

November 2006

Dear Donor,

When I hear the word 'diabetes', I think of one thing: a cure.

This is the mission we share at Sansum Diabetes Research Institute. It has been our mission for 63 years since we were founded by William D. Sansum, M.D., the first American physician to administer life-saving insulin to people with diabetes in 1922.

SDRI has made tremendous progress in many critical research areas. This progress has been possible because of the generous support of donors like you. We are truly grateful. I hope that you will consider a gift at the end of this year so that we can continue our progress and work.

Now, I would like share with the exciting news of our current projects at Sansum Diabetes Research Institute:

RESEARCH UPDATE

Pregnancy and Diabetes: A Model for a Cure?

Pregnancy offers a unique opportunity to study type 1 diabetes and to pursue an avenue of medical research towards a cure for type 1 diabetes.

In type 1 diabetes, patients become insulin-dependent and the most common management of the disease is the injection of artificial insulin up to 8 times a day, plus constant blood sugar testing, for a lifetime

However, SDRI has observed the phenomenon in normal pregnancy where the immune system is moderately suppressed and maternal blood insulin levels increase to accommodate the needs of the fetus. These two effects of pregnancy act to counter the twin effects of type 1 diabetes: the aberrant autoimmune response and decreased insulin production. From a clinical perspective, pregnancy may therefore be a model both for developing immuno-suppression protocols for type 1 diabetes, and for developing protocols to increase insulin production and even regenerate pancreatic islet cells.

New Insulin Therapies for the Growing Numbers of People with Type 2 Diabetes

The world keeps turning, and the tide of diabetes keeps surging. Since our last research update, it is estimated that millions more people worldwide have developed diabetes or have suffered the ravages of the disease. We have successfully completed much of the research that will make treatment easier for people with diabetes.

Specifically, inhaled insulins are finally here. Although still housed in a large inhaler and still a bit complicated to administer, the market has opened up for pharmaceutical companies to quickly test and bring to our community small, easier and even safer forms of insulin delivery. At SDRI we are actively applying these technologies and developments to the needs of people with diabetes.

Since this form of insulin delivery means that patients do not have to use a needle to inject the insulin, inhaled insulin is a means to introduce insulin therapy earlier in people with type 2 diabetes who need more than simple pill therapy. But pill therapy too is improving with the discovery of new peptides and hormones that regulate appetite and satiety. SDRI is in the forefront of clinical research that proves many drugs can be safe and effective.

SDRI Receives Grant for an Artificial Pancreas

The Juvenile Diabetes Research Foundation (JDRF) announced that it is supporting SDRI and other leading researchers around the world to participate in the Artificial Pancreas Project, which will assess new diabetes technologies and help accelerate their availability for patients

A consortium of researchers aims to speed the development of a closed-loop system (or artificial pancreas). This mechanical system will integrate a real-time glucose sensor and an insulin delivery system. The technology will enable a person with diabetes to maintain normal glucose levels by automatically providing the right amount of insulin at the right time, just as the pancreas does in people without the disease.

Studies will include children, as well as adults with type 1 diabetes. While the initial research will take place in clinical settings, the goal of the initiative is to eventually test artificial pancreas systems in everyday life settings, such as home or school.

In these fields of investigation that we have mentioned, as well as others, we hope to overcome the challenges that scientists in diabetes research have had for some time. However, SDRI needs your financial help to continue these important projects. If we work together, we will indeed find a cure, and new hope, for people with diabetes.

Sincerely,

Lois Jovanovic, M.D.
Chief Executive Officer &
Chief Scientific Officer

Joseph C. Shipp, M.D., FACP
Holiday Appeal Chairman, Board Member
UCSF Professor of Medicine, Emeritus