Dr. Tirone David

Melanie Munk Chair in Cardiovascular Surgery and cardiovascular surgeon, Peter Munk Cardiac Centre, Division of Cardiovascular Surgery, UHN Sprott Department of Surgery.

RECRUITED: 1978

Dr. Jennifer Chung

Aortic surgeon, Peter Munk Cardiac Centre, Division of Cardiovascular Surgery, UHN Sprott Department of Surgery.

RECRUITED: 2018

Dr. Vivek Rao

Peter Munk Cardiac Centre Chair in Advanced Cardiac Therapeutics, Division Head of Cardiovascular Surgery, Surgical Director of the Mechanical Circulatory Support Program, Peter Munk Cardiac Centre, Division of Cardiovascular Surgery, UHN Sprott Department of Surgery.

RECRUITED: 2001

WHATEVER IT TAKES

Through persistent recruitment and retention of outstanding clinicians and scientists, the Peter Munk Cardiac Centre will shape the future of cardiovascular care.

BY WENDY GLAUSER

What tough medical challenges will our society face in 20 years? What can the Peter Munk Cardiac Centre do today to meet the needs of patients tomorrow? These are just some of the questions that Dr. Barry Rubin, Medical Director and Chair, Peter Munk Cardiac Centre, Division of Vascular Surgery, UHN Sprott Department of Surgery, are asking about the future of cardiovascular medicine. At the forefront of Dr. Rubin's vision is a diverse team that reflects the population they serve, a priority on interdisciplinary collaboration and an unremitting focus on innovation – one that uses the most advanced equipment in the world. "Things are changing day by day and week by week, so we're always thinking ahead," he says. "It's invigorating and humbling to know that the techniques we consider the most advanced right now will look completely different in the very near future." ▸▸

Over the next two decades, cardiovascular care will undergo transformational change, says Dr. Vivek Rao, the Peter Munk Cardiac Centre's Division Head of Cardiovascular Surgery. For instance, surgical interventions will evolve into less invasive and more reproducible procedures – and that transition is already well underway. Doctors will use robotic technology to help them in the operating room, while artificial intelligence will assist in deciding on optimal treatments. The Centre's goal is to reduce recovery times, improve patient satisfaction and outcomes, and lead the development of new cardiovascular therapies.

Personalized medicine will become more important, and doctors will perform more preventive surgeries for those at risk of cardiovascular disease even before an illness becomes detectable. "If you have a family history of heart failure, we could implant 'smart' heart pumps through minimally-invasive techniques that will gradually take over the function of your heart if and when it starts to fail," explains Dr. Rao.

However, having a bold vision for the future of cardiovascular surgery only goes so far – that vision must also become a reality. For Dr. Rubin, this involves recruitment and retention. To be the leading heart and vascular centre in the world, the most talented clinicians, surgeons and researchers must be at the helm. "You can have the fanciest operating rooms and the best imaging equipment, but if you don't have the right people, it's not going to happen," he says.

Dr. Tirone David (centre) conducts a "David Operation." Over the last four decades, he's operated on more than 15,000 patients.

BRINGING THE BEST TO THE CENTRE

Recruitment and retention have always been important to the Centre's growth. Dr. Rao was recruited by Dr. Tirone David, the former Division Head of Cardiovascular Surgery. One of the world's foremost experts in cardiac surgery, Dr. David set out to develop an artificial heart program at the Peter Munk Cardiac Centre, and he wanted Dr. Rao, whom he had supervised while at the University of Toronto, to lead it. Dr. David advised Dr. Rao to go to Columbia-Presbyterian Hospital in New York City, one of three places in the United States that offered training in mechanical hearts at the time.

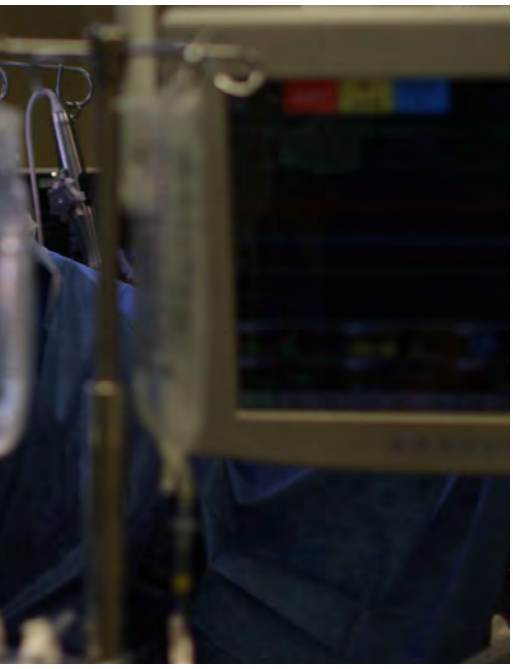
Knowing that nearly every major North American hospital was keen to start a mechanical heart program and that Dr. Rao would have other serious offers to consider, Dr. David wanted his offer to be the most attractive. He asked several donors, including the late Peter Munk, for funding to help him and Dr. Rao launch the Peter Munk Cardiac Centre's artificial heart program.

Fortunately, Dr. Rao came back. "I felt there was a debt I had to pay," he explains. "Dr. David had arranged my sub-specialty training with the understanding that I would return for five years and launch the program. It didn't seem right to leverage that training into a more lucrative offer in the U.S. Two decades later, I'm still here, and the program is thriving." The Peter Munk Cardiac Centre's mechanical heart program, which Dr. Rao co-leads with Dr. Heather Ross, Division Head of Cardiology, has outfitted more than 275 patients since 2001.

THE CHANCE TO GROW

It was never a given that Dr. David would come to Toronto and cement his legacy at the Peter Munk Cardiac Centre. After graduating with his MD in Brazil, he began practising in the U.S. before undergoing training in cardiac and thoracic surgery at Toronto General Hospital in 1975. After three years in Toronto, Dr. David received a number of lucrative job offers. The renowned Cleveland Clinic, where he completed his general surgery residency, wanted him to join its team full time. There was also an offer from St. Vincent Mercy Medical Center in Toledo, Ohio, where Dr. David could partner with a top cardiac surgeon and make more than 10 times what he would earn in Toronto.

Yet, he stayed. One of the key reasons, he says, was because of the uncompromising priority the Centre places on patient care. While it may seem as if every hospital has a patient focus, his experience in the for-profit healthcare system taught him otherwise. The opportunity to treat all patients, not just those who could afford it, was important. "Given the breadth of intricate patient cases I see here, I knew I would never stop learning," he says. "And the opportunity to operate on all sorts of patients would help my practice and allow my research to have



Ahead of the curve

The Peter Munk Cardiac Centre's medical professionals are taking cardiovascular resesarch and care to the next level. Here's what it takes to be the pre-eminent heart and vascular hospital.

TEAM

120

Clinicians, surgeons and scientists at the Peter Munk Cardiac Centre.

NEW RECRUITS

13

Clinicians, surgeons and scientists recruited in the last five years.

BETTER BALANCE

50%

Surgeons recruited in the last five years that have been women.

the widest possible impact."

Over the past 41 years, Dr. David has performed surgeries on more than 15,000 patients, and developed or perfected 17 surgical procedures that have changed how hundreds of thousands of patients with heart disease are treated worldwide. One such operation, now referred to by his peers as the "David Operation," is a procedure Dr. David developed whereby you can remove the enlarged aorta near the heart while preserving the normal aortic valve, the main valve in the heart. The ability to retain Dr. David has been integral to building a world-class destination for cardiovascular surgery at the Centre.

COLLABORATION IS CRUCIAL

Now leading the Division of Cardiovascular Surgery, Dr. Rao's goal is to keep the collaborative culture at the Peter Munk Cardiac Centre – which he says is one of its defining attributes – as strong as ever. Before each surgery, there is a team huddle, where the case is reviewed by experts from every division. Even if the case doesn't appear to be directly related to a particular doctor's area of expertise, there is a belief that all perspectives will be invaluable to delivering the strongest patient outcomes. For instance, it's not unusual to see a cardiologist and radiologist commenting on an aortic valve repair. That diversity of voices pre-surgery is critical for success and is consistent with the interdisciplinary approach to patient care that Dr. Rubin has mandated at the Centre.

It was the chance to learn from others that attracted Dr. Jennifer Chung to the Peter Munk Cardiac Centre and Sprott Department of Surgery in 2018. Dr. Chung, a highly skilled aortic surgeon who was the inaugural Advanced Aortic Surgery fellow, considered multiple job offers when she finished her training, but she chose the Peter Munk Cardiac Centre because the opportunities it afforded were most in line with her goals.

It also helped that the hospital was best set up for complex aortic surgeries, which is a high-risk and highly specialized area. "This kind of surgery is like a team sport," she explains. "It's a lot more than just the surgeon; it's anesthesia, nursing and more. The Peter Munk Cardiac Centre has that whole package." With Dr. Chung's recruitment, the Centre became the only program in North America with three female cardiac and vascular surgeons.

INNOVATION AND INFLUENCE

To keep the Centre at the forefront of cardiovascular surgery, there needs to be funding. Thanks to philanthropic support, Dr. Rubin created the Peter Munk Cardiac Centre Innovation Fund. Led by Dr. Harry Rakowski, Medical Director of the Hypertrophic Cardiomyopathy Clinic at the Centre, the Fund provides researchers with anywhere from $10,000 to $1 million to test novel, often high-risk ideas that traditional funding avenues are hesitant to support. The proposals are weighed by a group of business executives, medical experts and entrepreneurs. One recently funded project developed a medication that could reduce DNA damage caused by the radiation associated with some medical imaging, like CT scans. "We want to be out there pushing the envelope," says Dr. Rubin.

That freedom and encouragement – to explore new ideas and to perfect patient care – is why Drs. Rao and David have stayed. Dr. Chung is excited to know that every day she will be shaping the future of cardiovascular surgery. She won't forget what Dr. Rubin told her when he was persuading her to join the team: "In terms of how far you want to push yourself in your career, it's up to you. There is no ceiling." ■