

Hackensack hospital partners with researcher in search for diabetes cure

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BY BARBARA WILLIAMS
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STAFF WRITER

Doctors from [Hackensack](#) University Medical Center hope to find a cure for diabetes as they embark on a partnership with one of the world's leading researchers for the disease.

The hospital will be the first to try a procedure on humans with diabetes that is currently being tested on monkeys in Florida — a collaborative effort with Dr. Camillo Ricordi, a pioneer in the field and the scientific director and chief academy officer of the University of Miami Diabetes Research Institute.

“Dr. Ricordi wants to find a cure for diabetes, and he doesn't care how many people are involved in the process or share in the credit,” said Dr. Michael Shapiro, [Hackensack's](#) chief of organ transplantation and leader of the diabetes partnership. “This collaboration will do great things for diabetes research.”

Diabetes occurs when the body cannot produce or properly use insulin, a hormone that helps the body metabolize glucose into energy and control blood sugar levels.

With Type 1 diabetes, sometimes called Juvenile Diabetes and the most serious form of the disease, the body's immune system destroys the cells from the pancreas that make insulin, called islets. People with Type 2 diabetes make insulin but their body doesn't utilize it correctly and production of it typically declines as they age. More than 25 million Americans have diabetes and about 3 million of those suffer with Type 1.

Healthcare experts expect the number of diabetics to increase dramatically as obesity can trigger Type 2 diabetes and Americans continue to get heavier.

Living for years with unregulated blood sugar levels can cause a myriad of symptoms, some as severe as blindness, poor circulation that leads to limb amputation, and kidney failure.

Typical treatment for diabetic patients currently includes insulin pumps, injections, and oral medications. Transplanting islets from deceased donors is sometimes effective, but it frequently triggers other complications because the islets need to be implanted in the liver. The number of organ donors also falls way short of the number of diabetics who would benefit from a transplant.

In this latest study with monkeys, Ricordi loads islets on a disc and then implants them in the abdomen, rather than in the liver.

“The challenge is we’re dealing with an auto-immune disease so we have to replace or get cells to regenerate that were destroyed,” Ricordi told dozens of HUMC executives, physicians and healthcare workers on Tuesday. “And the key is to do this without a life-long regimen of auto-immune rejection drugs.”

Based on the success with the primates, Shapiro is hoping to have four patients undergo the procedure in early 2012, though recruitment hasn’t begun. The ideal patients will be those who aren’t responding to other treatments.

Physicians attending the announcement highlighted Ricordi’s expertise and advances in treatment of the disease.

His creation, the Ricordi Chamber, is so well-known in the field that it was mentioned in a recent episode of the medical-drama *Grey’s Anatomy*. Critical for a transplant, it is able to efficiently separate islets from the pancreas.

But successfully transplanting the islets will only be part one of the cure. Researchers need to figure out how to create islets in the lab so there will be enough to treat all diabetic patients who need them. Another research team is working on that endeavor in the Miami institute.

Still, the partnership has hospital executives determined and diabetic patients hopeful.

“I’m absolutely sure we’ll find a cure,” said Robert Garrett, president and chief executive of HUMC.

Stephanie Stone, who was diagnosed with diabetes at 10 and is now 18, attended the announcement with her [Franklin Lakes](#) family.

“I’m optimistic for the future,” Stephanie said. “If this isn’t a cure, it sounds like it’s a better treatment before a cure is found.”