mr. Kenneth Zablan Mrs. I. Zahniser Mr. Alden Zieman Ms. Sieglinde Zimmerman Ms. Julie Zimmerman Mr Howard Zinn Mr H I Zoffer Ms. Elizabeth Zolowicz Mr Dave Zurkowski

#### CORPORATE DONORS

Bloomingdale Lions Club Card Solutions Inc. Chair Care-Mobile Cot First Catholic Slovak Ladies Assoc. Five-Star Mortgage Inc. G. & G. Farms Jerig Inc. Kauffman Coxon Mechanical Contracotrs Inc. Mo Industries Inc. Saint Joseph Abbey Stanley J. Doris Fenvessy Fdn Terreri Zaxbys Zoumas Contracting Corp.

