

An Income That Never Shrinks

As **The Whittier** continues to seek friends to build its endowment, we are acutely aware that many individuals need income to fund their *own* futures. By utilizing a charitable gift annuity (CGA), you may help ensure The Whittier's future while providing your own steady stream of retirement income *and* receiving an income tax deduction.

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The tables below show examples of current rates for single and joint donors at various ages. For a customized illustration of your potential financial and tax benefits, please contact John De Michele at 858-626-5664.

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For One Life		For Two Lives – Joint and Survivor		
Age	Rate	Younger Age	Older Age	Rate
55	5.8	50	55+	4.7
60	6.0	55	55+	5.1
65	6.3	60	60-65	5.6
70	6.7	65	66-69	5.9
75	7.3	65	70-74	6.0
80	8.3	65	75+	6.1
85	9.7	70	71-74	6.2
90+	11.5	75	76-77	6.6
		80	82	7.3
		80	86-87	7.6
		85	91	8.7
		90	95+	10.3

 THE WHITTIER INSTITUTE
FOR DIABETES

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THE Whittier Diabetes REPORT

"Staying Healthy" with KGTV

Spotlight on Stem Cell Research

Hosting The Surgeon General

A Blood Sugar/Memory Link?



Scripps Whittier Diabetes Program

Scripps/UCSD/Whittier Diabetes Research Program

*Project Dulce – a program in partnership with
Community Health Improvement Partners
and the Council of Community Clinics*

Mission Statement:

The Whittier Institute for Diabetes supports the search to effect a cure for diabetes. To accomplish this, The Whittier will provide resources for innovative research, education and patient care, and will be a catalyst for collaboration among other leading organizations engaged in these endeavors.

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On the cover: KGTV "Troubleshooter"
Marti Emerald

For more information, or to comment:
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"I can take control of my health . . ."

With a strong family history of diabetes and a handful of other risk factors, KGTV-TV/Channel 10 news reporter and well-known "Troubleshooter" Marti Emerald knew she could be a prime candidate for the disease. So when Marti overheard colleague Carol LeBeau and her producer discussing an upcoming series of "Staying Healthy" reports on diabetes and the need for someone to go through diabetes testing, Marti volunteered.

Developed in partnership with The Whittier Institute for Diabetes, the four-part series covered the diabetes epidemic in the San Diego community, the programs and services available through the Scripps Whittier Diabetes Program and Project Dulce, and the leading research conducted by our scientists.

When the time came for blood glucose and treadmill testing, Marti was ready. Fortunately, she passed with flying colors.

"They said I have the vitals of a 20-year-old, give or take. And the treadmill shows my ticker's doing fine," she adds, acknowledging that she could tread longer if she lost some weight. "The folks at The Whittier were terrific. They walked me

through the tests, explained what the results mean, and what I can do to take control of my diabetic potential . . . meaning I don't have to develop diabetes if I lose weight, exercise, and live a healthy lifestyle."

Marti is relieved to know her family history isn't necessarily a life sentence. "My mother and father both had diabetes," she explains. "My father died eight years ago from the disease, blind and crippled. Mom passed away just before Thanksgiving from a diabetes-related heart attack. Other family members on both sides have it. I'm surrounded.

"Being a part of the series was a great experience and empowering," she adds. "I know I don't have to wind up sick like my parents if I take control of my health now."



Marti Emerald (center) with The Whittier Institute's Athena Philis-Tsimikas, M.D., chief medical director, and John Engle, CEO and president

The Whittier Institute Fundraising Update

Join The Whittier Friends

Founded in 1982, *The Whittier Friends* is The Whittier Institute's membership program for those who contribute or pledge gifts of \$1,000 or more annually. *The Whittier Friends* are crucial to fulfilling our mission to fund research and innovative solutions to diabetic treatment and care. We appreciate every member's continued support and gratefully honor our Friends with the following benefits (*all benefits are extended at each level*):

Whittier Friend: (\$1,000)

- Invitation to The Whittier's annual dinner honoring recipient of the Confidence Foundation Award
- *The Whittier Report*, our quarterly publication
- Invitations to receptions and lectures
- Tour of The Whittier Institute, including laboratories
- Recognition on The Whittier Donor Board

J.B. Collip Circle: (\$10,000)

Charles Best Circle: (\$50,000)

Sir Frederic Banting Circle: (\$100,000)

Confidence Circle: (\$1,000,000)

- Whittier Friend Life Membership

Challenge Update

In December, The Whittier's Board of Trustees graciously created a \$250,000 "Challenge" to be matched by our supporters. Their Challenge enables The Whittier to raise \$500,000 of the "seed money" necessary to access additional restricted funds.

To date, the Board has committed \$225,000, representing 85% participation by the Trustees. Two months into the campaign, our supporters have contributed \$65,000 of their \$250,000 to be matched. We have a ways to go – but what a great start!

Chart a Course for a Cure

Here's yet another way to support The Whittier's effort to finding the cure.

The Whittier Institute has joined with the National Marine Development Program in San Diego to give boat owners the opportunity to take advantage of a valuable income tax deduction while helping to fight diabetes. When a boat owner donates or "bargain sales" a boat to The Whittier, he or she makes a significant contribution to the battle against diabetes – and may claim a deduction for all or part of the total appraised value of the vessel. Proceeds benefit the programs, research and services of The Whittier Institute.



For more information about these or other fundraising programs, please contact John De Michele, Director of Development, at 858-626-5664.

Daniel Salomon, M.D., is associate professor in the Department of Molecular and Experimental Medicine at The Scripps Research Institute.



Shining a Light on Embryonic Stem Cell Research

How can scientists transform embryonic stem cells into insulin-producing beta cells?

That's the question Daniel Salomon, M.D., an associate professor in the Department of Molecular and Experimental Medicine at The Scripps Research Institute (TSRI), is trying to answer. Over the next two years, Dr. Salomon and his team will investigate what happens along the pathway of embryonic stem cell development and, ideally, engineer that pathway to produce insulin-rich beta cells, located within the pancreatic islet cells, for transplantation into diabetic patients.

"There is an urgent need for a renewable and unlimited source of glucose-responsive, insulin-producing beta cells to treat people with diabetes," Dr. Salomon points out. "While the recent successes in islet transplantation are very exciting, the reality remains a severe shortage of human donor organs that will limit this kind of transplantation to a few thousand patients each year unless something can be done." Currently, two to three donor pancreases are required to isolate enough islet cells for one transplant.

Unraveling the Cell Maturation Mystery

Researchers already know that embryonic stem cells have the remarkable potential to grow and differentiate into functioning beta cells. What is not known is how this happens.

The study uses mouse embryonic stem cells and the latest technologies in functional genomics (the study of gene function) to understand the molecular pathways required for stem cells to mature into beta cells.

According to Dr. Salomon, once researchers understand the complete pathway taken from stem cell to beta cell, they can figure out how to go back and manipulate the process to create thousands of beta cells to make transplantation into people with diabetes possible.

"We know that the path is there and at the end of the path is a beta cell, but we don't know much more than that," notes Dr. Salomon. "So we will research the signals that drive differentiation along this path." He also points out that while a primary objective of this research is to develop a strategy to produce beta cells for transplantation, an understanding of beta cell development at the

molecular level will also provide new insights into adult onset diabetes and potentially point in the direction of new therapies for this disease.

Lighting the Path

What Dr. Salomon's team is constructing is, in a sense, a fluorescent beacon along the stem cell development pathway.

Previous work by others has identified six or seven "guidepost" genes along the pathway. In order to take advantage of this start and discover new genes to advance the project, researchers will replace a guidepost gene in the embryonic stem cell with a fluorescent beacon gene. The beacon gene is placed in the "off" position; when the cell reaches the point along the development pathway where the guidepost should go on, the beacon will flash and turn fluorescent. Researchers then separate the "beacon-on" cells from the "beacon-off" cells. The basic concept is that the set of genes being turned on in the "beacon-on" cells are the genes driving the cells along the developmental pathway to the next stage. To identify these genes,

Dr. Salomon will use high-density DNA chips that can report on the expression of 40,000 different genes. This is the entire mouse genome.

"With our ability to use engineered fluorescent beacon genes to identify the cells, fluorescent cell sorter technology to separate them and gene expression profiling using DNA chips to identify the genes that are responsible, we have the opportunity to do gene discovery. In a series of steps we hope to literally light up the pathway leading from stem cells to beta cells."

According to Dr. Salomon, the potential impact of understanding how stem cells develop is tremendous – and much more than a two-year process.

"These are major questions in diabetes and developmental biology and we have to be realistic. While we have the technology, bringing it all together to create a cure for diabetes will take time and significant investment."

The Whittier Welcomes the U.S. Surgeon General

When President Bush asked U.S. Surgeon General Richard Carmona, M.D. to visit several sites throughout the country to discuss his recently unveiled Medicare program, Dr. Carmona included The Whittier Institute for Diabetes on his schedule. The Surgeon General, who became acquainted with The Whittier last year, is particularly impressed by the scope of our Project Dulce's racially diverse programs.

On Thursday, March 6, we had the

honor of hosting Dr. Carmona and nearly 200 guests. In addition to discussing the Medicare plan, the nation's top doctor emphasized every individual's responsibility for his or her own health. Dr. Carmona cited Type 2 diabetes as an example of one of the many diseases that can be avoided by a healthy diet and regular exercise. For those not inclined to work out, Dr. Carmona pointed out that walking is a great option.



The Whittier Institute's CEO and president, John Engle with U.S. Surgeon General Richard Carmona, M.D., and Chris Van Gorder, Scripps Health CEO and president.



Jeanne Jones has been involved with The Whittier Institute for Diabetes since 1981, when she was named the first president of “Whittier Friends.”

She was diagnosed with Type 2 diabetes in her 30s. After the initial shock wore off, Jeanne learned to control her diabetes through an exchange diet and has parlayed her success into a promising career.

Jeanne has written numerous books about light cuisine, appeared on national television programs, and is an internationally renowned nutrition consultant. Her syndicated weekly column, “Cook It Light,” reaches millions of readers.

Jeanne, along with her mother, Kathryn Fishback, and her sister, Cheryl Harris, established the Kathryn C. Fishback Family Foundation. Their foundation has contributed handsomely to ongoing research and other projects at The Whittier Institute.

Hummus

Looking for an alternative to chips and dip? This tasty, easy-to-make Middle Eastern mix works as a dip with toasted pita bread triangles, a spread or even a sauce.

- 2 16 oz. cans garbanzo beans (chickpeas)
- 4 garlic cloves, quartered
- 1/4 cup fresh lemon juice
- 3 tablespoons dark sesame oil
- 1/8 teaspoon freshly ground black pepper
- 1/8 teaspoon cayenne pepper

1. Drain the beans, reserving the liquid.
2. Place beans and all other ingredients in a blender or food processor and blend or process until smooth, adding reserved liquid as needed to give the mixture a creamy consistency.

Makes about 3 cups or 24 servings
 Each serving contains approximately:
 Calories: 61
 Fat: 2 grams
 Cholesterol: 0 mg.
 Sodium: 113 mg.
 Carbohydrates: 9 grams
 Protein: 2 grams
 Fiber: 2 grams

Support Groups

Whittier Support groups are led by certified diabetes educators and meet monthly throughout the county. Meetings feature guest speakers and topics of interest. Pre-registration is required.

Scripps Mercy Hospital

2nd Tuesday, 1:30 – 3 p.m.
 Contact: Catherine Moller
 619-260-7363

Scripps Well Being Chula Vista

2nd Monday, 1:30 – 3 p.m.
 Contact: Dora Mendoza
 619-260-7363

Scripps Well Being Chula Vista

Spanish-speaking group
 3rd Friday, 1 – 2 p.m.
 Contact: Dora Mendoza
 619-260-7363

Scripps Well Being Encinitas

2nd Wednesday, 1 – 2:30 p.m.
 Contact: Carol Snow
 858-626-5672

The Whittier Institute for Diabetes

(Scripps Memorial Hospital
 La Jolla campus)
 3rd Wednesday, 1 – 2:30 p.m.
 Contact: Resource Center
 858-626-5672

The Whittier Children’s Center Helps Kids Cope with Diabetes

Thanks to a grant from The Whittier, children are finding positive new ways to live with Type 1 diabetes.

Last year, The Whittier awarded a three-year grant to Children’s Hospital in San Diego to fund two diabetes educators who share a position at The Whittier Children’s Center. As a result, Andrea Huber, RN, CDE, and Laura Barba, RN, MS, CNS, NNP are bringing to life a diabetes management program especially for children. The program is directed by Michael Gottschalk, M.D., Ph.D., Director of Pediatric & Adolescent Endocrinology and Diabetes at Children’s Hospital.

“As a catalyst, The Whittier strives to provide resources for programs in the community that otherwise would go unfunded,” explains John Engle, CEO, The Whittier Institute for Diabetes, about the new pediatric program.

Insulin Pump 101

With a growing number of children learning to use insulin pumps, Children’s has begun to replace one-to-one pump training with a classroom setting. Classes for Children’s Hospital patients are held monthly at The Whittier Diabetes Resource Center. The educators developed generic training materials to give patients the freedom to choose the pump they prefer.

In addition, a combination advanced training class/support group enables children who have been using their pumps for a month or more “to share their struggles and listen to others talk about their experiences,” explains Barba. “They really teach each other a lot.”

Feedback from both patients and parents has been excellent, and the classes are expected to grow.

Optimal Diabetes Management

“Right now, newly diagnosed patients have to spend three to four days in the hospital learning about diabetes,” explains Barba. “It kind of puts them in a ‘sick’ mode. It’s really not the optimal setting for learning how to manage a lifelong, chronic disease.”

Following the trend set by leading diabetes centers around the nation, Children’s aims to transition diabetes education from the hospital to an outpatient setting. A multidisciplinary team of medical specialists, nutritionists, social workers and diabetes educators lead the training. According to Huber, “The goal is to optimize the educational experience for newly diagnosed children. It’s really an empowerment model.”

Community Outreach

Barba and Huber also network with various community resources, including Project Dulce and local schools, to tackle the epidemic of Type 2 diabetes in San Diego.

Because family and lifestyle play important roles in children’s health, com-



Ten year old Mason Betzenderfer, pictured with his mother Deborah, recently completed the basic pump management class.

munity education can have a real impact on early prevention. “The Project Dulce promotoras (peer educators) work closely with adults, and these adults may have children who are obese, prediabetic, or have other issues,” says Huber.

Both Barba and Huber are excited about the future of their programs and the impact on diabetes education and prevention. “This is a vision we’ve had at Children’s for years, and the grant money enables us to do it.”

For more information about pediatric insulin pump management classes, call 858-966-4032.

The Whittier Institute's new
director of community relations,
Katie Andrews, M.S.



News and Events

Community Awareness Partnership in Progress

In partnership with KGTV/Channel 10, The Whittier Institute is spearheading a six-month diabetes education initiative. In January, Channel 10 launched the program with a four-part series during the evening news aimed at raising community awareness about diabetes and the programs and services available through The Whittier Institute. The final segment included a live Q&A telephone bank.

The initiative also includes English and Spanish public service announcements airing on Channel 10 and Spanish-language stations through July, a Whittier Institute television commercial and various community awareness activities.



Lety Lleva, M.P.H.; Athena Philis-Tsimikas, M.D.; Surgeon General Richard Carmona, M.D., M.P.H.; Chris Walker, M.P.H. in Washington, D.C.

The Whittier Institute Goes to Washington

Last December, at the invitation of U.S. Secretary of Health and Human Services (HHS) Tommy Thompson, Whittier Institute Chief Medical Director Athena Philis-Tsimikas, M.D. joined Lety Lleva, M.P.H. and Chris Walker, M.P.H. in Washington, D.C. to present Whittier's Project Dulce as a model program to HHS representatives.

Through 30 multilingual staff members, Project Dulce provides diabetes care and education to low-income and underserved populations in San Diego via 17 community satellite clinics. Initiated in 1998, this model program continues to demonstrate exceptional results in improving participants' health and their understanding and manage-

ment of diabetes through nutrition and exercise, medical care, education and support.

Project Dulce Makes an International Impact

Project Dulce recently concluded a series of education classes for the Vietnamese community. According to peer educator Quan Nguyen, "The classes were very well-received and, we believe, had a tremendous effect on the participants' management of diabetes." In fact, one of the participants later visited Vietnam, where he found himself testing blood sugar levels with his own meter and sharing what he had learned in the classes. He reported his "students" were extremely grateful, as many Vietnamese with diabetes have never been to a doctor nor understand the importance of proper nutrition and exercise in controlling blood glucose levels.

Teeing Off for The Whittier

A team of dedicated volunteers, led by co-chairmen Dick Mau and Trustee Charles Scribner, is again spearheading the 2003 annual golf tournament to benefit The Whittier's programs and research. In its sixth year, the event is an important source of support for The Institute. Slated for Monday, October 13, at the beautiful La Jolla Country Club, ours is one of a handful of charitable tournaments permitted at the exclusive

club. Capping off the day will be exquisite seafood hors d'oeuvres, dinner, and a live auction conducted by Charlie Jones.

The 2002 event, co-chaired by Jack Beardsley and Jack Frager, was a resounding success. Our appreciation to the chairs and committee as well as lead sponsor U.S. Bank.

For more details or to receive a sponsorship packet call Katie Andrews 858-626-5671.

Calling Clinical Trial Participants

Every year, The Whittier participates in clinical trials designed to verify the safety and efficacy of new devices and treatments for diabetes. One of our current trials, sponsored by Amylin, is evaluating a compound called AC2993 designed for Type 2 patients.

As one of 36 national sites, The Whittier is enrolling subjects in this trial through June 2003. Candidates should have HBA1C levels of 6.8% - 9.0%, should take no diabetes medication or take only Metformin, and be available to visit The Institute over an eight-week period. To learn more about this or other clinical trials, call Carolyn Sexton, R.N., M.S.N., at 858-626-5666.

Cover Story

Alberto Hayek, M.D., Director of The Whittier's Islet Cell Research Laboratory, has been selected to appear on the inaugural cover of a new international consumer diabetes magazine entitled *Diabetes Explorer*. Dedicated to diabetes research for more than 30 years, the Harvard/Yale trained pediatric endocrinologist and researcher is internationally recognized for his many contributions to Type 1 diabetes research. The research laboratory is engaged in human islet cell isolation and replication for eventual transplantation, while basic research concerns the differentiation of human stem cells into insulin-producing cells.

Diabetes Explorer will debut in January 2004.



Janice Shigehara, R.D., C.D.E., shares a recipe for eggplant parmesan during one of The Whittier's heart-healthy cooking classes.

The Whittier Welcomes Katie Andrews

We are pleased to announce that Katie Andrews, M.S., has joined The Whittier Institute as our director of community relations. For the past six years, Katie served in the same capacity for Shiley Eye Center at UCSD, during which time she helped triple the number of patients and build community awareness of Shiley. Her background includes public relations, event coordination, and fundraising for various San Diego non-profit health organizations. In addition to spearheading Whittier's public relations, she will partner with John De Michele, director of development, in carrying out fundraising programs. Outside of work, Katie enjoys church activities, ocean swimming, and running.

What's Cookin'?

Earlier this year, The Whittier's dietitians began offering heart-healthy cooking classes in our teaching kitchen, created in memory of Margaret Gannon. Classes are open to anyone interested in learning to prepare tasty, simple recipes low in fat, sugar and sodium.

To register for the next class, please call 1-877-WHITTIER.

Low Blood Sugar in Brain Linked to Memory Loss

Losing your memory in old age sometimes may have nothing to do with Alzheimer's and lots to do with blood sugar. So suggests new research that found that people who don't process blood sugar normally, a silent, pre-diabetic condition, are likely to suffer poor memory and even a shrinkage of the brain region crucial for recall.

The good news: If the small study from New York University is confirmed, simple diet and exercise could help many people protect their brains from the fogged memory associated with aging.

Maybe the threat of memory loss, an oft-cited fear among aging baby boomers, will provide the final push for people to take those steps, lead researcher Antonio Convit says. "That's a great motivator to stay off the calories and stay off the couch," he said. For every Alzheimer's patient, there are eight older people who suffer enough memory loss to harm their quality of life yet have no dementia-causing disease, said Convit, an NYU psychiatry professor.

Blood sugar was a natural suspect because scientists have long known that diabetics are at higher-than-normal risk

for memory problems, possibly because diabetes harms blood vessels that supply the brain, heart and other organs.

The new study, to be published in *Proceedings of the National Academy of Sciences*, found that people's memory may be harmed long before they develop full-fledged diabetes and that it's a problem of fuel, not plumbing.

Convit studied 30 non-diabetic middle-age and elderly people. He measured how they performed on memory tests; how quickly they metabolized blood sugar after a meal; and the size of the hippocampus, the brain region responsible for recent memory.

The slower those people metabolized blood sugar, the worse their memory was, and the smaller their hippocampus was, Convit found.

Unlike most other tissues that have multiple fuel sources, the brain depends on blood sugar for almost all of its energy, Convit said. The longer that glucose stays in the bloodstream instead

of being metabolized into body tissues, the less fuel the brain has to store memories.

Convit's research found no specific threshold at which memory worsened. Instead it was a spectrum: The slower the glucose metabolism, the worse people did.

Once that metabolism reaches certain levels, it becomes a condition called "impaired glucose tolerance," or pre-diabetes, thought to afflict 16 million Americans. It strikes mostly in middle age, although people of any age who are overweight and sedentary are at risk. Without treatment, pre-diabetes usually turns into full-fledged diabetes, which in turn (often) brings deadly heart attacks and kidney failure.

Why did only the memory-crucial hippocampus seem harmed? Previous animal and human research shows it's the region most likely damaged by any brain insult, Convit said. Conversely, it also is an adjustable region, with the potential for some recovery if people bring their blood sugar under control, he said.

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Comprehensive Insulin Management Focuses on Type 1

People with Type 1 diabetes make up just 10 percent of the total diabetic population. Perhaps that's why educational programs designed especially to address the management of Type 1 are far less common than those for Type 2.

Yet individuals with Type 1 diabetes have very specific – and important – management needs. That's why The Whittier Institute recently added a new health education class. *Comprehensive Insulin Management for Type 1 Diabetes: A Path to Optimal Control and a Flexible Lifestyle* helps people with insulin-dependent diabetes optimize their blood glucose control and gain more autonomy over their meals and insulin management.

Some conventional insulin regimens can be rather outdated, requiring patients to have a set amount of insulin and eat a certain amount of food at the same time every single day – no exceptions. In *Comprehensive Insulin Management*, patients learn new routines that mimic Mother Nature

and the way insulin is naturally produced by the pancreas. As a result, they enjoy more flexibility in what and when they eat and can even skip a meal without risking hyper/hypoglycemia.

Topics including self-monitoring of blood glucose levels, balancing diet, counting carbohydrates and adjusting insulin to carbohydrate, exercise and blood sugars to ensure patients get the right amount of insulin at the right time. The course also covers exercise, stress management, prevention and treatment of hyper/hypoglycemia and other complications. In addition, patients learn to effectively manage sick days when their insulin requirements are high.

Taught by a diabetes health care team that includes two Certified Diabetes Educators, a registered nurse and a registered dietitian, the program meets weekly for four weeks and features small group discussions and individual progress reviews. Sponsored by Aventis, Novo Nordisk, and Animus pumps, the free classes are offered monthly at sites throughout the county.

Heather Nielsen completed the program last year. "The one-on-one attention from the educators was great," she recalls. "It really helped me troubleshoot the areas that I needed help with and make adjustments, and taught me more realistic carb counting." Nielsen also found it valuable to share success stories and struggles with others in the group.

Pre-registration is required for this program. To register or for more information, please call 858-626-5672.