



UNIVERSITY OF TORONTO  
**SURGICAL SKILLS CENTRE**  
AT MOUNT SINAI HOSPITAL

2010-2011



# Our Vision

The University of Toronto Surgical Skills Centre at Mt. Sinai Hospital is pleased to present its Annual Report for the Academic Year 2010-2011. We continue to undergo changes and take on new and challenging roles.

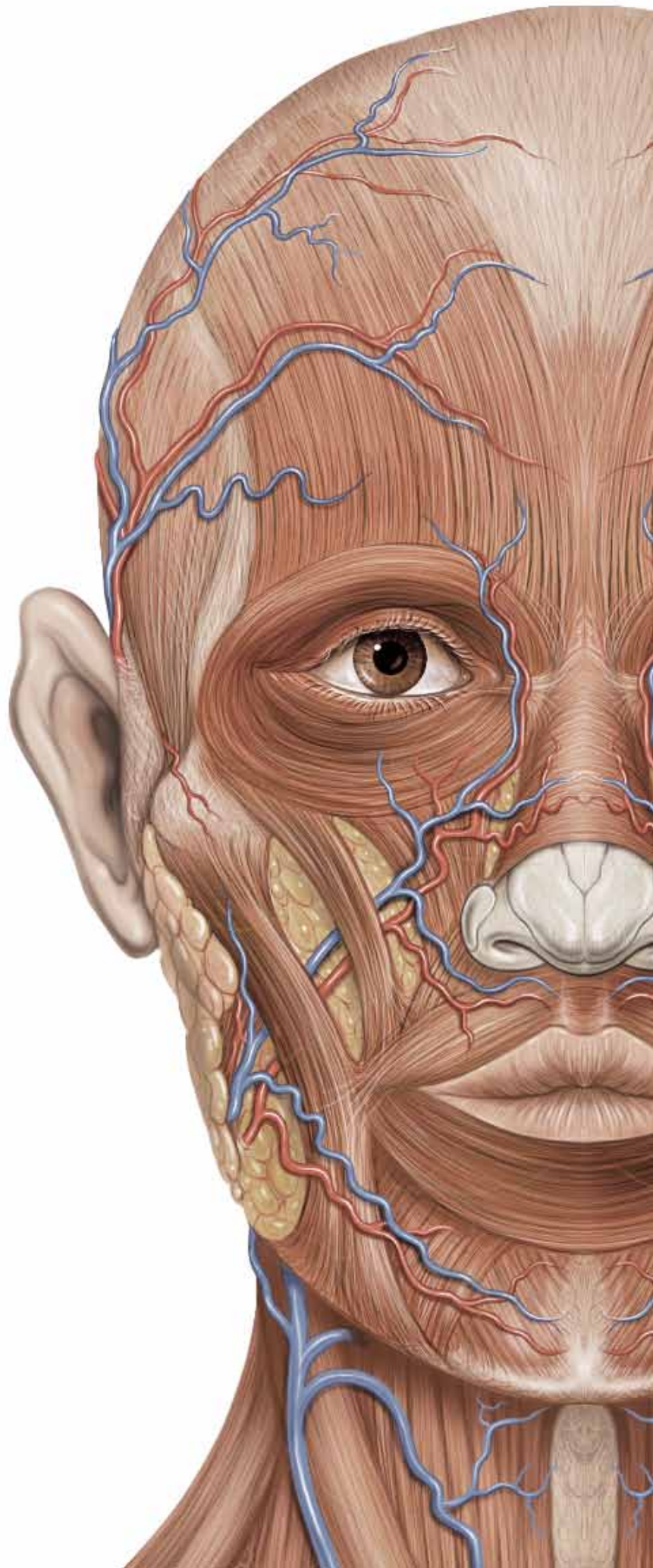
Traditionally, surgical skills have been acquired in the operating room. The complexity of surgical procedures and the premium placed on surgical time have increased. We can no longer expect surgeons to acquire novel skills in the operating room.

The University of Toronto Surgical Skills Centre at Mount Sinai Hospital provides a laboratory setting where basic and complex surgical procedures can be learned and practiced. Surgeons will achieve a higher level of expertise more rapidly in a laboratory setting, where they can employ educational principles of repeated practice and feedback. Educational research is conducted in skills acquisition and evaluation. This research will provide answers to fundamental educational issues and allowing testing of innovations in surgery.

It is our goal that this facility becomes an internationally recognized centre of excellence in surgical education.

## Our 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





# Letter from Dr. MacRae

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The Surgical Skills Centre has seen enormous growth in its programs within the University of Toronto community over the past decade. We have maintained accreditation as a Level I Education Institute with the American College of Surgeons. Education programs across all of the surgical disciplines are ongoing, and as well, there are multiple programs within other Departments of the Faculty of Medicine. We are an integral part of the education infrastructure of the Department of Surgery, and have been a model for other Skills Centres around the world. Over the next decade, I hope to see the SSC continue to push the boundaries, and expand on what can be done with simulation in surgery.

**“To lead people, walk beside them ... As for the best leaders, the people do not notice their existence. The next best, the people honor and praise. The next, the people fear; and the next, the people hate ...**

**When the best leader’s work is done the people say, ‘We did it ourselves!’”**

**– Lao-Tsu**

As the D.H. Gales Director, I have felt privileged to work with the tremendous staff of the SSC. Lisa is a dynamic, creative manager, who is constantly striving to get the most possible out of our resources. She is a phenomenal asset and ambassador for the Centre. Shunne, Dee, Marina, Jason, Dionne and Serenity are also models of the ‘can do’ attitude of the Centre. Each of them contributes hugely in their own special way, managing to soldier on with good humour, even when things get crazy! I am proud of the knowledge, professionalism and positive attitude of our staff.

I regret seeing my term as Director coming to an end. It has been an absolute pleasure to work with everyone involved. I would like to take this opportunity to thank the Gales family, especially Leslie Gales for her ongoing support of the Centre, and the Director’s position. I’d also like to thank the Department of Surgery for affording me the

opportunity to serve as the Director. Finally, my deepest gratitude goes to the staff for their hard work and support throughout the years, and especially to Lisa, who somehow manages to keep it all together. I’ve loved working with all of you!!

**Dr. Helen MacRae**

D.H. Gales Director

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## Dedication to Dr. MacRae

On behalf of the University of Toronto Surgical Skills Centre at Mount Sinai Hospital staff it is with mixed emotion that I write this farewell tribute to our D.H. Gales Director, Dr. Helen MacRae.

For the past 10 years Helen has been a pillar of strength and support for all of us at the lab. Her quiet mannerism and calm direction was exactly the type of leadership that made both the lab and staff flourish into the establishment we are today.

Her commitment to surgical education and research inspired all of us to work collectively on wide-ranging projects over the years. Under Helen’s leadership, she was able to take the varied educational backgrounds of our staff and promote us to take on challenges in model creation, research development, simulation technology and skills acquisitions that otherwise would have been too overwhelming to undertake. Without the encouragement and leadership of Helen we would not have attained the successful outcomes and international reputation in skills lab circles that we currently pride ourselves in.

10 years went by so quickly that it will be hard to imagine the lab without Helen. It is with fond wishes that we say farewell but not good bye. We could not have asked for a better leader or friend.

# Letter from Dr Rutka

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As the new Chair in the Department of Surgery at the University of Toronto, it gives me great pleasure to write this column on the tremendous attributes of the Surgical Skills Centre (SSC) at Mount Sinai Hospital. These attributes have been maintained since the inception of the Centre in 1998, and have led to the continued accreditation the Surgical Skills Centre as a Level I Institute of Accredited Education Institutes by the American College of Surgeons since 2006. We are one of only 3 Centres across Canada which is recognized by this distinction, along with University of British Columbia, and McGill University.

The fundamental tenet of the Centre, and indeed all such centres where surgical skills are taught, is to provide trainees with an opportunity for deliberate practice in a non-critical environment. Just as with technical skills in other disciplines, the art of surgery demands significant cognitive and muscle memory of complex tasks. Vince Lombardi, famed head coach of the NFL's Green Bay Packers, once said: "It's not practice that

makes perfect". It has been shown through numerous studies that repetition of these complex tasks, especially when performed in a non-threatening environment will lead to superior performance when these newly learned skills are transferred to the operating room and the patient. Most of us are familiar with the writings of Malcolm Gladwell in his book, "Outliers", in which he speaks of the mandatory time it takes to achieve superior performance. Many have attempted to apply the "10,000 hour rule" to achieving greatness in surgical technique.

There is no question in my mind that as surgical educators, we must continue to accelerate the pace of procedural skill acquisition. The good news, as shown in several studies from the SSC itself, is that models for instructing residents how to perform different surgical procedures do not need to be performed on sophisticated, expensive simulators. Many of the skills required to become an expert at surgery can be acquired through the concerted repetition of basic surgical manoeuvres with the core surgical instrumentation.



That being said, surgical simulation is advancing rapidly. Models are being produced that provide not only state-of-the-art visual graphics of the procedures being performed, but also feedback with haptics. The mathematical modeling of haptics in surgery remains a very complicated and difficult task to achieve. Some of you may be familiar with the National Research Council's (NRC) work on simulating brain surgery with the NEUROARM which is guided by a sophisticated imaging system. This is a multi-million dollar project which has placed Canada at the forefront of surgical simulation. Faculty at the University of Toronto are collaborating with the NRC on this project including Alan Okrainec (General Surgery, UHN), Eric Massicotte (Spine Surgery, UHN), and James Drake (Neurosurgery, Sick Kids). But just imagine how surgical simulation could be advanced if the millions of dollars spent yearly on the computer video game industry were allocated instead to enhancing surgical simulation and simulators in health care!

There is considerable interest in health care simulation at the provincial level thanks to the pioneering efforts of Dimitri Anastakis, Executive Director of SIM-one (formerly the Network of Excellence in Simulation for Clinical Teaching and Learning, NESCTL). The SSC has had a close relationship with this evolving provincial effort in simulation.

Of course, none of the success of the SSC would be possible without the outstanding leadership demonstrated year after year by Helen MacRae, SSC Director, Lisa Satterthwaite, SSC Manager, and SSC staff. I would like to thank them sincerely for keeping the Department of Surgery at the leading edge of surgical education and training. I should also like to acknowledge Mount Sinai Hospital for its continued willingness to partner with the Department of Surgery for the greater good of the SSC, and resident and fellow training. The SSC has also been home this past year to 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.

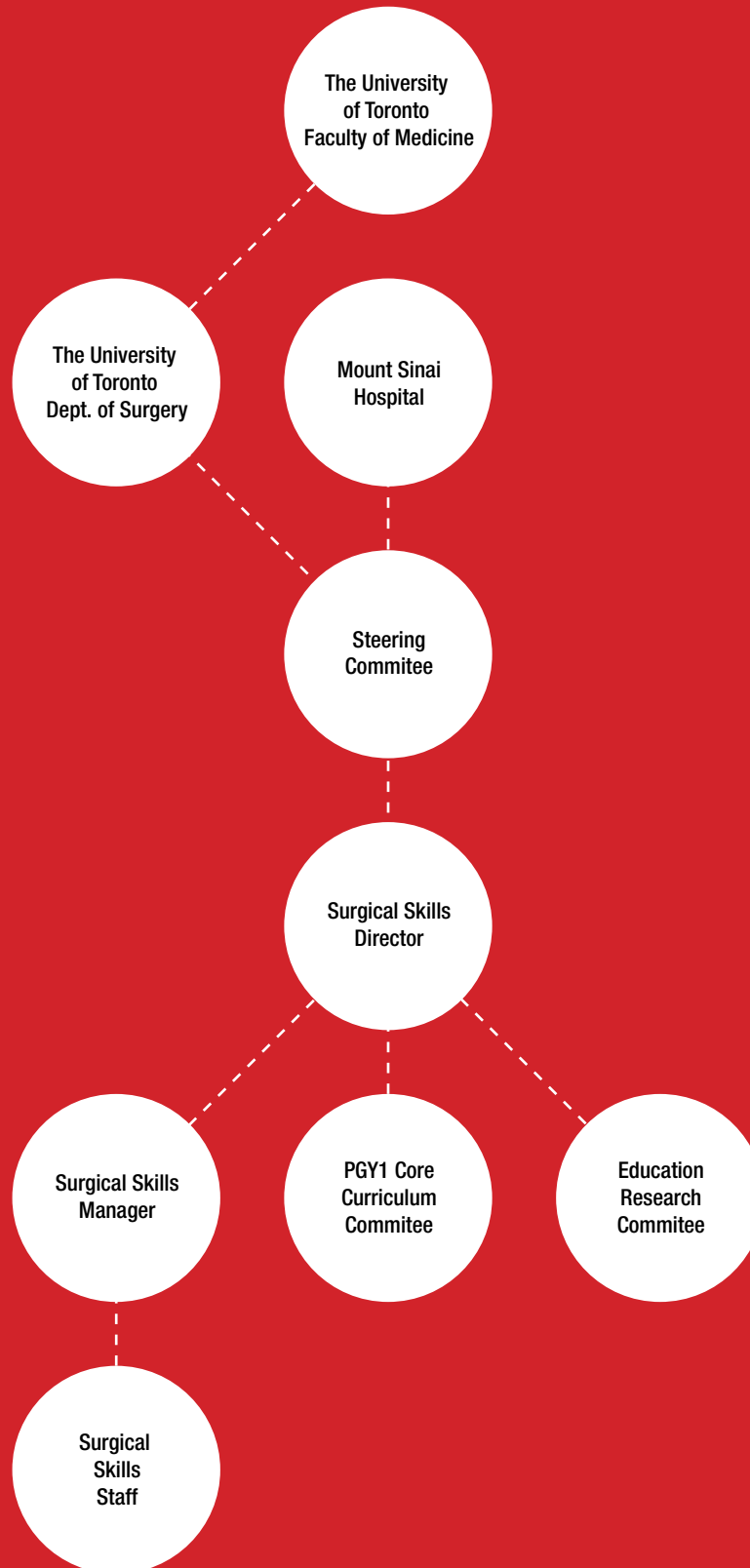
We are resource rich in the Department of Surgery at the University of Toronto. However, one of the most precious jewels in our crown is the Department of Surgery SSC at Mount Sinai Hospital which continues to appreciate in value and importance with each passing year.

**James T Rutka, MD, PhD, FRCSC,  
FACS, FAAP, FAANS**

RS McLaughlin Professor and Chair

Department of Surgery, University of Toronto

# Governance



# Staff Bios

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## Dr. Helen MacRae

D.H. Gales Director

Dr. MacRae is a General and Colorectal Surgeon at Mount Sinai Hospital, with a special interest in laparoscopic colorectal surgery. She completed medical school and a general surgery residency in Edmonton, Alberta, and fellowship training in colorectal surgery at the University of Toronto. Dr. MacRae has a Master's degree in Medical Education from Springfield, Illinois. Her research interests are in the areas of evaluation of clinical competence, acquisition of technical skills and surgical judgment.



a unique and diverse set of knowledge and skills that contributes to the successful implementation of medical curricula. His previous work experience in healthcare, where his focus was medical products and surgical instrumentation, contributes in achieving our daily objectives and goals in delivering an efficient and effective medical and surgical learning experience by all who attend our training sessions.

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## Lisa Satterthwaite

Manager

Ms. Satterthwaite holds an RPN diploma from Scarborough General Hospital and Honours diploma in Operating Room Techniques from Humber College. For over 12 years she has managed the SSC, including supporting the development and delivery of OSATS and PAME examinations, implementing of PGY-1 core curriculum, supporting research programs, aiding divisional specific and undergrad year 3 programming and continuing medical education sessions. Ms. Satterthwaite also offers consults for the development of medical education programs.



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## Dezan Rego

Surgical Technician

Ms. Rego has worked at Mount Sinai for over 30 years, and has been a team member in the Surgical Skills Centre for 12 years. She holds a diploma in Sterile Supply Processing from Centennial College. In 2001 and 2006 Ms. Rego was the proud recipient of the Karen McGibbon Award of Excellence from Mount Sinai Hospital. She enjoys working one-on-one with both the medical students and surgical residents and offering guidance to the enthusiastic group of co-op students and volunteers who frequent the lab.



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## Marina Romanova

Surgical Technician

Ms. Romanova has been a part of the team at the SSC since 2002. 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 vivarium. Appreciation of individuals with such a wide range of education and experience working together efficiently is very satisfying to Ms. Romanova. She also finds problem solving with co-workers and working and coming together as a team is especially rewarding.



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## Shunne Leung

Assistant Manager

Mr. Leung has been working at the Surgical Skills Centre for over 11 years as Assistant Manager and serves as the primary resource for technology related issues. Mr. Leung also serves as an adjunct and support to our Manager's office in day-to-day operations. With a B.Sc degree in Pharmacology and a Certificate in Business, Mr. Leung offers



### Jason Faria

Surgical Technician



Mr. Faria has now been a full time employee at the SSC for over 4 years. He started working here in 2008 following an intensive co-operative education placement through Central Commerce Collegiate. His keen interest and team spirit is a wonderful asset to the team as a whole. Jason assists with course bookings, setups and duties, as well as lab inventory and audio-visual requirements. He is responsible for ordering lab supplies and coordinating with medical companies to ensure the successful implementation of courses. He also assists our Manager with invoicing and billings. Jason really enjoys working in the team atmosphere at the SSC and the constant need to communicate effectively with the other members of the team.

### Dionne Banton

Business Officer



Ms. Banton attended 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. At the centre, her duties include front office reception as well as administrative functions. Dionne completed her certificate in Employee Development from Mount Sinai Hospital in June 2011. Dionne has transitioned well into this new position with full support from all team members.

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### Serenity Thomas

Surgical Technician



Ms. Thomas has now been working in the lab for 6 years as a part-time technician. She graduated from the University of Toronto in 2000 and holds a Bachelor of Arts in Bioethics. As part of the SSC team, Ms. Thomas assists with all course duties, lab set-up, the annual report and assists administrative tasks. She values and appreciates that while at work, she is able to continue her own personal learning experience, and she also enjoys being a part of the education that the medical students and residents go through.

Ms. Thomas just returned from maternity leave. In March 2010, Serenity and her husband welcomed their first child, Hannah Rose, the newest member of the SSC team!

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### Ranil Sonnadara, PhD

Research Scientist



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





# Letter from Dr. James

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As the inaugural Vice President of Education at Mount Sinai Hospital, I have recently become more acquainted with the very important role that the University of Toronto Surgical Skills Centre at Mount Sinai Hospital plays in the academic mission of the Hospital.

supporting this world class educational unit in the coming years and helping it to further develop programs which impact patient care, quality and safety, and enable physicians and interprofessional teams to improve skills in patient care using simulated models and techniques.



The Centre continues to impress visitors and learners with its innovative, progressive and expanding array of programs offered. Mount Sinai Hospital is extremely proud to have housed and supported the development of this world class educational centre over the past 12 years. The Centre has been playing a key part in training medical students, residents, fellows and surgeons locally, nationally and internationally in a growing number of disciplines in various surgical techniques.

The Centre's extremely effective approach to building programs and maintaining financial health is a model for other educational units which partner the University of Toronto with an academic hospital like Mount Sinai. With its unique approach to teaching and research, the Centre contributes in a major way to the impact that the Hospital has on surgical education for our own learners as well as those outside the Toronto academic community and in the developing world. Mount Sinai Hospital looks forward to

I would like to acknowledge the outstanding leadership and dedication of the Centre's Director, Dr. Helen MacRae and to thank and congratulate her on her pivotal role in an incredible educational success story. I would also like to acknowledge the hard work and enthusiasm with which Lisa Satterthwaite and the staff of the Centre have shown in supporting the Mount Sinai Hospital educational needs in the past year.

**Jacqueline James MD MEd FRCPC**

Vice President Education

Mount Sinai Hospital

# Core Curriculum

In September 2009 the Surgical Skills Centre celebrated its' 11th iteration of the core curriculum. The curriculum is attended by all Department of Surgery PGY 1 and Department of ENT residents. Attendance is mandatory each Tuesday from 0900- 1100 hrs throughout the academic year. There are now a total of 52 residents enrolled in the program. Each session is supported by 6 faculty members from various departments of surgery throughout the University. Sessions are also supported occasionally by affiliated departments such as anesthesia, respiratory therapy and casting technologists. There are 27 teaching sessions per year comprised of a variety of technical skills acquisitions with the focus on repetition of basic skills such as suturing. Each week the core task is used as a platform for building basic surgical technical skills in a safe and relaxed environment. Skills' training is complimented by an open door practice policy for all residents in all levels of training. The lab is able to accommodate requests via email booking for self directed learning opportunities. To date more than 4500 residents have taken advantage of this opportunity!

Each year the curriculum is reviewed and updates are incorporated. Added to our curriculum in the past few years were the MOSATS (mini objective assessment of technical skills) sessions. Each 4 – 5 weeks a group of past skills are set up in the lab enabling residents to review their technical skills for enrichment and feedback purposes. A single OSATS testing station is also set up to allow the residents the opportunity to go through a complete test module in conjunction with a faculty examiner utilizing a global rating scale and checklist marking system. At the end of the test there is time allotted for one on one feedback and review of the resident's effort. At the end of the academic year a full OSATS exam is delivered. The exam is an 8 station bell ringer that is examined by faculty members. The exam is mandatory for all PGY 1 residents to attend. Ranked exam results along with attendance records are sent to program directors and residents for review and inclusion in performance dossiers.

DATE	COURSE
September 14	Principles of Asepsis and Instrument ID
September 21	Instrument Handling and Knot Tying/Suturing
September 28	Line Insertions - IJ, Subclavian, Femoral, IV Insert & Cut Down
October 5	Airway Management and Surgical Airway
October 12	Tissue Handling Dissection and Wound Closure
October 19	Tendon Injuries and Carpal Tunnel Release
October 26	MOSATS and Practise Session
November 2	Chest Tube, Thoracentesis and Arterial Line
November 9	Catheterization, Suprapubic & Urethral & Abd Wound Closure
November 16	Cancelled Curriculum
November 23	Advanced Tissue Handling and Wound Closure ( Z plasty and Elliptical Incision)
November 30	Bowel Anastomosis - Hand Sewn and Stapled
December 7	Bone Fixation and Casting
January 11	Microsurgery and Bone Harvesting
January 18	Microsurgery and Skin Grafting
January 25	MOSATS and Practise Stations
February 1	Laparoscopic Skills I
February 8	Laparoscopic Skills II Arthroscopy-Gallbladder & Knot Tying
February 15	Laparoscopic Skills III Arthroscopy-Gallbladder & Knot Tying
February 22	Laparoscopic Skills IV Competition
March 1	Vascular Control I -Arterial and IVC
March 8	Vascular Control II - Arterial and IVC
March 15	March Break - Curriculum Cancelled
March 22	MOSATS and Practise Sessions
March 29	Electrosurgery and Skin and Liver Biopsy Session
April 5	HSK Animal Annex Group A
April 12	HSK Animal Annex Group B
April 19	Lab Closed for Passover
April 26	Practice Session 1
May 3	OSATS EXAM

## Laparoscopic Skills Competition

The tradition of hosting the Laparoscopic Skills Challenge continues. The Skills Challenge is a yearly event that has been running since 2001. The resident's pair up and compete by demonstrating skills in laparoscopic peg transfers, cutting, and knot tying. For the finale, the teams with the two best times battle for the championship title. Congratulations goes to 2010's the winning team, Dr's Sydney Wang and Ahmed Kayssi, both from the Division of General Surgery.

We also wanted to send big congratulations out to the 2011 winners, Dr's Jerry Xing and Kevin Koo, who are both from the Division of Orthopedic Surgery. It is the first time that we have had an Orthopedic team win.

## Teaching Award

Each year the PGY-1 surgical residents nominate a faculty member to receive the University of Toronto at Mount Sinai Hospital Education Award for Outstanding Contributions to Surgical Skills Education.

A faculty member from the Core Curriculum sessions, whom they believe demonstrated outstanding teaching skills, is selected.

We are pleased to recognize Dr. Richard Holtby, Division of Orthopedic Surgery, as the 2009-2010 winner. His dedication to teaching is evident through his interaction with the residents.

## Academia

Over the past few years, the number of divisional and departmental specific programs has been expanding. These programs continue to strengthen the skills of all residents and fellows participating in education at the Centre.

The Department of Obstetrics and Gynecology runs 18 bi-weekly core curriculum sessions throughout the academic year for the junior residents. Unique to the OBGYN Core Curriculum is that the residents take two OSATS exams, a pre-test and a post-test. The purpose of this is to evaluate the improvement of the residents throughout the course of the skills sessions.

### OB GYN Core Curriculum Sessions

Knot Tying/Suturing/Instruments

Marsupialization/Wound closure

Mid forceps

Breech

Shoulder Dystocia

Perineal Repairs

B-Lynch Sutures

Outlet forceps

Bowel Repairs

Bladder Repairs

Surgical Emergencies

Endometrial Biopsies/IUD insertion

Hysteroscopic Endometrial Resection

Laparoscopic Salpingostomy

Laparoscopic Cystectomy

Laparoscopic Suturing

Laparoscopic Knot Tying

Review Operative Vaginal Delivery

The Centre delivers Division specific programs for Neurosurgery, Urology, Vascular, Thoracic, Orthopedic and Plastic and Reconstructive Surgery.

### Division of Cardiac Surgery

Aortic Root Technique

Cardiac Summer School: Valve Replacement; Coronary Bypass

### Division of Vascular Surgery

Division of Neurosurgery

Femoral Anastomosis

Inferior Vena Cava repair

Carotid endarterectomy

Abdominal Aortic Aneurysm

Tibial bypass

### Division of Orthopaedic Surgery

Fundamentals of Spine Surgery

Ortho Down Days: knee, foot, ankle

### Division of General Surgery

General Surgery Summer School: Introduction to suturing and knot tying

Abdominal closure and hand sewn bowel anastomosis

Staplers and stapled intestinal anastomosis

Introduction to laparoscopy skills

Laparoscopic cholecystectomy

Laparoscopic knots and suturing

Percutaneous Tracheostomy

### Division of Plastic and Reconstructive Surgery

Tendon Repair

Sawbone Session

Botox Session

Rhinoplasty

Amputation Revision

Craniofacial Repair

Microvascular Anastomosis

Breast Flaps

Breast Reconstruction Surgery

Bone Repair

Finger tip flaps



### Division of Urology

Transurethral Resection of the Prostate  
Fundamentals of Laparoscopic Surgery Session  
Porcine Lab  
Laparoscopic Skills Lab  
Microsurgery  
Ureteroscopy  
Transvaginal Tape Procedure

### Division of Neurosurgery

Head Dissection  
Peripheral Nerve Dissection  
Lougheed Neurosurgery Course  
Microneurosurgical Anatomy Review

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## New Programs

The Department of Ophthalmology initiated a new program for their residents three years ago which has been very successful. The “Orbital Dissection” course runs over three consecutive half-days, where residents spend time acquiring and improving their technical skills. It is well attended by 40 residents, from both the University of Toronto and McMaster University.

Over the past year, the Department of Anesthesia began technical skills training utilizing the resources at the Skills Centre. The faculty incorporated workshops into their curriculum where PGY1 residents learnt Sterile Techniques, Epidural and Spinal Anesthesia, Vascular Access, and Airways, on models at the Centre.

### Department of Ophthalmology

Strab Suturing  
Plastics - Flaps  
Plastics - Lid repair  
Orbital Dissection Course

### Department of Respiriology

The Basics of Bronchoscopy

### Department of Otolaryngology

Soft Tissue Dissection  
Sinuplasty  
Endoscopic Sinus Surgery  
Rhinoplasty  
Temporal Bone Drilling  
Laser Safety Session  
Sinoscopy  
Oral Platting  
Temporal Bone Otoscopy

### Department of Radiology

Introduction to Radiology

### Department of Internal Medicine

Internal Medicine Program: Core Resident  
Integrated Scholarly Program  
Bedside Procedures  
Internal Medicine Airway Course

### Department of Family Medicine

Family Medicine Session: Suturing, Airway  
Management and Difficult Deliveries

### Department of Emergency Medicine

9<sup>TH</sup> Annual Emergency Medicine Surgical Skills  
Workshop

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## Undergrads

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: suturing, casting and catheterization. In one academic year, a total of 208 third year medical students attend these teaching sessions.

The Emergency Medicine Clerkship has introduced a two day program where faculty teach medical students airway management, emergency suturing, casting and splinting, as well as cardiac dysrhythmias using the SiMan HPS (Human Patient Simulator).

## Industry

Since the inauguration of the Surgical Skills Centre, surgical companies have considered the Centre to be a facility capable of satisfying their need to educate and demonstrate their offerings. Both local and international surgeons have the opportunity to attend these industry sessions at the SSC where they learn about new surgical approaches and instrumentation, as well as immersing technologies.

Our Centre very much appreciates industry's interest in working together year after year. The established working relationship with these companies continues to strengthen. Consequently, the Centre is often sought by companies who have the same need and interest to educate, and the opportunity for new relationships to form continues to increase.

An industry event during the summer of 2010 should be noted in the records. The Centre was hired to host a workshop which was above all others in its size and organization. The objective for this workshop was to introduce international surgeons to a new product in the treatment of female urological problems. Attending this one day workshop were 150 participants. To satisfy this number of participants, the lab delivered 6 iterations of the workshop utilizing 30 specimens which marks as the highest number used at the Surgical Skills Centre.

COMPANY	COURSE
Ethicon Inc.	Women's Incontinence: Intervaginal Slingplasty
Wright Medical	Foot & Ankle Repair
American Medical Systems	Pelvic Cadaveric Session
Medtronic	5th Annual Canadian Contemporary Spinal Techniques Course
Medtronic	6th Annual Canadian Contemporary Spinal Techniques Course
Advanced Dental Education Seminars	Dental Implants
Medtronic	Direct Lateral Interbody Fusion Spine Surgery
American Medical Systems	Elevated Pelvic Sling
Biomet Canada	Shoulder Arthroplasty
Tribe Medical	Foot and Ankle Technology
Johnson & Johnson Inc	Mentor Abdominalplasty Lab
Toronto Implant Institute Inc	Advanced Implant Surgery- A Hands-on Cadaver Course
Allergan	Voluma Launch
Medtronic	Tonsillectomy Course
Johnson & Johnson Inc	Bulkamid: Urethral Support Systems
American Medical Systems	Mini-Arc Incontinence
Medtronic	Sparring Techniques - Spinal Fusion
Medtronic	Spinal Deformities
Biomet Canada	Total Hip Revision
Johnson & Johnson Inc	Gynecare: Transvaginal Tape Abbrevio
Covidien	Hernia Masterclass
American Medical Systems	Advances in Female Pelvic Medicine and Reconstructive Pelvic Surgery
Medicis Canada	Facial Injection Course
Cochlear Canada	Cochlear Implant Drilling Session
Synthes Canada	MaxiRib Session
The National Hospitalist Association	National Hospitalist Conference 2010 Simulation Workshop
The National Hospitalist Association	National Hospitalist Conference 2010 Skills Workshop
American Medical Systems	Women's Health Workshop: Physician Training
Gynecare	Advanced Users Forum for Pelvic Floor Experts
Medtronic	Neurosurgery: Drilling 101
Johnson & Johnson Inc	Head and Neck Session
Allergan	FACE Symposium
Biomet Canada	ARCOS Modular Femoral Revision
Johnson & Johnson Inc	Coloplasty Techniques
Smith and Nephew	Current Advances in Arthroscopic Shoulder Repair: Rotator Cuff and Instability Repair
Global Dental Implant Institute	Advanced Periodontal and Implant Surgery
International Continence Society/ International Urogynecological Association	The Anatomy of the Pelvic Structures Important to the Pelvic Surgeon
Stryker	Triathlon Primary and Revision Cadaveric Training
Bard	Innovation in Incontinence Treatment

# COSATS

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The Colorectal Objective Structured Assessment of Technical Skill (COSATS) is a technical skills exam that was developed and evaluated at the University of Toronto's Surgical Skills Center at Mount Sinai Hospital. This project was funded by the Operative Competency Committee of the American Society of Colon and Rectal Surgeons (ASCRS). The goal of the project was to develop a technical skills exam for graduating colorectal fellows, with the hopes of incorporating the COSATS into the American Board of Colon and Rectal Surgery (ABCRS) certification exam. The COSATS will be the first assessment tool of its kind assessing subspecialty surgical training and will be the first attempt of a surgical society to assess surgical skill at the certification level.

## **Sandra De Montbrun, MD, FRCSC**

Colorectal Surgery Fellow

Wilson Centre Fellow

University of Toronto

The COSATS exam consumed an immense amount of the Centres resources in its development, preparation and delivery. It took over one year to conceptualize, organize and finalize the innumerable details needed to ensure the success of this inaugural exam. Many hours were spent creating and trialing models to provide a simulation with a high level of realism. In addition, the same attention and enthusiasm was shared in the development of detailed examination checklists, as well as building a comprehensive list of all necessary supplies.

In the week ahead of the exam the Surgical Skills Centre was a place full of activity. During this time SSC Staff and volunteers worked diligently together to carefully create all of the novel models and setting up the assessment stations. These models had to be realistic in their form, and it was also important that they were uniform in assembly for repeating the simulation at each assessment.

A one day record number of 15 SSC staff and volunteers contributed to the successful execution of the COSATS exam. Feedback from examiners and participants were very favorable on the smooth delivery and

appropriateness of the stations. The Surgical Skills Centre is proud and elated to have made this unique contribution to the colorectal society.

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## PREPS Lab

### PREPS Lab Staff

#### **Dr. Jacqueline James**

MD, MEd, FRCPC

Vice President of Education,  
Mount Sinai Hospital

#### **Dr. Sev Perelman**

MD, MSc, CCFP(EM)

Director

#### **Michelle Cleland**

RN

ACLS Course Director

#### **Lisa Satterthwaite**

RPN/OR

Manager

#### **Dionne Banton**

Business Officer

Beginning in the summer of 2010, the Surgical Skills Centre assumed management of the PREPS (Program for Resuscitation, Education and Patient Safety) lab. In conjunction, the Centre began coordinating and implementing all ACLS (Advanced Cardiac Life Saving) courses at Mount Sinai Hospital.

The PREPS lab offers training programs for nurses, doctors and allied health care professionals in order to obtain their ACLS certification. Re-certification courses are also held every other month.

The training modality which is offered through the PREPS lab is unique in comparison to other ACLS programs in the city. The PREPS lab has the only program



which uses computer based patient simulators in learning ACLS skills. Many attendees of the courses find this resource advantageous in the learning and skills acquisition. As a result, the ACLS program at the PREPS lab is rated one of the best in the province.

In the past year, almost 400 health care providers have attended ACLS certification and re-certification courses at the PREPS lab. In addition to the certification and re-certification courses, the PREPS lab is utilized for other training purposes and courses requiring the uses of models and simulation.

Some examples are:

Neonatal Resuscitation Program

R3 Emergency Residents-Crisis Resource

Management Training

Mount Sinai Hospital Dental Residents

Princess Margaret Fellow's medical oncology and hematology

CCRT, CRI Critical Care Education Network

Mount Sinai Hospital Pharmacists (ACLS and ECG Interpretation)

For more information about the PREPS lab, please visit

[www.mshpreps.com](http://www.mshpreps.com), or read the quarterly newsletter, "PREPS Revival"



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## Webinars

As technology develops in telecommunications, the ease of use, cost and practicality of teleconferencing is steadily becoming a common tool in higher education.

In 2010, the Surgical Skills Centre received service for the ability to connect to the Ontario Telemedicine Network (OTN), allowing the Centre to moderate and host Webinars on this system.

A Webinar is a web-based seminar, held in one location and broadcast to several external locations via the World Wide Web. This service is especially valuable in that it allows events to be broadcast to many remote locations.

To date we have hosted 2 Webinars, and we expect that this type of event to grow more prevalent and become more widely utilized.

**“... we expect that this type of event to grow more prevalent and become more widely utilized.”**

In April 2011 we hosted a Webinar in conjunction with the Department of General Surgery and Cancer Care Ontario. This conference was broadcast to 25 locations. Dr Phil Quirke, a pathologist, and Dr. Bill Heald, a surgeon, led the seminar. They are both internationally known for their work in the study of rectal cancer.

In June 2011, our second webinar titled “Symposium on Hereditary Gastrointestinal Cancer Syndrome” took place. It was broadcast to 10 external sites. At the Surgical Skills Centre, 40 participants took part in the symposium.

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## American College of Surgeons

### Accredited Education Institutes

In October of 2010, the Surgical Skills Centre was chosen to host the American College of Surgeons, Accredited Education Institutes Post Graduate Course. This was a big honor for the Centre, as it was the first time that the meeting was held outside of the US. The meeting “ACS Postgraduate Course: Exploring New Educational Opportunities Through the Consortium of ACS-Accredited Education Institutes” was held over 2 days, with a total of 90 participants in attendance.

On day one of the course lectures and panel presentations were held at the Metro Toronto Convention Centre. Presentations and lectures were given under five Deputations. The topics of these Deputations were

- Curriculum
- Research, Taking a New Look at an Old Topic
- Evaluation
- Outreach Programs, Touching the World
- Faculty Search and Rescue Mission

Day one also included a showcase of Exhibitors who displayed new technology relative to simulation and skills labs.

Day two provided attendees with rotations which were held at the Surgical Skills Centre. The participants were divided into smaller groups for these sessions. The seminars focused on

- Business Plan for Beginners
- Marketing 101

- IPPI- Integrated Procedural Performance Instrument
  - Creation of Models
  - Stem Writing
  - Briefing and Debriefing
  - Standardized Patient Training
  - The Use of Simulation for Assessment of Technical Skills and Intra-Operative Decision Making
- 

## Simulation Summit

In September of 2010, the Surgical Skills Centre hosted a Simulation Summit for The Royal College, “Advancing Knowledge: Enhancing Practice”. The Royal College worked alongside the “Network of Excellence in Simulation for Clinical Teaching and Learning” (NESCTL) to organize the event.

Three educational goals were highlighted by the Royal College: 1. moving toward scholarship, 2. defining the simulation research questions, 3. advancing interprofessional simulation training and assessment. The goal of the Simulation Summit was that participants would be able to experience and share in the latest innovations in simulation, with the main focus being on learning opportunities. Participants were able to expand their knowledge of simulation and were able to learn how it has the ability to enhance their daily practice.

Simulation in medicine has been used for over 20 years in Canada, but we are now at a point where simulation is being refined, and the medical education community is starting to recognize the effectiveness of simulation-based education.

The conference portion was held at the Metro Toronto Convention Centre, and it was the 3rd National Forum. When the

conference portion was over, there was a very fun event planned for simulation program administrators.

NESCTL planned a simulation Expedition, where participants were able to visit different simulation centres in Toronto. This was an accredited event, with a total of 75 people attending. Participants were placed into groups, and under the leadership of Bruce Ballon, were led on a “Simulation Education Expedition”.

The participants visited the Lawrence S. Bloomberg Faculty of Nursing Simulation Centre, Surgical Skills Centre and the Michener Institute.

At the Surgical Skills Centre, participants learned about the use of standardized patients and how to make models out of meat and products like hair gel and gravy.

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## Research

The Surgical Skills Centre is well known for its research in surgical education. Under the guidance of Dr. Ranil Sonnadara, our resident scientist, we have many projects on the go at any one time. Several of our present research projects are focused on evaluation and assessment, a vital step in implementing more proficiency-based training courses in our lab which will help ensure that participants are getting the most out of their training, and will help us to tailor training better to our participants. At the same time, we are seeking to relieve some of the burden placed on our assessors through the use of new technologies, and we have studies presently under way that are investigating new, less resource-intensive methods for assessing technical and clinical skills. Another key area of research is investigating ways to optimize the learning process for surgical trainees, using knowledge from cutting edge sports science to help us improve instructional methods and also to make best use of the limited practice time available for residents.

The Surgical Skills Centre also serves as a research training centre, and we have several undergraduate and graduate students working on research projects at any time, as well as a number of residents and Fellows. For more information about our research, or to volunteer as a participant in one of our studies, please visit <http://www.skillslab.ca>.

**Ranil Sonnadara, PhD**  
Research Scientist

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## CBC

This is the second year of piloting a competency-based residency program in the University of Toronto's Division of Orthopaedics Surgery. The orthopedic residency program now has a competency-based stream and a traditional stream. The first three residents in the competency-based stream are now well into their second year, and three new residents joined the stream this year. One of the cornerstones of the new program is a month-long 'boot camp'-style course that teaches residents core technical skills right at the onset of their training. Early indications show that this approach may have a profound impact on the residency experience: Residents who acquire core technical skills at the beginning of residency may learn much more from subsequent

educational and clinical activities compared with residents who start their training with traditional rotations.

Although the new curriculum is still in its infancy, it is already helping us improve the educational experience of all of our orthopedic residents as we take the knowledge and tools from the competency-based stream and apply them to the traditional stream. For example, many of the evaluation tools shown to be effective in the competency-based stream are now being implemented in the traditional stream. These tools help us provide better feedback to residents, and help them learn more effectively. We are also improving our understanding of the most effective practice strategies that would allow all residents to make better use of independent study opportunities in the Surgical Skills Centre.

In perhaps the most ambitious initiative so far, all 12 incoming orthopedics residents next year will be starting their training with the boot camp course. This decision was based on data we collected over the past two years showing the value of early technical-skills training for the competency-based residents. We look forward to examining how this new approach to surgical training can improve the learning experience for all our residents in the future.

**Ranil Sonnadara, PhD**  
Research Scientist



# DeLPHE Project

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A Training Cascade for Ethiopian Surgical and Obstetrical Care: An Interprofessional, Educational, Leadership and Skills Training Program, DeLPHE 199

Since 2008 faculty and staff from the University of Toronto and the Surgical Skills Centre has worked in partnership with the University Of Addis Ababa, Ethiopia Black Lion Hospital and the Imperial College London UK supported by a 60,000 GBP grant from the UK Government's Department for International Development (DfID) British Council Learning DeLPHE (Development Partnerships in Higher Education) group. The program provides funding to support partnerships between Higher Education Institutions (HEIs) working on collaborative activity linked to the UN Millennium Development Goals (MDGs).

Over the past 3 years the Surgical Skills Centre and University of Toronto faculty have embarked on 4 trips to Addis Ababa to provide instruction to 11 University of Addis Ababa faculty, midwives, nurses and residents. The training sessions included a Strengths Weakness Opportunities and Threats (SWOT) analysis, introduction to skills lab development, learning styles, evaluations, meeting dynamics, vision and mission statements and the creation of course objectives. The ground work instruction sessions were extremely important for the Addis group to learn how to build criteria for course and lab development and to create confidence that simulation training was an effective and results based form of training.

The outcome of the training sessions resulted in the development of 3 Training of Trainer (TOT) simulation training programs delivered by the Addis Ababa instructors group to a total of 45 interprofessional course participants from the Ethiopian regions of Gondar, Haramaya, Mekelle, Jimma, Addis Ababa and Awasa. The diversity of the attendees at the courses created a true cascade of learning as set out in the project objectives. All sessions were documented and evaluated with positivity. The idea of using simulation for training has become more readily accepted by the Ethiopians. This method of training will help address the increase of learning

opportunities for all healthcare professions. Currently the number of medical and nursing students in Ethiopia is on the rise with limited opportunity for traditional bedside learning. The greater than ever pressure on faculty to accommodate the increased numbers of trainees is daunting therefore the prospect to offer quality teaching in a safe and enriched learning environment was a welcomed alternative. The creation of simulated training models using locally available material was achieved by the TOT course participants above and beyond expectations. The creativity in model development with limited supplies was inspiring!

**"The diversity of the attendees at the courses created a true cascade of learning as set out in the project objectives."**

It is hoped that simulation based training programs will transfer to better patient outcomes in the area of health and safety.

Future directions of the project will include the assembly of all data collection from the past 3 years to be reviewed and processed into scholarly papers and presentations for delivery to international assemblies.

**Lisa Satterthwaite**  
Manager



# Special Events

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## Ministry of Government Services Event

On November 4th 2010, the Government of Ontario held a news conference and photo shoot at the Surgical Skills Centre to introduce a new government initiative. The Ministry of Government Services announced a new way for parents to register a newborn's birth, apply for a Social Insurance Number and a birth certificate, online all at once.

## The Launch of the new Surgical Skills Centre website!

Technology (and the SSC) has come a long way since the original Surgical Skills Centre website was made. I had the pleasure of giving the site a "face-lift" to reflect those changes. Visually the site now reflects the look and feel of previous annual reports; navigating the



The Minister of Government Services, Mr. Harinder Takhar, came to make the announcement.

It was an extra special day for the Surgical Skills Centre, as one of the Centre's technicians was asked to participate in the press conference and in the photo session that took place to showcase the initiative. Serenity and her daughter Hannah Rose were happy to be a part of the day, and were honored to meet with Minister Takhar.

site has been made much easier and increased functionality will enhance the end users experience. Our hope is that people new to the Lab and those who are familiar with the facility will find it an informative resource that gives a greater understanding of the work that goes on and the possibilities that the centre can support and host. Please visit: [www.utoronto.ca/ssc/](http://www.utoronto.ca/ssc/)

**Finch Taylor**  
[finchdesigns.ca](http://finchdesigns.ca)

# Praise



**FACULTY OF  
HEALTH**

**Health Leadership &  
Learning Network**

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Tel 416 736 22170  
Fax 416 736 5760  
hlhn@yorku.ca  
www.hlhn.ca



December 7, 2010

Mr. Neil J. Closner  
Vice President, Business Development  
Mount Sinai Hospital  
600 University Avenue, Room 341  
Toronto, ON M5G 1X5

Dear Neil,

I'd like to Thank-You for hosting a visit to Mount Sinai Hospital, for our delegation from Chongqing city-province, China. The delegation found the visit extremely informative and was especially impressed by the model of care and your international work. They could easily have kept you in discussion for another hour.

Vivien and Kristen, and the organization and help they provided, were invaluable.

Also, a warm Thank-You to the programs we visited – Shunne and the Surgical Skills Centre, Debra Hage and the Rehabilitation Centre, for taking the time out of their busy day and meeting with the delegation. Visiting these clinical and teaching areas was extremely important to the group.

Again, many Thanks.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Tania Xerri'.

Tania Xerri  
Director, Health Leadership and Learning Network  
Faculty of Health  
York University  
Rm 437 Health, Nursing and Environmental Studies Building  
4700 Keele St.  
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Phone: 416 736 2100 x22142  
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Toronto Western Hospital  
University Health Network

November 12, 2010

Lisa Satterthwaite  
Manager  
University of Toronto Surgical Skills Centre  
Mount Sinai Hospital

**Re: W. Lougheed Microsurgical Course**

Dear Lisa:

I just wanted to say thank you once again for the outstanding reception and environment that the Surgical Skills Centre provides for this course. I could not complete this course without your efforts but particularly Jason, Dezan, Marina and the volunteers who help with this course. To be able to offer a course like this to residents and keep it economically attractive, one cannot overestimate the contribution that the Surgical Skills Centre makes to this course and program.

I had reviewed with you a number of dates for the upcoming years and list them here before. These are carefully chosen to avoid conflicts with major North American meetings in neurosurgery. I hope the following dates are compatible and look forward to you confirming these dates: April 4-8, 2011, September 26-30, 2011, April 2-6, 2012 and October 1-5, 2012.

Once again many thanks for your continued support for this postgraduate neurosurgical education endeavour.

Yours sincerely,

M.C. Wallace, MD, FRCSC, FACS  
HEAD, DIVISION OF NEUROSURGERY  
TORONTO WESTERN HOSPITAL - UNIVERSITY HEALTH NETWORK  
FONDATION BAXTER ET ALMA RICARD CHAIR  
IN CEREBROVASCULAR NEUROSURGERY - UNIVERSITY OF TORONTO

/jai  
6.12.2010  
cc: Dr. H. MacRae



UNIVERSITY OF TORONTO  
DEPARTMENT OF SURGERY  
DIVISION OF NEUROSURGERY

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WISCONSIN SURGICAL CLUB  
Office of Secretary

May 10, 2011  
5960 N Lake Drive  
Milwaukee, WI 53217

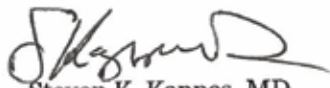
Lisa Satterthwaite  
Mount Sinai Hospital  
600 University Ave  
Level 2 – Room 250  
Toronto, ON  
M5G 1X5

Dear Ms Satterthwaite,

On behalf of the members of the Wisconsin Surgical Club, I would like to thank you taking our group through your skills center. It is an impressive operation, and you should be very proud of your center.

Again thank you for your time. I am,

Sincerely,



Steven K. Kappes, MD  
Secretary

(414) 332-6873  
skappes@wi.rr.com



# Visitors



During the last two years, we have been fortunate to host a large number of visits and tours at the Surgical Skills Centre for people from every corner of the world. Many of these visitors are surgeons who want to observe the way we train our residents and some are employees at other surgical training facilities. We have also hosted a number of international Government officials.

It is a pleasure to share with them knowledge from our experiences, and we also enjoy learning from the people we encounter at the lab. Our visitors include:

Moynihan Surgical Club from Great Britain  
 Wisconsin Surgical Club  
 Chinese Professionals Association of Canada

Darinda Landa, Senior Development Officer:  
 University of Toronto, Faculty of Medicine

Katherine Blades, MD Undergraduate  
 Program Manager: UBC Department of  
 Surgery

Dr. Benjamin Chemwolo, Head of  
 Reproductive Health: Moi Teaching and  
 Referral Hospital, Eldoret, Kenya

Dr. Craig Webster, Senior Research Fellow:  
 Centre for Medical and Health Sciences  
 Education, Faculty of Medical and Health  
 Sciences, University of Auckland, New  
 Zealand

Jason Follett, Assistant Coordinator:  
 Skills Centre for Health Sciences,  
 Halifax, Nova Scotia

Professor Herb Schwartz, 2011 Rosen-  
 Daniels, Visiting Professorship in Surgical  
 Oncology Translational Research: Vanderbilt  
 University, Nashville, Tennessee

Kim Garrison, Operations Manager/Patient  
 Simulation Lab: Queens University

Gitte Valsted Eriksen, OBGYN Educational  
 Consultant: Aarhus University Hospital,  
 Skejby, Denmark

Professor David Feliciano, Surgeon-in-Chief  
 and Chief of Vascular Surgery: Grady  
 Memorial Hospital; Professor of Surgery,  
 Emory University School of Medicine

Delegation from Joseftal Hospital, Eilat,  
 Israel: Dr. Josef Wichelewski, Anesthesiology  
 and resuscitation; Dr. Avinoam Tzabari,



Head of Obstetrics and Gynecology; Dr. Tova Arad, Head of Internal Medicine and CCU; Mirry Gavrielli, Head of Nursing

Mr. Murray Doggett, Canadian Patient Safety Institute

Dr. Aurora Pryor, Visiting professor: Duke University

Dr. Bruce Mann, Director of the combined Royal Melbourne and Royal Womens Hospital Breast Service; Head of the Breast and Surgical Oncology Unit: Royal Melbourne Hospital in Australia

Dr. Iryna Mogilevkina, Professor, Department of Obstetrics, Gynaecology and Perinatology: Donetsk National Medical University, Ukraine

Dr. Ian Jenkins, Consultant Colorectal and Laparoscopic Surgeon, ASCRS ("American Society of Colo-Rectal Surgeons"): St. Marks Hospital, Harrow, London, England

Jan-Maarten Luursema, Researcher: endoscopic skills, both in course design and psychological research: Department of Technical Medicine, University of Twente, The Netherlands

Ian Pereira, MD Candidate: Shulich School of Medicine and Dentistry, University of Western Ontario

Noel MM Moens, Associate Professor: Small Animal Surgery, Ontario Veterinary College, University of Guelph

We have also had visits from various people from:

Saudi Arabia

Hong Kong

Columbia

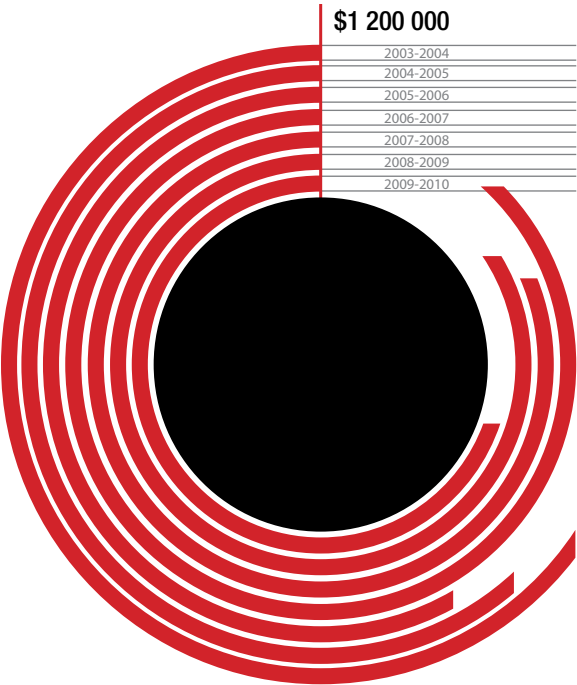
Washington, DC

Egypt

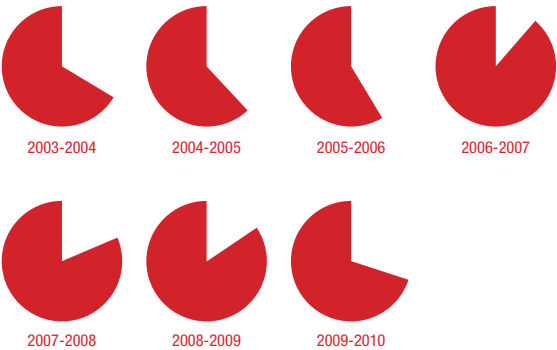
China

Tanzania

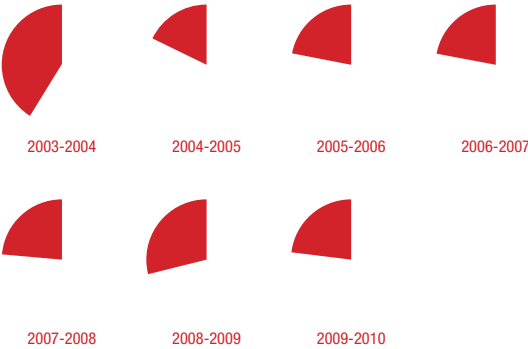
# Finances

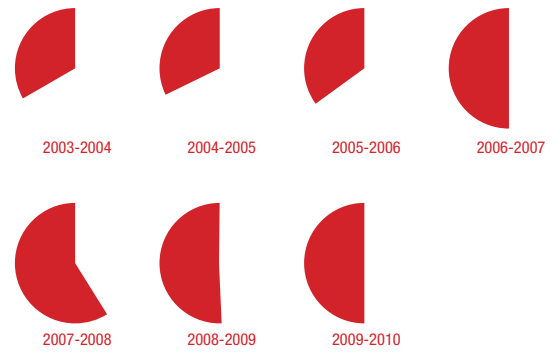


TOTAL INCOME 2010-2011

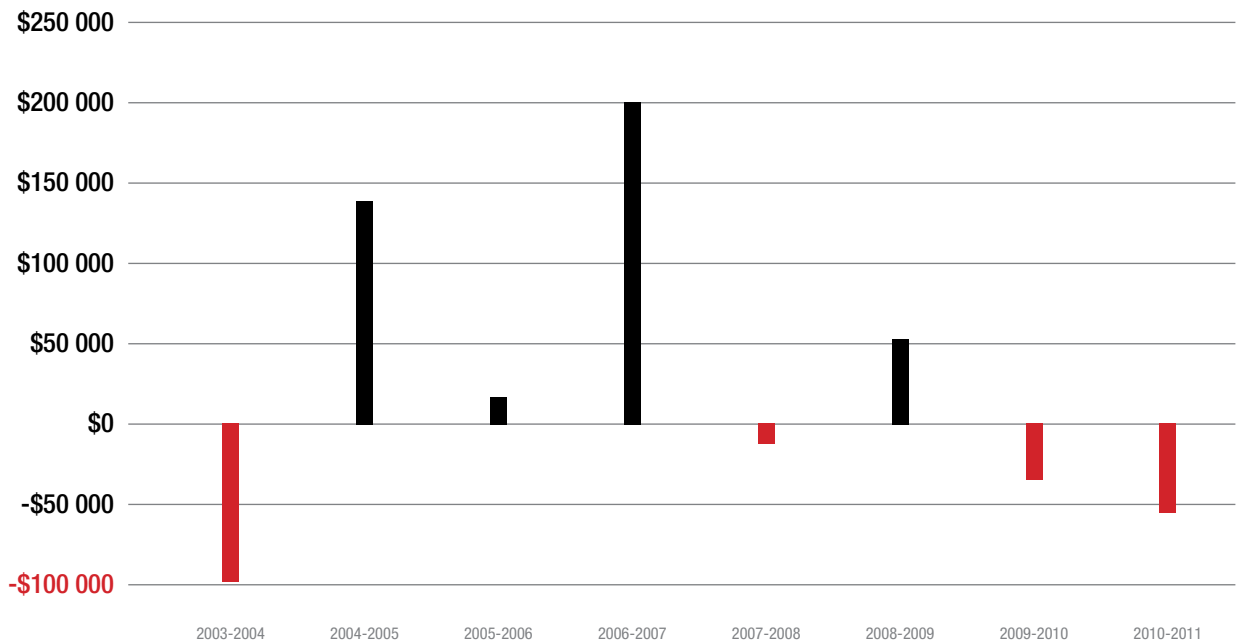


MATERIALS/SERVICES 2010-2011





TOTAL LABOUR 2010-2011



NET EARNINGS 2010-2011

# Supporters

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It is with great appreciation that we recognize the outstanding contributions of our supporters. The Surgical Skills Centre continues to thrive as a result of your dedication to surgical education. Your continued generosity, knowledge and funding have helped us build a centre unlike any other.

We look forward to continued interactions as we move forward in our journey.

Thank you all for everything!



THE D. H GALES  
FAMILY FOUNDATION







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