# Weill Cornell Hosts First World Congress on Novel Diabetes Treatment

On Sept. 15-16, Weill Cornell Medical College and NewYork-Presbyterian Hospital hosted the first World Congress on Interventional Therapies for Type 2 Diabetes, a gathering of nearly 1,000 surgeons, endocrinologists and ethicists from around the world to discuss the efficacy of surgical intervention for the treatment of Type 2 diabetes.

Held at the Marriott Marquis in Times Square, the Congress was opened by Dr. Antonio M. Gotto Jr., dean of the Medical College, followed by remarks by Dr. Herbert Pardes, president and CEO of NewYork-Presbyterian Hospital, and Dr. Fabrizio Michelassi, chairman of the Department of Surgery at Weill Cornell Medical College and surgeon-in-chief at NewYork-Presbyterian Hospital/Weill Cornell Medical Center.

Also featured at the Congress' opening was Dr. Richard Daines, New York state health commissioner and an alumnus of the Medical College, class of 1978. Dr. Francesco Rubino, associate professor of surgery at Weill Cornell and surgeon-scientist at NewYork-Presbyterian Hospital/Weill Cornell Medical Center, organized and led the Congress.

Diabetes currently affects some 246 million people worldwide — and that figure is expected to grow to 380 million by 2025. "The epidemic growth of Type 2 diabetes has created a race against time to find new approaches to treat and understand the disease," Dr. Rubino told the prestigious audience that came prepared for discussion and debate.

Dr. David Cummings, an endocrinologist at the University of Washington and one of the Congress's 80 faculty speakers, noted "the insights already beginning to be gained by studying surgical interventions may be the most profound since the discovery of insulin."

Adding to the exchange of ideas at the Congress was Dean Gotto, who participated in a panel discussion entitled, "Adequacy of Diabetes Control and Achievement of Diabetic and Metabolic Targets: Resolution, Remission or Cure?"

"Clearly there are benefits to a surgical approach to the treatment of diabetes," Dean Gotto said. "But one of the most important outcomes of this conference will be the continued debate of risk versus benefit to the patient, and determining who makes that decision."

The 11 sessions comprising the Congress featured topics such as the outcomes of bariatric surgery for the treatment of Type 2 diabetes, as well as the socio-economic ramifications for the ongoing treatment of this global epidemic.

But as exciting as the new surgical techniques are, Dr. Rubino said, more input from the global diabetes community is vital.

"Diabetes surgery and other novel interventional techniques are not only a promising therapeutic option for selected patients with Type 2 diabetes but also an unprecedented opportunity to shed light on the origin of the disease," he said. "To ensure a timely, scientific and safe development of this emerging discipline it is necessary to balance enthusiasm with caution. This is possible

only with the immediate attention and responsible, urgent actions from the global diabetes community."

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# Transplantation: A Medical Miracle

More than a half century has passed since Dr. Joseph E. Murray — in a 5 ½-hour procedure that took place two days before Christmas — transplanted a kidney from Richard Herrick to his twin brother, Ron Herrick, to complete the world's first successful human kidney transplant.

Ron Herrick, who was suffering from chronic nephritis, would go on to live nine more years. Dr. Murray would go on to win the Nobel Prize.

But 10 years after that historic surgical achievement, the odds of being alive 12 months after a kidney transplant were still quite long — about one in 10 if the organ came from a living donor. Survival was even less likely if the organ donor was deceased.

There has been spectacular progress in the relatively short span of five decades. While still fraught with potential complications such as rejection and malignancy, and lifelong need for immunosuppressive drugs, organ transplantation patients in the modern era can expect much brighter prospects in their post-transplant lives.

Part of that success is owed to NewYork-Presbyterian Hospital's Renal Transplant Program, which was founded in 1963 and the first in New York state. More than 3,000 renal transplants have been completed at the Hospital since that time, 240 between July 2005 and June 2006 alone.

In a lecture entitled "Transplantation: Promises Kept and Hopes to Be Met," Dr. Manikkam Suthanthiran, the Stanton Griffis Distinguished Professor of Medicine, as well as professor of biochemistry, of medicine, of medicine in surgery at Weill Cornell Medical College, and chief of nephrology and transplantation medicine, discussed the great strides made by early transplant pioneers and the obstacles still to be overcome.

"It was not easy to get these transplants to work in the beginning, but these pioneers persisted in their work," Dr. Suthanthiran said in his Sept. 4 remarks at Uris Auditorium.

From less than a 10-percent chance of survival to over 90 percent after one year with kidney transplants, 82 percent with liver transplants, and 86 percent with heart transplants, the science and success of transplantation has blossomed exponentially.

New immunosuppressant medications such as cyclosporine, tacrolimus and rapamycin, and polyclonal or monoclonal antibodies, give doctors better options to fend off cell proliferation and combat organ rejections. However, these drugs have side effects. Cyclosporine and tacrolimus are both nephrotoxic and rapamycin can cause lipid disorders.

Physicians are now going beyond treating rejection or even trying to fight it off before its onset. By looking at the expression of genes in the urine of kidney transplant recipients, the molecular test developed in Dr. Suthanthiran's laboratory found that it is becoming possible not only to identify rejection prior to a tissue injury and without a transplant biopsy, but also predict rejection reversal.

"We are very successful at making transplants work but post-transplant malignancy is still a problem," Dr. Suthanthiran said.

The risk of malignancy rises steadily over the course of a transplant patient's life. Again, drugs like rapamycin have anti-tumor effects, but the lasting hope remains transplantation without the need of any long-term drug therapy.

"This is our ultimate goal, tolerance," he said.

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# Awards & Honors

**Dr. John Boockvar**, the Alvina and Willis Murphy Assistant Professor of Neurological Surgery, recently received two major grants for his research on brain tumors. The first grant is awarded by the National Institutes of Health/National Cancer Institute, totaling $650,000 over five years, for his work on cell signaling in brain tumor stem cells. The second award is from the Adelson Foundation, for Dr. Boockvar's work on protein kinases and phosphatases and human glioma.

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