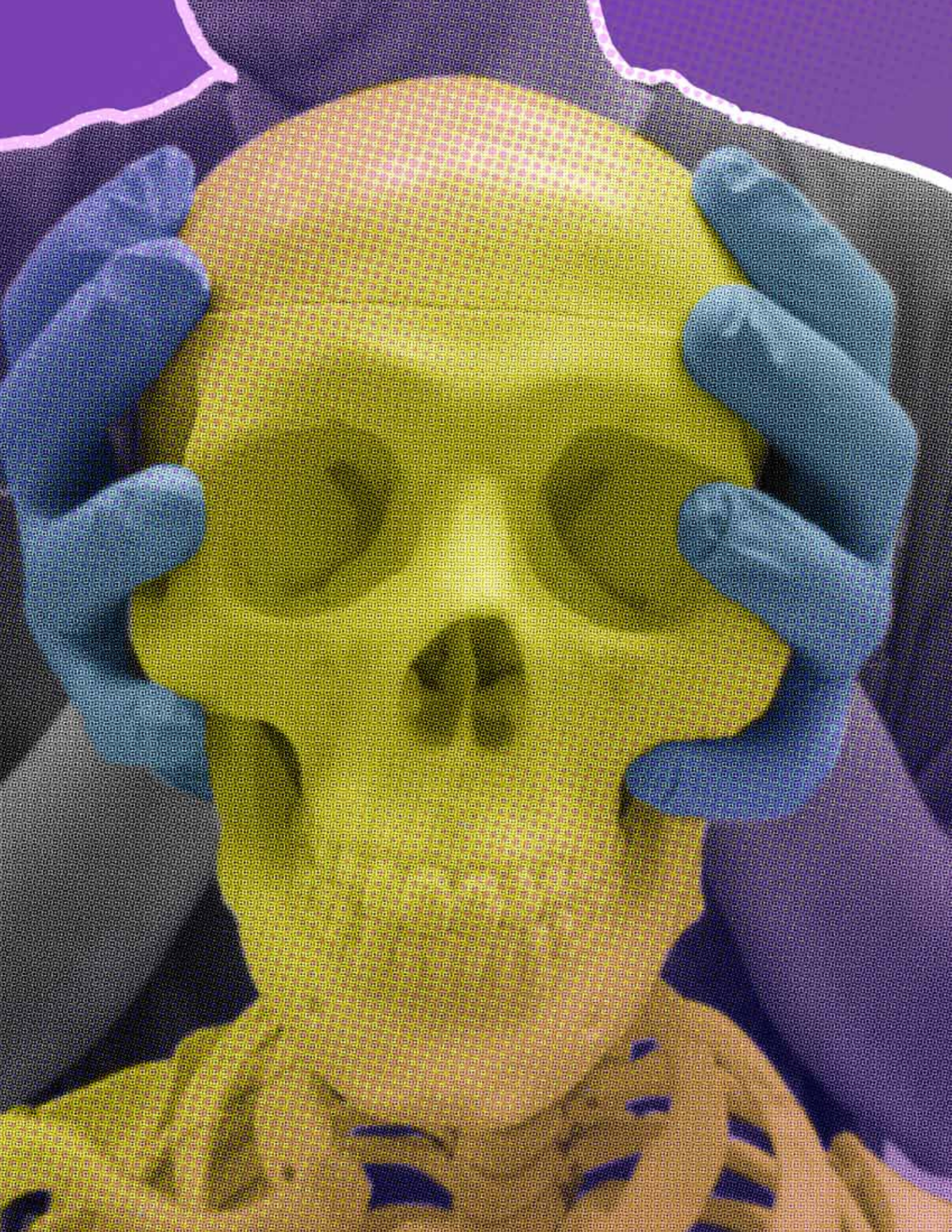
UNIVERSITY OF TORONTO
SURGICAL SKILLS CENTRE
AT MOUNT SINAI HOSPITAL

ANNUAL REPORT 2012



Introduction

The University of Toronto Surgical Skills Centre at Mt. Sinai Hospital proudly presents its annual report for the September 2011 to August 2012 academic year.

Working with exceptional international companies and teaching capable, dedicated learners from a number of disciplines, it is no surprise that this year has been one of great excitement, changes, and growth.

Our Vision

Traditionally, surgical skills have been acquired in the operating room. However, with the complexity of modern surgical procedures and an increasing premium on surgery time, it is no longer feasible to rely on past methodology to encourage the acquisition of novel skills.

The Surgical Skills Centre provides a laboratory setting where basic and complex surgical procedures can be learned and practiced. Given the opportunity for repetition of technique and direct feedback, surgeons achieve a higher level of expertise at a higher rate of acquisition.

Honing the efficacy of its training method, the centre conducts educational research in skill acquisition and evaluation. This research provides answers to fundamental educational issues and produces an impressive record of surgical innovation.

Through a dedication to thoughtful, effective surgical training, the Surgical Skills Centre has become an internationally recognized centre of excellence in surgical education.

The AEI Consortium is a network of 60 Level I and 5 Level II ACS-accredited education institutes. It offers global opportunities for collaboration, research, and access to resources from fellow institutes and the ACS Division of Education. The first institutes were accredited in June 2006.

The ACS Division of Education is responsible for managing the accreditation program. Through the use of the ACS AEI Standards and Criteria, participating institutes and skills centres ensure the delivery of the highest quality surgical education.

Since December 2006, the Surgical Skills Centre has been a level 1 accredited institute.

Mission

- To change the way fundamental surgical skills are taught and evaluated
- To provide a platform for continuing education in surgical skills
- To provide a laboratory for research in, and development of, surgical skills innovation
- To promote and enhance the teaching of surgical skills through the Surgical Skills Centre

Fundamentals of Laparoscopic Surgery

Since 2008 the Surgical Skills Centre has been an accredited testing site for the Fundamentals of Laparoscopic Surgery (FLS). Accreditation was obtained through The Society of American Gastrointesinal and Endoscopic Surgeons (SAGES) and endorsed by the American College of Surgeons (ACS).

FLS testing ensures surgical residents, fellows, and surgeons learn laparoscopic skills with consistency and through a scientifically accepted method. Not procedure specific, FLS is an applicable learning tool for general surgery, gynecology, and urology.

Dedicated to the promotion of FLS testing standards, Surgical Skills Centre Manager, Lisa Satterthwaite, has been an official proctor since 2008 and in January 2012, Jason Faria, Surgical Skills Centre Technician, attended 3 days of training in Boston, and is now, also, an official FLS proctor.

UNIVERSITY OF TORONTO

Once again, it gives me great pleasure to provide some remarks for this Annual Report, and offer my utmost support to the Surgical Skills Centre (SSC) at Mount Sinai Hospital. It has been a momentous year in many ways, and I am very pleased that the SSC continues to be recognized as one of Canada's lead centres for surgical skills training.

I must begin with offering my sincere thanks to Helen MacRae who served magnificently and capably in the position of SSC Director this past decade. Under her leadership, the SSC at Mt Sinai Hospital grew in leaps and bounds. The academic output from the SSC has been prodigious with numerous peer reviewed publications on the acquisition of surgical skills from such high impact journals as the New England Journal of Medicine, Annals of Surgery, and the American Journal of Surgery, to name a few. In addition, the SSC and the Department of Surgery has been the beneficiary of grants obtained through the Physicians Services Incorporated Foundation, the Canadian Institutes of Health Research, and the Association for Surgical Education, thanks to Helen.

This past year, we organized a search for Helen MacRae's replacement, and I am very pleased to report that Oleg Safir, Division of Orthopedics, Mt Sinai Hospital will now serve as the Director of the SSC. Oleg performed his residency training in Orthopedics in Toronto, and spent 2 years at the Ontario Institute for Studies in Education at the University of Toronto working towards his Masters on the topic of the development of technical skills in surgical education. He has published numerous papers in the orthopedics and surgical education literature, and has already articulated a wonderful plan for the continuity of academic excellence in the acquisition of surgical skills by medical students, residents and fellows. We welcome Oleg in his new role as SSC Director.

I would also like to take this opportunity to thank SSC Manager, Lisa Satterthwaite, and staff. Their commitment and devotion to the SSC are inspiring. They have helped to keep us at the leading edge of surgical education and training. Our partnership with Mount Sinai Hospital must also be acknowledged here for without their continued willingness to support the SSC, none of our successes would have been possible. This past year, the SSC has been the focal point for over 50 Continuing Medical Education (CME) courses which have served to keep faculty updated, and to provide required revenue to support the infrastructure and ongoing costs of the SSC. In this regard, I should like to thank Covidien for its major leadership role in financially supporting the SSC at Mt Sinai Hospital, and all our corporate sponsors for providing the required stability for operations at the SSC.

There is no question that we are heading towards competency based assessments and curricular development across all surgical specialties in the near future. In my mind, there is no better way to ensure that we train residents and fellows to their maximum potential as surgeons than through the courses and models that are available on an ongoing basis at the SSC at Mt Sinai Hospital.

James Rutka

James T Rutka, MD, PhD, FRCSC, FACS, FAAP, FAANS
RS McLaughlin Professor and Chair
Department of Surgery, University of Toronto

SIMSINAI

In the past year, we have been developing an overall strategic plan for education at Mount Sinai Hospital which I am delighted to announce will build on the tremendous expertise in simulation at Sinai which the Surgical Skills Centre continues to contribute to in a major way. Key goals of the Education Plan will be to increase the development, use and evaluation of innovative education approaches, to significantly expand team-based, interdisciplinary learning that is focused on improving patient outcomes and the patient experience, and to increase our educational research productivity.

It has been a pleasure to work with the centre's new D.H. Gales Director Dr. Oleg Safir, Lisa Satterthwaite, Manager of SSC and PREPS, and Dr. Sev Perelman, Director of PREPS, in developing a new vision for SimSinai which will be the umbrella organization bringing together the simulation and skill based programs at Mount Sinai to maximize our resource sharing, curriculum design expertise, and program planning.

The Surgical Skills Centre continues to be a showcase and exemplar of innovative, competency based medical education and I would like to congratulate Dr. Safir and the SSC team on an excellent and productive year. We look forward to developing programs with the help of the SSC in the coming months which are team based and involve simulation in surgical and other acute care settings, in which health professionals across disciplines come together to learn how to improve crisis resource management, communication and collaboration. These efforts will bring teams together, in a safe educational environment, to incorporate deliberate practice around difficult clinical scenarios, and allow for reflective feedback and learning. It is our expectation that these opportunities for team based learning will undoubtedly improve patient care, the ultimate goal of all of our health professional education programs.

The University of Toronto Surgical Skills Centre at Mount Sinai Hospital is invaluable to our local undergraduate and postgraduate programs associated with University of Toronto ranging across an increasing number of disciplines. The national and international leadership and impact that the Centre holds is a great source of pride for the Hospital and our community of educators.

Jacqueline James

Jacqueline James MD MEd FRCPC
Vice President Education

UNIVERSITY OF TORONTO
SURGICAL SKILLS CENTRE
AT MOUNT SINAI HOSPITAL

Since its inception, the University of Toronto Surgical Skills Centre (SSC) at Mount Sinai Hospital has been a flagship for medical student and resident education. Dr. Helen MacRae has helped to establish the SSC as a ground breaking educational centre that is internationally recognized for its expertise in teaching technical skills as well as for its research into medical education. Dr. MacRae stepped down as the D.H. Gales Director earlier this year, and it is a great privilege and honour for me to follow in her footsteps as the new Director of the SSC.

Numerous studies have consistently demonstrated the value and need for technical skills training outside of the clinical setting to ensure that doctors can employ these skills safely and confidently in clinical practice – indeed, a lab very similar to SSC was recently featured in an episode of a very popular medical drama show on television, which illustrates how integral the role of such labs has become in the way that doctors are trained. Recently, one of our major projects has been to work with the University of Toronto Department of Surgery on a new pilot Competency-Based Curriculum in Orthopaedics (CBC). This curriculum is designed to train and graduate residents based on demonstrated proficiency, rather than time spent in training. One of the major innovations from this program is a one-month module entitled the Toronto Orthopedic Boot Camp (TOBC), during which first year residents focus on acquiring fundamental orthopaedic and basic surgical skills at the SSC prior to the start of their clinical training. TOBC has been designed by a team of educators from the Department of Surgery including myself and Dr. Ranil Sonnadara, our SSC Scientist. It is taught and supervised by a dedicated team of staff clinicians, orthopedic fellows, nurses and other allied health care providers. The design of this module has generated overwhelming positive feedback from residents and orthopedic staff, and data collected over the last few years has shown how effective this kind of training can be. These findings have encouraged the Division of Orthopaedics to integrate this module into our current program for all incoming orthopedic residents starting July 2011, and in fact, several other medical schools are starting to integrate this approach into their residency programs.

Since we now understand the power of the TOBC approach to training technical skills, my vision is to expand this approach to other surgical subspecialties so that they can benefit from what we have learned through this pilot curriculum. In order to implement an intensive curriculum such as TOBC across all surgical subspecialties, we need to develop a committee of surgeons and educators who can facilitate the collaboration with other surgical skill centers at the various University of Toronto hospitals. Through partnerships, we will be able to better harness educational resources that are present in order to enable larger numbers of students and residents to benefit from the wealth of knowledge and expertise that exists within the Toronto area. Other recent work from SSC has shown that student-directed learning can be a very powerful tool that can have far-reaching benefits, and I believe that there are opportunities to put in place resources that will enable our residents to take a more active role in their own education. We are planning to put in place a practice space which has 24 hour access for trainees who want to practice their skills and techniques outside of regular hours. These are only a few of the concepts I hope to implement over the next little while.
I am firmly committed to fostering innovation and growth within the SSC. Of course, maintaining a strong research program is key if we are to continue to stay at the forefront of surgical education, and consequently this remains a major priority for both the SSC and the University of Toronto.

I am honored to serve as the new D.H. Gales Director and I am excited for the opportunity to build on the successes of my predecessors. I look forward to working with Lisa Satterthwaite, the rest of SSC team, and the entire Toronto Surgical community to continue to advance and improve the field of surgical education.

Oleg Safir

Oleg Safir, MD, MEd
D.H. Gales Director of the University of Toronto Surgical Skills Centre

Governance


The University of Toronto
Faculty of Medicine
The University of Toronto
Department of Surgery
Mount Sinai Hospital
Steering Commitee
D.H Gales
Surgical Skills Director
Surgical Skills Manager
PGY1 Core
Curriculum Commitee
Education Research Commitee
Surgical Skills Staff

Staff Bios

Dr. Oleg Safir D.H.Gales Director

Dr. Oleg Safir was appointed as the new D.H. Gales Director of the University of Toronto Surgical Skills Centre on January 1st 2012. An orthopaedic surgeon at Mount Sinai Hospital, he graduated from the Medical Academy in Dnepropetrovsk, Ukraine before completing his training in orthopaedic surgery at the University of Tel Aviv, Israel. Extremely interested in surgical education, Dr. Safir completed a clinical and research fellowship in adult lower extremity reconstruction at Mount Sinai Hospital in 2006. He also completed a masters degree in 2008 from the Ontario Institute for Studies in Education and a fellowship at the Wilson Centre for Research in Education where his studies focused on the topic of self-directed learning in the acquisition of surgical skills.

Lisa Satterthwaite Manager

Ms. Satterthwaite holds an RPN diploma from Scarborough General Hospital and an honours diploma in operating room techniques from Humber College. For 12 years she has managed the Surgical Skills Centre, supporting the development and delivery of OSATS and PAME examinations, implementing the PGY-1 core curriculum, supporting research programs, aiding division specific and undergraduate year 3 programming, and continuing medical education sessions.

Shunne Leung Assistant Manager

Mr. Leung has been Assistant Manager at the Surgical Skills Centre for 11 years. The primary resource for technology related subjects, Mr. Leung also serves as support to the manager's office in day-to-day operations. With a B.Sc degree in pharmacology and a certificate in business, Mr. Leung holds a unique and diverse set of competencies. With previous work experience in medical products and surgical instrumentation, Mr. Leung is essential in delivering an effective medical learning experience.

Dezan Rego Surgical Technician

Mrs. Rego has worked at Mount Sinai Hospital for over 30 years, 12 of which at the Centre. She holds a diploma in sterile supply processing from Centennial College. In 2001 and 2006 Mrs. Rego was the proud recipient of the Karen McGibbon Award of Excellence from Mount Sinai Hospital. She enjoys working one-on-one with both medical students and surgical residents, and offering guidance to the enthusiastic group of co-op students and volunteers.

Marina Romanova Surgical Technician

Ms. Romanova has now been a part of the Surgical Skills Centre team for 10 years. She holds an M.D. diploma from Riga Medical Institute, Latvia and a PhD in Medical Science from the University of Russia. Before joining the team, Marina worked as a Cardiology Research Technician at St.Michael's Hospital. Ms. Romanova appreciates individuals with a wide range of education and experience, and finds problem solving with co-workers especially rewarding.

Jason Faria Surgical Technician

Mr. Faria has now been a full time employee at the Surgical Skills Centre for 4 years. He began work following an intensive co-operative education placement through Central Commerce Collegiate. His keen interest and collaborative ability is a wonderful asset to the team. Jason thrives in the collegial atmosphere of the Surgical Skills Centre and he applies these skills with inspiring fervor.

Serenity Thomas Surgical Technician

Ms. Thomas has been working in the Surgical Skills Centre for 7 years as a part-time technician. She graduated from the University of Toronto in 2000 and holds a bachelor of arts in bioethics. Ms. Thomas values that while at work, she is able to continue her personal learning experience while contributing to the education of medical students and residents.

Dionne Banton Business Officer

Ms. Banton attended the George Brown College Special Events for Destination Tourism program, from which she graduated in 2005. Her work life at Mount Sinai Hospital began in 2009 with Five Star Catering as the Event Coordinator. A new opportunity at the Surgical Skills Centre allowed Ms. Banton to join the team in September 2010 as the full time business officer.

Dr. Ranil Sonnadara Research Scientist

Dr. Sonnadara's research focuses mainly in the areas of motor control, sensory-motor integration, skill acquisition, and skill evaluation. His primary position is as Research Scientist with the Surgical Skills Centre, but Dr. Sonnadara also holds appointments in the Department of Surgery, the Wilson Centre, the Faculty of Physical Education and Health at the University of Toronto, and in the Department of Kinesiology at McMaster University.

Dr. Oleg Safir

Marina Romanova

Lisa Satterthwaite

Jason Faria

Shunne Leung

Serenity Thomas

Dezan Rego

Dionne Banton

Dr. Ranil Sonnadara

Staff Development

Over the past year, the staff members at the Surgical Skills Centre have taken part in a Mount Sinai run initiative to develop more effective relationships and teams in the workplace.

The initiative utilizes the Angela & David Feldman Leadership Education Program and the Department of Organizational Development and Workforce Planning to offer an employee development certification. This certification promotes skill development by teaching core workplace competencies. The aim is to build a stronger team with better communication skills.

The program consists of four mandatory core workshops and four elective workshops based on individual goals, interests, and development needs.

The Surgical Skills Centre congratulates Lisa Satterthwaite, who has completed the "Management Development Certificate Program," and Dionne Banton, Jason Faria, and Dezan Rego who have each completed the "Employee Development Certificate Program." In the following year, the centre plans for all its staff members to take part in certification, and looks forward to their imminent success.

Certified annually in first aid and CPR, the staff also participates yearly in the Mount Sinai Hospital eLearning courses in Emergency Codes, Radiation Safety, Violence Prevention, WHMIS, Privacy Module, and Safety Engineered Devices.

Core Curriculum

In September 2011, the Surgical Skills Centre began its 13th iteration of the Core Curriculum. This cycle saw a record 54 residents enrolled, including first year residents from all divisions of the Department of Surgery, residents from the Department of Otolaryngology, and for the first time, residents from the Department of Oral and Maxillofacial Surgery.

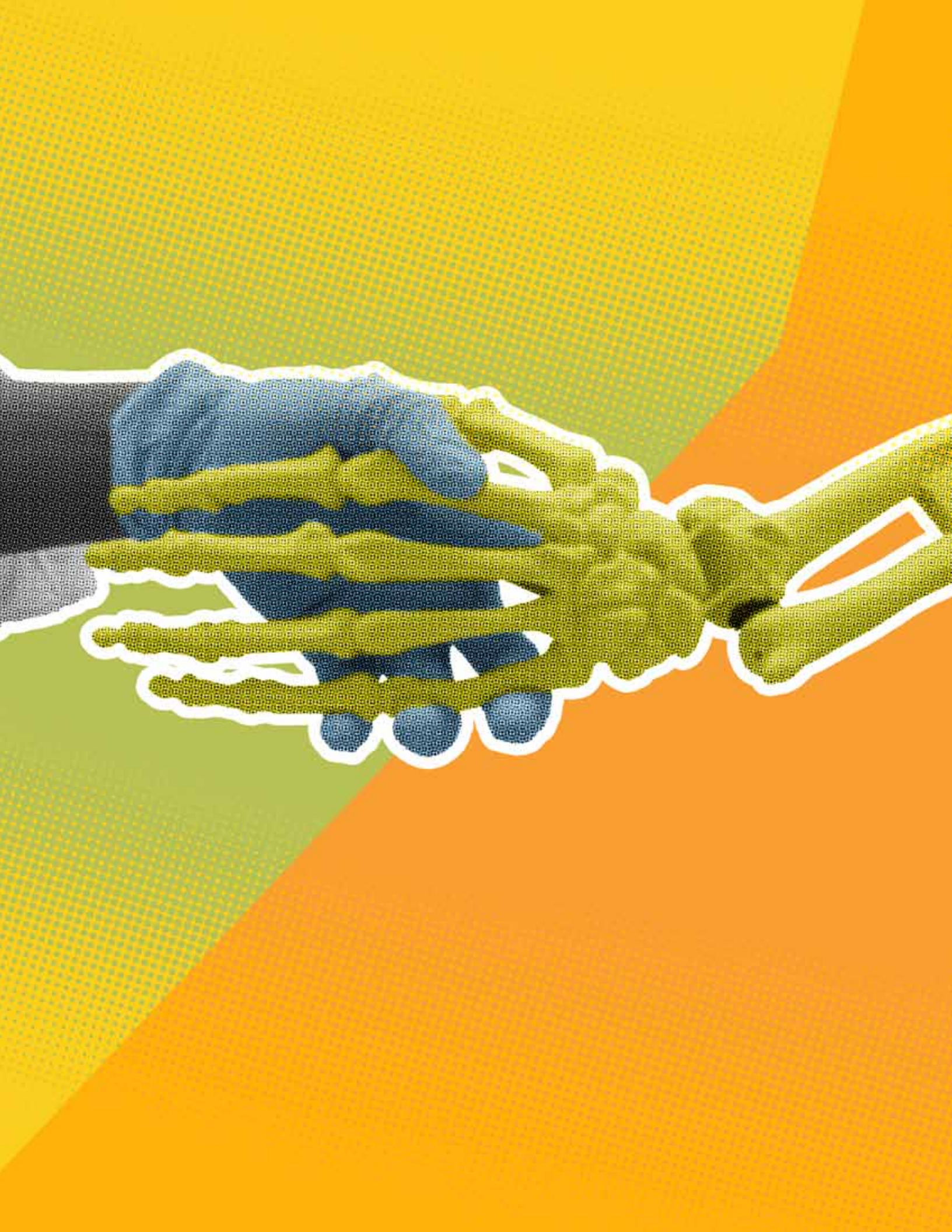
Each year, at least 27 courses are held focusing on the repetition of basic surgical skills. Compounded by practice, these skills form the foundation of expert surgical technique. Courses are complimented by an open door practice policy for all residents at all levels of training. The centre accommodates email bookings and to date almost 5000 residents have taken advantage of its independent learning opportunities.

Curriculum is constantly reviewed and updates incorporated. In past years, additions have included courses such as the Mini Objective Structured Assessment of Technical Skills (MOSATS) in order to periodically provide specific, individualized feedback and prepare residents for the larger Objective Structured Assessment of Technical Skills (OSATS) held at year's end. The 8-station bell-ringer exam is adjudicated by faculty members and is mandatory for all PGY 1 residents. At its completion, a ranked result table is distributed to program directors along with course attendance records for review and inclusion in individual performance dossiers.

Through the use of competitive, individualized programs such as the MOSATS, surgical residents are provided an extremely well-rounded and consistent education apposite to their specific needs.

Core Curriculum 2011-2012 Schedule

September 13, 2011	1	Principles of Asepsis and Instrument ID
September 20, 2011	2	Instrument Handling and Knot Tying/Suturing
September 27, 2011	3	Catheterization, Suprapubic & Urethral & Abd Wound Closure
October 4, 2011	4	Airway Management and Surgical Airway
October 11, 2011	5	Tissue Handling Dissection and Wound Closure
October 18, 2011	6	Tendon Injuries and Carpal Tunnel Release
October 25, 2011	7	MOSATS and Practice Session
November 1, 2011	8	Chest Tube, Thoracentisis and Arterial Line
November 8, 2011	9	Line Insertions - IJ, Subclavian, Femoral, IV Insert & Cut Down
November 15, 2011	10	Advanced Tissue Handling and Wound Closure (Z Plasty and Elliptical Incision)
November 22, 2011	11	Bowel Anastomosis - Hand Sewn and Stapled
November 29, 2011	12	Bone Fixation and Casting
December 6, 2011	13	Open Practice Session Self Directed No Faculty Required
January 10, 2012	14	Microsurgery and Bone Harvesting
January 17, 2012	15	Microsurgery and Skin Grafting
January 24, 2012	16	MOSATS and Practice Stations
January 31, 2011	17	Laparoscopic Skills I
February 7, 2012	18	Laparoscopic Skills II / Arthroscopy-Gallbladder & Knot Tying
February 14, 2012	19	Laparoscopic Skills III / Arthroscopy-Gallbladder & Knot Tying
February 21, 2012	20	Laparoscopic Skills V - Competition!!!
February 28, 2012	21	Vascular Control I -Arterial and IVC - Practice Exam for POS.
March 6, 2012	22	Vascular Control II - Arterial and IVC - POS Review - Faculty will be in at 0900 hrs
March 20, 2012	23	MOSATS and Practice Sessions
April 3, 2012	24	Electro surgery and Skin and Liver Biopsy Session
April 17, 2012	25	HSK Animal Annex Group A
April 24, 2012	26	HSK Animal Annex Group B
May 1, 2012	27	Practice Session 1
May 8, 2012	28	OSATS EXAM



Teaching Award

Each academic year, the PGY 1 residents who take part in the weekly Core Curriculum sessions nominate an outstanding faculty member to receive the University of Toronto Surgical Skills Centre at Mount Sinai Hospital Education Award for Outstanding Contributions to Surgical Skills Education. The recipient of the award is a faculty member who has taught during the Core Curriculum sessions.

This year, the centre is pleased to announce Dr. Helen MacRae as the 2011-2012 winner of this award. Dr. MacRae is a General Surgeon at Mount Sinai Hospital and former D.H Gales Director of the Surgical Skills Centre. She specializes in colorectal surgery.

Laparoscopic Skills Competition

The laparoscopic skills challenge has been hosted by the Surgical Skills Centre since 2004. PGY 1 residents who attend the weekly Core Curriculum sessions pair up and compete for the fastest total time in 3 laparoscopic tasks: peg transfer, cobra rope, and intracorporeal knot tying. The 2 teams who achieve the fastest total time in all 3 tasks advance to battle head-to-head for the championship title.

Held Tuesday, February 21st, 2012 the centre congratulates the winners, Drs. Daniel Abramowitz and Matt Strickland, both from the Division of General Surgery. Their team, "Wiggle Wiggle" was a strong contender to win from the onset, and through perseverance and excellent technical ability, they fulfilled their instructors' grand expectations.

2012 Laparoscopic Skills Competition winning team Drs. Daniel Abramowitz and Matt Strickland

Academia

This past year saw the Surgical Skills Centre busier than ever before, with courses running almost daily and often multiple sessions per day.

Interprofessional Initiatives

Initially opened for the exclusive use of the University of Toronto Department of Surgery, the Surgical Skills Centre now facilitates courses for a multitude of different divisions, departments, and disciplines.

Widening the scope of its courses once again, this past year has seen the integration of varying disciplines within a single course, promoting an inclusive vision of the medical field. For instance, during the Toronto Voice Course, attendees, typically ENT physicians, also included speech pathologists who provided an invaluable glimpse into the recovery process following surgical intervention. Similarly, during the ACLS courses taught in the PREPS lab, attendees and instructors alike came from a wide range of specialties, including nursing, respiratory therapy, emergency service workers, and physicians.

"Interprofessional communication is fundamental to effective teamworking in medicine." (Journal of the Royal Society of Medicine, August 2011, vol. 2)

The Neonatal Resuscitation Program (NRP) incorporating medical doctors, registered nurses, registered respiratory therapists and midwives aimed to extensively replicate the ethical, surgical and interdisciplinary dilemmas which are present in baby care.

The Competency Based Curriculum "Toronto Orthopaedic Boot Camp" will potentially shift the educational dynamic of Canadian medical institutions. The residents who attended the Boot Camp were taught by staff surgeons, fellows, nurse educators and casting technicians.

Through inter-professional initiatives the Surgical Skills Centre aims to produce the best-educated and well-rounded surgeons, as well as providing cutting edge training for all medical disciplines that are hosted at the lab.

Dr. Daryl Kuecy from the Division of Vascular Surgery teaches wound closure techniques to PGY 1 residents.

Department of Surgery

Dr. James Rutka, Department Chair

Division of Anatomy Dr. Cindi Morshead, Division Chair

The Division of Anatomy holds sessions for the Division of General Surgery and the Division of Orthopaedic surgery utilizing the instruments and facilities supplied by the Surgical Skills Centre.

Willed Body Program Dr. Cindi Morshead B.Sc., Ph.D

Through the generosity of our donors, the University of Toronto Faculty of Medicine Division of Anatomy is able to continue the long-standing tradition of providing excellent medical education and training. Through the Willed Body Program we strive to exceed the standards of anatomical donation and the regulations determined by the Anatomy Act of Ontario.

The University of Toronto has the largest willed-body program in Canada, receiving 180 body donations in 2011. As part of our not-for-profit program, the Division of Anatomy provides over 75 cadavers for courses, examinations, and surgical training at the Surgical Skills Centre alone. In total, the Willed Body Program facilitates over 2000 medical, dental, physiotherapy, occupation therapy, undergraduate, and graduate students, all of whom learn from hands-on experience with cadaveric material.

Each year the Division of Anatomy holds a memorial service to honour our donors for their priceless gift of knowledge. Family and friends of the donors, along with staff, students, faculty, representatives from the Chief Coroner's Office, and the funeral services that service the Willed Body Program, are invited to attend. This is a memorable experience for everyone, and provides students with a unique insight into donors' lives.

Division of Cardiac Surgery Dr. Gideon Cohen, Program Director

The Division of Cardiac Surgery holds numerous sessions for both junior and senior residents. Each session focuses on different aspects of one very important skill, valve replacement.

Division of General Surgery Dr. Najma Ahmed, Program Director

The first year residents from the Division of General Surgery attend 7 sessions of basic surgical skills prior to the commencement of the core curriculum in September. These summer sessions are meant to introduce the residents to the skills central to their specialty. The sessions are: an introduction to suturing and knot tying; staplers and stapled intestinal anastomosis; abdominal closure and hand sewn bowel anastomosis; an introduction to laparoscopy skills; laparoscopic knots and suturing; and a percutaneous tracheostomy workshop.

Division of Neurosurgery Dr. Abhaya Kulkarni, Program Director

The Division of Neurosurgery holds yearly sessions in cranio-orbital dissection, skull dissection, supratentorial cranial approaches, and infratentorial cranial approaches.

44th W. Lougheed Microsurgical Course

This past year, the Surgical Skills Centre facilitated 10 Canadian residents at the weeklong 44th W. Lougheed Microsurgical Course. A bi-annual didactic and technical microsurgical course, it has been calculated that almost every neurosurgical resident in Canada has attended the course at some time in its illustrious history. The course is supervised by Dr. M. Tymianski and caters to residents in their mid to late clinical training.

Division of Orthopaedic Surgery Dr. Peter Ferguson, Program Director

The Division of Orthopaedic Surgery features 4 Orthopaedic Education Days where residents study the fundamentals of spinal surgery, shoulder arthroscopy, elbow dissection, and elbow plating. The division also holds courses including Foot and Ankle Dissection: Self Learning and Teaching Exercises, and the 8th Annual University of Toronto Spine Course.

Competency Based Curriculum (CBC)

The Competency Based Curriculum (CBC), pioneered at the Surgical Skills Centre by the University of Toronto Department of Surgery, is a potent tool for surgical instruction. Emphasizing a targeted learning of core surgical techniques using models and simulations, the program, now in its third year, is for the first time enrolling 5 orthopaedic residents into its Orthopaedic Boot Camp, which focuses on training residents early in their surgical careers. With competency measured at course-end by an OSATS, past years' data has shown a marked increase in technical ability and retention between CBC participants and classically trained residents; with CBC participants attaining a score more similar to senior residents who have trained on average 42 months longer than classical junior residents.

With overwhelmingly positive research data, the Surgical Skills Centre looks to the CBC program as the prototype for the future development of surgical education.

Division of Plastic and Reconstructive Surgery Dr. Mitchell Brown, Program Director

The Division of Plastic and Reconstructive Surgery holds junior and senior resident-specific programming throughout the year. For PGY 2 residents, courses include finger amputation, tendon repair, microsurgical repair, breast marking, and AO hand and wrist fixation. For senior residents, sessions involve regional flaps of the upper and lower extremities, trunk, and face; common approaches to the brachial plexus; and AO hand and wrist fixation.

Division of Urology Dr. Robert Stewart, Program Director

The Division of Urology holds a number of skills sessions throughout the year, with the majority geared specifically towards junior and senior residents. Sessions for junior residents include an introduction to urology, open porcine labs, cadaver labs for incontinence, microsurgery, ureteroscopy, laparoscopic black boxes, and laparoscopic porcine labs. Senior resident sessions also include FLS practice and virtual reality bladder injection.

Division of Vascular Surgery Dr. Thomas Lindsay, Program Director

The Division of Vascular Surgery holds yearly summer sessions on the same important procedures that include: open abdominal aortic aneurysm repair, femoral anastomosis, carotid endarterectomy, and tibial bypass.

Department of Medicine Dr. Wendy Levinson, Department Chair

The students at the Department of Medicine are divided into 4 academies: FitzGerald, Mississauga Academy of Medicine, Peters-Boyd, and Wightman-Berris. Each Academy enrolls approximately 230 students.

Division of Critical Care Medicine Dr. Arthur Slutsky, Program Director

Working with the Division of Respirology, the Division of Critical Care Medicine held bronchoscopy courses and airway workshops in the Surgical Skills Centre facilities.

Division of Emergency Medicine Dr. Michael Schull, Division Chair

The Division of Emergency Medicine utilizes the Surgical Skills Centre and PREPS lab for a variety of courses throughout the year, including the 10th Annual Emergency Medicine Surgical Skills Workshop and ProWESS course.

Procedure Workshop for Emergency Surgical Skills (ProWESS)

A one-day workshop for practicing emergency physicians, ProWESS enhances EM technical skills outside of the clinical setting. Through hands-on workshops, participants improve their ability to effectively diagnose and treat common potentially life-threatening EM conditions. Workshops include the application of splints and casts, central line insertion, intraosseous insertions, lumbar puncture, needle and chest tube thoracostomy, percutaneous cricothyrotomy, and extensor tendon repair.

Division of General Internal Medicine Dr. Rodrigo B. Cavacanty, Program

60 faculty members work tirelessly in the Division of General Internal Medicine researching and observing the surgical education for which they have become renowned. The division holds the Core Resident Integrated Scholarly Programs (CRISP) and CRISP Code Blue at the Surgical Skills Centre.

Core Resident Integrated Scholarly Programs (CRISP)

Started in 1996, the CRISP program prepares first to third year internal medicine residents with the competencies required for independent surgical practice. Utilizing didactic talks, small group discussions, standardized patients, multimedia presentations, simulators, and regular resident assessments, CRISP follows strict CanMED guidelines for medical education. Separated by year, residents undergo weekly training directed at their experience level: PGY1 focuses on knowledge and skill, PGY2 on leadership and independent sophisticated thought, and PGY3 on senior level competencies. Once a month, all three groups meet to discuss the key issues facing modern surgery.

Division of Respirology Dr. Jae Yang, Program Director

This past year, the Division of Respirology worked hand in hand with the Division of Critical Care Medicine and the Surgical Skills Centre in the development of a course on the basics of bronchoscopy.

In addition, the division held sessions on pleural ultrasonography and chest tube insertion.

Division of Cardiology Dr. Eric Yu, Program Director

Integral to the education of residents from the Division of Internal Medicine, the Division of Cardiology annually holds the Cardiology Procedural Skills Course.

Division of Nephrology Dr. Rulan Parkeh, Program Director

The Surgical Skills Centre proudly welcomes the Division of Nephrology to its facilities where they now hold both research and programs on resident procedural training in central line insertion.

Department of Obstetrics and Gynaecology (OBGYN) Dr. Alan Bocking, Department Chair

During the academic year, the Department of Obstetrics and Gynaecology runs a bi-weekly core curriculum that focuses heavily on the repetition of fundamental surgical skills. Studying skills such as suturing and surgical knot tying, resident proficiency is measured at year's end by an OSATS exam.

Courses for first year residents include perineal injury repair, an outlet forceps course, laser course, B-Lynch suturing, knot tying, an instrumentation course, marsupialization and wound closure, bowel repair, bladder repair, hysteroscopic endometrial resectioning, and review operative vaginal delivery.

For second-year residents and up, courses include laparoscopic knot tying, laparoscopic cystectomy, and a surgical emergency course.

For her outstanding dedication to this program, the Surgical Skills Centre thanks Dr. Heather Shapiro, who recently stepped down from her position as Residency Program Director. In her place, the centre welcomes Dr. Donna Steele, OBGYN specialist from St. Michael's Hospital.

Department of Otolaryngology - Head & Neck Surgery

Dr. Ian Witterick, Department Chair

Otolaryngology PGY1 residents participate in the Department of Surgery's surgical skills curriculum. During the 2011-12 academic year residents took part in courses including Soft Tissue Dissection, Sinus Dissection, Rhinoplasty, Facial Fillers, Facial Plating, and multiple Temporal Bone Drilling Sessions.

Also facilitating continuing medical education and professional development, the department offered hands-on courses including Advanced Sinus Surgery, Endoscopic Ear Surgery, Rhinoplasty, The Toronto Voice Course, and in July 2012 undertook an intense, three-day skills program focusing on tissue transfers for head and neck reconstruction: the Microvascular Head and Neck Reconstruction course.

The Surgical Skills Centre would like to congratulate Dr. Ian Witterick, newly appointed Chair of the Department of Otolaryngology. Also deserving recognition is Dr. Patrick Gullane, the departing chair, who for 10 years was an asset to his post.

The 2nd North American Endoscopic Ear Surgery Course

Enrolling ENT residents and surgeons, the North American Endoscopic Ear Surgery Course, provides 2 days of lectures, dissections, and valuable meetings between surgeons from around the world. Drs. David Pothier, Adrian James, Muaaz Tarabichi, and Joao Flavio Nogueira spoke on a number of topics including endoscope use as adjunct to traditional ear surgery and paediatric considerations in endoscopic ear surgery.

Advanced Sinus Surgery Course

Including intense moderated panel discussions on an encompassing range of surgical and otolarygnolical topics, in-depth expert guided 4-hour dissections, 7 keynote speakers, faculty lunches, and lasting 2 days, the Advanced Sinus Surgery Course is an invaluable tool in providing a diverse, thoughtful surgical education. Supported by the Royal College of Physicians and Surgeons of Canada (RCPSC), the Surgical Skills Centre is overjoyed to have the opportunity to once again present this opportunity to residents of the Department of Otolaryngology.

Toronto Rhinoplasty Course

Filling the Surgical Skills Centre wet lab, presentation rooms, and PREPS lab with sessions and events, the Toronto Rhinoplasty Course offers residents an inclusive selection of rhinoplasty topics for study. As lectures outline techniques including nasal tip grafting, injectable rhinoplasty, and patient analysis, dissections run into early evening alongside video discussions and interactive workshops. Maintaining 1 faculty member per 2.2 residents, the course is a catalyst in the dialogue between surgeons of the otolaryngology discipline.

Department of Ophthalmology

Dr. Jeffrey Hurwitz, Department Chair

The Department of Ophthalmology holds a plethora of courses focusing both on reconstructive surgery and core ophthalmological technique. Plastic and reconstructive courses include lid repair, flaps and graphs. Courses focusing on core techniques include strabismus suturing and advanced strabismus suturing.

Toronto Ophthalmology Residency Introductory Course (TORIC)

For 20 years, TORIC has prepared junior residents for the rigour of specialty training in Ophthalmology. Over 2 weeks, residents from across Canada attend ophthalmology workshops taught by Canadian professors and supplemented by online readings and videos. The course concentrates on areas such as disease management and diagnosis, typically lacking in early residency trainings. This year 44 residents attended the course, an increase consistent with the growth of previous years.

Department of Anaesthesia

Dr. Brian P. Kavanagh, Department Chair

The Department of Anaesthesia is in its second year of holding sessions at the Surgical Skills Centre. The department holds general courses on airway management and bronchoscopy, as well as specific skills sessions focusing on sterile technique, spinal and neuraxial ultrasound, central line, surgical airway management, and bronchoscopy.

Department of Medical Imaging

Dr. Patrice Bret, Department Chair

The Department of Medical Imaging is the largest such department in Canada. Holding courses for residents and surgeons at every degree of certification. The department annually holds the Spinal Intervention Course outlining the techniques to be used in a variety of surgical contexts.

Undergradate Medical Education

Director of Undergraduate Education
Dr. George Christakis
Division of Cardiac Surgery

Pre-Clerkship Director
Dr. Ronald Kodama
Division of Urology

Undergraduate Coordinator Mr. Shibu Thomas

All 3rd year medical students from the University of Toronto participate in a 4-day training session at the Surgical Skills Centre. The Crash Course in Surgery teaches these undergrads basic surgical skills including chest tube insertion, catheterization, casting, knot tying, and suturing. In one academic year, approximately 250 participants attend.

Moving forward, in 2013 students from the University of Toronto Mississauga Campus will also be taking part in the course.

Emergency Medicine Clerkship

The Emergency Medicine Clerkship is the cornerstone of emergency medicine undergraduate education at the University of Toronto.

In a 4-week rotation, 3rd year medical students attend 2 days of sessions at the Surgical Skills Centre. During these sessions, faculty instructs students on airway management, cardiac dysrhythmias, chest pain, wound management, and EM casting and splinting.

Surgical Exploration and Discovery Program (SEAD)

SEAD is a 2-week program launched by the University of Toronto for medical students looking to gain further surgical experience during medical school. The first program of its kind in Canada, is facilitates 20 first year students. The program provides a unique combination of informal discussions on surgical lifestyle, career options, and observership specialties, with hands-on surgical skills and simulation workshops.

The Surgical Skills Centre is proud to provide the location and surgical models for SEAD, accommodating a diverse range of procedures including knot tying, vascular anastomosis, tendon repair, Z-plasty, microsurgery, bone plating, and aortic valve replacement.

Industry

The Surgical Skills Centre is honored to be the recipient of a number of unrestricted educational grants that allow the development of crucial medical initiatives. Provided by international companies at the top of their respective industries, with grants the centre is able to enlist local and international surgeons to instruct and attend courses demonstrating the novel, effective technologies and techniques being developed.

Working each year with an increasing number of exceptional companies, the Surgical Skills Centre is proud to foster relationships so meritorious in the medical field.

Company	Course Name
Allergan	Nurse Conference. Regional Symposium.
AO North America	Pelvic and Acetabular Fracture Management Course.
Biomet	Knee Implant Lab.
Cook Medical	Medical Educational Lab. Hands-On Cadaver Lab: Separation Component. Vertebralplasty Course.
Covidien	Complex Abdominal Wall Reconstruction. Cadaveric Anatomical Abdominal Dissection.
Ethicon Professional Education Canada	Advanced Forum for Pelvic Floor Experts.
Global Dental Implant Institute	Advanced Periodontal and Implant Surgery.
Medtronic	Direct Lateral Interbody Fusion Spine Surgery and Procedures utilizing the Device for Intervertebral Assisted Motion. Spinal Techniques Course. 7th Annual Canadian Contemporary Spinal Techniques Course.
Southmedic	Management of the Open Abdomen
Smith & Nephew / Linvatec	10th Biennial Canadian Orthopaedic Foot and Ankle Symposium.
Smith & Nephew	Foot and Ankle Symposium.
Stryker	Filming for Educational Video.
Synthes Canada Ltd	Thoracic Trauma Technology Symposium.
Tribe Medical	Foot and Ankle Technology.
Wright Medical	Foot and Ankle Surgery: Advances in Fixation. Total Knee Replacement. Foot and Ankle Repair.
Zimmer	Knee Navigation. Revision Hip.

Research

- Sonnadara, R.R., & Azzie, G. Developing a low-cost motion tracking system for paediatric laparoscopic trainers.
- Sonnadara, R.R., Safir, O., & Mihilaidis, A. Developing a multi-modal platform for motion tracking.
- Sonnadara, R.R., Garbedian, S., & Safir, O. Refining the GRS.
- Sonnadara, R.R., Garbedian, S., & Safir, O. Examining the effectiveness of video-based assessment.
- Sonnadara, R.R., & Moulton, C.A. Surgical planning.
- Murnaghan, L., Mayne, I.P., Sonnadara, R.R., & Brydges, R. Examining the efficacy and validity of a new casting simulator.
- Lin, V.Y.W., & Sonnadara, R.R. Examining the effect of video game experience on surgical skills in ENT surgeons.
- Veillette, C., Hodgins, J., & Sonnadara, R.R. Plotting the arthroscopic learning curve using LC-CUSUM.
- Sonnadara, R.R., Safir, O., Nousiainen, M., & Ferguson, P. A new approach to evaluating proficiency.
- Sonnadara, R.R., Safir, O., & Wei, D. Finding the appropriate balance between technical and outcomes-based instruction.
- Sonnadara, R.R., Safir, O., Aldebarry, H., & Garbedian, S. Examining the efficacy of student-led learning paradigms.
- Sonnadara, R.R., & Safir, O. Long-term benefits of starting residency with an intensive-based technical skills course.
- Sonnadara, R.R., Leroux, T., Safir, O., & Backstein, D. Examining the validity and reliability of a new assessment tool for arthoplasty procedures.
- Moulton, C.A., Gallinger, S., Macrae, H., & Sonnadara, R.R. Assessing consistency of slowing down moments in surgical expertise.
- McQuillan, R. Improving the duality of nephrology resident procedural training.
- Grantcharov, T., Zevin, B. Ex-vivo laparoscopic bariatric surgical training curriculum.
- Cavalcanti, R., Stroud, L. Using the integrated procedural performance instrument (IPPI) for assessment of US guided CVC insertion by internal medicine residents: Combined assessment of communication and technical skills.
- Fandino, M., Macdonald, K. Determining the best graft sealant combination in an in-vitro and in-vivo porcine model.
- Hoppe, D., Safir, O., Dubrowski, A. Evaluating the effectiveness of the BID teaching method within an orthopaedic boot camp.
- Petrera, M., Theodoropoulos, J., Dwyer, T., Ogilvie-Harris, D., Veillette, C. Accuracy of suture anchors placement in antero-inferior glenoid using a trans-subscapularis versus a low anterior portal.
- Friedman, Z., Arzola, C., Hayter, M. Teamwork skills during an acute clinical simulation scenario.

Colorectal Objective Structured Assessment of Technical Skill (COSATS)

The COSATS is a performance based technical skills exam developed by the Surgical Skills Centre in conjunction with the American Society of Colon and Rectal Surgeons (ASCRS) and the American Board of Colon and Rectal Surgery (ABCRS). Lead by Drs. Helen MacRae and Sandra de Montbrun, the COSATS aspire to become the new standard for colorectal board certification.

Running in June 2011, the initial project demonstrated that the COSATS had the ability to reliably discriminate between graduating colorectal residents and graduating general surgery residents. This year, a second ACRS-funded study compares the COSATS results of newly graduated colorectal surgeons to the results of their colorectal surgery examinations.

To be held in September 2012, this project is the first attempt of any surgical society to move forward with directly assessing technical skills at certification. The Surgical Skills Centre is gratified to be part of what will undoubtedly be a paradigm shifting study.

Farewell Dr. Ranil Sonnadara

In May 2012 the Surgical Skills Centre bid farewell to its research scientist Ranil Sonnadara, PhD. Opening the Sonnadara lab at McMaster University, he will be continuing his study of skill acquisition and expert performance in surgical trainees, athletes, and musicians. He will also be keeping his appointments as Assistant Professor at the Department of Surgery and Educator Researcher at the University of Toronto Wilson Centre.

Outreach

Refugee Camp in the Heart of Campus

Once per year, the University of Toronto chapter of the Friends of Medecins Sans Frontieres (MSF), erect a refugee camp in the heart of downtown Toronto. Featuring stations where students can learn the basic procedures and rituals required in assisting refugees, the event drew hundreds of eager participants and drew attention to the necessities of global medical awareness. In support of this indispensable cause, the Surgical Skills Centre proudly supplied instruments, sutures, models, and gauze as well as former MSF expats to recount their experiences.

Take Our Kids to Work

In association with the Take Our Kids to Work Foundation, each year the Surgical Skills Centre invites the staff of Mount Sinai Hospital to enroll their children in sessions teaching basic surgical skills. This past year, a multitude of children made their way through the centre, enthusiastic to learn not just about their parent's careers, but potentially experiencing that first taste of their future professions.

Shunne demonstrating bone assembly on "Take your kids to work day".

International Paediatric Emergency Medicine Elective (IPEME)

From Israel, Palestine, Jordan, and Canada, the Surgical Skills Centre in association with PASCIH, CISEPO, Sickkids, Mount Sinai, and the University of Toronto, invited 10 medical students to take part in discussions and workshops regarding pressing paediatric issues. At the centre, participants learned to suture, cast, and splint patients, vital skills in the battle against increasing child mortality rates. Forging edifying bonds between surgeons of different countries, IPEME provides participants the opportunity to improve both their medical and geographic awareness.

Summer Mentorship Program in the Health Sciences

Each year the Surgical Skills Centre, in conjunction with the University of Toronto Faculty of Medicine, holds courses for under-privileged high school students. Introducing them to aspects of the medical field, including basic surgical procedures and application processes, the program attempts to encourage social mobility and equality through the medical field.

New Developments

Congratulations New ASE Committee Chair

The Surgical Skills Centre congratulates Lisa Satterthwaite, the new chair for the ASE Committee of Nurses in Surgical Education. A member of the National Simulation Curriculum Committee sponsored by the American College of Surgeons and the Association of Program Directors in Surgery, Ms. Satterthwaite's managerial prowess and experience will undoubtedly be an asset to the ASE, as it has been to the Surgical Skills Centre.

Surgical Skills Centre Saves Hope

The Surgical Skills Centre is excited to be involved in the production of Saving Hope, the television show garnering the highest ratings of the 2012 summer season with over 4.5 million weekly viewers. Produced jointly for CTV in Canada and NBC in the United States, the centre has provided medical consultation services in addition to permitting the use of an extensive array of surgical instruments.

Surgical Skills: Surgical Videos

This year the Surgical Skills Centre has released a series of instructional medical videos aimed at providing medical residents and practicing surgical staff a visual aid to assist in procedural review. To be used alone or in conjunction with The Surgical Skills Centre Core Curriculum Syllabus, the videos feature senior surgeons performing and narrating procedures including hand sewn and stapled bowel anastomosis, airway management, and abdominal wound closure. Filmed by experienced surgical videographer Shunne Leung, the videos are available online through the American College of Surgeons website (www.facs.org).

Volunteers/Co-Op

Since the Surgical Skills Centre first opened in 1998 it has been fortunate to be able to provide volunteers and co-op students with training. Each year, the lab is supported by at least 2 volunteers and 2 co-op students whose duties range as far as their career goals. In return, they are provided a one of a kind opportunity to explore the disciplines of surgical education and surgery. In many cases, their experiences have been at a pivotal time in their lives, one that has helped guide them into pursuing a job in the health care field. In fact, one of the lab's full time technicians, Jason Faria, was hired after completing not one, but two co-op terms at the centre.

This year, the Surgical Skills Centre was pleased to invite Julian Escallon, Anna Hrynko, Stephanie Grossman, and Saerom Youn as volunteers; and Corey Forster of Westmount Collegiate, Lianne Ralph of Bishop Allen Academy, Myles Sinyard of Senator O'Connor College School, and Laren Waichberg of Wesmount Collegiate as co-op students.

Volunteer Stephanie Grossman cleans neck replacement pads from IV torso simulation models.

Visitors

The Surgical Skills Centre is a world-renowned teaching and research facility. It is thus no surprise that it receives numerous tour requests every year from health care professionals from all corners of the world.

These international encounters facilitate a mutual exchange of information, allowing the centre to develop surgical and fiscal relationships with hospitals around the globe.

Visitors this past year have included:

Dr. Kim Brown, Director, UTMB Surgical Simulation Center, the University of Texas Medical Branch, Galveston, Texas, USA

Dr. Tim Eglington, Consultant Colorectal Surgeon at Christchurch Hospital, Senior Lecturer in Surgery at the University of Otago, Christchurch, New Zealand.

Dr. Purwita Wicaya Laksmi, Center of Medical Education, Medical Education and Research Center, Faculty of Medicine, The University of Indonesia, Jakarta, Indonesia.

Dr. Ardi Findyartini, Center of Medical Education, Medical Education and Research Center, Faculty of Medicine, The University of Indonesia, Jakarta, Indonesia.

Dr. T.J. ten Cate, Director, Doctoral Program in Medical Education, Utrecht University Medical Center, Utrecht, the Netherlands.

Dr. Alexandra Cope, Clinical Research Fellow, Imperial College, Harry Morton Travelling Fellowship, London, England.

Dr. Amitai Ziv, Founder and Director of MSR, the Israel Center for Medical Simulation, Deputy Director of the Sheba Medical Center at Tel Hashomer. Tel Hashomer, Israel.

Dr. Donald Bae, Orthopedic Surgeon, Boston Childrens Hospital, Boston, Massachusetts, USA.

Dr. Steven Frick, Orthopedic Surgeon, Levine Children's Specialty Center, Charlotte, North Carolina. USA.

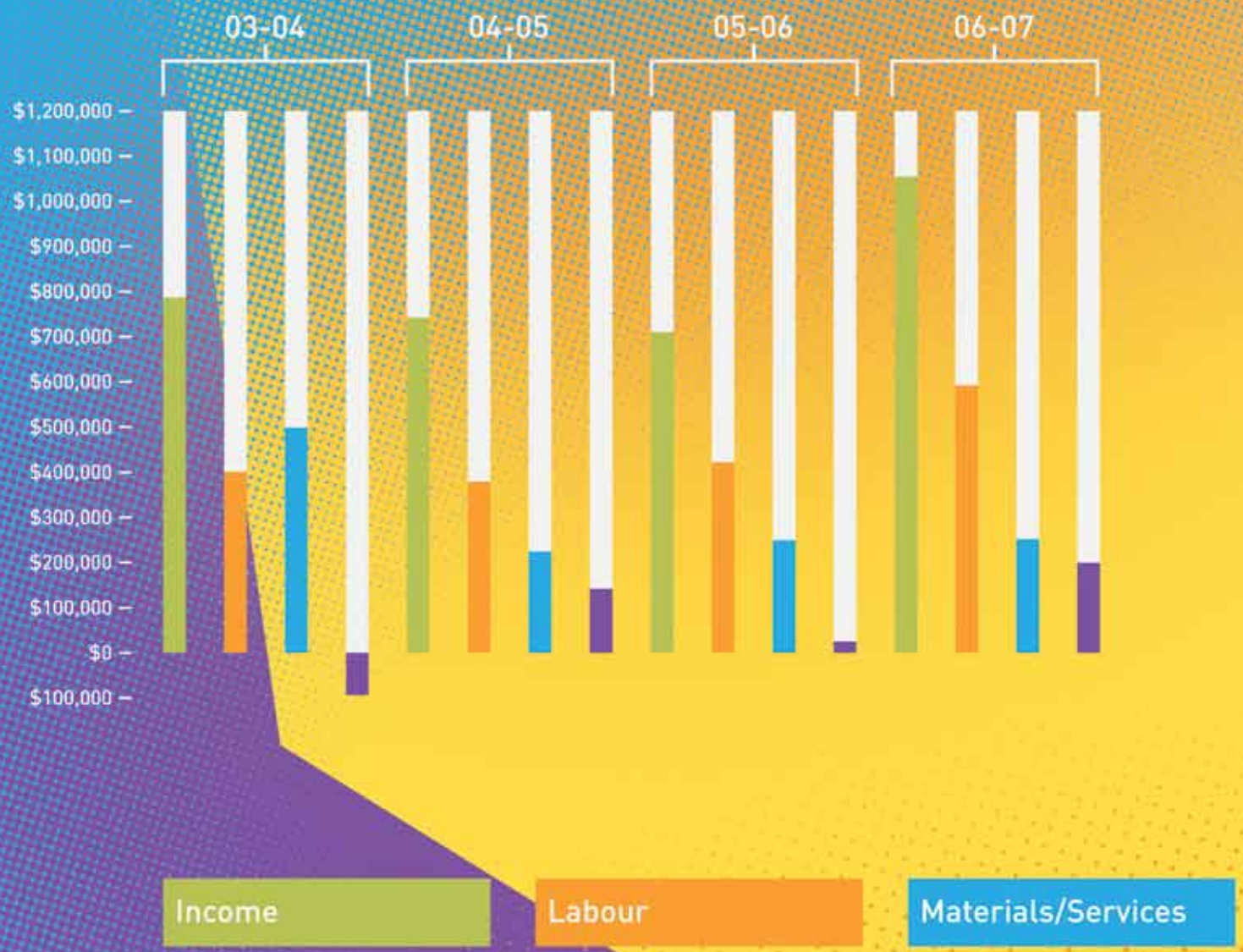
Dr. Bruno Fuchs, Professor and Head of Orthopedic Oncology, Director of Orthopedic Research, Balgrist University Hospital, Zurich, Switzerland.

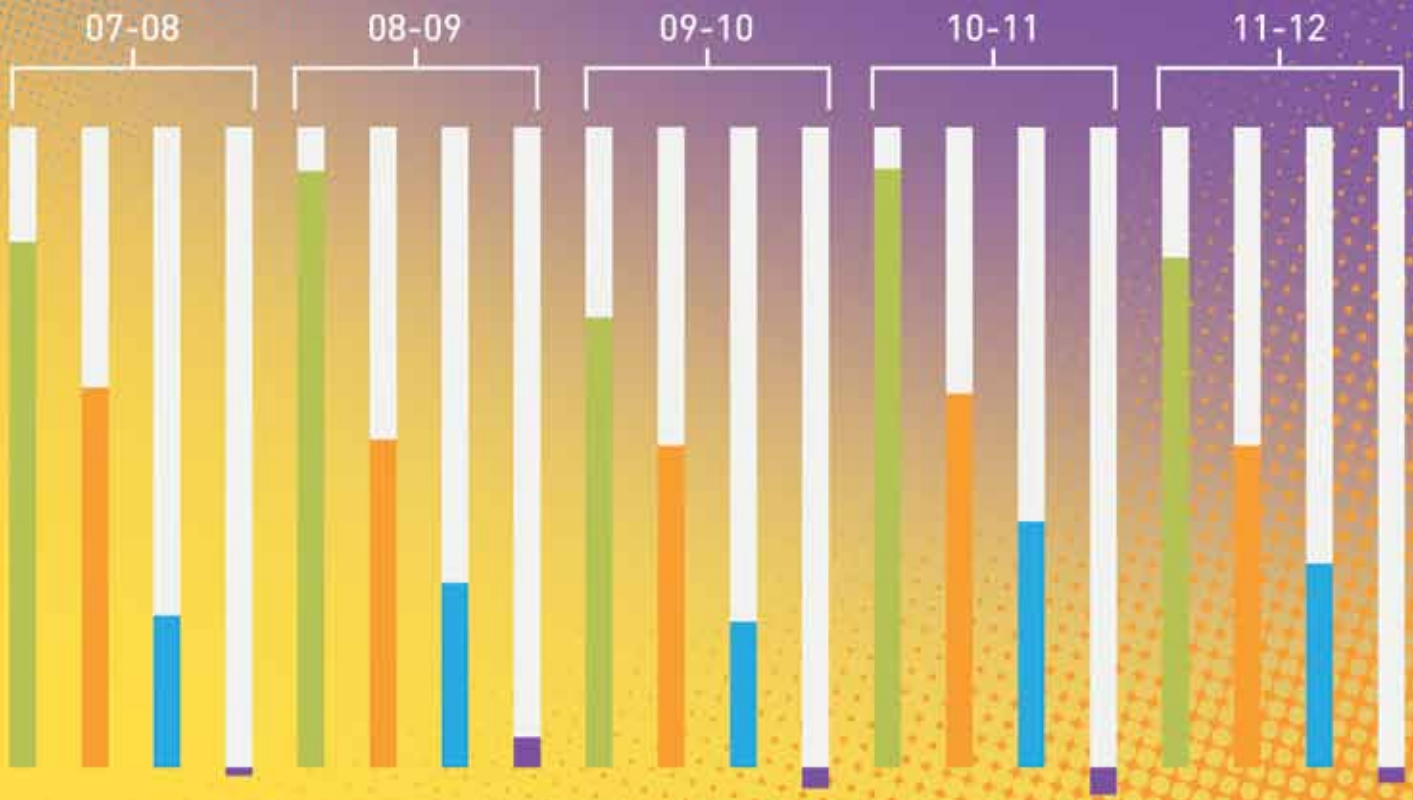
Delegation from Saudi German Hospital. Riyadh, Saudi Arabia.

Dr. Gordon Porter, SIM-One Thunder Bay Group

Surgeons and Medical Faculty from Indonesia, China, Jamaica, Ethiopia,

Financial Summary





Net Earnings

Program for Resuscitation Education and Patient Safety (PREPS)

PREPS began in 2003 at the initiative of Mount Sinai Hospital's former critical care specialist Dr. Randy Wax. Its purpose was to introduce simulation-based training to critical care clinicians. For the last two years, it has been lead by Dr. Sev Perelman, an emergency physician at the Schwartz/Reisman Emergency Centre at Mount Sinai Hospital. Since the time of its foundation, PREPS has grown to become one of the largest and most respected centres for ACLS training in the Greater Toronto Area. However, the PREPS mandate has evolved to include a variety of other simulation-base activities.

The most important inclusions are related to improving patient care and patient experience at Mount Sinai. PREPS serves as a resource for the Mount Sinai Advanced Resuscitation Committee and assists in quality improvement initiatives. Among them, regularly conducted mock codes are held in order to identify and rectify the gaps in crisis interventions (code blues). Additionally, the PREPS team assists the emergency department in conducting team-training exercises by presenting a simulation-based course for teaching procedural sedation to Mount Sinai clinical teams.

PREPS faculty has also been involved in academic activities at the university level. PREPS has helped design and deploy one of the first simulation-based curriculums for emergency physicians undergoing training in family medicine (the CCFP-EM fellowship). In addition, PREPS collaborated with Dr. Oleg Safir, to develop the Critical Care Crisis Resource Management Seminar for first year surgical residents at the University of Toronto.

PREPS has become the hub for research programs centered on simulation-based education. Drs. Zeev Friedman, Eric You-ten, and Sev Perelman have secured several peer-reviewed grants to investigate various aspects of simulation training. With the help of the Department of Anaesthesia, PREPS secured a dedicated research fellow to conduct studies in co-operation with the Surgical Skills Centre.

Dr. Sev Perelman

Medical Director

A graduate from the University of Toronto Medical School and with a MSc in Cardiovascular Physiology, Dr. Perelman has received Emergency Medicine training from the University of Western Ontario. Both a Staff Emergency Physician at Mount Sinai Hospital and an Assistant Professor at the Department of Family and Community Medicine at the University of Toronto, Dr. Perelman has received formal training in simulation education from Harvard/MIT and MSR Center in Israel. He is also a credited Medical Director for ACLS from the Ontario Heart & Stroke foundation and a certified instructor for the Canadian Resuscitation Institute. He is published in peer-review medical journals including Annals of Emergency Medicine, Canadian Journal of Clinical Pharmacology, and The Journal of Clinical and Investigative Medicine. He is a recipient of the Canadian National Resident Research

Part of PREPS vision and mandate is to reach out to communities in need of training. Recently, the PREPS team travelled to Nunavut and trained more than half of the nurses of that territory in ACLS. PREPS also helped train ACLS instructors from Sault Ste. Marie, Ontario and will soon train the medical staff of CDF at Base Borden. The PREPS staff has helped to develop and organize an Ontario Ministry of Health and Long-term Care Short Emergency Medicine Experience (SEME) program for community-base family physicians interested in broadening the critical care skills relevant for their local practices.

The PREPS vision has outgrown just resuscitation training and is becoming a broad simulation-based program with a positive impact on patient care and clinical training. In the future, PREPS will grow even further as The SimSinai Centre, developing a stronger collaboration with local, national, and international partners for the benefit of trainees and patients alike.

Dr. Sev Perelman MD, MSc, CCFP(EM)

SARATOV64 Mobile Unit

Conceptualized in July 2011 by Dr. Sev Perelman for code blue simulation, the mobile unit (MU) "MU SARATOV 64" was built at the PREPS lab by Rustam Zinatullin and Mike Katsap in August of the same year.

The "MU SARATOV 64" is composed of three tiers. On the bottom tier, a compressor unit is used to supply air to a mannequin as a link box coordinates proper functionality. On the middle tier, a primary laptop is housed that operates the mannequin, as a touch screen and splitter allow the instructor to monitor laptop input. The top tier consists of two additional laptops primarily used for audio/video recording with HD cameras, allowing for a multiple angles to be viewed and displayed during debriefing sessions.

In July 2011, the "MU SARATOV 64" was put on a trial run, exposing staff to a routine hospital code blue event. Comments, mistakes, and suggestions were addressed in situ by Dr. Perelman. The trial confirmed the necessity of MU training and the involved Mount Sinai staff unanimously appreciated the opportunity. The entire MU setup took no more than twenty minutes, which included PREPS lab disassembly, transport, and reassembly at the predetermined training site.

Award and the North York General Hospital Award for Leadership in Family Medicine. The Surgical Skills Centre congratulates Dr. Perelman on receiving an Individual Award for Excellence in Teaching from the Wightman-Berris Academy which he adds to his many teaching awards and nominations.

Finch Taylor

PREPS Technician

Finch was originally hired in the fall of 2010 as part-time staff for the Surgical Skills Centre where his energy, hustle, humour and eagerness to learn, became a vital asset to the lab. With close to 20 years of computing experience combined with the knowledge acquired at the Surgical Skills Centre, Finch was a natural candidate to take over the reigns of the PREPS Lab from Rustam. Recently, using the schematics created by Paul Kulyk and Paul Olszynski, he constructed PREPS' new ultrasound simulator. He looks forward to the challenges that come with running PREPS as it heads in a new direction of growth and expansion.

Rustam Zinatullin

PREPS Technician

Born into a family of doctors, Mr. Zinatullin attended Saratov State Medical University before immigrating to Canada and graduating with an HBSc in biology from York University. Accepted into the American University of Antigua College of Medicine, he will be completing his medical studies in 2016. Among Rustam's many contributions to PREPS is the design and construction of "MU SARATOV 64".

The Nunavut Experience

For over a year, the Qikiqtani General Hospital in Iqaluit, Nunavut had tried to arrange an ACLS Instructors and Certification Course. Contacing the PREPS lab, a team was quickly assembled to provide the training. Dr. Kim Desouza, an ER Doctor from the University Health Network, and Mr. Scott Andrews, a critical care paramedic, were the elected team. The PREPS instructors, along with Dr. Sev Perelman, the ACLS medical director, trained even the Iqaluit hospital's chiefs of anaesthesia and emergency medicine, Drs. Steve Kraus and Claudia Kraft. Following the instructors' course, over fifty registered nurses and six doctors were trained to become certified ACLS providers.

This was the first high fidelity mannequin simulation ACLS course organized in Nunavut and the largest off-site ACLS training program conducted in the north. For many, it was their first ACLS training since graduation.

Without the industrious support of Lisa Satterthwaite, Dionne Banton, Rustam Zinatullin, Shunne Leung, and the rest of Surgical Skills Centre staff, success would not have been possible.

The three hi-fi simulators used for the program were graciously provided by Laerdal Medical (SimMan), The University of Ottawa Surgical Skills Centre (SimMan), and CAE Healthcare Canada (METIman). Their generous support was the building block of this successful initiative.

Edus2

Based on the work of the University of Saskatchewan's Paul Kulyk, B.Eng., B.Sc. and Paul Olszynski, MD, CCFP (EM), PREPS Technicians Finch and Rustam built an Emergency Department Ultrasound Simulator (Edus2).

Portable, the Edus2 gives trainees the opportunity to learn the indications, image generation, and image interpretational skills required when using an ultrasound in various surgical contexts.

Activated by RFID cards placed under the skin of existing simulation mannequins, Edus2 plays a prerecorded video when a repurposed low frequency probe is applied overtop. Multiple scans are possible during any given scenario including thoracic, cardiac, abdominal, and pelvic scans.

Edus2 appears to be the first simulator of its kind that can be used with any manufactured simulation mannequin.

PREPS would like to thank Mr. Kulyk and Dr. Olszynski for their efforts in designing Edus2 and sharing their knowledge with the medical community.

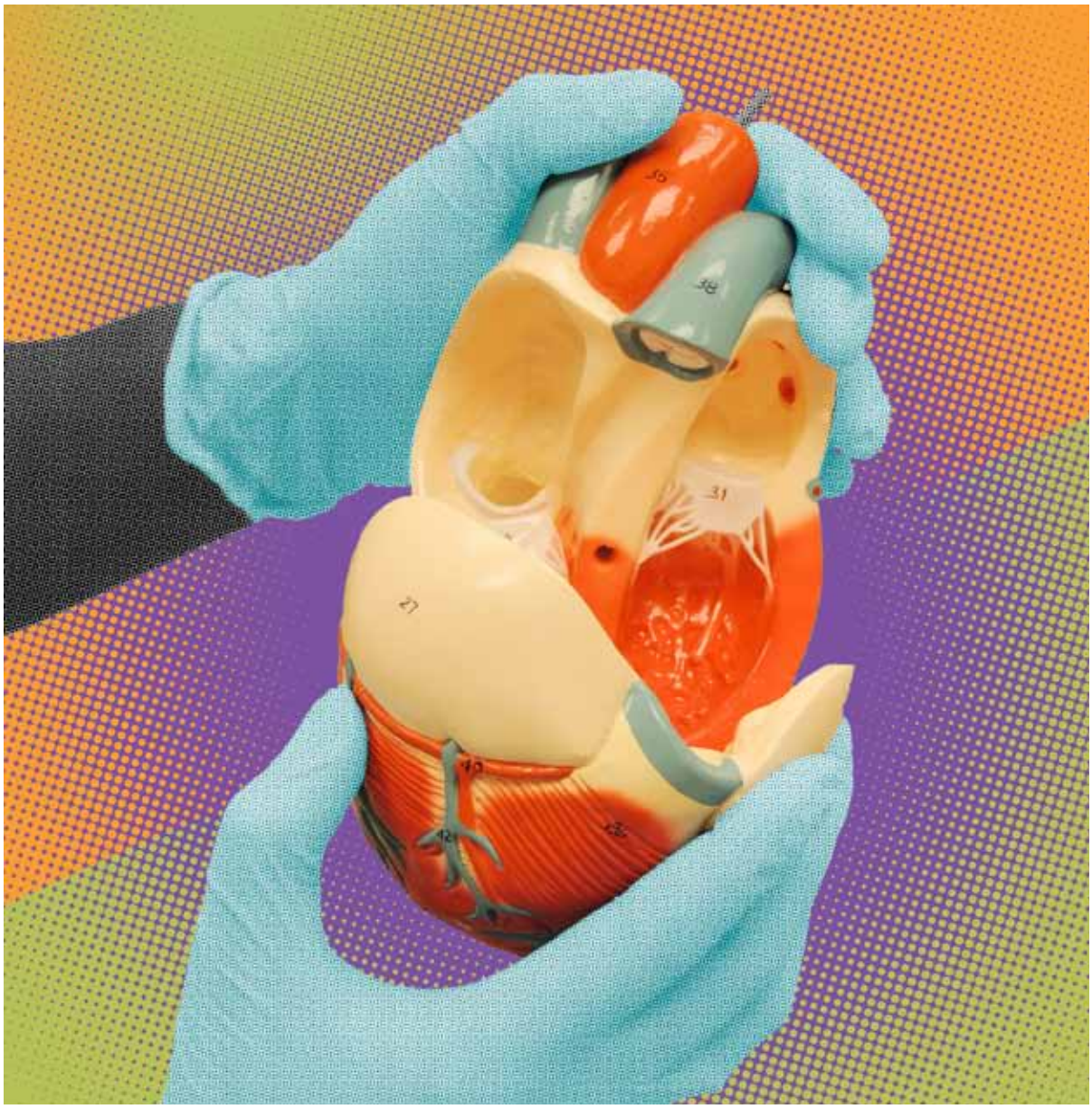
For more information visit their website: www. edus2.com

Supplemental Emergency Medicine Experience (SEME)

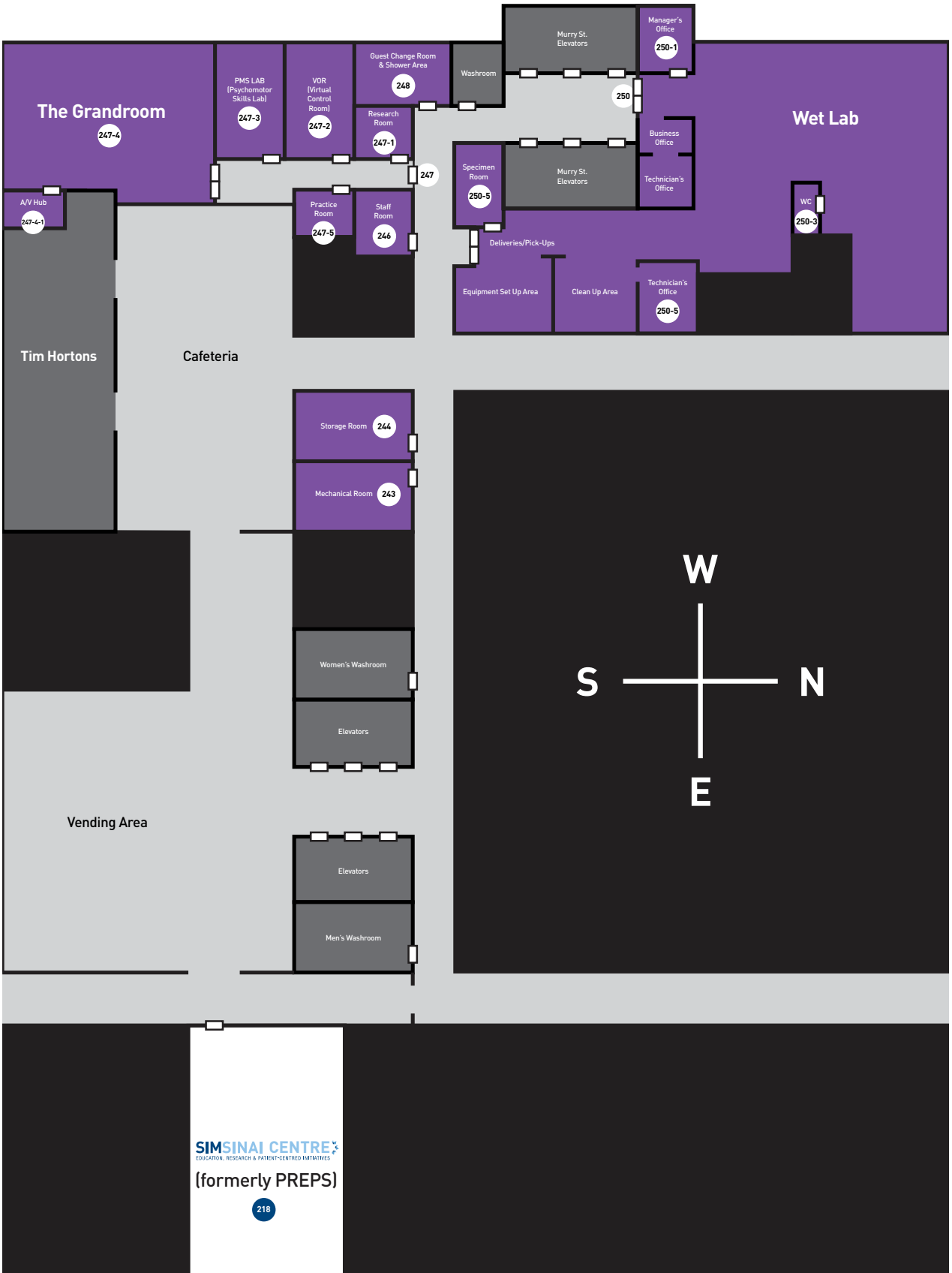
Instigated by Dr. Shirley Lee, Assistant Director of Education at the Schwartz/Reisman Emergency Centre at Mount Sinai Hospital and Assistant Professor with the Faculty of Medicine at the University of Toronto, SEME is a three-month, full-time, remunerated fellowship for family physicians.

SEME's goal is to provide a comprehensive, practical, and hands-on EM experience. Physicians undergo eight weeks of rotations in Toronto emergency departments with the option of supervised placements at rural or semi-rural hospitals. The academic portion of SEME is a series of 15 to 20 modules addressing key procedural and clinical areas. At the end of the twelfth and final week, physicians will have covered the principles of emergency medicine, ED legality, community-based issues, resuscitation, and cardiovascular, respiratory, abdominal, gastrointestinal, genitourinary, gynecological, neurological, and psychiatric emergencies. In addition, physicians will be trained in MSK and extreme emergencies, EM trauma, procedural sedation, and pediatric emergencies. Modules will be both web-based and taught in classroom sessions occurring at least once a week.

SEME is funded through the Department of Family and Community Medicine and the Ontario Ministry of Health and Long-Term Care



UNIVERSITY OF TORONTO
SURGICAL SKILLS CENTRE
AT MOUNT SINAI HOSPITAL



Supporters

It is with sincere gratitude that the Surgical Skills Centre acknowledges all of its tremendous supporters. The contributions that they make in support of surgical education allow the Surgical Skills Centre to remain at the forefront. It is due to their knowledge, generosity, and funding that the centre is able to grow.

The centre looks forward to its future partnerships with these, incredible, supporters.

Codman	COOK MEDICAL	CONMED LINVATEC
COVIDIEN	The D.H Gales Family Foundation	Edwards Lifesciences
Leica	Medtronic XOMED	MICROTEK
MOUNT SINAI HOSPITAL Joseph and Wolf Lebovic Health Complex	Mister GREEK MEAT MARKET	OLYMPUS
RBC Financial Group	smith&nephew	SORIN GROUP
ST. JUDE MEDICAL More control. Less risk.	STORZ KARL STORZ – ENDOSKOPE	SYNTHES
Surgery UNIVERSITY OF TORONTO	University Health Network	WRIGHT
ZEISS	zimmer	

Praise

Ontario Cancer Institute
Princess Margaret Hospital
University Health Network

Guided Therapeutics (GTx) Core
TECHNA

Techna Institute for the
Advancement of
Technology for Health

Institute of Medical Science
Otolaryngology-H&N Surgery
University of Toronto

July 11, 2012

Surgical Skills Centre
Mt. Sinai Hospital & University of Toronto
600 UniversityAvenue
Level 2 - Room 250
Toronto, Ontario
M5G 1X5

Dear Surgical Skills Centre Team:

We wish to express our sincere thanks to the Surgical Skills Centre (SSC) for your tremendous support of our translational research program.

The Guided Therapeutics (GTx) Program at The Princess Margaret Cancer Centre involves the development and clinical implementation of innovative imaging technology to transform cancer treatment. An integral step in this "bench to bedside" research is to rigorously evaluate new technology in a pre-clinical setting prior to safe deployment in clinical trials. The SSC provides state-of-the-art facilities to enable cadaveric surgical studies for the assessment of image-guidance systems and education of surgical residents and fellows.

Over the past 7 years, the support of the SSC has led directly to numerous scientific publications and presentations in the surgical literature, but more importantly, has allowed us to rapidly translate 3 innovative bench top developments into prospective clinical trials. The effectiveness of these systems in the OR, and the impact they are having on patient care, is a direct result of the support we have received from SSC.

In addition, we would like to specifically thank the entire team – Lisa, Marina, Dezan, Jason, Serenity, Shunne, Dionne – for always welcoming our requests for additional support with a smile and helpful suggestions, no matter how busy they are at the time. Thank you team!!

Sincerely,

The UHN TECHNA-GTx Research Program
Jonathan Irish, MD
Michael Daly, MSc
Harley Chan, PhD
David Jaffray, PhD
GTx Fellows & Residents

Surgery
UNIVERSITY OF TORONTO

MOUNT SINAI HOSPITAL

Joanne Fine Schwebel | Director
Volunteer Services | Interpreter Services
Mount Sinai Hospital | Joseph and Wolf Lebovic Health Complex
204-600 University Avenue,
Toronto, ON,
M5G 1X5

Dear Joanne,

On behalf of the University of Toronto Surgical Skills Centre at Mount Sinai Hospital I would like to extend my sincere congratulations to Saerom (Alice) Youn on her award being presented at the Mount Sinai Hospital Volunteer Recognition event.

Saerom has been a volunteer at our lab for several years. She is a dedicated assistant who has offered us her time and expertise in setting up, tearing down and the development of many programs surrounding surgical and medical education. Searom continues to bring her cheerful smile and easy presence to each shift. We are all very grateful for the support she has offered and look forward to future participation in the lab.

The award is well deserved and we share your thoughts in choosing Saerom for this prestigious honour.

Warm Regards,

Lisa Satterthwaite
Manager
University of Toronto
Surgical Skills Centre

UNIVERSITY OF TORONTO
SURGICAL SKILLS CENTRE
AT MOUNT SINAI HOSPITAL

600 University Ave.
Room 250
Toronto, Ontario, Canada
M5G 1X5

T: 416-586-4800 ext.2766
F: 416-586-8829
E: skills.centre@utoronto.ca

www.utoronto.ca/ssc

Managing Editor: Lisa Satterthwaite
Graphic Designer: Finch Taylor (finchdesigns.ca)
Contributing Editor: Zachary Ormut-Fleishman
Contributing Editor: Serenity Thomas