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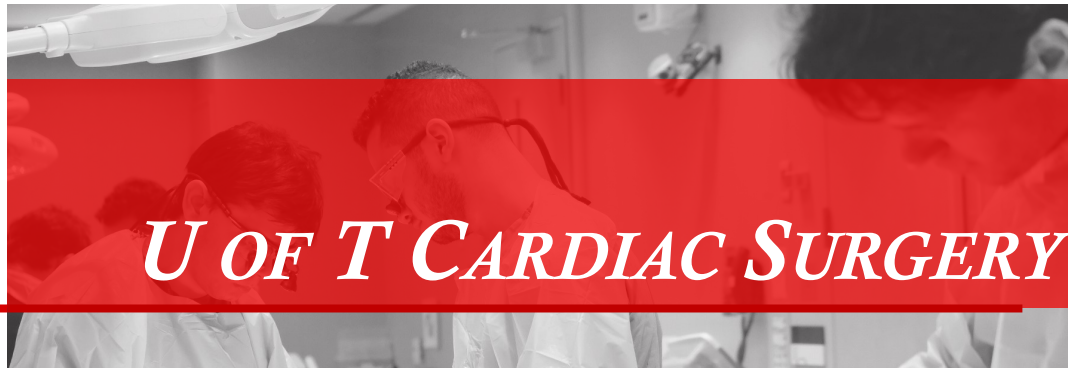

U OF T CARDIAC SURGERY

UNIVERSITY OF TORONTO
Division of Cardiovascular Surgery

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UPCOMING EVENTS

July 2020: New Academic Year

October 2nd: Bigelow Lecture with Dr. Joanna Chikwe

Royal College Residency Program Accreditation Visit - Date TBD

MESSAGE FROM THE CHAIR

Division Chair Dr. Terrence M. Yau

This edition of our newsletter finds us in a world seemingly changed beyond recognition, one that would have been almost impossible to imagine only a few short months ago. The global pandemic has separated us physically and yet brought most of us together in a common cause. We have seen leaders rise to the occasion or fail in unprecedented manner. Our busy surgical practices have been largely shelved for the last two months in order to free up emergency room, ICU and ventilator capacity to fight an insidious, invisible enemy. The possibility of asymptomatic contagion has made all of us paranoid about unknowingly infecting our families, patients, colleagues, and those most vulnerable. We have empathized with the patients, whether infected by COVID or not, who are separated from their families under the most terrifying conditions and sometimes at the end of their lives. There is seemingly no news report that doesn't deal with some aspect of the virus. The economic hammerblow of bringing the worldwide economy to a screeching halt has shattered lives, businesses and federal, provincial and municipal budgets.

And yet amidst these challenges, there is much for us to be grateful for.

While the death toll in long term care facilities has been tragic, the spread of infection in the general populace has been limited by the unprecedented measures taken, and in Canada our hospitals and the healthcare system have largely taken the influx of COVID patients in stride. As cardiac surgeons, we have been prepared to assume, but mostly spared, the stresses borne by our colleagues in emergency rooms, intensive care units, on intubation teams or those parachuted into long term care facilities in the midst of outbreaks. Their dedication, efforts and sacrifices have been cause for admiration and inspiration. Indeed, we have collectively been reminded that many people whose work outside of healthcare is essential to keeping society functioning are chronically underappreciated.

This pandemic has also been an opportunity to further inter-hospital collaboration. The need to develop a strategy to ensure safe and effective provision of cardiac surgical services across the Greater Toronto Area when some hospitals might be severely stressed or overwhelmed by COVID led to unprecedented cooperation between the units at Sunnybrook Health Sciences Centre, St. Michael's Hospital, Trillium Health Partners, Southlake Regional Health Centre, the University Health Network and the Hospital for Sick Children. Plans for coordinated patient care and rapid cross-credentialing of surgeons at other institutions were created, but fortunately have not as yet required implementation. Nonetheless, this is an excellent example of cardiac surgeons in 6 different units working together to ensure seamless patient care across the region.

The pandemic has also taught us, to our surprise, that much of the travel for work that we have become accustomed to may be obviated and may become, at least in part, obsolete. In return, we have found out how much can be accomplished by teleconference in a dress shirt and sweatpants. By the same token, telehealth has gotten a boost that would have otherwise taken years to achieve. I can't personally imagine forcing a patient to drive

Message from the Chair

two hours each way to see me in person for a routine followup visit in the future. And I have discovered that it **is** possible for someone to teach 70 and 80 year old patients how to operate a Zoom video call; this individual is, of course, not me but rather my capable administrative assistant.

How the next few months, let alone the next year, will unfold remains difficult to predict. At a minimum, we as cardiac surgeons will struggle to deal with the backlog of patients whose care has been deferred due to the pandemic, and with those whose medical condition has deteriorated while they were afraid to come to the hospital.

If, as all of us believe, a challenge is an opportunity to excel, then we have one of the greatest opportunities in recent memory.

We can be inspired by Tirone David's recent Lifetime Achievement Award from the American Association for Thoracic Surgery, an example of what unwavering commitment to clinical and academic excellence can achieve. Let us all recommit ourselves to our common goals of providing superlative patient care, innovation and discovery, and training the next generation of cardiac surgical stars in a collegial and collaborative environment.

New Faculty and Trainees

I want to extend a warm welcome to those who are joining this mission, our new faculty colleagues in the Division of Cardiovascular Surgery. These include Drs. Rachel Vanderlaan (Assistant Professor, Hospital for Sick Children) and Christoph Haller (Assistant Professor, Hospital for Sick Children). Our incoming residents for July 1 are Dinela Rushani from McGill and Rodolfo Rocha, who we know well. We will look forward to helping them develop into superb clinical and academic cardiac surgeons.

Royal College Review

We have been industriously preparing for the Royal College review, which was to have taken place this fall, but which has been postponed to a date as yet undetermined. Nonetheless, I believe that with Bobby's unflagging effort and enthusiasm, Naomi's organization, our residents' engagement and the efforts of many of you as dedicated teachers, we are in excellent shape for the review when it does happen. Let's all sustain and expand upon this commitment to our training program!

This Issue

This issue of our newsletter will feature some of the divisional accomplishments in global surgery, with articles from Bernie Goldman and our first-year resident Malak Elbatarny. Our alumni update spotlights Paul Fedak, and Hugh Scully has penned a tribute to a giant of Canadian surgery, Ron Baird.

In addition to our list of awards, we have a new format to spotlight some of the divisional publications. On these citations you will note red, blue or gold stars denoting papers in high-impact journals (including NEJM and JAMA), those featuring our residents, and those arising from interhospital collaborations within the University of Toronto, respectively. We are looking forward to increasing numbers of two- and the ultimate, three-star papers!

2020 Bigelow Lecture

Finally, this year's Bigelow Lecturer will be Dr. Joanna Chikwe, Professor and Chair of the Department of Cardiac Surgery at the Cedars-Sinai Smidt Heart Institute. Assuming that travel is possible again this fall, we will plan for a divisional dinner on Thursday October 1, followed by the Bigelow Lecture at 0730 on Friday October 2, 2020. If travel is not yet possible in October, a video telelecture format will be employed.

As always, please forward any submissions or items you'd like to see featured in the next issue to my attention. In the meantime, I wish you and your families a safe and healthy summer of 2020!

Terry Yau

Message from the Program Director

It is my pleasure to address you as the Program Director once again. As always, I would like to thank the leadership and support of Terry, David Latter, Gideon, Viv, Joe, Osami, David Barron and so many, many others.

We are excited to welcome **Drs. Rodolfo Rocha** and **Dinela Rushani** who will be joining our program this summer! We all know Rodolfo well and are excited for him and for his new family to join us. Dinela comes to us from McGill – she is strong, hardworking and clever and will undoubtedly be a wonderful addition to our program. It will be a pleasure to have the opportunity to train them both. Please make them feel welcome and cheer hard for their success.

I would like to update you all on our progress:

First and foremost, all of our residents are safe, healthy and in good spirits during COVID-19.

Message from the Program Director

Program Director Dr. Bobby Yanagawa

Trainee Operative Experience

We continue to see improvements in the surgical experience across the board thanks in large part to the Chiefs of all 5 hospitals. Obviously, with the COVID-19 slowdown, resident training has taken a hit but staff and residents alike are all pulling together to optimize all surgical experiences while keeping resident safety front and center. Thank you for all of these efforts.

Learning the Materials

The Academic Half-Day teaching was completely revamped by Dr. Ouzounian and the residents. The sessions have now moved completely on-line and the talks continue to be of high quality. The attendance and engagement by our trainees continues to be very high.

Resident Research

Our resident research productivity continues to be top notch. Congratulations to our residents for their continued contributions to the literature and for helping to maintain UofT cardiac surgery as a top academic program. Here is a sample of high-impact papers and scholarships from just the past few months:

Rashmi Nedadur *was awarded the prestigious Vector Scholarship in Artificial Intelligence.*

Derrick Tam *was one of the awardees of the CCS Covid-19 Challenge for Canada Initiative for his work regarding the effects of the delays on cardiac surgeries and procedures due to the pandemic.*

Elbatarny M, Tam DY…Rocha RV…*Yanagawa B, Ouzounian M; Canadian Thoracic Aortic Collaborative (CTAC) Investigators. Valve-Sparing Root Replacement Versus Composite Valve Grafting in Aortic Root Dilation: A Meta-Analysis. Ann Thorac Surg. 2020:S0003-4975(20)30044-8.*

Rocha RV*…Yanagawa B…Ouzounian M. Systematic review of contemporary outcomes of endovascular and open thoracoabdominal aortic aneurysm repair. J Vasc Surg. 2020;71:1396-1412.e12.*

Rocha RV*, Yanagawa B…Ouzounian M, Cusimano RJ. Off-pump versus on-pump coronary artery bypass grafting in moderate renal failure. J Thorac Cardiovasc Surg. 2020;159:1297-1304.e2.*

Tam DY…Rocha RV*, Ouzounian M… Fremes SE. Transcatheter ViV Versus Redo Surgical AVR for the Management of Failed Biological Prosthesis: Early and Late Outcomes in a Propensity-Matched Cohort. JACC Cardiovasc Interv. 2020;13:765-774.*

Rocha RV, Tam DY*…Fremes SE. Long-term Outcomes Associated With Total Arterial Revascularization vs Non-Total Arterial Revascularization. JAMA Cardiol. 2020:e196104.*

Ribeiro RVP*…Ouzounian M, Yau T… Yanagawa B; Canadian Cardiovascular Surgery Meta-Analysis Working Group. Supplemental Cardioplegia During Donor Heart Implantation: A Systematic Review and Meta-Analysis. Ann Thorac Surg. 2020:S0003-4975(20)30029-1*

Ribeiro RVP*, Yanagawa B…Ouzounian M, Verma S… Clinical outcomes of mitral valve intervention in patients with mitral annular calcification: A systematic review and meta-analysis. J Card Surg. 2020;35:66-74.*

Notably, one can appreciate significant resident-to-resident mentorship on these projects as well as collaboration between research teams across multiple Toronto Hospitals.

Here are our other initiatives and priorities on the horizon…

The 2020 External Review has been delayed and we are continuing to work closely with the University and the Royal College on updated timelines

The transition to CBD continues to go well. We thank all surgeons for participating in the completion of EPAs for our learners and great job to our CBD residents – Malak and Roberto.

Our goal is for ALL residents to pass the Royal College Examination. Our effort to offer the best possible AHD experience is with this goal front and center. Note: after much deliberation at the Royal College, this year there will only be a WRITTEN component. Next year, we anticipate a return to the ORAL and WRITTEN format.

Our goal is for ALL residents to successfully transition to fellowship and staff positions. Our efforts here include numerous mentorship/networking evenings which will continue when we open up again.

For my part, I pledge to work closely with our residents and our RPC to ensure that the direction of our residency program is in -line with the vision of our Chair.

Sincerely,

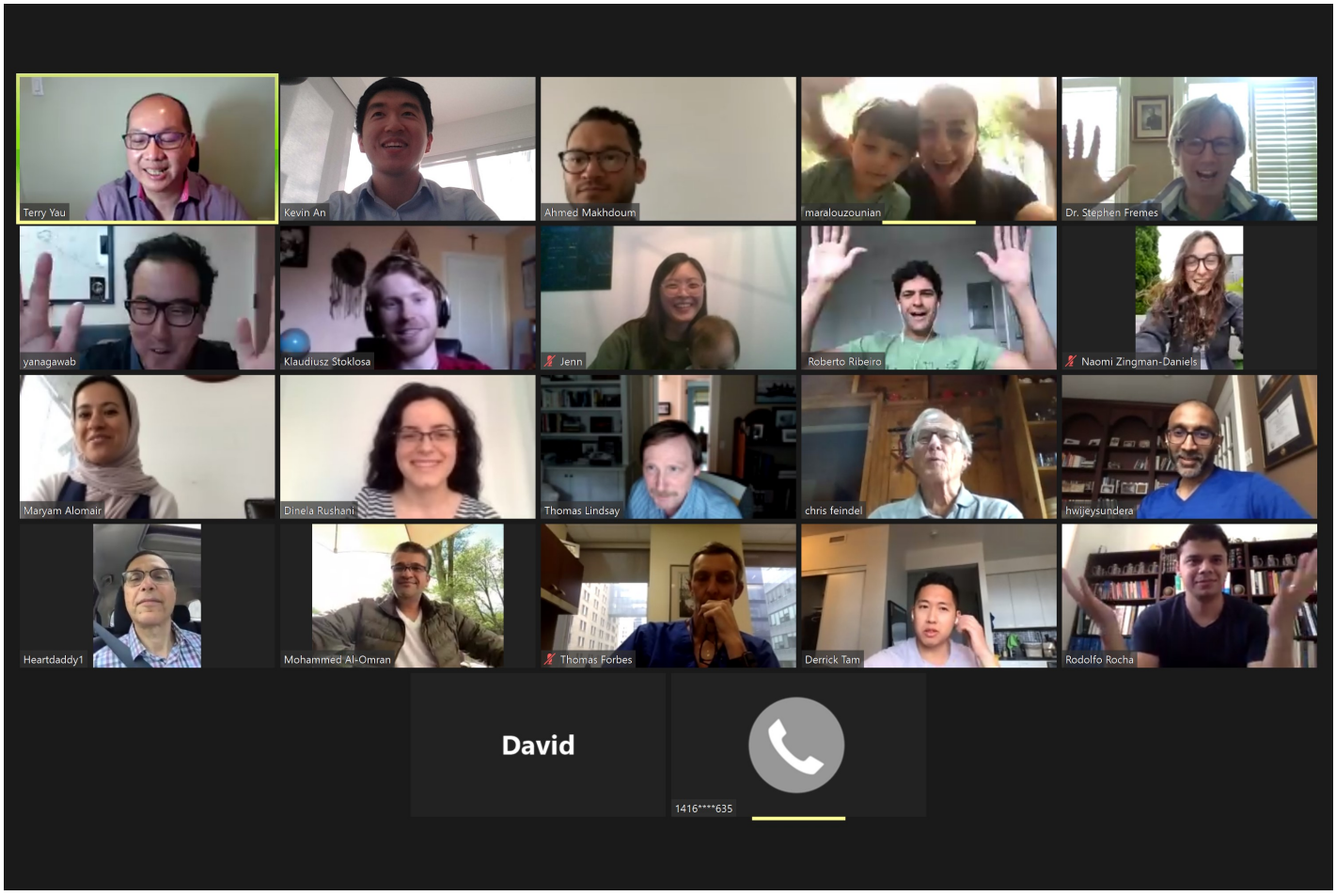
Bobby Yanagawa

Divisional Updates: Resident Awards

Congratulations to our resident **Dr. Ahmed Makhdoum** on his award for Best Oral Presentation at the CCC meeting in Montreal for his abstracts "Outcomes of Sutureless Aortic Valve Replacement Versus Conventional Aortic Valve Replacement and Transcatheter Aortic Valve Replacement: A Systematic Review and Meta-Analysis" and "Survey of Cardiac Surgeons to Evaluate the Use of Sutureless Aortic Valve Replacement in Canada."

Huge congratulations are in order for **Dr. Derrick Tam,** who brilliantly defended his PhD thesis, "The Surgical Management of Severe Aortic Stenosis In the Era of Transcatheter Aortic Valve Replacement" (supervisor **Dr. Steve Fremes**) on 27 May 2020. Additionally, he has won the 2019 Paul Cartier Award, and was an awardee of the CCS Covid-19 Challenge for Canada Initiative, for his work on the pandemic-induced delays on cardiac surgeries and procedures.

Congratulations also to **Dr. Rodolfo Rocha**, who also defended his PhD thesis, "Surgical Treatment of Thoracoabdominal Aortic Aneurysms: Endovascular versus Open Approach" (supervisors **Dr. Maral Ouzounian** and Dr. Thomas Lindsay) with flying colors on 28 May 2020.



The first divisional Zoom celebration was held on Saturday, May 30, 2020; a surprise party for Derrick and Rodolfo, who had both passed their PhD thesis defences earlier that week

Divisional Updates: Resident Awards (cont'd)

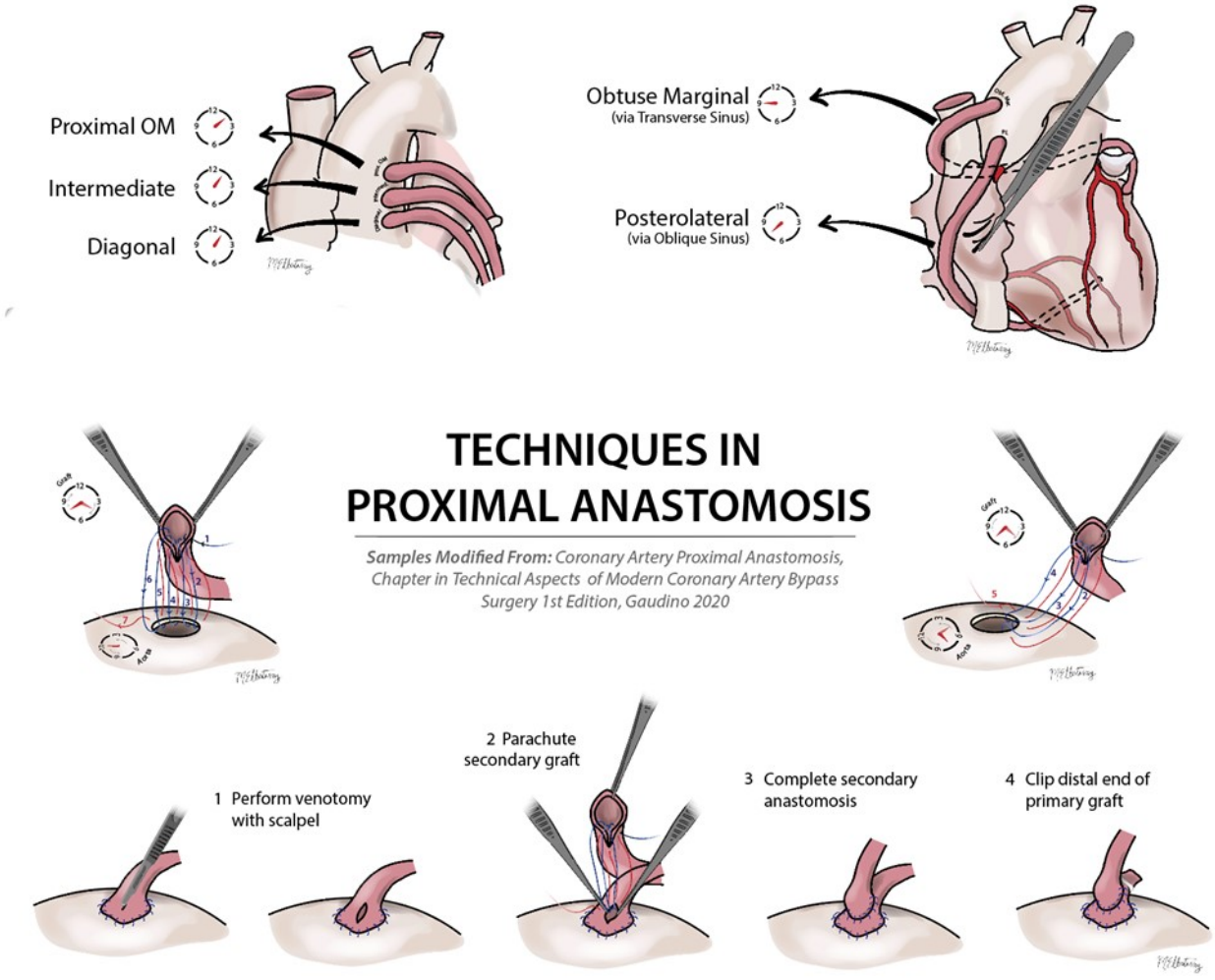
Congratulations are also due to **Dr. Rashmi Nedadur** for her recent Vector Scholarship in Artificial Intelligence!

Dr. Amine Mazine has also continued to receive recognition, winning the 2019 CSCI/CIHR Resident Research Award, a CIHR fellowship, Vanier Canadian Graduate Scholarship, and the 2019 Postgraduate Research Award.

Second-year resident **Dr. Kevin An** has received two rewards for his work recently: of the AATS Honoring our Cleveland Clinic Mentors Leadership Award, and was additionally one of the recipients of the Quality Improvement Top Project/Presentation Award from the Surgical Foundations at University of Toronto.

First-year resident **Dr. Roberto Vanin Pinto Ribeiro** has received a number of awards recently, including the 2019 McMurrich E-Poster Award; 2nd place for the 2019 Trainee Research Award for Basic Science at the 2019 CCTN/CHFS research competition; and honourable mention for the 2019 Alan Wu Poster Competition.

PGY1 resident **Malak Elbatarny** had a successful presentation at the 2020 Gallie Day of her talk "Is Better the Enemy of Good? Risk of Reintervention for Residual Lesions in Congenital Heart Surgery," and has had her impressive artistic work published, visualizing cardiac surgery phenomenally for a textbook that has recently been sent to the presses. You can see her artwork below:



Dr. Malak Elbatarny's illustrations.

Divisional Updates: Faculty Awards

Congratulations to **Dr. Tirone David** on being awarded the 2020 Lifetime Achievement Award of the American Association for Thoracic Surgery! This honor, announced at the centennial scientific sessions of the AATS, recognizes individuals for enduring contributions which have shaped the field of cardiac surgery. Dr. David and **Dr. Richard Weisel** are also previous recipients of the Scientific Achievement Award of the AATS.

Congratulations to **Dr. R.J. Cusimano** on his recent promotion to Full Professor! R.J. has achieved international recognition for his work in cardiac tumors and improving care worldwide for patients with these rare afflictions.

Congratulations to **Dr. Osami Honjo** for being one of the winners of the HSC President Award!

Dr. Hugh Scully and **Dr. Richard Weisel** have both been appointed as Surgeons-Emeritus, as well as being made honorary members of UHN in recognition of their long and incredible careers in cardiac surgery and teaching.

Dr. Hugh Scully additionally has been appointed to the Senate of the Toronto General & Western Hospital (UHN) and has been serving as President of the Mount Sinai / UHN Academic Medical Organization / Clinical Funding Group.

Dr. Subodh Verma has joined the editorial board of Circulation, in recognition of his exemplary contributions to the journal. Congratulations to him also for his recent NEJM and JAMA publications documenting a benefit of dapagliflozin on cardiovascular mortality and hospitalization for heart failure in both diabetic and nondiabetic patients. These findings have led to the FDA approving an indication of dapagliflozin for treatment of heart failure regardless of diabetic status. A paradigm change in heart failure!

Dr. Joe Noora assumed the position of Division Head of Cardiac Surgery at Trillium Health Partners as of 17 February 2020, taking over from **Dr. Charles Cutrara**. Congratulations Dr. Noora, and thank you for many years of leadership at THP, Dr. Cutrara!

Huge thanks to **Dr. Bobby Yanagawa** for sharing his thoughts and concerns in speaking up for the profession in a recent Globe and Mail article on the effects of COVID-19 on surgeons and other providers working in hospitals trying to keep their patients alive during this complicated and difficult time.

Dr. Osami Honjo (7th from left) with the other awardees of the HSC President Award

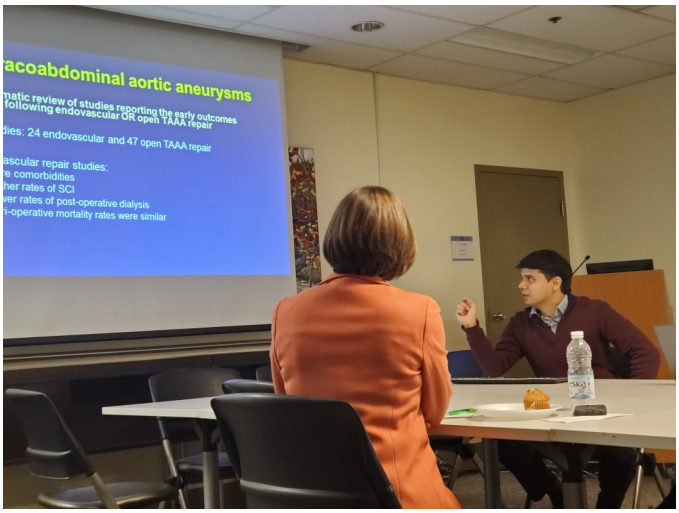
Divisional Updates: Mentorship

We had a wonderful mentorship night in January with **Dr. Bonneau**, which we are particularly grateful for due to his upcoming retirement. Best wishes in all your future endeavors to Dr. Bonneau and thank you for all your teaching and guidance to our residents!

We have had some excellent journal clubs and wellness and enrichment dinners for the residents, including a highlight of a wellness talk from **Dr. James Maskalyk** about mindfulness this past fall.

The residents were thrilled to have a Zoom mentorship and networking teleconference with **Dr. John Puskas**, Chair of Cardiovascular Surgery at Mount Sinai St. Luke's, Mount Sinai Beth Israel and Mount Sinai West on 20 May 2020.

Additionally, we were lucky to have **Dr. Jennifer Lawton**, the Richard Bennett Darnall Professor of Surgery and Chief of the Division of Cardiac Surgery at the Johns Hopkins University, not only as our Bigelow Lecturer last fall, but Dr. Lawton additionally attended resident talks on their research and provided invaluable insight, mentorship, and feedback on their work.



Clockwise from top left: (1) From left: Dr. Terrence Yau, Dr. Jennifer Lawton, and Dr. Jim Rutka at the 2019 Bigelow Lecture; (2) Dr. Lawton and resident Dr. Amine Mazine; (3) Dr. Lawton and incoming resident Dr. Rodolfo Rocha; (4) Dr. Lawton and resident Dr. Malak Elbatarny.

Divisional Updates: Learning

As the landscape of healthcare and learning continues to change during this difficult and fluid time during the pandemic, we have been incredibly lucky that we have been able to continue our residents' learning through some excellent academic half days as we have continued the learning schedule online. Our teaching surgeons have seamlessly transitioned to Zoom lectures, which has been invaluable in providing instruction to our learners during a time when so much else is changing.

Prior to the move online, we had a number of excellent academic half-days and wet-labs. A particular thank you to **Dr. Shafqat Ahmed** and **Dr. Steve Singh** for their help in leading the wet-lab curriculum this year!

Residents and Dr. Shafqat Ahmed at a wet-

Divisional Updates: Coach House Dinner

Our annual Coach House Dinner was hosted this academic year on November 18, 2019. We had a number of excellent presentations from each hospital, ranging from case studies to presentations of ongoing research to discussions surrounding the division's achievements, history, and goals moving forward. Thank you to all who contributed and attended!

(Left) Dr. Yanagawa and (right) incoming resident Dr. Rodolfo Rocha presenting at the 2019 Coach House Dinner.

ALUMNI UPDATE: DR. PAUL FEDAK

As a first-year medical student in Toronto I was assigned to the Wightman Academy and had most of my clinical educational sessions at the Toronto General Hospital. I was exposed to some of the world's best cardiologists and cardiac surgeons at a very formative stage of my career. There is no question that these early experiences shaped my career as an academic cardiac surgeon. As a medical student I still remember Dr. Thomas Parker trying to show us how to assess the JVP with a flashlight. We thought he was crazy until with time, we could also see it. After making countless rounds with the cardiologists, I thought I should see what cardiac surgery was about. The cardiologists seemed to respect these surgeons, so maybe there was something redeeming about them.

I contacted the program director, Dr. Christopher Feindel, and asked to observe him in surgery. I would hang around his office and pester his administrative assistant Mandy, almost daily. We finally made a date to observe a surgery. I waited for him one very early morning and he forgot me! Finally, after a couple of hours someone remembered to come and get me. And so my first observation of open heart surgery was made.

Dr. Paul Fedak

Tony Ralph Edwards was assisting him and I recall Dr. Ralph Edwards pointing down and indicating that the beating organ I was staring at was indeed the heart. Everyone laughed while I was awestruck. Chris Feindel was my new hero in life. He did three cases that day, made it all look so easy, and then raced out to play competitive squash. I had never seen anything so incredible as open heart surgery and no one as cool as that surgeon. I don't think I blinked for 12 hours that day. Let's just say that my interactions with Dr. Feindel continued over many years and it is no coincidence that my first-born son Bennett's middle name is "Christopher".

I decided that cardiac surgery was my destination. The only problem was that I was sure I didn't have the talent or personality for it. I still remember Dr. Allan Detsky advising me to get an "ego transplant" if I wanted to become a heart surgeon.

I read everything I could about heart surgery and the surgeons that shaped the profession. I skipped classes and went to the Texas Heart Institute to meet Denton Cooley. I even scrubbed in on one of his cases. I think I was the fourth assistant! Not long after that I happened to be on the ward reading a chart of a patient that I was following who needed complex cardiac surgery. Dr. Tirone David suddenly appeared as he was scheduled to perform the procedure. He looked like George Hamilton and sounded like Julio Iglesias. I was very nervous but asked him if he would allow me to observe him operating on this patient. He paused and looked deep into me and said "… it would be my pleasure" with nobility and flair that made me forget who Denton Cooley was. The surgery was incredible and the results even better. I watched our patient's remarkable recovery and new quality of life. It seemed that the results of heart surgery were as impressive as the characters who did the operations. I would observe Tirone in action on many occasions after that case, whenever I could skip a class and climb the ladder and perch over his shoulder. How he tolerated this I will never understand now that I am a surgeon myself.

Not long after that I was introduced to the rich academic history and activities of cardiac surgery in Toronto. I even met Bill Bigelow as a medical student. I started doing some research with the cardiac surgeons in training, an equally impressive group of talented characters.

At that time, Viv Rao, Gideon Cohen, and Michael Borger were all doing PhD training in Dr. Richard Weisel's laboratory. I interacted with them frequently and became even more inspired to be an academic surgeon. Dr. Terry Yau had already completed his research years with Weisel, and he was chief resident at Sunnybrook. He mentored me on one of my first clinical papers. He showed me how to make a research poster (no PowerPoint back then!) which I presented at the Canadian Cardiovascular Congress. With time, I finally got to meet Professor Weisel. I was fascinated by his academic work and ability to shape academic careers and mentor people. I dreamed of doing a PhD under his supervision and join the pedigree of so many leaders in the field. I still remember my first interaction with him. I was being keen and asked him what cardiac surgery textbooks I should read. He looked at me disapprovingly and informed me that "… in Toronto we write textbooks, we don't read them". Years later, we wrote a textbook chapter in Sabiston and Spenser's iconic textbook of cardiac surgery. As always, he was right.

ALUMNI UPDATE: DR. PAUL FEDAK

I decided that clinical and academic training in Toronto was the best in the world. I was willing to sell my soul to the Devil to train in Toronto. However, they only took one student per year and there were many exceptional applicants. Damn that Mark Peterson from Winnipeg seems really good! It was either an act of God or a deal with the Devil, but the year I applied they accepted two students to the program – me and Mark. Mark and I

were both confident bright young surgeons in training and during our pathology rotation together, we hatched a fool proof scheme to win at Roulette. When Professor Butany wasn't looking we drove to Niagara Falls to put our game theory to the test. Let's just say we won't be retiring anytime soon.

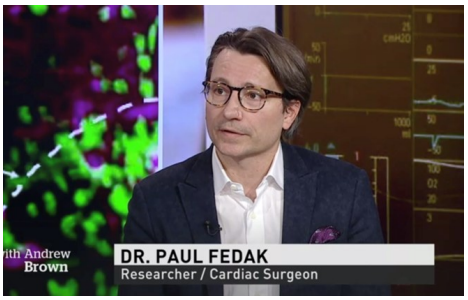
My residency training and PhD graduate studies in the surgical scientist program at Toronto were equally exhausting and thrilling. I learned so much and developed a skillset that will be leveraged for my entire career. The training was exceptional. I didn't appreciate the richness of the training while in Toronto. Only after a clinical fellowship at Northwestern University and now training my own residents clinically and academically can I really appreciate what is so special at Toronto. It is innovative, it is excellence, it is world class. It has history and it has exceptional leadership and vision.

There are countless memories from my training that are far too numerous to document in this alumni update. In my early years as a resident I was stationed at Sunnybrook and really enjoyed my time with Dr. Bernard Goldman. I remember a redo mitral valve case. Bernie did the first one in 1971. As I first assisted, I informed him that I wasn't even born when he did the first case. He immediately kicked me out of his room! Gopal Bhatnagar was junior staff at that time and was really fun to work with. Steve Fremes I admired greatly for his precision in both clinical and academic pursuits and still correspond with regularly today. Gideon Cohen was my senior resident and took good care of me in those first years. On other rotations when the young nurses found out I was training in cardiac surgery they would become very interested and then ask me if I knew Gideon Cohen.

After my junior years I did my PhD under Richard Weisel and Ren-Ke Li. This was an exceptional experience that allowed me to travel the world and meet the leaders in the field. My partner in the lab was a new guy that no one had ever heard of. His name was Dr. Subodh Verma. He was a genius in academic research. He transformed the research environment around him and was the most productive resident in Toronto's history. He mentored me and we became close friends. This continues today. It is interesting how much other trainees can influence you. This is also a strength of Toronto. The influx of clinical fellows from around the world creates a lasting network of professional colleagues. I learned a great deal from many international fellows, such as Piroze Davierwala. He took me though my first CABG. Sorry Piroze! Piroze is now a star surgeon in Leipzig, Germany. He works under the leadership of international superstar Herr Professor Dr. Michael Borger. All roads lead to Toronto.

Dr. Paul Fedak with his wife (top), son (middle), and Prince Albert II of Monaco (bottom)

ALUMNI UPDATE: DR. PAUL FEDAK



In my later years I rotated at St. Mikes and really started to learn how to be a technician. Dr. Daniel Bonneau was transformative for me. I started to become a surgeon with his guidance. I will never forget doing my first Bentall procedure with him. During reperfusion he scrubbed out and called my wife from the O.R. I won't repeat what was said - but it took at least 2 months for my relationship to recover from that brief phone call. Fortunately, my wife and I are still married. David Latter also was an outstanding teacher and role model. I really appreciated my time with him. He never called my wife. Dr. Yves LeClerc was there at the time and showed me how to operate with grace and ease. He had a mysterious talent for technical surgery that was perhaps underappreciated.

When I finished my training in Toronto an opportunity came up for an academic surgeon position in Calgary. Not everyone was enthusiastic about Calgary. Bonneau wanted to know where I would tie up my horse at the hospital. Weisel was sure they would have no clue what to do with someone with my training and skillset. Tirone, however, recognized it as a good opportunity. I felt that there was so much talent in Toronto they surely didn't need me. Yet, I had never considered the possibility that I would leave Toronto – everyone who was any good seemed to train and stay as a staff surgeon. Subodh and Mark both stayed. But the idea of going elsewhere and bringing the strengths of Toronto to a new environment was appealing to me. Great people go and build great programs. Maybe I could have more impact in my career by help to build a new program. Manifest destiny was calling "Go West, young man!".

I left Toronto and did a clinical fellowship with Dr. Pat McCarthy at Northwestern. This blossomed from a connection I made with him while a visiting professor in Toronto. Gideon had worked with Pat at the Cleveland Clinic and so Pat was charmed by Toronto trainees. Pat and I collaborated on a research project and developed a relationship while I was in training. Importantly, the Chicago program at Northwestern was rapidly developing under Pat's recent arrival from the Cleveland Clinic. Accordingly, from Pat, I learned about program development and leadership.

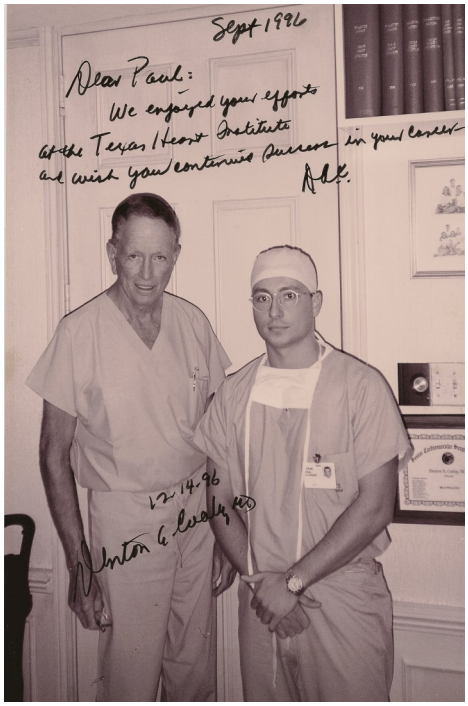
I then started my career in Calgary. Dr. Andrew Maitland was a Toronto alumnus and the Chief of Cardiac Surgery at Calgary. We had a Toronto connection and bond. I started in 2007 and I built a translational research program from a blueprint of a building that had not yet been completed. I brought the Toronto academic tradition to a new group of surgeons. I was productive in my lab and clinically obtained good results. With time, I advanced in the ranks and became a full Professor. Recently, I was appointed Head, Department of Cardiac Sciences and Director, Libin Cardiovascular Institute. I am now responsible for clinical cardiovascular services, research, and educational programs in our health region of over 2 million people leading 80 cardiologists and 12 cardiac surgeons with over 1600 additional staff. I obtained leadership training at Harvard University in preparing for my new role. I still maintain an active clinical practice as a surgeon specializing in bicuspid aortic valve disease. I continue to direct my translational research program and train graduate students.

Dr. Fedak with trainee Dr. Holly Mewhort (left) and Dr. Denton Cooley (right)

I remain a proud alumnus of the Toronto program. I still bleed blue. I am honored to be profiled.

Paul W.M. Fedak, MD PhD FRCSC FAHA

Head, Department of Cardiac Sciences
Director, Libin Cardiovascular Institute
Professor, Cumming School of Medicine, University of Calgary
Merck Chair in Cardiovascular Research



In memoriam: Dr. Ronald James Baird
May 3,1930 – March 26, 2017
A Pioneer in Vascular and Cardiac Surgery

Written by Dr. Hugh Scully

Born, raised and educated in Toronto, Ron was Gold Medalist in the Medical Class of 1954 at the University of Toronto.

Invited to join the Gallie Postgraduate Surgical Course by Dr. Robert Janes, he completed his Fellowship in General Surgery in 1959, and in Cardiovascular and Thoracic Surgery in 1964. He won the Roscoe Graham Award in 1960, the Lister Award in Surgery in 1964 and the Medal in Surgery from the Royal College of Physicians and Surgeons of Canada in 1969.

His mentors were Drs. Gordon Murray, Bill Mustard and Bill Bigelow.

In 1960 Ron was appointed to the cardiovascular surgical staff at the Toronto General Hospital. In 1964 he moved to the Toronto Western Hospital, where he was Head of CVS from 1972 – 1977. When Dr. Bigelow retired in 1977, Ron moved back to the Toronto General Hospital as Head of CVS and Chairman of CVS at the University of Toronto from 1977 – 1987. He retired from independent surgical practice in 1994, but continued as an assistant and mentor to residents and fellows until 2002.

Academically, Ron progressed rapidly from Assistant Professor in 1964 to Associate Professor in 1968 and full Professor in 1973.

He was well-known as an innovative vascular surgeon, and a pioneer in the early days of adult cardiac surgery in the evolution of coronary artery, valve replacement , pacemaker and heart transplant surgery.

He was an exceptional teacher of the craft of surgery, and greatly admired and respected as a mentor to generations of residents and international fellows from many different countries.

Ron was an author of many peer-reviewed articles both in vascular and cardiac surgery, numerous abstracts, book chapters and editorials.

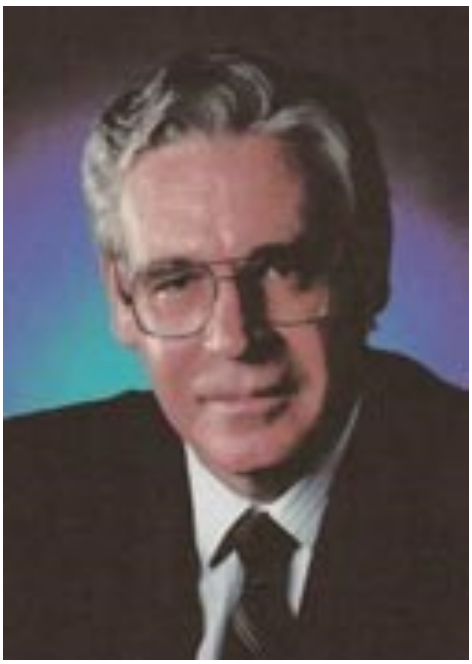
He was an invited speaker at many international CV meetings, travelling widely and always enhancing the reputation of the quality of cardiovascular surgery in the Department of Surgery at the University of Toronto.

In his quiet way, Ron Baird was a remarkable leader. He served on the Council of the Society of University Surgeons {SUS}, the Board of Governors of the American College of Surgeons {ACS}, the Council for CVS with the American Heart Association {AHA}, President of the North American Chapter of the International Society for Vascular Surgery, President of the Canadian Society of Thoracic & CVS, and was one of only four CVS surgeons to be elected President of the Canadian Cardiovascular Society {CCS}over 72 years. {The other three, all trained in Toronto, were Bill Bigelow, Wilbert Keon and Hugh Scully}. Ron Baird was active in virtually all of the top societies in cardiology, cardiac and vascular surgery.

Ron Baird was a renaissance man, keenly interested in nature, science, history and international travel. He had a wide circle of friends outside of medicine, and greatly enjoyed bridge and bonvivant companionship at the Toronto York Club.

He was devoted to his family. His wife, Fern, was his greatest champion and supporter. They took great pride in their children : Ron Jr { unhappily deceased from cancer recently}, Catherine and Fraser and respective spouses and grandchildren. There were many happy family times at their farm close to Toronto and their Bahamian retreat in Hope Town.

Ron Baird lived life fully and well. He leaves a rich legacy.



Dr. Ronald James Baird

Saving Children's hearts: Dr. Bernard Goldman

"He who has health has hope. He who has hope has everything"

– Arabic Proverb

By Dr. Bernard Goldman

The Save a Child's Heart Foundation (SACH) is a UN sponsored Israeli NGO based at a Tel Aviv University School of Medicine affiliated hospital – The Edith Wolfson Medical Center (WMC). SACH was founded by an American ex-pat, Dr. Ami Cohen.

I first met Ami in 1991 at U of T Surgical Grand Rounds. He was a cardiothoracic surgeon recently discharged from the US Army and a Clinical Fellow in Pediatric Heart Surgery at Sick Kids He was presenting his experiences setting up a mobile field hospital in the Saudi desert during the First Gulf War – an interesting scenario for an Orthodox Jew from Washington DC! I later learned that during a tour in South Korea he had been asked to operate on needy local children with congenital heart defects who had no other options for care. That experience set him on the path to children's heart surgery and Sick Kids. He was then recruited to the WMC by an old friend of mine, a senior cardiac surgeon who I knew from my own visits to Israel, teaching, training or operating (e.g. implanting the Toronto stentless porcine aortic valve) in different major teaching hospitals.

Initially the WMC was not given permission by the health authority to open a new pediatric unit. However, Ami was soon operating on children from Ethiopia referred by former US Army colleagues involved in humanitarian aid in the developing world. Soon he was referred local cases from Gaza. In 2001, Ami published a seminal article in the Annals "Saving Children's Hearts- We can and We Should" defining the SACH mechanism for providing access to expert heart care in children from LMICs. Sadly he died shortly after publication on a mission to Tanzania.

In the years since, SACH has operated on more than 5,000 kids from 62 countries (at no cost for travel or care), fully half from the Muslim world near (Gaza and the West Bank) and far (Iraq, Azerbaijan, Kazakhstan) despite, and often during, political tensions or outright hostilities.

Indeed there is a free Tuesday Palestinian Clinic regularly attended by families and children facilitated by a partner Christian charity. I have been involved with SACH since inception and helped establish a SACH Canada Board to create awareness and raise funds.

SACH has evolved a unique hub-and-spoke relationship with many reliable referral partners in many countries and regions (e.g. 16 in Gaza and the West Bank). As compared to the traditional "Fly in, fly out" humanitarian mission to a foreign locale, the SACH "hub" is the tertiary heart centre at WMC, where foreign doctors are trained in various heart disciplines to return and establish local centres of competence for their populations (China, Romania, Tanzania, Ethiopia). There is a Palestinian team currently training at WMC to open a pediatric unit in Ramallah and a young surgeon from Gaza City at the beginning of her training. SACH conducts frequent screening, surgical and interventional missions to some of these centres to provide oversight, assistance, teaching and on -site training.

Despite the many years since I trained at Sick Kids with Drs. Mustard and Trusler, (using surface hypothermia to facilitate venous occlusion and rapid ASD repair), I have had great satisfaction learning the complex repairs that have evolved for the more complicated defects, have scrubbed in often (mainly to retract and cut sutures!), have sent numerous medical students for fascinating 2 week "internships", have mentored their presentations, helped publish papers or scholarly theses, presented the SACH experience with rheumatic heart valve surgery in the young and joined the Global Surgery section of our Department of Surgery. I am currently Chair of our Medical Advisory Committee responsible for approving support for training of various foreign doctors at WMC, approving which child requires more complicated repair and transport to Israel and which children can be cared for at their local centre of competence (e.g. the Jakaya Kikwete Cardiac Institute in Tanzania).

One of the most satisfying aspects of my relationship with SACH is a visit to the Children's House near the hospital, a beautiful facility where the foreign train-

Dr. Bernard Goldman

ees live side by side with upwards of 24 children, pre and post- operative, their exuberant play supervised by volunteers from around the world, by their mothers, other caregivers or nurses who travelled with them from distant and foreign lands. The babel of language and laughter, the colour of their mother's traditional dress, the smells of exotic foods each prepares and the rapid healing of children previously incapacitated is a memorable experience.

In June, 2018, The United Nations presented Save a Childs Heart with its Population Award celebrating the benefits brought to needy children with heart disease in the developing world. Currently SACH is working to interact with other NGOs and signatories to the recent Cape Town Declaration on Access to Heart Surgery in the Developing World (https://www.jtcvs.org/article/S0022-5223(18)31723-9/abstract). Humanitarian aid via involvement in global surgery is a worthwhile consideration, both fascinating and eminently satisfying, for those of us privileged to live and work in the Western world.

Bernard Goldman, CM, MD, BSc(Med), FRCSC

Professor Emeritus, Department of Surgery, University of Toronto

Founding Head, Cardiac Surgery and Surgeon in Chief. Sunnybrook Health Sciences Centre

Global surgery feature: From Medical Missions to 600 Switches: Top 3 Lessons from the Aswan Heart Centre

By Dr. Malak Elbatarny

Three years ago, the Bigelow lecture at University of Toronto was given by Sir Magdi Yacoub. This key inciting event kickstarted my involvement with the Aswan Heart Centre (AHC) in Egypt and interest in global surgery by extension. It has been an inestimable privilege to have a small window into the exemplary leadership, team culture, clinical acumen, and organization which built such a state-of-the-art cardiac centre in this low-to-middle income country.

AHC is an independent full-service cardiac hospital sustained completely on philanthropic donations through the Magdi Yacoub Foundation. It performs over 1000 adult and pediatric cardiac surgeries annually out of two operating rooms and at no cost to patients. Those requiring anything from ASD repair to LVAD are triaged from all over Egypt and as far away as Burundi to be discussed at the interdisciplinary Joint Cardiothoracic Conference; thus, AHC is effectively a "Gateway to Africa" for training and patient care. Only heart transplant is excluded due to Egypt's legal restriction on non-live organ donation. The adult patients are young, all ages are often late-presenting, and there is a large burden of rheumatic disease. Somehow, no one seemed surprised to see two Criss-Cross heart repairs in the same month.

Knowing this, it is difficult to imagine that only 10 years ago, the newly-minted centre, erected in a small town far from the nation's capital, was completely different. Operating rooms were active only one week out of each month. Surgeries were only performed under supervision from the Prof himself, and his students Drs. Carin Van Doorn (department head at Leeds, UK) and Canada's own, Ismail El-Hamamsy. Then for an entire year, in-house staff only performed primary closure VSDs independently. For several years, surgeons accepted the reality of being on call 24/7/365 for the ICUs and wards, learning and in turn teaching, as they went. Needless to say, the centre's trajectory from monthly medical missions to their 600th arterial switch represents a phenomenal success story which has been anything but easy.

The following are a few vignettes of what I gained from my time in Egypt:

Resident Dr. Malak Elbatarny at the Aswan Heart Centre

A New Perspective on the Value of Team Culture & Exemplary Leadership

My preceptor, Dr. Hatem Hosny, can always be found at the patient's bedside, if you're looking for him. Dr. Hosny's by-example leadership, and the entire centre's deep trust in him, puts AHC's develop-

ment in context. Famously, he's the first to arrive, last to leave, performing any and all tasks in patient care. His humility and quiet leadership has set the tone for the culture of the entire centre, where colleagues have a sense of empowerment while simultaneously feeling supported.

The small town culture remains a hallmark of the centre. There is a strong tradition to celebrate new milestones for trainees and staff alike with a "oozoomah" or gathering. One pediatric LVAD patient even celebrated her birthdays with the team every year at the hospital. It is clear that such a culture has been critical to keeping the team's vision and spirit alive through the formative eras, and to this day through marathon days and weeks.

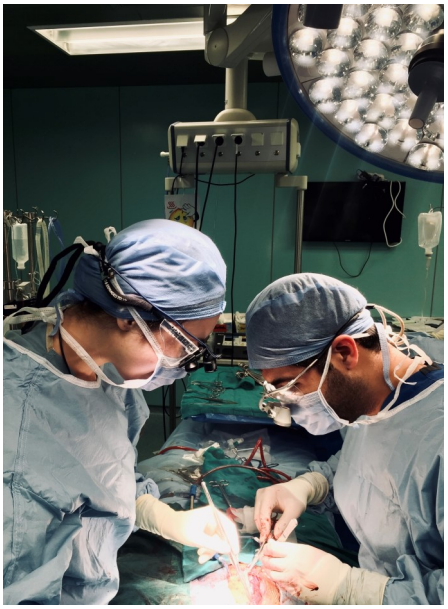
Necessity is the Mother of Invention

Back in Toronto, I can't help but chuckle when we complain about suboptimal instruments or prostheses on back order (not that my Egyptian colleagues believe me). By comparison, at AHC, no materials are wasted—arterial and venous cannulas, excess Dacron— all spared and re-sterilized. Importantly, Dacron is routinely used for annuloplasty instead of expensive rings and autologous pericardium is a staple. There is a very high rate of Freestyle aortic root replacement. Reluctance to subject patients to long-term anticoagulation with unreliable monitoring spawned a myriad of advanced mitral repair techniques. Numerous late-presenting TGAs led to the rebirth of the Mustard procedure, with an AHC-pioneered modification, for those who are not candidates for arterial switch. I believe that experiencing how cardiac surgery can be molded to meet complex patient needs and environmental limitations gives young trainees permission to imagine and realize the future of the specialty.

Global Challenges in Cardiac Surgical Education

Currently, the AHC service runs on 4 staff surgeons, 6 short-term fellows, and is newly piloting a pathway for comprehensive cardiac surgical training for fresh medical school graduates. Cardiac surgery certification in Egypt has traditionally occurred through a non-clinical Master's degree. Recently, an alternative path through a formal clinical board exam has been introduced. For AHC trainees, clinical competence is half the battle—they must navigate complicated systemic barriers required to obtain official certification to practice. As a result, many attempt to re-certify internationally, a massive brain-drain that may even represent a challenge to the sustainability of the centre. Still, the same questions of how much responsibility trainees should have in the OR, which off-service rotations should be included, and how training milestones should be defined, are surprisingly identical to those from the other side of the Atlantic. Discussions around competency-based curricula, the value and practical means for integration of surgical simulation, and support for academic enrichment were mutually eye-opening and remain a means of mutual collaboration and development.

With each passing year, I continue to gain perspective, knowledge, skills, and friendships through my time and relationships at AHC. I am therefore excited and grateful for the opportunity to integrate it into my training on an annual basis. The University of Toronto's support for international experiences like these, in my view, are foundational in our strong tradition of training leaders in Cardiac Surgery.



Resident Dr. Malak Elbatarny with team and operating at the Aswan Heart Centre

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* - High Impact
* - Resident
* - Cross institutional

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