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ST. MICHAEL'S HOSPITAL  
*A teaching hospital affiliated with the University of Toronto*

## NEWS RELEASE

### **Paired Kidney Exchange Offers Kidney- Failure Patients a New Option**

*"Before we began this program, we excluded up to 20% of living donors who wanted to donate (a kidney) to a family member or friend because they were incompatible..."*

(Friday, March 31, 2006, Toronto) – In a Canadian first, Toronto General Hospital, University Health Network and St. Michael's Hospital are collaborating in an innovative donor "swap" that has prolonged the lives of two patients already, and has the potential to prolong the lives of thousands more.

The Paired Kidney Exchange Program offers some kidney patients an option when a family member or friend is willing and medically able to become a live donor but cannot do so because of an incompatible blood type. If another incompatible recipient and donor pair can be found that are a match for the first pair, the recipients "swap" donors and transplants, effectively creating two new compatible pairs.

The four procedures were performed on Nov. 29, 2005 at Toronto General and St. Michael's Hospitals at the same time. Each hospital admitted one recipient and the donor giving the kidney to that specific recipient. The exchange enabled Tom (Donor A), the husband of Antoinette (Recipient A) to give a kidney to Joe (Recipient B), the husband of Heidi (Donor B). Heidi (Donor B), in turn, gave a kidney to Antoinette (Recipient A).

"Before we began this program, we excluded up to 20% of living donors who wanted to donate to a family member or friend because they were incompatible," said Dr. Edward Cole, Director of the Kidney Transplant Program at Toronto General Hospital (TGH) and Professor of Medicine at University of Toronto. "But patients need these organs desperately and so, collaboratively with St Michael's, we customized a model that has been used in the US."

Dr. Jeffrey Zaltzman, Director of the Kidney Transplant Program at St. Michael's Hospital and Associate Professor of Medicine at University of Toronto, pointed out that the waiting list for all organs, including kidneys, continues to grow and that currently there are about 800 patients in the Greater Toronto Area waiting for a transplant. The average wait time to get a kidney transplant is about seven years after starting dialysis. "This program will reduce the kidney transplant waiting list every time we match and transplant pairs because two patients don't have to go on it, and it will also contribute to the best possible survival outcome for patients," explained Dr. Zaltzman. Currently, transplants remain the best option for end-stage kidney failure patients for both survival and quality of life. With a live donor, patients can expect an average of 20 years of kidney function in comparison to an average of 10 years with a kidney from a deceased donor.

In order to optimize the number of transplants that can be performed through such an exchange program, large numbers of incompatible donor and recipient pairs from transplant programs across Canada are required. "We agree that there is a need for a national registry for paired living donor exchange across Canada for maximum impact," said Kimberly Young, Chief Executive Officer of the Canadian Council for Donation and Transplantation (CCDT), which advises the Federal, Provincial and Territorial Conference of Deputy Ministers of Health on donation and transplant issues. "In fact, because there is a great deal of support and excitement for such a registry across the country amongst the various transplant programs, CCDT has commissioned a

Task Force, chaired by Drs. Nickerson, University of Manitoba, and Cole to develop a feasibility report to the CCDT to present to the Conference of Deputy Ministers of Health.”

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## P.2, Paired Kidney Exchange....

Heidi Leung, 44, was only too glad to give her kidney to Antoinette, whose husband, Tom, could provide a kidney for her husband Joe, 46. “I saw how much my husband had suffered while waiting for four years for his first kidney which he obtained from a deceased donor in a 1994 transplant,” said Heidi. “I knew he would get run down, and I wanted to do something for him so much. With this new option, I can do something for my husband and the other patients since my husband does not have to go on the waiting list.”

Tom McCabe, in his early 60s, the husband of Antoinette, said he was initially surprised at the elegant simplicity of the paired arrangement which provides two life-saving transplants simultaneously.

For his wife, Antoinette, in her late 50s, who was diagnosed with kidney failure three years ago and was on dialysis for most of the time, the transplant has been a “lifesaver.” He added, “You don’t have to wait for someone to die to get your life back. Without hesitation, I would do it again.”

Each paired kidney exchange requires careful co-ordination and meticulous logistics and timing. Each donor is kept anonymous from the recipient that they donate to so that patient confidentiality is protected. The two donor patients – each in different hospitals -- are placed under anaesthesia at the same time to minimize the chance that one might refuse to go through the procedure while the other is already in the operating room. The procedures require four operating rooms and surgical teams in two different hospitals. In the rare event that one of the two transplants may be stopped during the surgery, the donor kidney will be offered to the next suitable recipient on the deceased donor transplant list. The intended recipient will then be placed at the top of the transplant list for deceased donors. The other transplant will proceed at the originally scheduled time.

The transplanted organ success rate for living donor kidney recipients is 90 – 95% at one year, and 85- 90% at five years.

In Ontario, more than 1,000 patients are waiting for a kidney transplant. Adults usually wait eight to 10 years, and about two per cent of people on the waiting list die waiting for a kidney each year.

Toronto General Hospital is a partner in the University Health Network, along with the Toronto Western Hospital and the Princess Margaret Hospital. These teaching hospitals are affiliated with the University of Toronto. The scope of research at Toronto General Hospital has made this institution a national and international source for cardiovascular discovery, education and patient care, as well as for its innovations in transplantation, surgical innovation, infectious diseases, diabetes and genomic medicine. For more information, please visit [www.uhn.ca](http://www.uhn.ca).

St. Michael's Hospital is one of Canada's busiest and innovative academic health science centers located in the heart of Toronto. In addition to being a world-renowned research and academic center, St. Michael's Hospital remains one of the world's best-known symbols for leading and compassionate patient care. Recently the hospital launched the Li Ka Shing Knowledge Institute that is home to the new Keenan Research Centre and the Li Ka Shing International Centre in Health Care Education. St. Michael's Hospital is raising the bar as a prominent healthcare leader while remaining true to its mission and values as a catholic teaching hospital which is fully affiliated with the University of Toronto.

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