

FORMULA THE CAMPAIGN FOR ST. MICHAEL'S TRANSPLANT AND KIDNEY CARE CENTRE



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WORLD-LEADING KIDNEY TRANSPLANT CARE AND RESEARCH: THE NEED IS NOW.

There is a health-care crisis looming. One in 10 Canadians has kidney disease, a chronic affliction with no chance of remission. And with an aging population, a ballooning number of obese Canadians, increasing rates of high blood pressure and an epidemic of diabetes (the leading cause of kidney disease) – the numbers are only going up.

Kidney disease is considered a silent killer because there are few symptoms and it's difficult to detect. Some people can live with kidney disease for years, and many do. But for others, their kidneys fail. At that point, there are only two options: dialysis or a kidney transplant.

Dialysis can take over a person's world. A patient can spend hours a day, at least three times a week, hooked up to machines that do the kidney's natural work. Family life, marriage, work, travel –

nothing happens as it once did. And dialysis is not a life saver: half of patients 65 years of age and older starting dialysis today will not be alive in five years. What's more, the cost of dialysis to the system is a prohibitive \$2.2 billion annually.

When kidneys fail, the best solution is a kidney transplant.

The main job of the kidneys is to remove the body's waste and excess water. When kidneys are damaged, they have difficulty cleaning blood, controlling blood pressure, producing red blood cells and retaining the essential vitamins and nutrients that keep bones strong. **Chronic kidney disease can lead to heart disease and death.**

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THE CAMPAIGN FOR THE TRANSPLANT AND KIDNEY CARE CENTRE

The Transplant and Kidney Care Centre at St. Michael's Hospital is one of the first and the largest program of its kind in the country. It is home to some of the country's preeminent nephrologists. It is where people from across Canada travel to be treated by our specialists. It is where innovations in kidney research and transplantation happen all the time. It is no wonder. At St. Michael's Transplant and Kidney Care Centre,

our sole focus is kidneys. Our teams of nephrologists, surgeons, social

workers, pharmacists, educators and scientists are dedicated to a single field of research and practice: kidneys. No hearts, lungs or livers. Just kidneys.

Canadians need this kind of unilateral focus. Of the 4,500 people in this country who are on the waiting list for an organ transplant, 80 per cent are in line for a kidney. The need for kidney transplants and for kidney research has become an urgent national problem.

While St. Michael's Transplant and Kidney Care Centre is at the leading-edge of care, we can still do more. But we need the space to make it possible. We need a new and larger clinic to treat more patients in an environment that's state-of-the-art, as well as a welcoming satellite kidney care centre. And we need to invest in pioneering research that can prevent kidney disease from taking lives.

Led by our volunteer champions Senator Nicky Eaton, Tim Griffin and Jaime Watt, we have launched a \$7 million fundraising campaign to enhance and expand our Transplant and Kidney Care Centre, and to support world-leading research.

At St. Michael's Transplant and Kidney Care Centre, our sole focus is kidneys. No hearts, lungs or livers. Just kidneys.



Senator Nicky Eaton



Tim Griffin



Jaime Watt

Join us.

MASTERY COMES FROM DEDICATION TO A SINGLE DISCIPLINE.



ST. MICHAEL'S IS A PIONEERING FORCE IN KIDNEY CARE.

Since we began in 1969, our Transplant and Kidney Care Centre has been at the forefront of kidney care.

We've completed over 3,000 transplants. Each year we perform 150 new transplants, twice as many as we performed just 10 years ago. And we treat more than 1,700 post-renal patients annually in both our hospitals and satellite kidney care centres. Because the reality is, people are patients for life.

For many of our patients, dialysis is a necessary and ongoing component of managing kidney disease. At St. Michael's Hospital, we want to make dialysis as easy as possible for patients. That's why we are opening a new satellite dialysis centre right in the community. That way, patients don't always have to come to us.

This is yet one more way we are leading in the field of kidney care.

In the past 30 years, there has been an 800 per cent increase in the number of patients in our care. **Remarkably, that number is only going up.** Our history of innovations has been no less remarkable. In a Canadian first, St. Michael's co-created the Kidney Paired Exchange Program, which helped solve the problem of family members who wished to donate an organ but weren't compatible with their loved one. This laid the groundwork for a national program that matches incompatible recipient-donor pairs with other incompatible pairs across Canada.

We've gone even further to tackle the challenge of incompatible donors. For instance, we are the only transplant centre in North America (perhaps the world) to offer blood-type-incompatible transplants with Glycosorb[®], a technology that enables patients to accept a kidney from a donor with a different blood type. It's a miraculous option because more than one-third of people willing to donate a kidney are turned



down because their blood type doesn't match the recipient's. St. Michael's was also the first transplant program in Ontario to utilize minimally invasive surgery techniques on living kidney donors.

And our work extends beyond our borders. We are home to the most ethnically diverse kidney transplant population in North America. We were the first in the world to discover that South Asians experience a higher risk of cardiac events following a transplant, resulting in a change of protocols for this population. And we have a robust international program that has brought living donors from 81 countries. In one case, it took us a mere 21 days to bring a donor from overseas and perform the transplant on our patient here in Canada.

St. Michael's conducted the most extensive clinical research in the country on a once-daily formulation of tacrolimus, an anti-rejection medication essential for transplant patients. As a result of our work, once-daily tacrolimus has been helping kidney transplant patients since 2005. It's our celebrated team of dedicated health-care professionals, including the physicians and surgeons, who make it all possible.

DR. JEFFREY ZALTZMAN | NEPHROLOGIST

Director, Division of Nephrology • Medical Director, Diabetes Comprehensive Care Program • Professor of Medicine, University of Toronto • CMO, Transplant, Trillium Gift of Life • Associate Scientist, Li Ka Shing Knowledge Institute

Over the past two decades, Dr. Zaltzman has been leading teams of renowned doctors and scientists who are tackling the urgent problem of kidney disease from every angle. But his work extends beyond the hospital. Thanks to Dr. Zaltzman's work with Trillium Gift of Life, Ontario has grown its rate of organ donations and he works tirelessly to ensure a fair allocation of life-giving resources.

DR. RAMESH PRASAD NEPHROLOGIST

Director, the Transplant and Kidney Care Centre • Professor of Medicine, University of Toronto

A passionate advocate for the eradication of organ trafficking and transplant tourism, Dr. Prasad chose nephrology when he witnessed the revolutionary impact of a transplant on patients' lives.

DR. DARREN YUEN NEPHROLOGIST

Staff Physician, St. Michael's Hospital • Scientist, Keenan Research Centre for Biomedical Science • Assistant Professor of Medicine, University of Toronto

Part of the team awarded a \$1 million Transformational Diabetes Team Research Grant from the University of Toronto's Banting and Best Diabetes Centre, Dr. Yuen runs his own lab and teaches promising young scientists – all in pursuit of discoveries to combat the scourge of kidney disease.









DR. KENNETH PACE UROLOGIST

Vice Chief, Surgery • Chief, Division of Urology • Researcher, Keenan Research Centre Project Investigator, Li Ka Shing Knowledge Institute

A leader in minimally invasive surgery and an award-winning teacher, Dr. Pace performed Toronto's first robotic-assisted prostatectomy. In 2015, Dr. Pace was honoured with the Complete Physician Award from St. Michael's Hospital's Board of Directors.

DR. ROBERT STEWART UROLOGIST

Transplant Surgeon • Associate Professor, Division of Urology, University of Toronto Winner of multiple teaching awards, Dr. Stewart has, for the past decade, served as Program Director for the Division of Urology at the University of Toronto.



DR. MICHAEL ORDON UROLOGIST

Transplant Surgeon • Associate Scientist, Li Ka Shing Knowledge Institute • Assistant Professor, Division of Urology, University of Toronto

Dr. Ordon specializes in complex kidney stones and minimally invasive urologic surgery, robotic-assisted surgery and renal transplantation.



DR. MONICA FARCAS UROLOGIST

Transplant Surgeon • Assistant Professor, Division of Urology, University of Toronto

Dr. Farcas specializes in renal transplantation and minimally invasive surgery in urology. In addition to her medical training, she holds advanced degrees in engineering and has research interests in innovative engineering applications to surgery, as well as surgical simulation.

THE DAVE AYRES STORY

Like many kids growing up in Canada, Dave Ayres wanted to play hockey in the NHL. He was 25 and at a hockey training camp when his feet became so swollen he couldn't get his skates on.

"I was on blood pressure medication and thought that was the cause. I'd been sick to my stomach for a while. One day on my way to work I nearly hit someone because I was so dizzy," says Dave.

It was Thanksgiving weekend when Dave ended up in the ER. His kidneys were working at 15 per cent capacity and he had to start dialysis immediately.

"I thought I had the flu and the next thing you know they're telling me my kidneys are gone. I had no clue."

Dave went on dialysis, three days a week, four hours at a time for the next eight months.

He considers himself lucky for many reasons. But he was particularly grateful that it was hockey season so he got to watch a lot of games during treatment.

Dave Ayres is indeed lucky. On a sunny day in May, he came to St. Michael's Hospital's Kidney and Transplant Unit where he received a new kidney, courtesy of his mom, Mary.

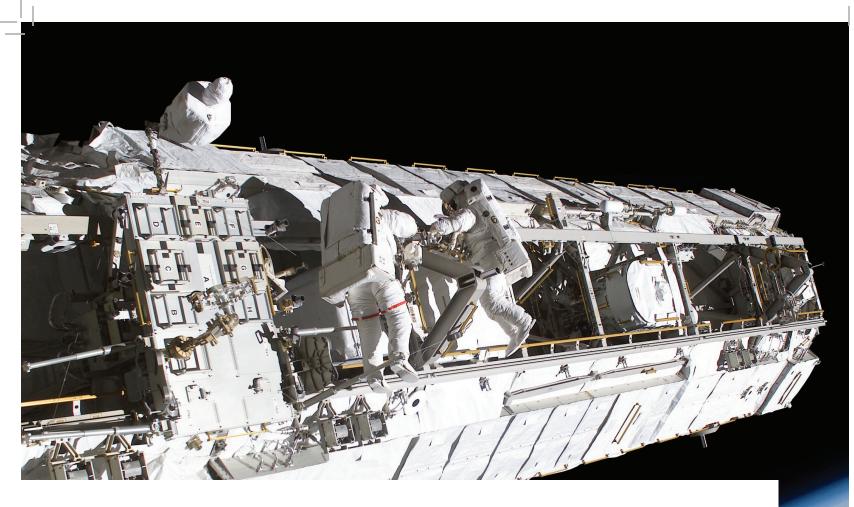
"My mom and I are super close. She said this was one of the best things she could do with her life, giving me her kidney so I could play hockey and get on with my life."



"People kept saying that it must have been hard going through what I did at the age of 25. But for me, it was after I had my transplant that I experienced the best time of my life."

It's been 14 years since the transplant and both Dave and his mom are thriving. He even went on to play six seasons as a back-up practice goalie for the Toronto Marlies. Dave credits his positive attitude to the staff at St. Mike's.

"I want people to know that there are so many brilliant doctors at St. Michael's who keep you going," Dave says. "I didn't want the transplant to dictate my life. They told me to go ahead and live."



YEARS OF FOCUS LEADS TO FERVENT INNOVATION.



SCAR WARS: A WORLD CENTRE FOR FIBROSIS RESEARCH.

Organ scarring – known as fibrosis – is responsible for nearly half of all deaths in the developed world. Forty-five per cent of all chronic diseases in hospitals are related to fibrosis, and it is at the root of most heart and kidney failures. Sadly, medicine has not yet figured out how to diagnose and treat the problem well enough.

"We have hundreds of drugs for heart disease and various cancers, but almost nothing for fibrosis. We owe it to our patients to change that," says St. Michael's world-renowned endocrinologist Dr. Richard Gilbert, who is head of the division of endocrinology.

SCAR WARS IS THE ANSWER



The goal is to create a world-leading centre for scarring research at St. Michael's. Led by Dr. Gilbert, a multi-disciplinary team of renowned clinician-scientists is aggressively working to eliminate kidney scarring. They are inventing diagnostic tools and developing drug therapies. The Holy Grail is a treatment that can stop or even reverse scarring. Dr. Gilbert and his

team have two promising drugs ready for the next phase of development. The FT011 is the first anti-fibrotic drug tested and found safe on humans. A clinical trial involving people with diabetic kidney disease, the leading cause of kidney failure in Canada, will begin in

2019 pending Health Canada approval. Another drug that has been found effective in animal modelling is intended to move to the next stage of trials. It has taken Dr. Gilbert over a decade to get these drugs to this stage. With a generous commitment from our donors, it could be as little as five years before these new treatments are finally available to patients.

Led by staff nephrologist and scientist Dr. Darren Yuen, the team has already conducted the world's largest clinical trial in kidney scarring using MRI technology. While the current gold-standard diagnostic test for kidney scarring is a painful needle biopsy that can cause internal bleeding and extracts only a tiny sample of the kidney, our process is painless and safe. It also lets experts diagnose the extent of scarring and predict the future health of kidneys in transplant patients. Our next step is an even larger clinical trial using ultrasound technology.

Complicated chronic diseases need multiple therapies. Because the body is always circumventing best efforts, the solution is to invent as many tools as possible. There is no one more qualified to lead the charge. Dr. Gilbert already has patents on novel treatments for kidney disease and heart failure. He is the co-founder of Fibrocor, a biotechnology company focused on anti-fibrotic therapies. And he has won prestigious awards including a Canada Chair in Diabetes Complications.

Kidney disease doesn't have to be a death sentence. With your help, we can profoundly change the course for current and future patients. Please join us in supporting the transformational work of the Scar Wars project.

THE JAMIE MERBAUM STORY

"I'm alive today because I was in the right place at the right time," says 74-year-old Jamie Merbaum. "I now celebrate a second birthday because St. Michael's Hospital saved my life."

After 40 years of managing his high blood pressure, Jamie was told he needed a kidney transplant. Unfortunately, the wait time was at least a few years before he could move to the top of the list, so he pursued options in the U.S., where he lived part time.



Jamie also began seeing St. Michael's nephrologist Dr. Ziv Harel, who helped manage his care while he waited for a transplant.

It was during an appointment with him that Jamie had a medical emergency and Dr. Harel personally escorted him down to St. Michael's ED. Jamie was assessed and started on dialysis that very same day. He was also added to the kidney transplant list.

Jamie came to St. Michael's twice a week for dialysis and was under the care of Dr. Jeffrey Zaltzman, who was then the Director of the Renal Transplant Program.

"They were so wonderful at the night clinic. The nurses were so caring. Anything you needed they showed up right away and did whatever they could to help you feel more comfortable."

It was a Sunday night at the clinic, when Jamie got the call. The voice on the other end of the line belonged to Dr. Ron Wald, a nephrologist at St. Michael's.

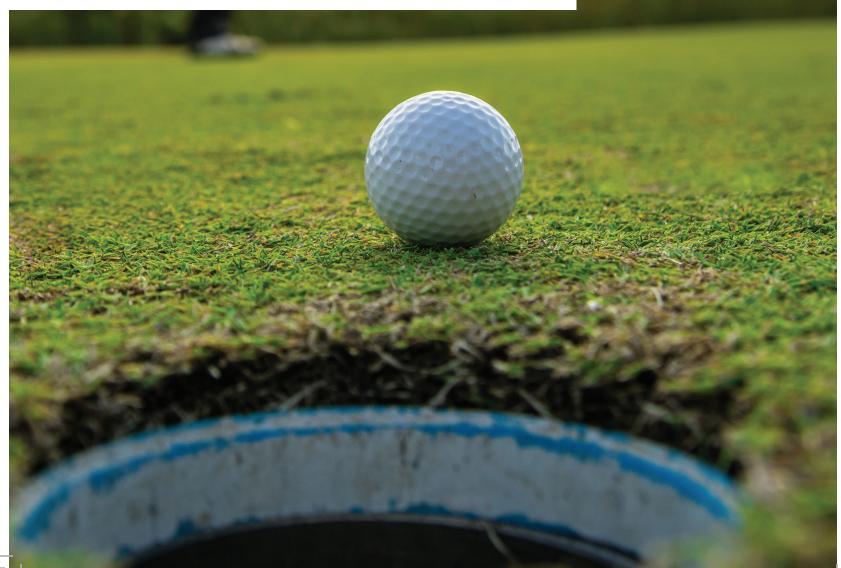
"He asked if I was sitting or standing, and when I said I was standing, he suggested I sit down because they had a kidney for me that very night."

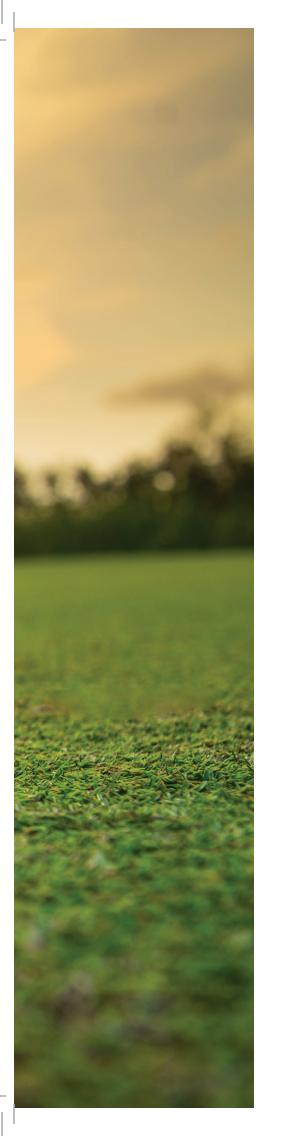
Jamie was speechless. The original recipient couldn't be located and the kidney had to be used immediately if it was going to be used at all. Because he was already in the hospital and his blood-type matched, Jamie got the kidney.

"I called my wife to tell her I was getting a kidney in the morning. She assumed it was going to be in the U.S., because here in Toronto we were told it would take several years, and it had only been about 10 months. I said 'No, it's here! In Toronto! At St. Mike's!"

"It truly was a miracle. In Hebrew we say 'beschert' – which means, 'it was meant to be!"

CLARITY OF MISSION MEANS A SMOOTHER ROAD TO SUCCESS.





THE NEW TRANSPLANT AND KIDNEY CARE CENTRE WILL TAKE US TO THE NEXT LEVEL.

Every patient who walks through our doors deserves the best of us. They deserve our undivided attention. They deserve to be consoled when they're frightened. They deserve timely education on how to care for themselves in their new reality. They deserve care that gives them back their lives.

St. Michael's Kidney Transplant Program is doing all of that right now – in a clinic bursting at the seams.

Our team is scattered about the building, and sharing small spaces with other departments. Our waiting room doesn't provide the warm and calming feel that our patients need. Our nurses, social workers and patient educators are working in cramped and inefficient spaces and our exam rooms are in desperate need of modernization.

The new centre on our eighth floor of 61 Queen Street East will allow us to holistically manage the care of patients with advanced kidney disease. Planning for the next stage of their treatment, whether it's dialysis or transplant, will be done with the compassion we are renowned for.

Our goal is to continue our legacy of innovation in research and medical care. We need more and better space to make it happen.

FOCUS

JOIN THE **CAMPAIGN** FOR ST. MICHAEL'S TRANSPLANT AND KIDNEY CARE CENTRE.

Too many Canadians are suffering from a disease that can turn an ordinary life into an extraordinary challenge.

St. Michael's Transplant and Kidney Care Centre offers hope, compassion and world-class treatment to its patients. What we can't yet offer is a physical space that matches the deep expertise of our health-care professionals and that marries our scientific discoveries with our exemplary patient care.

You can change that.

Join the visionary group of donors who have made miracles happen at St. Michael's. Because of them, our clinicians, scientists and staff are able to take on the toughest healthcare challenges, anywhere.

Your contribution will save lives and will inspire others to become a part of this amazing community.



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