

DEPARTMENT OF SURGERY

ANNUAL REPORT

July 1, 1999 - June 30, 2000

University of Toronto

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R.S. McLaughlin Professor and Chair - Dr. J.H. Wedge
Professor and Associate Chair - Dr. B.R. Taylor

Surgeons-in-Chief

Dr. J.H. Wedge – The Hospital for Sick Children
Dr. Z. Cohen - Mount Sinai Hospital
Dr. D. Jones - St. Joseph's Health Centre
Dr. E. Poulin - St. Michael's Hospital
Dr. B. Goldman - Sunnybrook and Women's College
Health Sciences Centre
Dr. I.J. Harrington - Toronto East General Hospital
Dr. B.R. Taylor - James Wallace McCutcheon Professor
and Chair – University Health Network

University Division Chairs

Dr. R.D. Weisel - Cardiac Surgery
Dr. Z. Cohen - General Surgery
Dr. J. Rutka - Leslie Dan Professor and
Chair of Neurosurgery
Dr. J. Waddell - A.J. Latner Professor and
Chair of Orthopaedic Surgery
Dr. P. Neligan – Wharton Chair in Reconstructive Plastic Surgery
Dr. S. Keshavjee - Thoracic Surgery (Acting)
Dr. M.A.S. Jewett - Urology
Dr. K.W. Johnston - R. Fraser Elliott Chair in Vascular Surgery
Dr. M. Wiley – Anatomy
Dr. L. Wilson-Pauwels - Biomedical Communications

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REPORT FROM THE CHAIR

Dr. John H. Wedge, R.S. McLaughlin Professor and Chair

Introduction

The 1990s were a decade of University budget cuts, reduction in medical school enrolment, corresponding cuts to the numbers of postgraduate trainees and removal of a substantial portion of the resource base of our teaching hospitals. Despite this, our Department has become much stronger from almost every perspective. We have been able to recruit superb young academic surgeons to our faculty and have been able to retain those who are critical to our academic programs. Our research funding more than doubled through the decade and this year surpassed sixteen million dollars. A substantial increase in publications listed in this report are, in part, a reflection of our success in obtaining external funds for our research.

The academic year began with the appointment of a new Dean, Dr. David Naylor, who led a Faculty of Medicine Planning Process, which has just been completed. The vision of our Faculty is to provide international leadership in health research and education. The strategic priorities and implementation goals are to build our Faculty, enrich the student experience, strengthen our academic programs, enhance our relationships and extend our reach, and to strengthen our infrastructure and resource space. Five research themes have been identified. These are: molecular health and applied genomics; models and mechanisms of human disease; improvement of health and function; health information technology and knowledge transfer; and a comprehensive program in imaging. The mission of our Faculty is to prepare future health leaders, contribute to our communities and improve the health of individuals and populations through the discovery, application and communication of knowledge. I believe that the Department of Surgery is well poised to exhibit leadership in the Faculty, not only due to our academic productivity, but also to our increasing reputation and recognition in the world of academic surgery.

Our Surgeon Scientist Program has stabilized at approximately 30 residents per year. We continue to receive generous support from the Faculty Postgraduate Education Office, the Surgical Alumni Fund and Johnson & Johnson. The Ontario Government Matching Program for graduate student support at the University of Toronto has been very successful. We have been able to fund our full allotment of awards. Nineteen out of thirty-two residents, enrolled in the Program as of July

2000, will have external fellowships from granting agencies, industry or specialty societies. The residents are now being paid at the Ministry of Health resident stipend level so they are no longer financially disadvantaged by being enrolled in the Program. The Surgeon Scientist Program is now essentially self-sustaining.

Dr. Tom Todd, Chair of the Division of Thoracic Surgery, has resigned and departed for a new career in the Middle East. Dr. Robert Ginsberg, Surgeon-in-Chief at the Mount Sinai Hospital prior to moving to New York in 1990, has accepted the position as Chair of Thoracic Surgery and will be joining us part way through the next academic year.

Dr. Michael Ameli has completed his term as Director of Continuing Education in the Department and has been succeeded by Dr. Sender Herschorn. With the Continuing Professional Development Program of the Royal College and the trend to more exacting demonstration of maintenance of competence, this portfolio will undoubtedly grow quite substantially in both importance and responsibility in the next several years. To reflect the change in emphasis of post-residency ongoing learning, the name of the portfolio has been changed from continuing surgical education to continuous professional development.

Finally, Dr. Alan Hudson, a distinguished member of this Department, who was formerly Chair of the Division of Neurosurgery, has retired as President and Chief Executive Officer of the University Health Network. Dr. Hudson has been a consistent and tireless supporter of this Department through the difficult times of the 90s and we are greatly indebted to him for his long-term contribution to this Department. Both Dr. Charles Tator and Dr. Hudson were named to the Order of Canada in this academic year, reflecting well upon the long-term academic productivity of our Division of Neurosurgery.

A very successful annual meeting of the Association for Surgical Education was held in Toronto during the year of the Presidency of Dr. Richard Reznick. A significant number of surgical educators from this Department were highlighted at the meeting, reinforcing the leadership role in education being provided by this Department in North America. The Surgical Skills Laboratory based at the Mount Sinai Hospital has been a resounding success in its initial two years. We are receiving many visitors from around the world who regard this as the best model to-date for teaching surgical skills. The Education Group is taking good advantage of this laboratory to study the process of learning technical skills.

Lastly, I would like to recognize two individuals who are serving in major positions of leadership in Canadian medicine. These are Dr. Hugh Scully of the Division of Cardiac Surgery who is President of the Canadian Medical Association and Dr. Bernard Langer, former Chair of this Department, who will take on the mantle of President of the Royal College of Physicians and Surgeons of Canada this September. My congratulations to both of them for representing this Department in such a distinguished manner.

Visitors to the Department

Dr. Robert Buckman, Professor, Toronto Sunnybrook Regional Cancer Centre, was the Kergin Lecturer. His topic was “How to teach medical students, residents and colleagues the delivery of ‘bad news’ to patients and families”.

Dr. Douglas Kondziolka, Professor of Neurological Surgery and Radiation Oncology and Co-Director, Center for Image-Guided Neurosurgery, University of Pittsburgh, was the John Palmer Lecturer on March 3, 2000. His topic was “Brain radiosurgery for neurosurgeons, body radiosurgery for body surgeons”.

Dr. Darracott Vaughan, Jr., Chair, Department of Urology, Cornell University, was the Gordon Murray Lecturer and the Gallie Bateman Judge on May 11, 2000. His topic was “Current approaches, diagnostic and therapeutic, for surgical adrenal disorders”. He also gave a lecture entitled “Contemporary stresses on academic surgery in the United States”.

Departmental and External Awards and Honours

Benjamin Alman and Jay Wunder (Orthopaedic Surgery) received the 2000 Orthopaedic Research and Education Foundation of the American Academy of Orthopaedic Surgeons Clinical Research Award (Kappa Delta Award). This is the premier award for an orthopaedic investigator in North America.

Mark Bernstein (Neurosurgery) won the A.R. Hudson award given annually to the best neurosurgical teacher at the University of Toronto.

Erin Boynton (Orthopaedic Surgery) received the Carroll Laurin Award from the Canadian Orthopaedic Foundation.

George Christakis (Cardiac Surgery) received the Dr. Marvin Tile Distinguished Service Award of the Department of Surgery.

Michael Cusimano (Neurosurgery), and Bernard Liebgott (Anatomy) won W.T. Aikins Awards for Individual Teaching Performance.

Tim Daniels (Orthopaedic Surgery) has been appointed as the Canadian representative on the International Committee for the American Orthopaedic Foot and Ankle Society (AOFAS).

Gail Darling (Thoracic Surgery) was awarded the 2000 E. Bruce Tovee Undergraduate Teaching Award.

Joel Fish (Plastic Surgery) won the 1999 PAIRO Excellence in Clinical Teaching Award for the University of Toronto.

Arnis Freiberg (Plastic Surgery) won the Arnis Freiberg Teaching Award.

Stephen Fremes (Cardiac Surgery) was appointed Senior Adjunct Scientist at the Institute for Clinical Evaluative Sciences.

Bernard Goldman (Cardiac Surgery) was awarded the 2000 E. Bruce Tovee Postgraduate Teaching Award

Sender Herschorn (Urology) was elected as Deputy Canadian Delegate to the Societe Internationale d'Urologie. He also received the Dr. Marvin Tile Distinguished Service Award of the Department of Surgery.

Alan Hudson (Neurosurgery) was appointed to the Order of Canada.

Carol Hutchison (Orthopaedic Surgery) won the Dean A.L. Chute Award (the Silver Shovel).

Laurence Klotz (Urology) was elected Chair of the Global Genitourinary Group.

Ron Kodama (Urology) received the Dr. Marvin Tile Distinguished Service Award of the Department of Surgery.

Bernard Langer (General Surgery) has been appointed President of the Royal College of Physicians and Surgeons of Canada for a two-year term, starting September 2000.

Nizar Mahomed (Orthopaedic Surgery) has received the 1999 Canadian Orthopaedic Research and Education (CORE) Foundation Young Investigators Award.

Jim Mahoney (Plastic Surgery) assumed the Presidency of the Canadian Society of Plastic Surgeons.

Peter Neligan (Plastic Surgery) was elected President of the Canadian Microsurgical Society. He also won the W.K. Lindsay Research Resident Supervisor Award.

Eric Poulin (General Surgery) was appointed President of the Canadian Association of General Surgeons.

Sid Radomski (Urology) won the University of Toronto Surgical Skills Centre Distinguished Education Award.

Richard Reznick (General Surgery) is the 2000 recipient of the National Board of Medical Examiners (NBME) John P. Hubbard Award. The award is given to individuals recognized as making significant contributions to the pursuit of excellence in the field of evaluation in medicine.

Robin Richards (Orthopaedic Surgery) was elected President of the Canadian Orthopaedic Research Society for a one-year term.

Ted Ross (General Surgery) was given the Directors Award of the Peters-Boyd Academy.

Lorne Rotstein (General Surgery) has won the 1999-2000 Ross Fleming Surgical Educator Award given by the University Health Network for outstanding contributions in surgical education.

Robert Salter (Orthopaedic Surgery) won the Bristol-Meyers Squibb Award.

Joseph Schatzker (Orthopaedic Surgery) was elected President of the AO Foundation, Davos, Switzerland.

Emil Schemitsch (Orthopaedic Surgery) won the 2000 George Armstrong-Peters Prize.

Lloyd Smith (General Surgery) won a 2000 PAIRO Excellence in Clinical Teaching Award.

Charles Tator (Neurosurgery) was appointed to the Order of Canada.

Bryce Taylor (General Surgery) won the Colin R. Woolf Award for Long Term Contribution to Continuing Education.

Ian Taylor (Anatomy) has won a Dr. E. Mary Hollington Award for teaching with distinction in the pre-clinical or basic science portion of the curriculum. He has also won the Harry Whittaker Memorial Teaching Award. This award is given by the year one undergraduate medicine class to the teacher who gives encouragement and displays genuine concern for student well-being and, through personal commitment to quality teaching, provides practical and clear insights in the basic sciences during the first year of the undergraduate medical program.

Thomas Waddell (Thoracic Surgery) has been awarded the Second Alfred Blalock Research Scholarship, Young Faculty Award, from the American Association for Thoracic Surgery.

David Williams (Emergency Medicine) has received the American Astronautical Society's 1999 Melbourne W. Boynton Award for his "extraordinary contributions to the successful implementation of the STS-90 Neurolab mission and his leadership in developing innovative strategies for the advancement of space medicine and earth-based human health care and safety".

Carin Wittnich (Cardiac Surgery) won the 2000 Lister Prize.

Jay Wunder (Orthopaedic Surgery) won the Robert Salter Teaching Award as voted by the residents to the outstanding teacher of the year.

Reviews, Searches and Appointments

Dr. Fred Brenneman was appointed Vice-President of the Trauma Program at the Sunnybrook and Women's College Health Sciences Centre.

Dr. Michael Fehlings was appointed to the Robert O. Lawson Chair in Neural Repair and Regeneration at the University Health Network.

Dr. Christopher Forrest was appointed Head of the Craniofacial Program at The Hospital for Sick Children.

Dr. Stephen Fremes was appointed Head of the Division of Cardiac Surgery at the Sunnybrook and Women's College Health Sciences Centre.

Dr. Steve Gallinger was appointed Head of Hepato-Biliary Pancreatic Surgical Oncology at the University Health Network and the Mount Sinai Hospital.

Dr. Brent Graham was appointed Director of the Hand Program in the Department of Surgery.

Dr. Allan Gross was appointed to the Bernard I. Ghert Family Foundation Chair in Reconstructive Orthopaedics at the Mount Sinai Hospital.

Dr. Sender Herschorn was appointed Director of Continuing Professional Development in the Department of Surgery.

Dr. Antoine Khoury was re-appointed Head of the Division of Urology at The Hospital for Sick Children.

Dr. Laurence Klotz was appointed Head of the Division of Urology at the Sunnybrook and Women's College Health Sciences Centre.

Dr. Andres Lozano was appointed to the Tasker Chair in Functional Neurosurgery at the University Health Network.

Dr. Gianni Maistrelli was appointed Head of the Division of Orthopaedic Surgery at the Toronto East General Hospital.

Dr. Peter Neligan was appointed to the Wharton Chair in Reconstructive Plastic Surgery at the University Health Network.

Dr. Ori Rotstein was appointed to the Peter Crossgrove Chair in General Surgery at the University Health Network.

Dr. Emil Schemitsch was appointed Head of the Division of Orthopaedic Surgery at St. Michael's Hospital.

Dr. John Trachtenberg was appointed Director of the Prostate Centre at the Princess Margaret Hospital of the University Health Network.

Promotions

Congratulations to the following members of the Department of Surgery whose academic contributions to the Department and to the University were recognized by promotions July 1, 1999.

Dr. Mark Cattral, Ms. Celia Godkin, Dr. Shafique Keshavjee, Dr. Paul Merguerian and Dr. Sid Radomski were promoted to Associate Professor.

Dr. Andres Lozano, Dr. James Rutka and Dr. Christopher Wallace were promoted to Full Professor.

Comings and Goings

Our Department was strengthened this year by the recruitment of the following: Dr. Robert Cartotto (Plastic Surgery) Sunnybrook and Women's College Health Sciences Centre; Dr. David Fisher (Plastic Surgery) The Hospital for Sick Children; Dr. David Grant (General Surgery) University Health Network; Dr. Andrew Howard (Orthopaedic Surgery) The Hospital for Sick Children; Dr. Andrei Krassioukov (Research) University Health Network; Dr. Jack Langer (General Surgery) The Hospital for Sick Children; Dr. David Lindsay (General Surgery) St. Joseph's Health Centre; Dr. Weiping Min (Research) University Health Network; Dr. Raja Rampersaud (Orthopaedic Surgery) University Health Network; Dr. Christopher Schlachta (General Surgery) St. Michael's Hospital; Dr. Andrew Smith (General Surgery) Sunnybrook and Women's College Health Sciences Centre; Dr. John Tsihlias (Urology) University Health Network; Dr. Thomas Waddell (Thoracic Surgery) University Health Network and Dr. Cari Whyne (Research) Sunnybrook and Women's College Health Sciences Centre.

The following have left the Department during the 1999-2000 academic year: Dr. Sandeep Agrawal, Dr. Michael Dan and Dr. Alan Hemming.

UNDERGRADUATE EDUCATION

Dr. William Tucker, Director

Though no longer the largest undergraduate medical program in North America, since the reduction from 252 to 177 students per year in 1992, the University of Toronto remains the largest program in Canada. Its effective functioning depends on a large faculty who teach at three academies, The Hospital for Sick Children, and several partially affiliated teaching hospitals, as well as the Medical Sciences Building. Recent initiatives in undergraduate medical education in the Faculty of Medicine as a whole include a virtually complete turnover of course directors, the re-design of courses to enhance the basic science content (especially in pharmacology, molecular biology and genetics) and an increased role for medical informatics (e-based education and evaluation).

Within our own Department, the teaching, acquisition and evaluation of technical skills remain somewhat problematic. Clearly, basic technical skills should be acquired by undergraduate medical students, and the Department of Surgery should have major input and responsibility in this area. It is clear that there are many good technical skills teaching initiatives in various surgical divisions at different academies, but the lack of uniformity in the programs, or consistent documentation, frustrates efforts at fair faculty-wide evaluation.

For the first time this academic year, the Faculty of Medicine moved to a pass/honours/fail system for student evaluations.

Dr. John Murnaghan organized and led a session to prepare middle-level surgical residents for their role in undergraduate teaching. The session took place on March 22, 2000, and 17 of the 18 residents completing the evaluation form indicated that the session had been worthwhile for them. Dr. Murnaghan and his faculty, including Drs. Ross, Hamstra, Tucker, Bohnen and Hodges (guest speaker, Department of Psychiatry) are to be commended for their efforts to improve undergraduate teaching by our surgical housestaff.

A faculty development workshop, again organized and chaired by Dr. John Murnaghan, was held on June 2, 2000, to orient new faculty to their roles as teachers in our Department. Drs. Wedge and Taylor and Ms. Dann from the Department of Surgery provided key information about the organization of the Department, its administration and the Faculty of Medicine promotions process. Drs. Hamstra, Bohnen,

Tucker, Darling and Ross joined Dr. Murnaghan in presenting the teaching mandate of the Department and strategies to assure its achievement.

The biannual meeting of the Canadian Undergraduate Surgical Education Committee (CUSEC) was held in Halifax from November 18-20, 1999. The University of Toronto participation by faculty, surgical education fellows and undergraduate students dominated the program. In particular, faculty members from our Department were involved in 10 of the 12 presentations at the pre-meeting workshop and delivered several of the key talks during the regular program.

The twentieth annual meeting of the Association for Surgical Education (ASE) was held in Toronto from May 3-6, 2000. Richard Reznick served as President of the Association for Surgical Education this year, and welcomed delegates from across Canada, the United States and the United Kingdom. Again, the University of Toronto was prominently represented amongst the presenters.

The Tovee Undergraduate Teaching Prize this year went to Dr. Gail Darling of the Division of Thoracic Surgery. In addition to an outstanding personal record for teaching performance, Gail has served for many years on the Undergraduate Education Committee of the Department, and in recent years has been the Course Director for the Art and Science of Clinical Medicine Year II Program (ASCM II), in which capacity she has served our Department extremely well.

Catherine Haywood, a PGY5 resident in the plastic surgery program, won this year's D.R. Wilson Award for outstanding undergraduate teaching by a resident. It is well known and increasingly recognized that the residents contribute substantially to the education of our undergraduate students, particularly in the clerkship years, and their efforts, as well as the teaching by faculty members, are monitored in the regular debriefings conducted by Dr. Stan Hamstra, the Director of the Office of Surgical Education. Dr. Hamstra's reports bolster the objective data available for assessment of the teaching performance of our residents and faculty.

I would like to thank the student and faculty members of the Undergraduate Education Committee for their input and guidance over the past year, and express our gratitude to John Wedge for his unwavering support and commitment to the undergraduate teaching program in the Department.

POSTGRADUATE EDUCATION

Dr. John Bohnen, Director

It has been my pleasure to take over Jameel Ali's position as Director of Postgraduate Education on July 1, 1999. Jameel has presided over a large, well-organized and successful program of surgical education that has expanded tremendously under his leadership. Jameel had already informed me of Chairman Wedge's profound commitment to postgraduate education and the outstanding administrative support of Tess Weber, Arin Defazio and Jean Defazio.

All of our CaRMS positions were filled for July 1999. In 1999-2000, we had 228 trainees in the surgical programs (cardiac surgery, general surgery, neurosurgery, orthopaedic surgery, plastic surgery, thoracic surgery, urology and vascular surgery residencies; and colorectal surgery, pediatric general surgery and surgical oncology fellowship programs). Twenty-eight residents were enrolled in the Surgeon Scientist Program.

Our residents fared well in Royal College exams. Twenty-three of 26 residents who sat the Principles of Surgery examination passed (88%), as did 29 of 30 candidates who attempted their fellowship examinations for specialty certification (97%). Congratulations to our trainees on these excellent results!

There have been several changes in training program leadership. Thanks to outgoing program directors Rick Pearl, Joseph Schatzker, Tom Todd and Bill Tucker, for their enormous contributions to the pediatric general surgery, orthopaedic surgery, thoracic surgery and neurosurgery training programs. Chris Wallace has taken the helm in neurosurgery after interim leadership by outgoing and incoming Chairs Charles Tator and Jim Rutka. Doug Hedden is the new program director for orthopaedic surgery; Jack Langer now leads the pediatric general surgery training program; Shaf Keshavjee became acting program director of the thoracic surgery program; and Lorne Rotstein has joined Marcus Burnstein as co-director for general surgery. Carol Swallow has become the program director of the general surgery oncology fellowship program. The cardiac surgery, plastic surgery, urology and vascular surgery programs thrive under the continued leadership of Charles Peniston, Ron Levine, Ron Kodama and Wayne Johnston respectively.

The divisional program directors chair their respective residency program committees, which include elected resident representatives. Overall direction at the department level comes from the Postgraduate Education Committee. The Core Surgery Committee oversees the Core Surgery Program, which trains first and second year residents in all aspects of surgical theory and practice. Stan Hamstra, Director of the Office of Surgical Education, co-ordinates the trainees' evaluations of teaching programs and faculty members. Each surgeon receives a "teaching effectiveness score" based on residents' feedback.

Surgeon teachers and trainees engage in many hours of educational collaboration in the operating room, at the bedside, in seminars, in practice oral exams, in research programs and in personal mentorship. Beyond these individual efforts, each division sponsors a large array of educational venues and events, including one dedicated half-day per week away from clinical duties. At the departmental level, the success of "showpiece" programs such as the Principles of Surgery lecture series, the Surgeon Scientist Program and the Surgical Skills Centre distinguish the University of Toronto for its outstanding breadth and depth of residency training.

Under the enthusiastic leadership of Martin McKneally, the Principles of Surgery lecture series provides junior residents with the knowledge of surgical science they need for clinical practice and success in the "POS" exam. Over a two-year cycle, leaders in fields within and outside surgical disciplines cover clinical and professional aspects of practice, ranging from electrolytes to ethics.

The Surgeon Scientist Program, led by Ori Rotstein, is unique to the University of Toronto. The Surgeon Scientist Program enables residents to attain MSc and PhD degrees in internationally recognized research programs in numerous disciplines including basic science, clinical epidemiology and surgical education.

The Surgical Skills Centre, under Carol Hutchison's leadership, trains junior residents in basic operating room skills and theory in a controlled, laboratory setting, under the supervision of master teachers of surgical technique. In the last year, the Surgical Skills Centre has produced over 100 sessions for resident skills acquisition. Besides teaching junior residents basic skills, the Surgical Skills Centre provides advanced skills training for five surgical divisions and the Departments of Otolaryngology and Obstetrics/Gynecology.

The Department of Surgery has an active program in education research with Dimitri Anastakis chairing the Education Research Committee. Members of our Department play a major role in the Centre for Research in Education, where currently four surgical trainees are enrolled in MSc and PhD programs.

The Department of Surgery has sponsored or participated in a variety of special events for trainees such as orientation day for incoming PGY1's in July, and Career Night in September for senior year medical students interested in surgery. Many such events were hosted by divisional programs, such as general surgery's practice management symposium and urology's communication workshop.

In the past year, numerous faculty members and residents were granted awards by hospitals, surgical divisions and the Department of Surgery for excellence in postgraduate teaching. Among them, Bernie Goldman received the Tovee Postgraduate Award for sustained, outstanding contributions to postgraduate training, and Catherine Haywood won the D.R. Wilson Education Prize for outstanding teaching of medical students by a surgical resident.

Some of last year's challenges continue into the new academic term. Hospital closings, mergers and take-overs stress our capacity to organize stable rotations for residents. The newly ratified contract between the Professional Association of Interns and Residents of Ontario and Ontario's teaching hospitals mandates a reduction of "on-call" frequency to one-in-three at home and one-in-four in hospital, protecting residents from overwork but causing concerns about the adequacy of their exposure to clinical emergencies. The University introduced, and then retracted a requirement for residents to pay tuition for their education while serving as professional caregivers. The dual nature of residency training has been acknowledged, and the tuition issue will be dormant in the near future. The tremendous success of the Surgeon Scientist Program continues to challenge the re-integration of research residents into the clinical stream.

The program flourishes because of the abilities and commitment of faculty and trainees. We will have the opportunity to demonstrate our activities to the Royal College accreditation team who will conduct our six-year review in April 2001.

CONTINUING MEDICAL EDUCATION

Dr. Michael Ameli, Chair C.M.E. Committee

This has been an interesting and productive year for the Department of Surgery in terms of continuing medical education, sponsoring a total of 19 courses. There has been a surge of interest in continuing medical education activities because of the current regulations from the Royal College of Physicians and Surgeons of Canada and a definite interest in obtaining credits for continuing professional development.

The Continuing Medical Education office in the Faculty of Medicine has continued to give very good service and has been very instrumental in many of the changes that have taken place in improving continuing medical education for physicians. Dr. Dave Davis and Sandra Leith, particularly, have been very helpful.

This is a year when many changes are going to take place. With the advent of continuing professional development, the Department of Surgery has decided to change the name of the Committee to the Continuing Professional Development Committee. A new Chair, Dr. Sender Herschorn, from Sunnybrook and Women's College Health Sciences Centre, has been selected. The mandate of the Committee has been expanded significantly and will improve both the quality of continuing medical education for the University as a whole, and also for outside surgeons who require continuing professional development credits. The continuing professional development credits cover a multitude of continuing medical education activities and many of these will involve our Department. For the future, we will see a progressive interest in continuing medical education activities and continuing medical education will be much more responsive to surgeons in the community who will require continuing professional development credits, that may not be available at their local hospital.

Training of physicians, the advent of new surgical skills and remedial training, will all need to be part of the mandate of our Committee. Continuing professional development will definitely be a growth activity for the future, and it will be at the same level as undergraduate and postgraduate education at the University of Toronto.

RESEARCH

Dr. Ori D. Rotstein, Director

Research in the Department of Surgery continues to flourish. The Surgeon Scientist Program remains an important component of our Departmental activities. More than twenty-five surgical residents were involved in the past academic year, representing all the surgical specialties and working in the areas of fundamental biology, education, clinical epidemiology and health administration. The research work by these young individuals continues to bring local, national and international recognition to our Department, as evidenced by their excellent publications and their competitiveness for grants and awards. These are too numerous to fully list, but in aggregate, they demonstrate the quality of science being performed within the Department. Some noteworthy awards are as follows. At the Institute of Medical Science Research Day, Robert Gryfe was awarded the J.C. Laidlaw Prize for excellence in research and Ian McGilvray was a co-winner of the Salter-Siminovitch Award. Dr. Gryfe also tied for first place with Michael Borger for the 1999 CSCI/MRC Resident Research Award. Gideon Cohen was awarded the 1999 Canadian Research Award for Specialty Residents in the Division of Surgery of the RCPSC/CSCI/PAIRO. Finally, this year's Bernard Langer Surgeon Scientist Award recipient, given to the most worthy recent graduate of the Surgeon Scientist Program, was David Hackam.

The Gallie-Bateman resident research competition was again a great success. This year's competition was judged by Dr. E. Darracott Vaughan, Jr., the Cole Professor, Department of Surgery at Cornell University, New York. His Gordon Murray Lecture highlighting the management of adrenal masses was of great interest to all in attendance. Ten excellent resident papers were presented. Robert Gryfe and Sevan Hopyan were co-winners and Robin Boushey was runner-up at the Gallie-Bateman resident research competition. Eugene Wai was the inaugural recipient of the Wyeth-Ayerst Canada Incorporated Award for excellent research in the fields of medical education and clinical epidemiology. This past year, four residents were awarded scholarships as part of the Johnson & Johnson Medical Products Surgeon Scientist Fellowship Program. These were Tony Finelli, Howard Ginsberg, Laz Klein and Jennifer Macmillan. Johnson & Johnson have committed support for this Fellowship for the next ten years.

The George Armstrong-Peters Prize for best young investigator in the Department was awarded to Dr. Emil Schemitsch for his continuing productivity in orthopaedic research, while the Lister Prize for the best senior investigator was awarded to Dr. Carin Wittnich, citing her research contributions in the area of neonatal myocardial protection.

The Research Committee welcomed new members this year and thanked former members for their input on various issues. The Committee continues to co-ordinate the departmental research activities. The broad representation from across the Department has made it possible to develop a strong consensus regarding our research priorities and directions. In the past year, the Committee dedicated a retreat day to discussion of the role of non-clinician scientists in the Department, has initiated the development of a structured mentoring program, and has evolved surgeon scientist guidelines in conjunction with the new policy on tuition and maximum on-call mandates. The Committee also serves as a vehicle for dissemination of information on several important issues, including available funding sources, awards received and new opportunities. Finally, we are indebted to Val Cabral for her skilful administrative co-ordination of all aspects of the Departmental research activities.

In summary, this has been an excellent year for research in the Department of Surgery. We should continue to take great pride in the breadth and depth of our research accomplishments, while remaining cognizant of the importance of future research innovation as a means of providing excellence in patient care.

DIVISION OF CARDIAC SURGERY

Dr. Richard Weisel, Chair

Cardiac surgery is a relatively new specialty and continues to evolve. An increasing number of patients who benefited from open-heart operations in the past are returning for further treatment of more advanced and complex cardiac pathology. Interventional cardiologists treat an ever-increasing proportion of patients with coronary artery disease and congenital heart defects, leaving only the more complex cases to be treated with surgery. In addition, those interventions are often palliative and eventually many patients need cardiac surgery. These changes in cardiac pathology, compounded with the continuous introduction of new operative techniques and devices to treat patients with cardiovascular disorders, make cardiac surgery very challenging, particularly for academic surgeons. In spite of these changes, the clinical outcomes of cardiac surgery at University of Toronto affiliated hospitals remain excellent.

St. Michael's Hospital has accumulated extensive experience with off pump coronary artery surgery. This technique of myocardial revascularization is also being employed at the other two hospitals with increasing frequency. Extensive laboratory investigations at St. Michael's Hospital have resulted in a series of clinical investigations. Dr. Stephen Fremes was appointed Chief of the Division of Cardiac Surgery at the Sunnybrook and Women's College Health Sciences Centre. He is actively recruiting new staff surgeons with an interest in both basic and clinical investigation. Both laboratory and clinical research continues to flourish at the Toronto General Hospital. The Congenital Heart Surgeons Database has been established at The Hospital for Sick Children. Numerous operative procedures conceived by cardiac surgeons from Toronto are now widely used globally. The academic presence of our faculty at national and international scientific meetings is among the top ones.

Resident Awards

Dr. Michael Borger - CSCI/MRC Resident Research Award, Postgraduate Medical Education, University of Toronto; Javenthey Soobiah Award, Postgraduate Medical Education, University of Toronto; Edward Christie Stevens Fellowship in Medicine, Postgraduate Medical Education, University of Toronto.

Dr. Gideon Cohen - Miriam Neveren Memorial Award, Postgraduate Medical Education, University of Toronto; Joseph M. West Family Memorial Fund, Postgraduate Medical Education, University of Toronto.

Dr. Vivek Rao - Chisholm Memorial Fellowship, Postgraduate Medical Education, University of Toronto; 2000 Canadian Research Resident Award, Royal College of Physicians and Surgeons of Canada/Canadian Cardiovascular Society.

Dr. Stacy O'Blenes - Parke Davis Second Prize, Postgraduate Medical Education, University of Toronto; Wilfred Bigelow Prize, Division of Cardiac Surgery, University of Toronto; First Prize, Surgical Service Basic Science Research Competition, The Hospital for Sick Children; Finalist, Vivian Thomas Young Investigator Award, American Heart Association.

DIVISION OF GENERAL SURGERY

Dr. Zane Cohen, Chair

The Division of General Surgery at the University of Toronto changed leadership during the past academic year. Dr. Zane Cohen assumed the position from Dr. Bryce Taylor. Dr. Taylor had made very significant contribution to the Division of General Surgery and was responsible for developing some of the strongest programs. It is worth repeating that at the conclusion of Dr. Taylor's term as Chair of General Surgery the external report of the General Surgical Division stated that "the Division of General Surgery at the University of Toronto is the standard against which all Canadian divisions should be measured".

Extremely strong programmatic development has occurred within the Division over the years and was fostered during the past year. However issues such as budgetary constraints and resident issues, as well as the internal accreditation process and restructuring, appeared to come to the fore during the past year. Every member within the Division of General Surgery has now committed to the Faculty Matching Program, which was developed during this past year within the Division of General Surgery. This has allowed the Division some monetary flexibility in deciding on major issues. A Finance Committee for the Division was established consisting of Drs. Zane Cohen, Eric Poulin, Sherif Hanna and Lorne Rotstein.

The internal accreditation process of general surgery involved all staff and residents. Workload to education ratio was paramount in the minds of the interviewers and resident issues such as allocation of residents to their rotations, as well as last minute changes of these rotations, were addressed. The new PAIRO agreement, which changes the "on-call" of residents, will be a very major topic for our Division to solve during the next academic year. The official external accreditation of general surgery will take place in April 2001. Programs in colon and rectal surgery and surgical oncology, which are accredited by the Royal College without certification, were also reviewed internally. The Surgical Oncology Program was found to be exemplary. The Colon and Rectal Surgery Program had some minor weaknesses only.

Restructuring discussions continued during this past academic year. Major geographic changes are likely to be completed during the 2000-2001 academic year. The Sunnybrook Health Science Centre and Women's College Hospital officially became the Sunnybrook and Women's College Health Sciences Centre and Dr. Sherif Hanna has

officially been appointed Head of the combined Divisions of General Surgery at these institutions. St. Michael's Hospital and The Wellesley Hospital have now officially merged with Dr. Eric Poulin becoming the Chief of Surgery at that combined institution. Dr. Marcus Burnstein continues in his role as Chief of General Surgery of the combined institution.

Postgraduate Training

The following residents were successful in completing the general surgical training program in the academic year 1999-2000: John Iskander, Peter Dauphinee, Michael Anderson, David Hackam, Todd Penner, Stephen Cassivi, Ayyan Niaz, David Smith, Larissa Temple, Lorraine Tremblay and Julia Jones. There was a 100% success rate in the Royal College fellowship examinations in general surgery.

The residents engaged in full-time research in the Surgeon Scientist Program during the 1999-2000 academic year were: Erin Kennedy (supervisor: Robin McLeod); George Oreopoulos (supervisor: Ori Rotstein); Robin Boushey (supervisor: Dan Drucker); Rebecca Gladly (supervisor: Joyce Danko); Jennifer MacMillan (supervisor: Carol Swallow); Laz Klein (supervisor: Tom Lindsay); Priscilla Chu (supervisor: Joyce Danko). These residents were awarded a number of research scholarships as well as other important prizes for their work.

John Bohnen, the Director of Postgraduate Education, worked well with our Co-Program Directors to establish various principles for the allocation of our general surgical residents for the various rotations. The PGY1 and PGY2 years will have a much more structured schedule than previously and last minute changes to the rotations will be avoided, except for exceptional circumstances.

Dr. Lorne Rotstein was appointed as Co-Program Director in General Surgery along with Marcus Burnstein. Marcus' dual role within the Colon and Rectal Surgery Program was recognized by the internal accreditation process as being excessive. Therefore, additional help was required within the program. Lorne Rotstein will take over as the Program Director for the Division of General Surgery on May 1, 2001. The Division is indebted to Robert Mustard and Ulo Ambus, who co-ordinated the PGY1 and 2 and PGY3, 4 and 5 seminars. Their places were taken on July 1st by Peter Chu and Lloyd Smith respectively.

Promotions

During the past academic year, Mark Cattral was promoted to the level of Associate Professor.

New Faculty

In 1999-2000, Drs. David Grant, Jack Langer, David Lindsay, Chris Schlacta and Andrew Smith joined our general surgical division. Recruitment plans for the academic year 2000-2001 include Paul Bernick at the Toronto East General Hospital, Peter Chu at the Sunnybrook and Women's College Health Sciences Centre, Stan Feinberg at St. Joseph's Health Centre, Philip Haigh at the University Health Network and Alan Dackiw and David Urbach at the University Health Network commencing January 1, 2001.

Honours and Awards

During the academic year, Bernie Langer became the President-Elect of the Royal College of Physicians and Surgeons of Canada. He will assume his presidency in September 2000. Eric Poulin was appointed President of the Canadian Association of General Surgeons. Dr. John Bohnen officially took over as Director of Postgraduate Education. Lloyd Smith won a PAIRO Award for resident teaching. David McCready became President of the Canadian Society of Surgical Oncology. Doug Wooster became President-Elect of the Canadian Society for Vascular Surgery. Bryce Taylor was awarded a Colin R. Woolf Award for commitment and achievement in postgraduate education. Richard Reznick was awarded the John T. Hubbard Award. Steve Gallinger won the Premier's Research Excellence Award, as well as being appointed Director of the Hepatobiliary Surgery Program jointly at the University Health Network and Mount Sinai Hospital. Richard Reznick also received the James IV Travelling Fellowship, the sabbatical time to be taken during the summer of 2001.

There were numerous grants achieved by our faculty from the Medical Research Council of Canada, CIHR, Physicians Services Incorporated Foundation, National Cancer Institute of Canada, National Institutes of Health, Natural Sciences and Engineering Research Council, as well as many others. The total value of all grants received by our faculty during the academic year was \$3,899,982.

A number of teaching awards were won during the academic year. Helen MacRae and Michael Goldberg won individual teaching excellence awards from the Wightman-Berris Academy. Peter Kim won the Chief Resident's Best Teaching Award at The Hospital for Sick Children. Lorne Rotstein won the Ross Fleming Surgical Educator Award at the University Health Network. The remaining honours and awards are listed below.

Our surgical residents, particularly those in the Surgeon Scientist Program, were also extremely successful in their grant capture, as well as overall in their academic productivity. Rob Gryfe was a co-winner in the Gallie-Bateman resident research competition and won the CSCI/Medical Research Council of Canada Resident Research Prize. Robin Boushey was runner-up in the Gallie-Bateman resident research competition and won the Star Medal for scholarship in anatomy, physiology and pathology. He also was awarded a Medical Research Council of Canada Fellowship, a Crohn's and Colitis Foundation of Canada Research Fellowship, as well as a Terry Fox Research Fellowship. George Oreopoulos received an honorable mention in the Gallie-Bateman resident research competition and also received a fellowship from the Surgical Infection Society. David Hackam won the Bernard Langer Surgeon Scientist Award for overall excellence in research during his residency training. Erin Kennedy received both a Medical Research Council of Canada Fellowship and a Crohn's and Colitis Foundation of Canada Fellowship. Rebecca Gladly received a Medical Research Council Fellowship and a Hospital for Sick Children tuition bursary. Jennifer MacMillan received an Ontario Graduate Scholarship and an M.I.S. Merit Award, and Laz Klein received a Johnson & Johnson Surgical Scientist Program Award.

Special Events

The Society for University Surgeons held its annual meeting in Toronto and was hosted by Ori Rotstein. The Annual Assembly of General Surgeons took place in June. This event was once again organized by Steve Gallinger and is certainly a highlight as an academic day for our general surgical division. Steven Strasberg, an alumnus of our Division was the Bruce Tovee Lecturer and did an outstanding job in assessing the presentations and making the awards for best papers to Rob Gryfe, Karen Yap and George Oreopoulos.

The 40th Annual Update Course for general surgeons was held at the end of April of the year 2000. This was a two-and-a-half day session

devoted to a variety of topics – surgical oncology and laparoscopic surgery being highlighted. Visitors for the Update Course were Alfred Cohen from the Memorial Sloan-Kettering Cancer Center and John Hunter from the Emory University in Atlanta, Georgia. A very large number of local faculty both within general surgery and outside of general surgery took part in the sessions. The Update Course during this academic year provided our Division with the largest registration and the largest amount of corporate sponsorship in the history of the Update Course.

DIVISION OF NEUROSURGERY

Dr. James Rutka, Chair

This year, Dr. Charles Tator was honoured for his role as Chair of the Division of Neurosurgery from 1989–1999. Dr. Tator was also appointed as a member of the Order of Canada. Dr. Rick Moulton was appointed to the position of Division Head of Neurosurgery at St Michael's Hospital having taken over from Dr. William Tucker, who stepped down after serving as Division Head for seven years.

To assist the new Chair, the following appointments were made: Dr. Chris Wallace, Program Director; Dr. Michael Cusimano, Course Director; Dr. Michael Fehlings, Research Director; Dr. Ab Guha, Neuro-oncology Committee Chair; and Dr. Mark Bernstein, Dan Chair Fund Executor for the Toronto Western Hospital site.

Resident Achievements

All three resident candidates passed the Royal College examinations and received their FRCSC degree: Drs. Wai Ng, Sagun Tuli, and Ahmed Alkhani.

Several residents received externally funded fellowships and awards during the year: Steve Casha – Cervical Spine Research Society Resident Fellowship and Ontario Neurotrauma Foundation Award; Howard Ginsberg – Medical Research Council of Canada Doctoral Research Award and Johnson & Johnson Fellowship; Abhaya Kulkarni – Physicians Services Incorporated Foundation Award and Congress of Neurological Surgeons Resident Award; Todd Mainprize – National Cancer Institute of Canada Research Fellowship; Nicolas Phan – Medical Research Council of Canada Fellowship, Elizabeth Arbuthnot Dyson Fellowship and Joseph M. West Family Memorial Fellowship; Michael Taylor - Preuss Award; Eve Tsai – Ontario Neurotrauma Foundation Fellowship and Joint Section on Trauma of the American Association of Neurological Surgeons Award.

Todd Mainprize and Michael Taylor were awarded a University of Toronto Open Fellowship in recognition of their excellent academic achievements in the laboratory. Michael Taylor also received a Clinician-Scientist Training Program Award – Research Training Centre, The Hospital for Sick Children.

Warren Ho successfully transferred to the PhD program within the Institute of Medical Sciences. Abhaya Kulkarni successfully defended his Master's in clinical epidemiology and is now in the PhD program. Kamal Thapar successfully defended his PhD in the Department of Laboratory Medicine and Pathobiology.

Howard Ginsberg won this year's Horsey Prize for best clinical research in the Division of Neurosurgery. The Morley Prize winners for best basic science research were Steve Casha (first prize) and Michael Taylor (second prize). Wai Ng was awarded second prize in the oral presentations at the University of Toronto, Trauma Research Day 2000. Eric Massicotte received the A.R. Hudson Resident Teaching Award.

Charles Matouk won the University Health Network's Sopman Humanitarian Award.

Congratulations to the following: Brad Jacobs – married August 21, 1999; Ash Singhal – married August 21, 1999; Sheila Singh – married September 25, 1999; Moji Hodaie – baby girl, Sara, May 17, 2000.

Awards

Michael Cusimano – Ontario Neurotrauma Foundation; Peter Dirks – National Cancer Institute of Canada; Michael Fehlings – Ontario Neurotrauma Foundation grant; Medical Research Council of Canada/Canadian Neurotrauma Partnership Program, and Health Research Personnel Development Program Career Scientist Award; Ab Guha – American Brain Tumour Association Award, Natural Sciences and Engineering Research Council grant, Premier's Research Excellence Award, Monsanto Biomedical Research Grant, National Cancer Institute of Canada, The Hospital for Sick Children's Translational research grant, Heart and Stroke Foundation, Radiation Therapy Oncology Group Translational research grant, Gene Chip Discover grant, and American Cancer Society; Raj Midha – Ontario Neurotrauma Foundation; Paul Muller – National Institutes of Health/National Cancer Institute of Canada grant; Jim Rutka – Terry Fox New Frontiers Award, National Cancer Institute of Canada; Michael Schwartz – Ontario Neurotrauma Foundation.

New Funded Initiatives

Charles Tator Endowment Program for Spinal Cord Injury and Repair; Harold J. Hoffman/Shoppers Drug Mart Chair in Pediatric Neurosurgery - Chairholder, Robin P. Humphreys; James F. Crothers Family Fellowship in Peripheral Nerve Damage, Freeman Centre in Clinical and Molecular Endocrine Oncology.

Neurosurgery Lectureships

Botterell – Dr. Peter McLBlack, Brigham Women’s and Children’s Hospital; Keith – Dr. Arnold Menezes, University of Iowa; Hendrick – Dr. Tae Sung Park, University of Washington, St. Louis

Promotions

Andres Lozano, James Rutka, Chris Wallace – Full Professor

New Faculty Recruits

Phil Porter – University Health Network - vascular neurosurgery
Kamal Thapar – University Health Network - skull base and epilepsy surgery.

Other Awards

Chris Wallace organized the Lougheed Microvascular Course for the neurosurgery residents on two occasions. Fred Gentili organized the Botterell Professorship. Ab Guha organized the 2nd Annual CBTnet Meeting. Mark Bernstein organized the Keith Lectureship with Michael Fehlings arranging the research presentations by the residents.

Mark Bernstein won the A.R. Hudson Faculty Teaching Award.

The number of publications by neurosurgery faculty and residents totalled 79, and there were 43 visiting professorships by the faculty.

Appointments

Fred Gentili has been appointed as a member of the University of Toronto Joint Centre for Bioethics. Mark Bernstein has become a member of the Joint Center for Bioethics at the University of Toronto. Chris Wallace and Jim Rutka were appointed co-chairs of the Host

Committee for the AANS 2001 meeting in Toronto. Ab Guha has been selected as neurosurgical representative to the Clinical Care Advisory Committee meeting of the National Neurofibromatosis Foundation. Fred Gentili has been appointed Head of the Royal College Examination Committee. Rick Moulton has been appointed as President of the Canadian Neurosurgical Society.

DIVISION OF ORTHOPAEDIC SURGERY

Dr. James Waddell, A.J. Latner Professor and Chair

This past year has been an eventful one within the Division of Orthopaedic Surgery. Hospital restructuring continues to be an important influence on the Division with continuing plans at both St. Michael's Hospital and Sunnybrook and Women's College Health Sciences Centre for amalgamation of clinical services and surgeons from respectively the Wellesley Hospital site and the Orthopaedic and Arthritic Hospital site. It is anticipated that this restructuring will be complete at approximately the time that I finish as the Chair of the Division of Orthopaedic Surgery.

There has been a new Chair established in orthopaedic surgery at the Mount Sinai Hospital. This chair, The Bernard I. Ghert Family Foundation Chair in Reconstructive Orthopaedics, has been occupied by Dr. Allan Gross and it is anticipated that it will support the continued excellence in reconstructive orthopaedic surgery practiced at the Mount Sinai Hospital.

Dr. Joseph Schatzker, after many years of service as Program Director, stepped down from that position effective January 1, 2000 and the position has now been taken over by Dr. Douglas Hedden of The Hospital for Sick Children.

Two new staff appointments have been made in the Division over the past year. Dr. Andrew Howard has been appointed as an active staff member at The Hospital for Sick Children, and Dr. Raj Rampersaud to an active staff position at the University Health Network, Toronto Western Hospital. Dr. Rampersaud's primary interest is in spine surgery and he has joined Dr. Michael Fehlings of the Division of Neurosurgery in the University Health Network Spine Program.

The Division has had a number of outstanding visitors in the past year, most particularly Dr. Stuart Weinstein as the Kennedy Visiting Professor and Dr. Regis O'Keefe as our Visiting Research Professor. Both visiting professors did an outstanding job and all faculty members were delighted with the contributions of the visitors to the academic excellence of our Division. In addition, the Austrian/Swiss/German Travelling Fellows visited in April and the ABC Travelling Fellows in June of 2000. Both groups of travelling fellows contributed their considerable experience and knowledge to residents and faculty alike over the course of the academic days set aside for their visit.

Members of the faculty and residents were recognized for excellence in orthopaedic surgery over the past year. Dr. Daniel Whelan received the Robin Sullivan Award for Excellence in Research at the Orthopaedic Research Day for his paper on “Pulmonary contusion and fat embolism”. Dr. Sevan Hopyan was co-winner of the Gallie-Bateman resident research competition for his presentation on “A mutant parathyroid hormone related protein receptor and uncoupled growth plate signals in Ollier’s disease”. Dr. Eugene Wai was the inaugural recipient of the Wyeth-Ayerst Canada Incorporated Award for excellence in research in clinical epidemiology. Dr. Joel Lobo won the poster prize at the Trauma Research Day for his work on “The biomechanics of fracture fixation”. Dr. Amir El Maraghy and Dr. Eugene Wai were awarded the Sanofi-Synthelabo Resident Research Award for the best resident presentations on Kennedy Day. Dr. Amir El Maraghy was voted by the faculty as the outstanding graduating resident and received the R.I. Harris Postgraduate Prize in recognition of this award.

Faculty recognition for excellence by outside groups included the Kappa Delta Award (the Orthopaedic Research and Education Foundation Clinical Research Award) to Drs. Ben Alman and Jay Wunder. Dr. Erin Boynton received the Carroll Laurin Award from the Canadian Orthopaedic Foundation for her continued research work. Dr. Tim Daniels was appointed the Canadian representative on the International Committee of the American Orthopaedic Foot and Ankle Society in recognition of his clinical and academic expertise in this field.

Dr. Carol Hutchison was once again recognized for her excellence in teaching by being awarded the Silver Shovel Award. Dr. Robin Richards was elected President of the Canadian Orthopaedic Research Society for a one-year term. Dr. Jay Wunder was recognized for his excellence in teaching by receiving the Robert Salter Teaching Award – an award voted on and presented by the residents to the outstanding faculty teacher each year.

Dr. Ian Harrington stepped down after ten years of service as the Chief of Orthopaedic Surgery at the Toronto East General Hospital and was succeeded by Dr. Gianni Maistrelli currently an Associate Professor in the Department of Surgery.

Overall, this has been a very successful year for the Orthopaedic Division. New staff appointments indicate a growing interest in

academic orthopaedic surgery at this University. Grant support is up substantially over the past year, and our faculty members continue to be recognized by their international peers for their contributions in orthopaedic surgery.

DIVISION OF PLASTIC SURGERY*Dr. Peter Neligan, Wharton Chair in Reconstructive Plastic Surgery***Research**

Dr. Zvi Margalioth successfully completed and defended his MSc thesis and returned to the clinical stream in July 2000. Two residents entered the Surgeon Scientist Program. Dr. Rob Shenker, under the supervision of Drs. Peter Neligan and Cho Pang, and Dr. Alexis Armour under the supervision of Drs. John Semple and Kim Woodhouse. The annual Resident Research Day was on March 31, 2000. The best clinical paper was won by Dr. Catherine Haywood for her paper entitled "Exploring cortical plasticity following free functioning muscle transfer in the upper extremity: Using functional magnetic resonance imaging and transcranial magnetic stimulation" and the best research paper was won by Dr. Joan Lipa for her paper entitled "The retinacula cutis of the face". The University of Toronto was extremely well represented at the annual meeting of the Plastic Surgery Research Council in Seattle in May 2000. Dr. David O'Donovan (research fellow in plastic surgery under the supervision of Drs. Christopher Forrest and Cho Pang) won the Snyder Award for the best paper presented by a fellow or resident in plastic surgery. The title of Dr. O'Donovan's paper was "Role of cytoprotection in the prevention of radiation induced craniofacial bone growth inhibition: Evaluation in an infant rabbit model." Dr. O'Donovan also won the Shenaq Award for the best paper presented by an international fellow for the same paper. Dr. O'Donovan's project is the subject of an MD thesis which he has prepared for the National University of Ireland, University College, Dublin. Dr. Claire Black (research fellow under the supervision of Drs. Peter Neligan and Cho Pang) won the Hardesty Award for the best poster at this meeting for her paper entitled "Effect of nicotine on endothelial function in human skin flap." Dr. Black is also submitting her project as the subject of a thesis towards an MD degree at Queen's University in Belfast. Dr. Manuel Gomez (supervisor Dr. Joel Fish) received an American Burn Association Award for the best presentation at the Canadian Special Interest Group at the Association for his project "The Ross Tilley burn score: An outcome predictive score in Canadian burn patients". Dr. Peter Neligan was awarded the W.K. Lindsay Resident Research Supervisor Award.

Teaching

The achievements of both residents and staff was celebrated by receipt of several awards during the year. Drs. Marc Dupere and Nancy de Kler received the Harrison Award for the best resident teachers at the Sunnybrook and Women's College Health Sciences Centre. Dr. Catherine Haywood was the recipient of the D.R. Wilson Award for the best resident teacher within the Department of Surgery. This award was presented on Gallie Day. Dr. Arnis Freiberg won the Arnis Freiberg Teaching Award for the best faculty teacher.

Several courses were held in the new Surgical Skills Laboratory this year. The two-day dissection workshop was held on November 25 – 26, 1999. This was attended by both University of Toronto and McMaster University residents and fellows. A workshop on facial implants and injectables in plastic surgery was also held in the Surgical Skills Laboratory. The Hoyle Campbell Visiting Professor for the year 2000 was Dr. Neil Ford Jones of the University of California, Los Angeles. Dr. Jones spent two days with the residents, as well as acting as one of the judges at the annual Resident Research Day.

New Appointments

Dr. David Fisher was appointed to The Hospital for Sick Children and has taken over as Head of the Cleft Program. Dr. Christopher Forrest was appointed Head of the Craniofacial Program at The Hospital for Sick Children.

Four residents graduated from the program this year. Drs. Damir Matic, Catherine Haywood, Joan Lipa and Richard Hopper. Dr. Matic is pursuing a clinical fellowship in craniofacial surgery at the Johns Hopkins University. Dr. Hopper is pursuing a craniofacial fellowship at the New York University and Dr. Lipa an oncologic reconstruction fellowship at M.D. Anderson Cancer Center. Dr. Haywood has been appointed to the staff of the Peel Memorial Hospital.

DIVISION OF THORACIC SURGERY

Dr. Shaf Keshavjee, Acting Chair

Clinical

All thoracic surgeons on University Avenue are now based at the University Health Network, providing an active and busy teaching service for the thoracic surgical trainees. The full breadth of thoracic surgical disease is treated at the University Health Network, making it the largest and most comprehensive training program in the country. The Lung Transplant Program has continued to grow experiencing the busiest year ever in the history of the Program with over 40 transplants performed this year. After the successful addition of a Pediatric Lung Transplant Program and a Heart-Lung Transplant Program, we are now embarking on a Living-Related Lung Transplant Program. The Lung Volume Reduction (LVR) Program, now under the direction of Dr. Thomas Waddell, has completed a randomized trial in lung volume reduction for end-stage emphysema. The Lung Volume Reduction Program, the University Health Network Pulmonary Hypertension Program, the Cystic Fibrosis Programs and the Lung Transplant Programs have been more closely integrated to provide seamless care for patients with end-stage lung disease.

Teaching and Research

Dr. Gail Darling has completed her third year as Course Director of the Arts and Science of Clinical Medicine Course. The thoracic surgery research laboratory continues to be productive with numerous grants, publications, presentations at international meetings and a continued attraction of both University of Toronto surgical scientist trainees and international fellows. The breadth of expertise provided by the principal investigators, Dr. Shaf Keshavjee (Director), Dr. Mingyao Liu and Dr. Thomas Waddell, provide an exciting and stimulating research environment for trainees ranging from undergraduate students to post-doctoral fellows.

Retirements and Recruitments

Dr. Thomas Waddell was appointed as an Assistant Professor in January 2000. In addition to playing a major role in both lung transplantation and thoracic oncology, he has his own laboratory focusing on basic investigations in the field of xenotransplantation. Dr.

Waddell has obtained peer-reviewed funding of almost half a million dollars in his first year on our faculty!

Dr. Tom Todd has left the University of Toronto to assume the position of Chief of Surgery at the Shaikh Khalifa Medical Centre in Abu Dhabi, United Arab Emirates – he appears to be enjoying his new lifestyle! Dr. Tim Winton has moved to the Division of Thoracic Surgery in Edmonton.

Dr. Shaf Keshavjee has served as Acting Chair, Division of Thoracic Surgery and Head of the Division of Thoracic Surgery at the University Health Network, as well as Program Director for thoracic surgery. Dr. Robert Ginsberg, originally from Toronto, who has been working in New York as the Chief of Thoracic Surgery for the past ten years, has been recruited to the position of Chair of Thoracic Surgery, University of Toronto and Head, Division of Thoracic Surgery, University Health Network, starting January 1, 2001.

Awards and Honours

Dr. Shaf Keshavjee: Canada's Top 40 under 40 Award; three-year Medical Research Council of Canada grant; three-year Canadian Cystic Fibrosis Foundation grant. Dr. Mingyao Liu: three-year renewal of his previously held Medical Research Council of Canada grant; a new five-year CIHR grant and the Premier's Research Excellence Award. Dr. Gail Darling: E. Bruce Tovee Award for Undergraduate Teaching. Dr. Tom Waddell: American Association for Thoracic Surgery Research Fellowship; Thoracic Surgery Foundation for Research and Education research grant; Crann Foundation Award; Canadian Foundation for Innovation Major Infrastructure Award. Dr. Jonathan Cardella successfully defended his MSc thesis under the supervision of Dr. Mingyao Liu, and Dr. Stefan Fischer successfully defended his MSc thesis under the supervision of Dr. Shaf Keshavjee.

Visiting Professors and Meetings

The 29th Annual Thoracic Surgery Refresher Course was a well-attended success once again, with Visiting Professors Anthony Yim (Hong Kong), Philippe Dareteville (France) and Lary Kaiser (United States). In addition, a symposium on "Current Concepts in the Management of Stage III Lung Cancer" was held in conjunction with the American Association for Thoracic Surgery meeting in Toronto.

This multidisciplinary meeting brought together an international faculty of leaders to present the state-of-the-art in advanced lung cancer.

Invited Lectures

Dr. Shaf Keshavjee was an invited lecturer at the American Thoracic Society meeting, San Diego, California; the Division of Cardiothoracic Surgery, University of California Los Angeles; the International Society of Cardiothoracic Surgeons XIIth meeting in Awaji, Japan; the Royal College of Surgeons meeting in Montreal; the Canadian Association for Transplantation in Mont Tremblant, Quebec; the Third South American Transplant Society meeting in Uruguay; the Northeastern Brazilian Society of Thoracic Surgery in Brazil, and the Canadian Pulmonary Hypertension Society in Toronto. Dr. Mingyao Liu was an invited lecturer at the University of Waterloo, Department of Chemical Engineering; the Jinan Hospital in China; Kyoto University in Japan, and at the Ray Wu Scientific Retreat in Cape Cod, United States. Dr. Thomas Waddell was an invited lecturer at the Canadian Transplantation Society, Mont Tremblant, Quebec, and the Canadian Pulmonary Hypertension Symposium in Toronto. Dr. Gail Darling was an invited speaker at the Canadian University Surgical Education Committee meeting held in Halifax in November 1999. Dr. Michael Johnston was an invited lecturer at the Queen Elizabeth II Health Sciences Centre, Dalhousie University; the Canadian Association of Thoracic Surgeons annual meeting in Toronto, and the Ottawa Civic Hospital/University of Ottawa in April 2000.

DIVISION OF UROLOGY

Dr. Michael Jewett, Chair

Faculty Appointments, Promotions, Honours and Changes

This year the Division's faculty consisted of nineteen geographic full-time surgeons, four senior surgeons and one PhD scientist. Faculty continued their global scope and visited most Canadian provinces, many United States and international universities and attended meetings all over the world. Leadership was provided in international clinical trials and various national and international urological organizations. Dr. Grant Farrow completed thirty-four years of clinical practice at the Toronto General Hospital and retired at the end of the year.

Dr. Lori Burrows, PhD, continues as Director of the Centre for Infection and Biomaterials Research at the University Health Network, Toronto General Hospital, which now houses eleven members, including a surgical scientist resident.

Dr. Lesley Carr officially moved her office to the Sunnybrook campus of the Sunnybrook and Women's College Health Sciences Centre where she continues to direct the Urology School for the residents.

Dr. Neil Fleshner was a co-investigator on two National Cancer Institute of Canada awards, including a case-control study of PSA screening in preventing deaths from prostate cancer and the role of serum IGF-1 levels and AR receptor genotype in prostate cancer diagnosis. He organized a meeting with international scope on nutrition and prostate cancer.

Dr. Magdy Hassouna continues with his neuromodulation research and nerve stimulation program.

Dr. Sender Herschorn, Deputy Chair of the Division, stepped down as Head at the Sunnybrook and Women's College Health Sciences Centre. He was appointed the departmental Director of Continuing Professional Development (formerly known as Continuing Medical Education). He was awarded the Faculty postgraduate teaching award and the Marvin Tile award for distinguished service in the Department of Surgery.

Dr. John Honey continued as Director of the Urolithiasis and Lithotripsy Program at the University and Head of Urology at St.

Michael's Hospital. The Wellesley-Central Hospital became a site of St. Michael's Hospital and the stone program will move to the Bond Street site. He is a co-investigator on a Kidney Foundation of Canada grant and a Heart and Stroke award. A scholarship was inaugurated in his name at St. Michael's Hospital and Dr. Ken Pace, a fellow in endourology and laparoscopy was the recipient of the first annual scholarship. The team performed the first laparoscopic donor nephrectomy in Ontario in collaboration with the Minimal Access Therapeutics Division at St. Michael's Hospital.

Dr. Keith Jarvi continued to lead the Andrology Program with peer-reviewed funding and supervises a fellow, a post-doctoral student, and a surgical scientist resident.

Dr. Michael Jewett continued as Chair of the Division and Head of Urology at the University Health Network. He was awarded a Kidney Foundation of Canada research grant as a principal investigator and is a co-investigator on several National Cancer Institute of Canada awards. He led a team at the University Health Network that performed the first robotic laparoscopic radical prostatectomy in Canada.

Dr. Tony Khoury was invited as a visiting professor to ten medical universities/international meetings, is leading two clinical trials, supervised two fellows, who won prizes for their work, and leads the Pediatric Urology Fellowship Program, which is considered one of the top programs in North America, with two fellows per year entering the program. He has received research funding from The Hospital for Sick Children Research Institute, the Kidney Foundation of Canada, and Materials and Manufacturing Ontario. The hospital division underwent a successful five-year review by Dr. Jim Mandell.

Dr. Laurence Klotz became the Head of Urology at the Sunnybrook and Women's College Health Sciences Centre. He continues as Chair of the Canadian Uro-Oncology Group (CUOG)/National Cancer Institute of Canada Clinical Trials Group GU Site Committee, as well as the Global GU Group. He also continues as Editor-in-Chief of the Canadian Journal of Urology and was elected to the executive of the Society of Urological Oncology.

Dr. Ron Kodama continued as the Program Director of the Division. He was awarded the Marvin Tile award for distinguished service to his hospital Department of Surgery.

Dr. Gordon McLorie became President of the Canadian Urological Association, an honour that the faculty has not held for more than ten years.

Dr. Paul Merguerian left the Division in April for a new position in Fresno, California.

Dr. Sid Radomski won the Surgical Skills Centre Teaching Award for best surgical teacher. He conducts the very popular hands-on part of Urology School, and is developing the minimally invasive surgery program at the University Health Network.

Dr. Rob Stewart moved his laboratory and practice to St. Michael's Hospital in July, where he continues with his vascular biology research.

Dr. John Trachtenberg continues as Director of the Prostate Centre at the Princess Margaret Hospital and is now President of the Canadian Academy of Urological Surgeons. He is a co-investigator on several grants. The Prostate Centre was awarded a Clinical Research Program award at the Princess Margaret Hospital and launched its website. The annual and very successful continuing professional development meeting for prostate diseases (ICPC) will be held again in 2001.

Dr. John Tsihlias joined the Faculty in July at the University Health Network, Princess Margaret Hospital after further uro-oncology training at MD Anderson Cancer Center and set up his laboratory to study prostate cancer biology.

Academic Events and Divisional Awards

Our Charles J. Robson Visiting Professor this year was Dr. Ian Thompson, Chair of the Division of Urology at the University of Texas at San Antonio.

Research Day 1999 was held in conjunction with the Robson Visiting Professorship. The awards for best presentations were: Resident Basic Research Award – Dr. R. Nam; Resident Clinical Research Award – Dr. S. Sharir, honourable mention – Dr. T. Finelli; Urology Fellow Research Prize – Dr. G.P. Capolicchio, honourable mention – Dr. W. Farhat.

The annual graduation ceremony (TURP 1999 for Toronto Urology Party) took place at the Badminton and Raquet Club in June. The

Faculty was introduced to the new PGY1's and the graduates. The achievements of faculty and residents were also recognized, as well as acknowledgement of retirees and new faculty members. Our guest was the City of Toronto Chief Planner, Paul Beresford. Dr. Sender Herschorn received the Postgraduate Faculty Teaching Award by the senior residents. Dr. Ron Kodama received the A.W. Bruce Undergraduate Faculty Teaching Award for the sixth time, and Dr. Munir Jamal was awarded the Resident Undergraduate Teaching Award as the best resident teacher.

The Ontario Government W.K. Kerr Scholarship in Science and Technology was established with donations from faculty and friends. The endowment is \$300,000 and it will provide an annual postgraduate scholarship of \$15,000. This is the second scholarship fund for urology with almost \$1,000,000 in the Toronto Hospital Foundation Graduate Student Scholarship in Urological Research Fund.

The Paul Starita Scholarship was awarded to Ben Beheshti for studies in prostate cancer at the University Health Network, Princess Margaret Hospital in the Department of Pathology.

Postgraduate Education

Dr. Ron Kodama continued as Program Director with Dr. Leslie Carr organizing Urology School. Graduates of the program in 1999 were Drs. Nicholas Logarakis, Munir Jamal and John Preiner, and all were awarded their fellowships from the Royal College. We will welcome four new PGY1's in July - Drs. Andrew Caters and Kurt Eger, University of British Columbia; Dr. Leslie Dean, University of West Indies, and Dr. Aaron Blumenfeld, University of Toronto. There were a total of eighteen residents in the program. In addition, there were eleven fellows in clinical and research positions.

The fifth Urology Fair for resident selection, which is a national event, was held on January 9th in Toronto with all programs sending interview teams and all the Canadian fourth year students interested in urology attending. Twenty-one applicants were interviewed for three positions.

Drs. Eddie Matsumoto and Tony Finelli continued in the Surgeon Scientist Program to study for their MSc in education under the supervision of Dr. Stan Hamstra (co-supervisor, Dr. Sid Radomski) and

in microbiology and biomaterials under Dr. Lori Burrows (co-supervisor, Dr. Keith Jarvi) respectively.

Dr. Rob Nam was awarded the Astra Zeneca-CUOG Research Award for this year and Dr. Ricardo Rendon, fellow with Dr. Jewett, won it for next year. Dr. Ben Chew was also awarded the third annual Struthers Scholarship for studies in stone disease.

The University of Toronto/St. Michael's Hospital Endourology Fellowship has been approved by the Endourology Society as a recognized fellowship program, one of a few in North America. Dr. Kenneth Pace, the first fellow in the program with Dr. Honey, was awarded the Northeastern Section of the American Urological Association's Graduated Urologist Award to begin developing a laparoscopic donor nephrectomy program at St. Michael's Hospital, the first of its kind in Ontario. He is also pursuing an MSc degree in clinical epidemiology at McMaster University.

Dr. Pramod Reddy, fellow at The Hospital for Sick Children, won First Prize Research Award for his paper titled "Regeneration of functional bladder substitutes using large segment (>44cm²) acellular matrix allografts in a porcine model: Long term results" at the American Academy of Pediatrics (Urology). Dr. Walid Farhat, also a fellow at The Hospital for Sick Children, won the Canadian Urological Association Prize Essay contest for his paper titled "The dysfunctional voiding symptom score: Quantitative standardization and follow-up of voiding behaviours in children".

Continuing Professional Development (formerly CME)

The Urology Update was held in November under the able direction of Dr. Sender Herschorn, Director of Urological Continuing Medical Education and co-direction of Dr. Laurie Klotz. Once again, it proved extremely successful. The next update is scheduled for November 2000.

DIVISION OF VASCULAR SURGERY

*Dr. K. Wayne Johnston, R. Fraser Elliott Chair
in Vascular Surgery*

Honours

Dr. Rubin is the Wylie Scholar in Academic Vascular Surgery. Dr. Johnston continues as Editor-in-Chief of the Journal of Vascular Surgery and the R. Fraser Elliott Chair in Vascular Surgery. Dr. Lindsay is the President of the Peripheral Vascular Surgery Society.

Research

Dr. Lindsay has Physicians Services Incorporated Foundation grant support to continue his studies of the mechanism of remote organ injury following repair of ruptured aortic aneurysms. Dr. Kucey, with Dr. Tu, is funded by a grant from the Canadian Heart and Stroke Foundation to evaluate carotid endarterectomy in the community. He is supervising two clinician scientists. With a grant from the Canadian Heart and Stroke Foundation, Dr. Rubin continues his study of factors influencing human neutrophil function. In collaboration with Drs. Wright and Merchant, the Medical Research Council of Canada has funded a study of the role of magnetic resonance imaging for the evaluation of ischemic extremities. Dr. Kalman, with Dr. Irvine and others, has ongoing grant support from the Canadian Heart and Stroke Foundation, to determine the efficacy of interventions in smoke cessation and also exercise therapy. Dr. Johnston has a Medical Research Council of Canada grant to support his basic research programs with Professors Richard Cobbold and Matadial Ojha (Biomedical Engineering) in Doppler ultrasound and hemodynamics studies.

Education

Dr. Goldberg received the Wightman-Berris undergraduate teaching award and Dr. Rubin received a nomination. Dr. Lossing's core lectures in vascular surgery continue to be very highly evaluated. Dr. Kalman organized the very successful 4th Toronto Vascular Surgery Symposium. He is Chair of the Royal College Examination Committee in Vascular Surgery. Dr. Wooster chairs a group that is developing the next version of the Vascular Self-Evaluation Program (a continuing medical education program for vascular surgeons) and developed guidelines for a self assessment program for the maintenance of certification initiative for the Royal College. Dr. Wooster is a member

of the Vascular Advisory Committee of the American College of Surgeons. He also chairs the Vascular Surgery Residency Committee and is Director of Medical Education at the St. Joseph's Health Centre.

Administration

Dr. Walker is Vice-President of the Toronto General Hospital. Dr. Ameli completed his term as Chair of Continuing Medical Education for the Department of Surgery. Dr. Johnston completed his term as Chair of the Clinician Scientist Committee at the Medical Research Council of Canada. Dr. Tanner is Chair of the Specialists Coalition and was an Ontario Medical Association negotiator.

New Programs

Dr. Maggisano, in collaboration with Dr. Kucey and others, has introduced several technical modifications to improve the safety of thoracoabdominal surgery.

DIVISION OF BIOMEDICAL COMMUNICATIONS

Dr. Linda Wilson-Pauwels, Chair

This year marks an exciting expansion of the professional Master of Science in Biomedical Communications (MScBMC) curriculum. A new *optional* program of study includes combining the MScBMC with the Postgraduate Certificate in Computer Animation at Sheridan College. This unique partnership provides Biomedical Communications students the opportunity to specialize and receive a certificate in state-of-the-art, 3-dimensional computer animation applications on workstation platforms in a renowned training program at Sheridan College.

The principal rationale for creating this *combined* program is the increasing professional demand and job market availability for Biomedical Communications graduates with skills in advanced 3-D computer animation. Neither the University of Toronto, nor other post-secondary institutions in Toronto presently offer the calibre of professional training in 3-D computer animation provided at Sheridan College.

Currently, Biomedical Communications students acquire skills in animation using software on a microcomputer platform. The Sheridan College program will extend these skills into the application of advanced animation software on a computer workstation platform. The Sheridan College animation course content has been adapted for the Biomedical Communications students in four new graduate courses that are jointly listed in the Institute of Medical Science and the School for Animation, Arts and Design at Sheridan College. The courses are co-directed by faculty cross-appointed to both institutions. The Master's project is the culmination of advanced work completed in the four joint courses.

The main advantage of the *Combined Optional Program* for the Biomedical Communications students is the development of advanced skills in 3-D computer animation within the MScBMC program *without lengthening the time to degree completion*. Students who enter this Combined Optional Program will pay a combined fee for both institutions that will be less than the sum of the fees for the individual programs.

Sheridan College will benefit from the Combined Optional Program by expanding their animation content, now focused on entertainment, into

the area of biomedical communications; the target audience being mainly industry involved in medical applications. This partnership will create innovative research and education opportunities utilizing advanced 3-D computer animation in the departments affiliated with biomedical communications.

Future goals include attracting industry support for research initiatives in interface design and visualization.

DIVISION OF ANATOMY

Dr. Michael Wiley, Chair

On July 1, 1999, seven members of the Department of Anatomy and Cell Biology transferred their primary academic appointments to the Department of Surgery to form the new Division of Anatomy. Thirteen academic, technical and administrative staff make up the new division, located in the Medical Sciences Building.

The newest member of the Division is Dr. Cindi Morshead. Dr. Morshead is Director of the neuroanatomy course for physical therapy and Director of the gross anatomy course developed for students in the new Radiation Sciences Program. Her research interests are in neuroscience and neural stem cells, in particular.

Dr. David Cormack retired on June 30th, after 33 years of service to the University of Toronto. Dr. Cormack was in charge of the histology component of the structure and function and metabolism and nutrition courses and is author of the ninth edition of "Ham's Histology", "Essential Histology" and "Clinically Integrated Histology".

Dr. Ian Taylor has won this year's E. Mary Hollington Award for teaching with distinction in the pre-clinical part of the curriculum and the Harry Whittaker Memorial Teaching Award.

Our new Division carries the legacy of the Department of Anatomy for excellence in providing education in gross anatomy, neuroanatomy, embryology and histology. Part of this legacy is a tradition of producing educational materials including many of the most widely used texts in the discipline. This year saw the completion of the third edition of "The Anatomical Basis of Dentistry" by Professor Bernie Liebgott and the release of the 10th edition of "Grant's Atlas of Anatomy", now edited by Professors Anne Agur and Ming Lee. Coincident with the release of the latest edition of the atlas was a major renovation of the JCB Grant Museum that displays the anatomical specimens with which Grant first developed the atlas.

With the growth of electronic multi-media as a teaching resource, the Division has strengthened its collaboration with the Division of Biomedical Communications to develop several interactive programs to support anatomy education.

“Functional Neuroanatomy: An Interactive Neuroanatomy Atlas”, produced by Professor Patricia Stewart was used for the second time in the brain and behaviour course of first year medicine. This year’s version includes 3-dimensional movies showing deep structures in the brain, rotating within a transparent cortex, as well as seven animations depicting sensory and motor pathways. The program was enthusiastically received by our medical students and has been adopted in the neuroanatomy course at the University of British Columbia as well. The “Interactive Anatomy Lab Companion”, produced by Professors Mike Wiley and Nick Woolridge was introduced as a part of a new approach to laboratory teaching for students in Arts and Science and Radiation Sciences. These students can now schedule their own lab study periods using a resource area where they have access to microscopes, plastinated prosections, and computer work-stations connected to the web. The students in both programs gave this approach to laboratory study high ratings in their annual course evaluations.

The application of interactive multimedia in education is rapidly expanding. In the coming year, the Division plans to increase its focus on the development, application and evaluation of the new technologies in anatomy education.

SURGICAL ALUMNI ASSOCIATION

Dr. Charles Tator, President

One of the vital functions of your Surgical Alumni Association is to support the academic activities of the young investigators in our Department. We do this through several avenues, the most important of which is to provide support to our surgical residents enrolled in the Surgeon Scientist Program. In the 1999-2000 academic year, your Alumni Fund supported the following residents enrolled in the Surgeon Scientist Program: Alexis Armour, Tony Finelli, Laz Klein, Hari Mallidi, Eddie Matsumoto, Rob Shenker and Eve Tsai.

Since its inception, the Alumni Association has supported about 75 surgical residents in this way. Indeed, we have become well-recognized around the world for our major support of the research training of our trainees.

Another way we support our young investigators is through the awarding of the University of Toronto Surgical Alumni Scholarship to a recent faculty member. This award was instituted in 1998 and Dr. Carol Swallow was the first recipient. The second award was made in 1999 to Dr. Peter Dirks. This Alumni Association has become an active participant in promoting academic activities among its young investigators.

Through the generous giving of alumni and current faculty, we have built up our endowment funds, which support the Fellowship and Scholarship programs. At the present time the Surgeon Scientist Program Fellowship Endowment has \$249,479 and the John Provan Educational Endowment has \$136,916. We continue to seek the support of alumni and current faculty to build these endowment funds. Currently, many of you are on long-term pledges to the Surgical Alumni Fund, most of which have been eligible for matching by the University of Toronto. The matching opportunity has been extended to 2001, and so there is still time for those who wish to take advantage of this dollar-for-dollar match.

We also support in a small way other academic initiatives, and this year we provided a small grant to members of the Janes Club to help them publish an historical account of their activities. Our Surgical Alumni Newsletter is published twice yearly and reaches almost 2,000 alumni and faculty. Thank you Robin Humphreys for your excellent editorship of our newsletter.

SURGICAL ONCOLOGY

Dr. Robert Bell, Chair

Departmental Surgical Oncology Committee

Dr. David McCready, Head of Surgical Oncology for the Central East Cancer Care Ontario Region (CCOR) organized the first of what promises to be annual Surgical Oncology Network Updates for the surgeons of this region. The Central East CCOR is the largest in Ontario and Dr. McCready has done an admirable job of organizing surgical networks and discussion groups within this region. The first update was a joint venture of the CCOR, Toronto Sunnybrook Regional Cancer Centre and Princess Margaret Hospital. In addition to a spirited discussion of the development of surgical oncology services within the CCOR, Dr. McCready presented a valuable continuing medical education program related to sarcoma, melanoma and breast cancer management. A second organizational meeting for the CCOR surgical oncology group followed this meeting. Termed a “townhouse” meeting, more than 30 surgeons from community, as well as academic health science centres, discussed issues such as the implementation of the CCO Pancreatic Surgery Task Force Report. Patients across our region will benefit substantially from better organization of surgical oncology services and Dr. McCready deserves our appreciation for the work done to this point.

The General Surgery Oncology Fellowship Program underwent its initial internal and external Royal College review, and achieved full approval with glowing commentary from the external reviewers. The success of this program in its first two years is the result of the organizational and educational efforts of Dr. Carol Swallow, Program Director. Dr. Swallow had developed a very successful curriculum that is shared by radiation oncology residents, as well as fellows in other departmental surgical oncology fellowship programs. She has received support from Drs. Andy Smith and Sharif Hanna at the Sunnybrook and Women’s College Health Sciences Centre, as well as Drs. Lorne Rotstein, Steven Gallinger, Jean Couture and David McCready at the Princess Margaret Hospital. This program is an excellent example of inter-institutional collaboration within the University and Dr. Swallow is to be congratulated for the success of this program.

Dr. Steven Gallinger was appointed Head of Hepato-Biliary Pancreatic Surgical Oncology at the University Health Network and the Mount Sinai Hospital. In this position, Dr. Gallinger will be responsible for development of patient centred multidisciplinary clinical care, as well

as the academic program in HPB oncology at the two hospitals. The appointment of surgical oncology heads for each of the cancer site groups is a long-term goal of the program and Dr. Gallinger's appointment is an initial step in this direction.

Drs. Ulo Ambus and Dr. Tim Winton are leaving the University after productive surgical oncology careers. Dr. Ambus will be developing a breast surgery program in Abu Dhabi and Dr. Winton is moving to Edmonton for a division head position in thoracic surgery.

THE HOSPITAL FOR SICK CHILDREN**Surgeon-in-Chief – Dr. J.H. Wedge****HEADS OF DIVISION****Dr. W.G. Williams – Cardiac Surgery****Dr. J. Langer – General Surgery****Dr. R. Humphreys – Neurosurgery****Dr. W. Cole – Orthopaedic Surgery****Dr. R.M. Zuker – Plastic Surgery****Dr. A. Khoury – Urology**

The Hospital for Sick Children has been a major beneficiary of the loosening of the Federal purse strings for support of biomedical research. We anticipate the creation of twenty-five Canada Research Chairs over the next five years and the Canadian Foundation for Innovation is supporting important projects within the matrix structure of the Research Institute. The number of endowed chairs based at the Hospital has increased quite substantially. Dr. Robin Humphreys has been appointed to the Shoppers Drug Mart-Hoffman Chair in Neurosurgery. This recognizes Robin's leadership in international pediatric neurosurgery. Dr. James Wright has been appointed Head of Population Health Sciences in the Research Institute and has as his mandate a major expansion to the infrastructure for clinical research.

Dr. David Fisher has been appointed to the Division of Plastic Surgery to replace Dr. Hugh Thomson and will focus on cleft lip and palate surgery. Dr. Andrew Howard has joined the Division of Orthopaedic Surgery to replace Dr. Mercer Rang. Dr. Tony Khoury has been reappointed as Head of the Division of Urology.

Renegotiation of the Surgical Alternate Funding Plan has commenced and it is anticipated that there will be a major enhancement, which will allow us to add surgeons to those areas that have realized significant increases in the volumes and acuity of children with surgical problems.

As can be seen from this year's report, academic productivity has made another quantum leap, both in external research funding and peer-reviewed publications. Residents in the Surgeon Scientist Program, based at The Hospital for Sick Children, have won numerous awards for their presentations at national and international meetings.

DIVISION OF CARDIAC SURGERY

Dr. J.G. Coles - Associate Professor
Dr. G.S. Van Arsdell - Assistant Professor
Dr. W.G. Williams – Professor (*Division Head*)
Dr. C. Wittnich - Associate Professor (*Research*)

PUBLICATIONS

Belanger MP, Wallen WJ, Wittnich C: Special feeding and care of senescent spontaneously hypertensive rats. *Contemporary Topics in Laboratory Animal Science*: July 1999: 38(4): pp 7-11.

de Leeuw M, Williams JM, Freedom RM, Williams WG, Shemie SD, McCrindle BW: Impact of diaphragmatic paralysis after cardiothoracic surgery in children. *Journal of Thoracic and Cardiovascular Surgery*: September 1999: 118: pp 510-517.

Gatzoulis MA, Munk M-D, Williams WG, Webb GD: Definitive palliation with cavopulmonary and/or aortopulmonary shunts for adults with single ventricle physiology. *Heart*: January 2000: 83: pp 51-57.

Najm HK, Coles JG, Black MD, Benson L, Williams WG: Extended aortic root replacement with aortic allografts or pulmonary autografts in children. *Journal of Thoracic and Cardiovascular Surgery*: September 1999: 118: pp 503-509.

Najm JH, Wallen J, Belanger MP, Coles JG, Williams WG, Van Arsdell GS, Black MD, Wittnich C: Does the degree of cyanosis affect myocardial adenosine triphosphate levels and function in children undergoing surgical procedures for congenital heart disease? *Journal of Thoracic and Cardiovascular Surgery*: March 2000: 119: pp 515-524.

Oechslin EN, Harrison DA, Harris L, Downar E, Webb GD, Siu SS, Williams WG: Re-operation in adults with repaired tetralogy of fallot: Indications and outcomes. *Journal of Thoracic and Cardiovascular Surgery*: August 1999: 118: pp 245-251.

Ovaert C, Caldarone CA, McCrindle BW, Nykanen B, Freedom RM, Coles JG, Williams WG, Benson LN: Endovascular stent implantation for the management of post-operative right ventricle outflow tract obstruction: Clinical efficacy. *Journal of Thoracic and Cardiovascular Surgery*: November 1999: 118: pp 886-893.

Overgaard CB, Harrison DA, Siu SC, Williams WG, Webb GD, Harris L: Outcome of previous tricuspid valve operation and arrhythmias in adult patients with congenital heart disease. *Annals of Thoracic Surgery*: December 1999: 68: pp 2158-2163.

Poirier NC, Van Arsdell GS, Brindle M, Thyagarajan GK, Coles JG, Black MD, Freedom RM, Williams WG: Surgical treatment of aortic arch hypoplasia in infants and children with biventricular hearts. *Annals of Thoracic Surgery*: December 1999: 68: pp 2294-2297.

Torrance SM, Belanger MP, Wallen WJ, Wittnich C: Neonatal pig hearts metabolic and functional response to the development of ischemic contracture: Is recovery possible? *Pediatric Research*: March 2000: 48(2): pp 1-9.

Williams JM, de Leeuw M, Black MD, Freedom RM, Williams WG, McCrindle BW: Factors associated with outcomes of persistent truncus arteriosus. *Journal of the American College of Cardiology*: August 1999: 34: pp 545-553.

Wittnich C, Wallen WJ, Belanger MP, Ikonomidis JS: Extracellular calcium concentration affects susceptibility to global ischemic injury in newborn but not adult hearts. *Journal of Heart and Lung Transplantation*: July 1999: 18: pp 1-9.

Yeh T Jr, Williams WG, McCrindle BW, Benson LN, Coles JG, Van Arsdell GS, Webb GG, Freedom RM: Equivalent survival following cavopulmonary shunt: With or without the Fontan procedure. *European Journal of Cardiothoracic Surgery*: September 1999: 16: pp 111-116.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Coles JG: American College of Surgeons, San Francisco, California, October 1999. Complex pulmonary venous reconstruction.

Van Arsdell GS: International Society of Cardiovascular Surgery, Melbourne, Australia, September 1999. Homografts in the pulmonary position.

Williams WG: Park City Conference on Pediatric Cardiovascular Disease, Salt Lake City, Utah, February 2000. (1) Hypertrophic obstructive cardiomyopathy: The Toronto experience, (2) Optimal choice of right ventricle to pulmonary artery conduits.

Williams WG: South American Association for Thoracic Surgery, Quito, Ecuador, October 1999. (1) Surgery in the neonate, (2) Surgery for tricuspid atresia, (3) Tetralogy of fallot, (4) Transposition of the great arteries.

Williams WG: Charleston Symposium on Congenital Heart Disease, Charleston, South Carolina, April 2000. (1) Surgical issues in adults with congenital heart disease, (2) Update of Congenital Heart Surgeons Society database.

Williams WG: Brazilian Congress of Pediatric Cardiology, Belo Horizonte, Brazil, November 1999. (1) Trends in tetralogy surgery, (2) Late correction of transposition: Preparing the left ventricle for a switch, (3) Left ventricular outflow tract obstruction/hypertrophic obstructive cardiomyopathy, (4) Managing the adult with congenital heart disease.

Williams WG: European Association of Cardiothoracic Surgery, Glasgow, Scotland, September 1999. A novel repair for patients with AVSD requiring re-operation for left AV valve regurgitation.

Williams WG: Japanese Association for Thoracic Surgery, Sendai, Japan, October 1999. Current strategy of cardiac surgery in neonates and infants.

Williams WG: Festschrift for Dr. J. Stark, London, England, September 1999. Database for congenital heart disease.

Williams WG: University of Iowa, Iowa City, Iowa, November 1999. Trends in managing patients with congenital heart disease.

Wittnich C: Heart and Stroke Foundation of Ontario, Newmarket, Ontario, March 2000. Hot flash on menopause.

Wittnich C: Heart and Stroke Foundation of Ontario, Toronto, Ontario, June 2000. Menopause, heart disease and stroke.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Chronically hypoxic newborn hearts response to stress. *Wittnich C:* Heart and Stroke Foundation (\$266,869 1999 - 2002).

Clinical trials of insulin and glucose enriched cardioplegia in infants undergoing cardiac surgery. *Van Arsdell G, Rao V, Coles JG, McCrindle B:* The Hospital for Sick Children (\$6,000 1998 - 1999).

Impact of gender on myocardial pathology and responses to ischemia/reperfusion. *Wittnich C:* Heart and Stroke Foundation (\$225,989 1998 - 2001).

Magnetic resonance imaging for ischemic heart disease. *Wright M, Graham B, Burns P, Coates G, Downar E, Fort S, Hendler A, Hu B, McKerlie C, Merchant N, Mickleborough L, Wittnich C:* Medical Research Council of Canada (\$350,000 1999 - 2002).

Mechanisms of xenograft rejection. *Coles JG, Brockhausen I:* Medical Research Council of Canada (\$50,252 1996 - 1999).

HONOURS RECEIVED

Wittnich C: Lister Prize, Department of Surgery, University of Toronto, May 2000.

DIVISION OF GENERAL SURGERY

Dr. S.H. Ein - Associate Professor
Dr. A.H. Fecteau - Assistant Professor
Dr. R.M. Filler - Professor
Dr. T. Gerstle - Assistant Professor
Dr. P.C.W. Kim - Assistant Professor
Dr. J. Langer – Professor (Division Head)

PUBLICATIONS

Alvarez F, Atkison PR, Grant DR, Guilbault N, Jones AB, Kim PCW, Kneteman NM, Laurin L, Martin SR, Murphy GF, Paradis K, Shapiro J, Smith LJ, Superina RA: NOF-11: A one-year pediatric randomized double-blind comparison of neoral versus sandimmune in orthotopic liver transplantation. *Transplantation*: January 2000: 69(1): pp 87-92.

Bruch S, Ein SH, Rocchi C, Kim PCW: The management of non-pigmented gallstones in children. *Journal of Pediatric Surgery*: May 2000: 35(5): pp 729-732.

Chait PG, Muraca S, Baskin K, Richards H, Connolly B, Temple M, Ein SH, Biggar WD, Morrison SA: Percutaneous cecostomy. *Internet Website*: November 1999: 10: 102-105.

Ein SH: Congenital malformations of the esophagus. In: *Pediatric Gastrointestinal Disease*. (Wyllier A, Hyams JS, eds). Churchill Livingstone, New York: 1999: pp 149-163.

Ein SH: Neonatal surgery: General surgical conditions. In: *Residents Handbook of Neonatology* (Perlman M, Kirpalani HM, Moore AM, eds). W.B. Saunders Company, Philadelphia: 1999: pp 225-240.

Ein SH: Appendicitis. In: *Pediatric Surgery* (Ashcraft KW, ed). W.B. Saunders Company, Philadelphia: 2000: pp 571-579.

Ein SH, Kim PCW, Miller HAB: The late nonfunctioning duodenal atresia repair: A second look. *Journal of Pediatric Surgery*: May 2000: 35(5): pp 669-672.

Ein SH, Shandling B: Experience with long Duhamel's procedure. In: Hirschsprung's Disease and Allied Disorders (Holschneider AM, Puri P, eds). McGraw-Hill Incorporated, Chicago: 2000: pp 329-336.

Jugenburg M, Haddock G, Freedman MH, Ford-Jones L, Ein SH: The morbidity and mortality of pediatric splenectomy: Does prophylaxis make a difference? *Journal of Pediatric Surgery*: July 1999: 34(7): pp 1064-1067.

Kimmel SG, Mo R, Hui CC, Kim PCW: New mouse models of congenital anorectal malformations. *Journal of Pediatric Surgery*: February 2000: 35(2): pp 227-231.

Kimmel SG, Obatake M, Kushida M, Merguerian P, Clarke ID, Kim PCW: Murine xenogeneic immune responses to the human testis: A presumed immune-privileged tissue. *Transplantation*: March 2000: 69(6): pp 1075-1084.

Kolski H, Vajsar J, Kim PCW: Thorascopic thymectomy in juvenile myasthenia gravis. *Journal of Pediatric Surgery*: May 2000: 35(5): pp 768-770.

Koplewitz B, Daneman A, Ein SH, McGuigan MA, Mian M: Gastric perforation attributable to liquid nitrogen ingestion. *Pediatrics*: January 2000: 105(1): pp 121-123.

Koplewitz BZ, Manson DE, Ein SH: Post-traumatic torsion of accessory lobe of the liver and gallbladder. *Pediatric Radiology*: November 1999: 29: pp 799-802.

Mellor DJ, Desparment J, Braude BM, Ein SH: Use of a flexible illuminated stylet to demonstrate the proximal esophageal pouch in surgical repair of esophageal atresia. *Pediatric Surgery International*: November 1999: 15: pp 296.

Min W-P, Gorczynski R, Huang X-Y, Kushida M, Kim PCW, Obatake M, Lei J, Suri RM, Cattral MS: Dendritic cells genetically engineered to express fas ligand induce donor-specific hyporesponsiveness and prolong allograft survival. *Journal of Immunology*: January 2000: 164: pp 161.

Ramos CT, Koplewitz BZ, Babyn PS, Manson D, Ein SH: What have we learned about traumatic diaphragmatic hernias in children? *Journal of Pediatrics*: April 2000: 35(4): pp 601-604.

Saxton ML, Ein SH, Hoehner J, Kim PCW: Near-total intestinal aganglionosis: Long-term follow-up of a morbid condition. *Journal of Pediatric Surgery*: May 2000: 35(5): pp 669-672.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Immune effector mechanisms in new concordant cardiac xenotransplant model. *Kim PCW*: Heart and Stroke Foundation (\$162,000 1999 - 2001).

HONOURS RECEIVED

Kim PCW: Chief Resident's Best Teacher Award, The Hospital for Sick Children, June 2000.

DIVISION OF NEUROSURGERY

Dr. P.B. Dirks - Assistant Professor

Dr. J.M. Drake - Associate Professor

Dr. R.P. Humphreys – Professor (*Division Head*)

Dr. J.T. Rutka - Professor

PUBLICATIONS

Alkhani AM, Boop FA, Rutka JT: Involution of enhancing intrinsic tectal tumors after endoscopic third ventriculostomy. *Neurosurgery*: November 1999: 91: pp 863-866.

Carlotti CG Jr, Drake J, Hladky J-P, Teshima I, Becker LE, Rutka JT: Primary Ewing's sarcoma of the skull in children. *Pediatric Neurosurgery*: December 1999: 31: pp 307-315.

Carlotti CG Jr, Jay V, Rutka JT: Infantile hemangio endothelioma of the pericranium presenting as an occipital mass lesion. *Neurosurgery*: January 2000: 92: pp 156-160.

Drake JM, Peerless H: Surgical management of terminal basilar artery and posterior cerebral artery aneurysms. In: *Operative Neurosurgical Techniques* (Schmidek HH, ed). W.B. Saunders Company, Philadelphia: 2000: pp 23-37.

Gupta N, Rutka JT: Molecular neuro-oncology. In: *Neuro-Oncology, The Essentials* (Bernstein B, Berger MS, eds). Thieme Publications, New York: 2000: pp 30-41.

Humphreys RP: Brain vascular malformations. In: *Pediatric Neurosurgery* (Choux M, Di Rocco C, Hockley AD, Walker ML, eds). Churchill Livingstone, New York: 1999: pp 665-677.

Jay V, Squire J, Bayani J, Alkhani AM, Rutka JT, Zielenska M: Oncogene amplification in medulloblastoma: Analysis of a case by comparative genomic hybridization and fluorescence in situ hybridization. *Pathology*: August 1999: 31: pp 337-344.

Kulkarni AV, Drake JM, Armstrong D, Dirks PB: Measurement of ventricular size: Reliability of the frontal and occipital horn ratio compared to subjective assessment. *Pediatric Neurosurgery*: July 1999: 31: pp 65-70.

Kulkarni AV, Drake JM, Armstrong DC, Dirks PB: Imaging correlates of successful endoscopic third ventriculostomy. *Journal of Neurosurgery*: June 2000: 92: pp 915-919.

Lam KW, Drake JM, Cobbold RSC: Generation and maintenance of bubbles in small tubes by low-frequency ultrasound. *Journal of Acoustical Society of America*: December 1999: 106(6): pp 3719-3729.

Mainprize T, Taylor M, Rutka JT: Pediatric brain tumors: A contemporary prospectus. *Proceedings, Pediatric Update for the General Neurosurgeon*, Philadelphia, 2000.

Ochi A, Otsubo H, Shirasawa A, Hunjan A, Sharma R, Bettings M, Rutka JT, Kamiyo K, Yamazaki T, Wilson SB, Snead OC:

Systematic approach to dipole localization of interictal EEG spikes in children with extratemporal lobe epilepsies. *Clinical Neurophysiology*: January 2000: 111(1): pp 161-168

Rutka JT, Otsubo H, Kitano S, Sakamoto H, Shirasawa A, Ochi A, Snead OC: Utility of digital camera-derived intra-operative images in the planning of epilepsy surgery for children. *Neurosurgery*:

November 1999: 45: pp 1186-1191.

Rutka JT, Taylor M, Mainprize T, Langlois A, Ivanchuk S, Mondal S, Dirks P: Molecular biology and neurosurgery in the third millennium. *Neurosurgery*: May 2000: 46(5): pp 1034-1051.

Suhardja AS, Kovacs KT, Rutka JT: Molecular pathogenesis of pituitary adenomas: A review. *Acta Neurochirurgica*: July 1999: 141: pp 729-736.

Taylor MD, Gokgoz N, Andrulis IL, Mainprize TG, Drake JM, Rutka JT: Familial posterior fossa brain tumors of infancy secondary to germline mutation of the hSNF5 gene. *American Journal of Human Genetics*: January 2000: 66: pp 19-32.

Taylor MD, Rutka JT: Pediatric posterior fossa tumors. In: *Neuro-Oncology, The Essentials* (Bernstein M, Berger MS, eds). Thieme Publications, New York: 2000: pp 363-376.

Tenti G, Drake JM, Sivaloganathan S: Brain biomechanics: Mathematical modeling of hydrocephalus. *Neurological Research*: January 2000: 22: pp 711-719.

Tuli S, Drake JM, Lawless J, Wigg M, Lamberti-Pasculli M: Risk factors for repeated cerebrospinal shunt failures in pediatric patients with hydrocephalus. *Journal of Neurosurgery*: January 2000: 92: pp 31-38.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Dirks PB: American Association of Neurological Surgeons/Canadian Neurological Society, San Francisco, California, April 2000. Ligand independent activation and aberrant subcellular location of a PDGFR-alpha isolated from a glioblastoma.

Dirks PB: National Ad Hoc Meeting of Review of Treatments for Pediatric Severe Head Injury, Lake Louise, Alberta, April 2000. Role of decompressive craniotomy in pediatric severe head injury.

Drake JM: Ventricular and Cisternal Pathology: Current Opinions, Controversy Approaches and New Trends, Vicoforte de Mondovi, Italy, January 2000. (1) Hydrocephalus shunts: The state of the art, (2) Arachnoids cysts, suprasellar cysts: History of treatment and new concepts in neuro-endoscopic era.

Drake JM: Congress of Neurological Surgeons, Boston, Massachusetts, November 1999. (1) Managing shunt complications, (2) Pediatric update for the general neurosurgeon.

Drake JM: Hydrocephalus Beyond 2000, Sydney, Australia, March 2000. (1) Multi-centre trials: Fact or fiction, (2) In-utero treatment of hydrocephalus: Viable.

Drake JM: CRIANCA 2000: International Congress of Pediatric Specialties, Curitiba, Brazil, May 2000. (1) Selective posterior rhizotomy, (2) The neurosurgeon's view, (3) Neurosurgery.

Drake JM: World Conference on Pediatric Neurosurgery, Martinique, France, November 1999. CSF hydrodynamic disorders: Shunts.

Drake JM: Canadian Mathematical Symposium, Hamilton, Ontario, June 2000. Requirement for new mathematical models of the brain for hydrocephalus treatment.

Humphreys RP: European Society of Pediatric Neurosurgery, Poiana Brasov, Romania, May 2000. (1) AVM in childhood, (2) Seminar: Neurosurgical quiz, (3) Solve-a-case.

Humphreys RP: V Jornadas Anuales de Controversias en Patología Vascular Cerebral, Buenos Aires, Argentina, April 2000. (1) Hematomas cerebrales en la población pediátrica, (2) Aneurismas cerebrales en pediátrica, (3) Malformaciones arteriovenosas en la infancia: Revisión clínica y quirúrgica.

Humphreys RP: American Academy of Pediatrics, Washington, D.C., October 1999. Big heads, small heads: Tolerate or operate?

Humphreys RP: Congress of Neurological Surgeons, Boston, Massachusetts, November 1999. Craniofacial surgery: What have we learned?

Humphreys RP: American Association of Neurological Surgeons, Atlanta, Georgia, December 1999. Moderator: Scientific session V.

Rutka JT: American Association of Neurological Surgeons, San Francisco, California, April 2000. (1) Craniopharyngioma: Point/counterpoint, (2) How to build a brain tumor centre, (3) Update on tumors for the general neurosurgeon, (4) Management of brain stem tumors, (5) Novel treatments for malignant brain tumors, (6) Moderator: Pediatric brain tumors.

Rutka JT: International Symposium of Brain Tumor Pathology, Nagoya, Japan, May 2000. (1) Current management of brain tumors in children, (2) Overview of the cell cycle and human gliomas, (3) Developmental signaling pathways in medulloblastoma.

Rutka JT: Korean Neurosurgical Association, Cheju Island, Korea, April 2000. (1) Epilepsy surgery in children, (2) Surgery of brain stem tumors in children.

Rutka JT: Congress of Neurosurgery, Boston, Massachusetts, November 1999. (1) Treatment of craniopharyngiomas, (2) Moderator.

Rutka JT: Trillium Health Centre, Mississauga, Ontario, November 1999. Advances in brain tumor surgery.

Rutka JT: Pediatric Brain Tumor Conference, Toronto, Ontario, May 2000. Brain tumors: An update.

Rutka JT: Society for Neurosurgery, Scottsdale, Arizona, November 1999. Cytotoxic CD44-mediated targeting of human astrocytomas using colloidal gold and low dose radiation.

Rutka JT: Barrow Neurological Institute, Phoenix, Arizona, May 2000. Non-lesional epilepsy surgery in children.

Rutka JT: World Conference on Pediatric Neurosurgery, Martinique, France, November 1999. Perspectives in pediatric neurosurgery.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A molecular epidemiologic case-control study of pediatric brain tumors in Ontario. *McLaughlin JR*, Rutka JT, Greenberg M, Malkin D: National Cancer Institute of Canada (\$494,326 1997 - 2000).

Cytoskeletal-matrix interactions in astrocytomas. *Ivanchuk S*, Rutka JT: National Cancer Institute of Canada (\$63,000 1998 - 2001).

Cytoskeletal: Matrix interactions regulation astrocytoma tumorigenicity. *Rutka JT*: Medical Research Council of Canada (\$300,000 1999 - 2004).

Development of a clinical outcome measure for pediatric hydrocephalus. *Kulkarni A*, Drake JM: The Hospital for Sick Children Foundation (\$75,000 1998 - 2000).

Development of animal models for the study of human brain tumors. *Mainprize T*, Rutka JT: National Cancer Institute of Canada (\$130,000 1999 - 2002).

Hedgehog signaling pathways in medulloblastoma. *Taylor MD*, Rutka JT: National Cancer Institute of Canada (\$120,000 1998 - 2001).

Intermediate filament-induced alterations in astrocytoma tumorigenicity and morphology. *Rutka JT*, Dirks PB, Becker LE: Medical Research Council of Canada (\$216,000 1998 - 2001).

Mathematical model for optimal ventricular catheterization insertion in hydrocephalus. *Tenti G*, *Sivaloganathan S*, Drake JM: The Hospital for Sick Children Foundation (\$57,075 1999 - 2001).

p16 regulated alternation of astrocytoma cytoskeletal formation. *Langlois A, Rutka JT*: Association de Recherche Contre Cancer France (\$60,000 1999 - 2001).

p16 induced regulation of astrocytoma tumorigenicity. *Rutka JT, Hamel PA*: National Cancer Institute of Canada (\$360,000 1997 - 2000).

Regulation of the cell cycle in developing astrocytes in vivo. *Dirks PB*: Dean's Fund (\$10,000 1999 - 2001).

Regulation of the cell cycle in developing astrocytes in vivo. *Dirks PB*: Connaught Foundation (\$30,000 1999 - 2001).

Role of hedgehog signaling in brain and cartilage neoplasms. *Alman B, Rutka JT, Hui CC*: National Cancer Institute of Canada/Terry Fox New Frontiers Initiative (\$570,000 1999 - 2002).

Shared flow cytometry facility. *Guidos C, Rutka JT, Buchwald M, Chamberlain J, Cohen A, Danska J, Dick J, Grinstein S*: Medical Research Council of Canada (\$50,000 1998 - 2002).

DIVISION OF ORTHOPAEDIC SURGERY

Dr. B.A. Alman - Assistant Professor
Dr. W.G. Cole – Professor (*Division Head*)
Dr. D.M. Hedden - Associate Professor
Dr. A. Howard - Assistant Professor
Dr. M.C. Rang - Professor
Dr. R.B. Salter - Professor
Dr. J.H. Wedge - Professor
Dr. J.G. Wright - Associate Professor

PUBLICATIONS

Alman B, Fitzpatrick L, Shore E, Gomberg BR, Khurana JS: Bone structure and function: Morphology, embryology and bone biology. In: A Compendium of Skeletal Pathology (Khurana JS, Alman BA, eds). United Pathologists Press, New York: 1999: pp 1-33.

Alman BA, Khurana JS: The surgical pathology of bone trauma: Common problems in orthopaedic practice. In: *A Compendium of Skeletal Pathology* (Khurana JS, Alman BA, eds). United Pathologists Press, New York: 1999: pp 59-73.

Alman BA, Kim H: Pelvic obliquity after fusion of the spine in Duchenne muscular dystrophy. *Journal of Bone and Joint Surgery*: September 1999: 81B: pp 821-824.

Bernard MA, Hogue DA, Cole WG, Sanford T, Snuggs MB, Montufar-Solis D, Duke PJ, Carson DD, Scott A, Van Winkle WB, Hecht JT: Cytoskeletal abnormalities in chondrocytes with EXT1 and EXT2 mutations. *Journal of Bone and Mineral Research*: March 2000: 15: pp 442-450.

Cole WG: The challenge of genetics. *Current Orthopaedics*: January 2000: 14: pp 1-5.

Couture J, Mitri A, Lagace R, Smits R, Berk T, Bouchard HL, Fodde R, Alman BA, Bapat B: A germline mutation at the extreme 3' end of the APC gene results in a severe desmoid phenotype and is associated with over-expression of beta-catenin in the desmoid tumor. *Clinical Genetics*: March 2000: 57(3): pp 205-12.

Daniels TR, Alman B, Wedge JH: Congenital clubfoot. *Current Orthopaedics*: October 1999: 13: pp 229-238.

Davis AM, Beaton DE, Hudak P, Amadio P, Bombardier C, Cole D, Hawker GA, Katz JN, Makela M, Marx RG, Punnett L, Wright JG: Measuring disability in the upper extremity: A rationale supporting the use of regional outcome measure. *Journal of Hand Therapy*: December 1999: 12(4): pp 269-274.

Eastwood DM, Menelaus MB, Dickens DRV, Broughton NS, Cole WG: Idiopathic toe-walking: Does treatment alter the natural history? *Journal of Pediatric Orthopaedics*: January 2000: 9(B): pp 47-49.

German A, Gardner W, Howard A, Mackay M, Letts RM: Mechanisms of lap belt and air bag injuries in children. *Child Occupant Protection in Motor Vehicle Crashes*: July 1999: pp 81-93.

Harjacek M, Diaz-Cano S, Alman BA, Coburn J, Ruthazer R, Wolfe H, Steere AC: Prominent expression of mRNA for the pro-inflammatory cytokines in synovium in patients with juvenile rheumatoid arthritis or chronic Lyme arthritis. *Journal of Rheumatology*: February 2000; 27(2): pp 497-503.

Hemmadi SS, Cole WG: Treatment of aneurismal bone cysts with saucerization and bone marrow injection in children. *Journal of Pediatric Orthopaedics*: July 1999; 19: pp 540-542.

Hopyan S, Gokgoz N, Bell RS, Andrulis IL, Alman BA, Wunder JS: Expression of osteocalcin and its transcriptional regulators core-binding factor Alpha-1 and MSX2 in osteoid-forming tumors. *Journal of Orthopaedic Research*: September 1999; 17: pp 633-638.

Howard A: Children, automobile restraints and injuries. *Pediatrics and Child Health*: January 2000; 5: pp 24-30.

Howard A, Viskontas D, Sabbagh C: Reduction in osteomyelitis and septic arthritis related to haemophilus influenzae type B vaccination. *Journal of Pediatric Orthopaedics*: November 1999; 19: pp 705-709.

Kim HK, Alman BA, Cole WG: A shortened course of parenteral antibiotic therapy in the management of acute septic arthritis of the hip. *Journal of Pediatric Orthopaedics*: January 2000; 20(1): pp 44-47.

Lan F, Wunder JS, Griffin AM, Davis AM, Bell RS, White LM, Ichise M, Cole W: Periprosthetic bone remodelling around a prosthesis for distal femoral tumors: Measurement by dual energy X-ray absorptiometry (DEXA). *Journal of Bone and Joint Surgery*: January 2000; 82A: pp 120-125.

Marx RG, Bombardier C, Hogg-Johnson S, Wright JG: How should importance and severity ratings be combined for item reduction in the development of health status instruments? *Journal of Clinical Epidemiology*: November 1999; 52(3): pp 193-197.

Tejpar S, Nollet F, Li C, Wunder JS, Michils G, dal Cin P, Van Custem E, Bapat B, van Roy F, Cassiman JJ, Alman BA: Pre-dominance of beta-catenin mutations and beta-catenin dysregulation in sporadic aggressive fibromatosis (desmoid tumor). *Oncogene*: December 1999; 18: pp 6615-6620.

Weisman DS, Rang M, Cole WG: Tardy displacement of traumatic radial head dislocation in childhood. *Journal of Pediatric Orthopaedics*: July 1999; 19: pp 523-526.

Wenstrup RJ, Florer JB, Willing MC, Giunta C, Young F, Steinmann B, Cole WG: Haplo-insufficiency for COL5A1 expression is a common molecular mechanism underlying the classical form Ehlers Danlos syndrome. *American Journal of Human Genetics*: June 2000; 66: pp 1766-1776.

Wright JG, Hawker GA, Bombardier C, Croxford R, Dittus RS, Freund DA, Coyte PC: Physician enthusiasm as an explanation for area variation in the utilization of knee-replacement surgery. *Medical Care*: September 1999; 37(9): pp 946-956.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Alman BA: University of Vermont Familial Cancer Center, Burlington, Vermont, November 1999. Colon cancer and fibromatosis: Common roles for beta-catenin and wingless signaling.

Alman BA: Lawson Research Institute, University of Western Ontario, London, Ontario, March 2000. Developmental pathways in musculoskeletal neoplasia.

Alman BA: University of Ghent, Ghent, Belgium, November 1999. Developmental pathways in musculoskeletal neoplasia.

Alman BA: Toronto Rett Syndrome Association, Toronto, Ontario, September 1999. Making people better not just different: The role of the orthopaedic surgeon in Rett syndrome.

Alman BA: British Columbia Children's Hospital, Vancouver, British Columbia, May 2000. Wingless signaling in neoplasia.

Cole WG: American Society for Bone and Mineral Research, St. Louis, Missouri, September 1999. Chair: Mouse and human genetic studies of skeletal dysplasias.

Cole WG: Canadian Arthritis Network, Toronto, Ontario, June 2000. Genetic disorders of ligaments and cartilage that produce premature osteoarthritis.

Cole WG: National Institute of Arthritis and Musculoskeletal and Skin Diseases, Washington, D.C., September 1999. Invited participant: New research strategies in osteogenesis imperfecta.

Cole WG: Canadian Orthopaedic Research Society, Edmonton, Alberta, June 2000. New insights into normal skeletal development.

Cole WG: Groupe D'etude en Orthopedie Pediatrique/British Society for Children's Orthopaedic Surgery, London, England, January 2000. Pediatric orthopaedics in the new millennium.

Cole WG: International Conference on Osteogenesis Imperfecta, Montreal, Quebec, August 1999. Surgical treatment of the upper limb in osteogenesis imperfecta.

Cole WG: Jacob Katz Memorial Lecturer, Pediatric Orthopaedic Club, New York, New York, September 1999. The heterogeneity of osteomyelitis of childhood.

Cole WG: International Pediatric Orthopaedic Think Tank, Montreal, Quebec, October 1999. (1) Update on osteogenesis imperfecta, (2) Perspectives on treating recurrent dislocation of the patella.

Cole WG: Visiting Professor, Hong Kong Orthopaedic Association, Hong Kong, China, November 1999. (1) The spectrum of osteomyelitis in childhood, (2) Basic principles of genetic biology, (3) Etiology of congenital anomalies, (4) Information technology and orthopaedics, (5) Complications of pediatric fractures, (6) Femoral shaft fractures in children.

Hedden DM: Canadian Orthopaedic Association, Edmonton, Alberta, June 2000. (1) Moderator: Pediatric fracture update, (2) Moderator: Slipped capital femoral epiphysis.

Hedden DM: Visiting Professor, Dalhousie University, Halifax, Nova Scotia, May 2000. Movement of difficult spinal problems.

Wright JG: Ste-Justine Pediatric Orthopaedic Review Course, Montreal, Quebec, April 2000. (1) Supracondylar fractures with neurovascular injury: What to do? (2) Femoral fractures: From newborn to adolescents.

Wright JG: Pediatric Orthopaedic Society of North America, Vancouver, British Columbia, May 2000. Clinical trials symposium.

Wright JG: Society for Clinical Trials, Toronto, Ontario, April 2000. Issues related to measuring quality of life in children in clinical trials.

Wright JG: Canadian Arthritis Network, Toronto, Ontario, January 2000. Methodologies and outcomes (theme V) meeting development of a new co-morbidity index to adjust for those conditions which, in addition to the primary diagnosis, predict future functional decline.

Wright JG: American Academy of Orthopaedic Surgeons, Orlando, Florida, March 2000. (1) Moderator: Orthopaedic outcomes: Can they change your life (or at least your practice)? (2) Who should collect the information: Do the doctors and patients see eye-to-eye? (3) Using and interpreting office-derived information, (4) Successful office-based assessment, (5) Using your own practice outcomes, (6) How can the American Academy of Orthopaedic Surgeons help surgeons collect outcomes information?

Wright JG: American Academy of Orthopaedic Surgeons, Long Beach, California, February 2000. (1) Randomized clinical trials, (2) When and why do surgeons change what they do? (3) Design of trials (Barcelona/Casablanca).

Wright JG: Visiting Professor, Child Health Research Symposium, Calgary, Alberta, April 2000. (1) Assessing the outcome of treatment: How do we decide if children have been made better? (2) Workshop: Development of disease/condition-specific outcome measures for children, (3) Measurement of illness in children.

Wright JG: Visiting Professor, University of Western Ontario, London, Ontario, March 2000. (1) How many orthopaedic procedures should we be performing?

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A multicentre, randomized clinical trial comparing intralesional methyl prednisolone and bone marrow injections for simple bone cysts. *Wright JG, Alman BA, Cole WG, Hedden DM, Howard AW:* Pediatric Orthopaedic Society of North America (\$29,794 2000 - 2001).

A randomized trial of casting and external fixation for pediatric femoral fractures. *Wright JG, Wang E, Coyte PC*: Medical Research Council of Canada (\$314,248 1998 - 2002).

A randomized prospective trial of a dynamic brace for scoliosis. *Alman BA, Hedden DM*: Biortex Incorporated (\$41,000 1998 - 2000).

A randomized trial comparing the Moss Miami and Universal spinal instrumentation systems for idiopathic scoliosis. *Wright JG, Hedden DM, Alman BA, Cole WG*: Medical Research Council of Canada (\$66,350 1998 - 2002).

A randomized trial comparing two spinal implant systems for idiopathic scoliosis. *Wright JG, Hedden DM, Alman B, Cole WG, Rang M*: Synthes Canada/DePuy (\$150,000 1997 - 2000).

Analysis of extracellular matrix molecule mutations in individuals with Ehlers-Danlos syndromes: A cause of premature development of osteoarthritis. *Cole WG, Roughley P*: Canadian Arthritis Network/Network Centres of Excellence/Medical Research Council of Canada (\$160,000 1999 - 2003).

Beta-catenin in aggressive fibromatosis: Molecular pathology and implications for pharmacologic therapy. *Alman BA*: National Cancer Institute of Canada (\$255,600 1998 - 2001).

Clubfoot: Regulation of contracture by growth factor manipulation. *Alman BA*: Pediatric Orthopaedic Society of North America (\$104,000 1997 - 1999).

Cost-effectiveness of escalating dose factor VIII prophylaxis in severe hemophilia A. *Feldman B, Blanchette V, Einerson T, Rivard G, Israels S, Robinson S, Oh P, Babyn P, Hedden DM*: Canadian Red Cross Society/Bayer (\$120,000 1997 - 2001).

Crash protection for children. *Howard A, Wright JG, Parkin P, Letts RM, Mackay M, German A, Hale I*: Ontario Neurotrauma Foundation (\$231,700 2000 - 2002).

Determinants of arthritis disability and joint replacement surgery. *Hawker GA, Wright JG, Coyte PC, Badley EM, Williams JI, Glazier RH, Harvey BJ*: Medical Research Council of Canada (\$394,330 1999 - 2004).

Development of a new co-morbidity index to adjust for those conditions which, in addition to the primary diagnosis, predict future functional decline. *Wright JG*: Canadian Arthritis Network (\$16,000 1999 - 2001).

Development of diagnostic criteria for carpal tunnel syndrome. *Graham B*, *Wright JG*: Physician Services Incorporated Foundation (\$59,000 1998 - 2000).

Developmental signaling pathway antagonists in the treatment of brain and cartilage neoplasms. *Alman BA*, *Hui CC*, *Rutka J*: National Cancer Institute of Canada (\$590,000 1999 - 2002).

Evaluating patient-based outcome measures across disease groups using the Rasch model. *Davis AM*, *Beaton D*, *Kopec J*, *Wright JG*, *Williams JI*: Physiotherapy Foundation of Canada (\$5,000 1999).

Evaluating the outcome of knee replacement using individual patient preferences. *Wright JG*, *Young N*, *Schemitsch E*, *Hawker G*: Medical Research Council of Canada (\$102,292 1997 - 1999).

Evaluation of rigid and hinged ankle-foot orthoses in cerebral palsy: Implication of prescriptive practice. *Alman BA*: J.P. Bickell Foundation (\$18,277 1997 - 1999).

Examining the relationship between evidence-based practice and physician and patient opinion. *Wright JG*, *Coyte PC*, *Glazier RH*, *Hawker GA*, *Kreder HJ*, *Mahomed NN*: Medical Research Council of Canada (\$212,988 1999 - 2002).

Examining the relationship between evidence-based practice and physician and patient opinion. *Wright JG*, *Coyte PC*, *Glazier RH*, *Hawker GA*, *Kreder HJ*, *Mahomed NN*: Arthritis Society (\$65,000 1999 - 2002).

Genetics of congenital scoliosis. *Alman BA*, *Cole WG*: The Hospital for Sick Children (\$26,400 1998 - 2000).

Geographic injury surveillance of bicycle and pedestrian motor vehicle injuries. *MacKay M*, *Howard A*: Rick Hansen Foundation (\$48,000 1998 - 1999).

Molecular pathology of cartilage neoplasia : The role of parathyroid hormone related protein and Indian hedgehog. *Alman BA, Wunder JS*: Medical Research Council of Canada (\$318,000 2000 - 2003).

Molecular pathology of Ehlers-Danlos syndrome and chondrodysplasias. *Cole WG*: Medical Research Council of Canada (\$1,200,270 1999 - 2004).

Molecular pathology of fibrosis: Aggressive fibromatosis as a model system. *Alman BA*: Medical Research Council of Canada (\$22,344 1998 - 2001).

Randomized controlled trial of in-patients versus home-based rehabilitation following primary total hip and knee arthroplasty. *Mahomed NN, Wright JG, Hawker GA*: Physicians Services Incorporated Foundation (\$64,500 1999 - 2001).

The Canadian Arthritis Network. *Cruz TF, Wright JG*, 124 other co-investigators: Network Centres of Excellence (\$3,800,000 1998 - 2002).

HONOURS RECEIVED

Alman BA: American Academy of Orthopaedic Surgeons Clinical Research Award (Kappa Delta Award), December 1999.

Alman BA: Pediatric Orthopaedic Society Award, May 2000.

Cole WG: Mercer Rang Scientific Paper Award, Pediatric Orthopaedic Society of North America, May 2000.

DIVISION OF PLASTIC SURGERY

Dr. H.M. Clarke - Associate Professor
Dr. D. Fisher - Assistant Professor
Dr. C.R. Forrest - Associate Professor
Dr. W.K. Lindsay - Professor
Dr. J.H. Phillips - Assistant Professor
Dr. R.M. Zuker – Professor (*Division Head*)

PUBLICATIONS

Al-Qattan MM, Clarke HM, Curtis CG: The prognostic value of concurrent Horner's syndrome in total obstetric brachial plexus injury. *Journal of Hand Surgery*: March 2000; 25B(2): pp 166-167.

Forrest CR: Application of minimal access techniques in lag screw fixation of fractures of the anterior mandible. *Plastic Reconstructive Surgery*: December 1999; 104: pp 2127-2134.

Guernsey C, Hozjan I, Forrest CR: Continued excellence in cleft lip and palate and craniofacial care and research. *Newsletter: American Cleft Palate-Craniofacial Association*: July 1999; 24: pp 5-13.

Hopper RA, Armstrong DC, Clarke HM: Straightening of aberrant carotid arteries with age in velocardiofacial syndrome. *Plastic and Reconstructive Surgery*: November 1999; 104(6): pp 1744-1747.

Manktelow RT, Zuker RM: Cross-facial nerve graft: The long and short graft: The first stage for micro-neurovascular muscle transfer. *Operative Techniques in Plastic and Reconstructive Surgery*: August 1999; 6(3): pp 174-179.

Manktelow RT, Zuker RM: Introduction: Reanimation of the paralyzed face. *Operative Techniques in Plastic and Reconstructive Surgery*: August 1999; 6(3): pp 151.

Shainhouse T, Zuker RM: The impact of non-wound site infection on surgical wound healing. *Canadian Journal of Plastic Surgery*: September 1999; 7(5): pp 229-232.

Zuker RM, Manktelow RT: The technique of muscle transplantation to the face in children with Moebius syndrome. *Operative Techniques in Plastic and Reconstructive Surgery*: August 1999: 6(3): pp 204-209.

Zuker RM, Morris S: Functioning muscle transfers. In: *The Growing Hand* (Scheker LR, Gupta A, eds). Harcourt Publishers Limited, London: 1999: pp 111-123.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Clarke HM: World Congress on Pediatric Intensive Care, Montreal, Quebec, Canada, June 2000. (1) Emergency care of burn patients, (2) Chair: How I manage burn patients.

Clarke HM: United States and International Discussion Panel: Obstetrical Palsy, Boston, Massachusetts, September 1999. (1) Examination, (2) Spontaneous recovery, (3) Fibrin glue.

Clarke HM: American Academy of Pediatrics, Washington, D.C., October 1999. (1) Minor hand trauma managed by the practitioner, (2) Bites and stings.

Clarke HM: Chang Gung Memorial Hospital, Taipei, Taiwan, May 2000. (1) Techniques in pollicization and functional results, (2) Fibrin glue in nerve repair, (3) The evaluation and treatment of obstetrical brachial plexus palsy.

Clarke HM: American Society of Plastic and Reconstructive Surgeons, New Orleans, Louisiana, October 1999. Complex reconstruction of the pediatric hand.

Clarke HM: Society for Surgery of the Hand, Taipei, Taiwan, May 2000. The evaluation and treatment of obstetrical brachial plexus palsy.

Zuker RM: Institute of Postgraduate Medical Education, Catholic University of Nijmegen, Nijmegen, The Netherlands, November 1999. (1) Facial reanimation in the Moebius patient, (2) Clinical evaluation of the Moebius patient, (3) Muscle transplantation in the Moebius patient innervated by the motor nerve to masseter.

Zuker RM: Visiting Professor, Icholov Hospital/Tel Aviv Medical Centre, Tel Aviv, Israel, July 1999. (1) The role of microsurgery in facial paralysis reconstruction, (2) The Canadian health care system.

Zuker RM: Baylor College of Medicine, Houston, Texas, October 1999. Advances in facial paralysis reconstruction with the aid of microsurgery.

Zuker RM: American Society of Plastic and Reconstructive Surgery, New Orleans, Louisiana, October 1999. Complex reconstruction of the pediatric hand.

Zuker RM: Congress of the International Confederation for Plastic, Reconstructive and Aesthetic Surgery, San Francisco, California, July 1999. (1) Course: Complex reconstruction of the pediatric hand, (2) Panelist: Reconstructive applications of endoscopy.

Zuker RM: Visiting Professor, University of British Columbia, Vancouver, British Columbia, September 1999. Facial paralysis in children.

Zuker RM: Visiting Professor, University of Southern California, Los Angeles, California, November 1999. The use of the gracilis muscle in Volkmann's ischemic contracture of the forearm in children.

Zuker RM: Houston Society of Plastic Surgeons, Houston, Texas, October 1999. Visiting professor: Rounds.

Zuker RM: Visiting Professor, University of British Columbia, Vancouver, British Columbia, September 1999. Walk around rounds.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Autism and Moebius syndrome: A neuropsychological study of visual-spatial attention and facial emotion. *Bryson SE, Roberts W, Zuker RM:* Medical Research Council of Canada (\$108,000 1999 - 2001).

Efficacy of telehealth for teaching specialized clinical rehabilitation techniques: A pilot of five techniques. *Barden W, Clarke HM, Young N, McKee NH:* The Hospital for Sick Children Foundation (\$13,227 1998 - 2000).

Genotype and phenotype of brainstem injury in autism. *Rodier PM, Bryson SE, Figlewicz DA, Gudas LJ, Hyman SL, Stanton ME*: National Institutes of Health/NICDH (\$4,219,189 1999 - 2003).

Ischemic pre-conditioning of skeletal muscle. *Forrest CR*: Medical Research Council of Canada (\$260,000 1994 - 1999).

Radiotherapy-induced craniofacial bone growth retardation: Establishment of a model to investigate the role of radioprotection in the infant rabbit. *Forrest CR*: The Hospital for Sick Children Foundation (\$28,500 1999 - 2001).

Radiotherapy-induced craniofacial bone growth retardation: Establishment of a model to investigate the role of radioprotection in the infant rabbit. *Forrest CR*: American Society of Plastic and Reconstructive Surgery/Plastic Surgery Education Foundation (\$7,500 1999 - 2000).

DIVISION OF UROLOGY

Dr. D.J. Bagli - Assistant Professor

Dr. A.E. Khoury - Associate Professor (*Division Head*)

Dr. G.A. McLorie - Associate Professor

PUBLICATIONS

Bagli DJ, Joyner BD, Mahoney SR, McCulloch L: The hyaluronic acid receptor is induced by stretch injury of rat bladder in vivo and influences smooth muscle cell contraction in vitro. *Journal of Urology*: September 1999: 162: pp 832-840.

Barrieras D, Lapointe S, Reddy PP, Williot P, McLorie GA, Bagli DJ, Khoury AE, Merguerian PA: Urinary retention after bilateral extravesical ureteral re-implantation: Does dissection distal to the ureteral orifice play a role? *Journal of Urology*: September 1999: 162: pp 1197-1200.

Burrows L, Khoury AE: Issues surrounding the prevention and management of device-related infections. *World Journal of Urology*: December 1999; 17: pp 402-409.

Dewan P, McLorie GA: Uterocystoplasty. In: *Bladder Augmentation* (Dewan P, Mitchell ME, eds). Oxford University Press, New York: 2000: pp 71-77.

Finelli A, Babyn P, McLorie GA, Bagli DJ, Khoury AE, Merguerian PA: The use of magnetic resonance imaging in the diagnosis and follow-up of pediatric pelvic rhabdomyosarcoma. *Journal of Urology*: June 2000; 163: pp 1952-1953.

Khoury AE, Agarwal SK, Bagli DJ, Merguerian PA, McLorie GA: Concomitant modified bladder neck closure and mitrofanoff urinary diversion. *Journal of Urology*: November 1999; 162: pp 1746-1748.

Logarakis NF, Carvalho MH, Agarwal SK, Merguerian PA, Bagli DJ, McLorie GA, Khoury AE: The role of testicular biopsy in splenic-gonadal fusion. *Canadian Journal of Urology*: October 1999; 6: pp 868-871.

McLorie GA, Farhat W: Role of partial nephrectomy in unilateral Wilms' tumor. In: *Dialogues in Pediatric Urology* (Ross JH, ed). William J. Miller Associates, New York: 1999: pp 4-5.

Merguerian PA, Reddy PP, Barrieras DJ, Wilson GJ, Woodhouse K, Bagli DJ, McLorie GA, Khoury AE: Acellular bladder matrix allografts in regeneration of functional bladders: Evaluation of large segment (>24 cm²) substitution in a porcine model. *British Journal of Urology*: May 2000; 85: pp 894-898.

Pugach JL, DiTizio V, Mittelman MW, Bruce AW, DiCosmo F, Khoury AE: Antibiotic hydrogel coated Foley catheters for prevention of urinary tract infection in a rabbit model. *Journal of Urology*: September 1999; 162: pp 883-887.

Reddy PP, Barrieras D, Bagli DJ, McLorie GA, Khoury AE, Merguerian PA: Initial experience with endoscopic holmium laser lithotripsy for pediatric urolithiasis. *Journal of Urology*: November 1999; 162: pp 1714-1716.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Bagli DJ: Icelandic Medical Association, Reykjavik, Iceland, January 2000. (1) Dysfunctional voiding, (2) Vesicoureteral reflux.

Bagli DJ: American Academy of Pediatrics, Washington, D.C., September 1999. Implications of molecular biology for pediatric urology.

Bagli DJ: International Bladder Symposium, Washington, D.C., November 1999. Rapid stretch-regulation of bladder extracellular matrix (ECM) both in vivo and ex vivo.

Khoury AE: French Egyptian Congress of Pediatric Urology, Cairo, Egypt, October 1999. (1) Early management of neurogenic bladder, (2) Bladder evaluation in pediatric renal transplantation, (3) Innovations in hypospadias surgery, (4) Chair: Renal transplantation session.

Khoury AE: University of South Florida, Key West, Florida, March 2000. (1) Evaluation and management of urinary tract infections and reflux, (2) Distal hypospadias current techniques, (3) Urinary diversion in children.

Khoury AE: South-East Anatolia Pediatric Urology Group, Gaziantep, Turkey, June 2000. (1) Innovations in hypospadias, (2) Congenital adrenal hyperplasia: The evolution of feminizing genitoplasty.

Khoury AE: Societe Internationale d'Urologie, Sharjah, United Arab Emirates, November 1999. (1) Innovations in hypospadias, (2) Where is pediatric urology heading in the third millennium?

Khoury AE: American Academy of Pediatrics, Washington, D.C., September 1999. Chair: Clinical research prize committee for urology.

Khoury AE: Association of Mohellim of Southern Ontario, Toronto, Ontario, March 2000. Hypospadias.

Khoury AE: Combined AAP/ESPU, Tours, France, June 2000.
Moderator: Sphincter session.

Khoury AE: American Urological Association, Atlanta, Georgia, May 2000. Panel discussion: Urinary tract infection in children: Biofilms.

Khoury AE: Canadian Urological Association, Kelowna, British Columbia, June 2000. Panel member: Antenatal hydronephrosis.

McLorie GA: American Academy of Pediatrics, Washington, D.C., October 1999. Moderator: Reconstruction II.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Acellular bladder matrix allografts (BAMA) in regenerating functional bladders in an animal model: The cellular mechanisms involved in repopulation of the matrix. *Reddy P*, Merguerian P, Wilson G, Bagli D: American Urological Association (\$10,000 1999).

Development of peritoneal dialysis catheters that resist colonization following simultaneous catheter exchange. *Khoury AE*, Burrows L: The Hospital for Sick Children Foundation (\$13,213 2000 - 2001).

Infection-resistant biomaterials: Applications of liposomal antibiotic hydrogel coatings for preventing device-related infections in trauma patients. *Mittelman MW*, Bruce AW, DiCosmo F, Khoury AE, Reid G: DCIEM (\$244,120 1997 - 1999).

Novel cell signaling peptides for treatment of scarring in bladder. *Woodhouse K*, Bagli DJ, Khoury AE: Materials and Manufacturing Ontario (\$398,833 2000 - 2002).

Objectifying the management of urinary voiding dysfunction in children. *Bagli DJ*, Farhat W: RESTRACOM/The Hospital for Sick Children Foundation (\$35,000 1999 - 2001).

RHAMM in pediatric bladder disease. *Bagli D*: March of Dimes (\$140,000 1998 - 2000).

Stretch induced activation of a local renin-angiotensin system (RAS) promotes bladder fibrosis through the receptor for hyaluronic acid (RHAMM). *Bagli DJ*, Capolicchio JC: American Foundation for Urologic Disease (\$32,000 1999 - 2000).

HONOURS RECEIVED

Bagli DJ: First Prize Research Award, American Academy of Pediatrics (Urology), October 1999.

Khoury AE: First Prize Research Award, American Academy of Pediatrics (Urology), October 1999.

McLorie GA: First Prize Research Award, American Academy of Pediatrics (Urology), October 1999.

MOUNT SINAI HOSPITAL

Surgeon-in-Chief – Dr. Zane Cohen

HEADS OF DIVISIONS

Dr. R.S. McLeod – General Surgery
Dr. A.E. Gross – Orthopaedic Surgery
Dr. M. Buckspan – Urology

The Department of Surgery at the Mount Sinai Hospital continues to work in a collaborative fashion with a single practice plan. The programmatic development that has been achieved over the past several years has continued in the areas of orthopaedic oncology (sarcoma), reconstructive orthopaedics and andrology. Within general surgery, the sub-specialty groups include colon and rectal surgery, hepatobiliary and pancreatic surgery, head and neck endocrine oncology and breast surgery. Clinically, vascular surgery and plastic surgery are also represented.

General Surgery

There have been significant achievements by members of the general surgical staff. Dr. Steven Gallinger continues to head the Familial Gastrointestinal Cancer Registry and has received two National Cancer Institute of Canada grants, as well as a recent Premier's Excellence Award. Dr. Robin McLeod received Crohn's and Colitis Foundation of America funding for a randomized controlled trial comparing suture techniques in Crohn's disease. This is a multicentre North American trial which includes 16 centres. Tony MacLean, one of the colorectal fellows, won the Canadian Association for General Surgeons Research Award for Clinical Sciences and Erin Kennedy, a Surgeon Scientist Program resident, was awarded a Medical Research Council of Canada fellowship.

Dr. Carol Swallow was awarded a Physicians Services Incorporated Foundation grant for "Modulation of immunosuppression and hepatic fibrogenesis by fetuin, an endogenous TGF-beta 1 antagonist". Jennifer MacMillan, another of our Surgeon Scientist Program residents was awarded the 1999 Johnson & Johnson Medical

Products Surgeon Scientist Fellowship. In addition and importantly, Dr. Carol Swallow, who is the Program Director for Surgical Oncology, organized the Royal College accreditation for surgical oncology. The program was approved with high praise. Dr. Jean Couture participated in an intergroup trial designing a randomized controlled trial for rectal cancer. Dr. Helen MacRae received an Association for Surgical Education grant to assess laparoscopic skills.

Drs. Michael Goldberg and Helen MacRae received Wightman Berris Academy Teaching Awards, as did Dr. Carol Hutchison. Evidence-based reviews in surgery will start in September 2000, sponsored by the Canadian Association of General Surgeons. It includes all 16 general surgery residency programs. Dr. Robin McLeod is Committee Chair and Dr. Helen MacRae is a committee member. Dr. Robin McLeod also participates in the clinical epidemiology course given by the American College of Surgeons.

Dr. Zane Cohen was appointed Chair of the Division of General Surgery at the University of Toronto and continues in his last year as Surgeon-in-Chief at the Mount Sinai Hospital. Dr. Steven Gallinger was appointed Head of the Hepatobiliary Oncology Program at the University Health Network and the Mount Sinai Hospital.

During the academic year 1999-2000, unfortunately Dr. Earl Myers died. A lectureship in his name will be established. Dr. Phillip Haigh will be recruited to the University Health Network and the Mount Sinai Hospital starting July 1, 2000. It is hoped that the Breast Program at the Mount Sinai Hospital and the Princess Margaret Hospital will be a collaborative project with both Drs. David McCready and Phillip Haigh doing breast work at the two institutions.

Urology

Clinically, the internationally recognized program in andrology continues. The major component of this program is male factor infertility. There is also a very strong program in male sexual dysfunction and this is clearly an area of regional expertise. A new clinical area of the aging male (andropause) represents a significant commitment on the part of the Department of Surgery to expand this clinical program.

The Division of Urology remains a strong centre for teaching for fellows, residents and students. Currently, there has been an expansion to two fellows in training – one clinical and one in basic science – and a core resident in the Andrology Training Program.

There is a strong research basis in both basic and clinical science within the Division of Urology. There are three major areas within the basic science realm. These are genetics of male infertility, which is National Institutes of Health funded, detection of atypical bacteria in prostatitis, which is National Institutes of Health funded, and sperm DNA integrity, including apoptosis and aneuploidy. There is a strong clinical research program with approximately 12 papers per year being published from the Division of Urology in clinical research, as well as presentations at national and international meetings. In particular, both Drs. Keith Jarvi and Armand Zini have been visiting professors at a number of different sites throughout North America in the past year.

During this academic year, the University of Toronto Andrology Update Series, directed by Dr. Keith Jarvi, was initiated and the Division of Urology has taken a leading role in organizing the Canadian Fertility and Andrology satellite meeting in Toronto.

Orthopaedic Surgery

This is an extremely strong division in the programmatic areas mentioned above. The research that has emanated from this division has been exemplary. Dr. Erin Boynton has received an Arthritis Society Junior Scholarship grant and a Lauren Award of Orthopaedic Research from the Canadian Orthopaedic Foundation. Dr. Aileen Davis has received a grant from the Arthritis Society looking at predictors of outcome following revision total hip arthroplasty. This is a renewal grant. She has also received a Clinician Scientist Award from the Ontario Ministry of Health and the Canadian Institute for Health Research for methodologies for evaluation of function in revision arthroplasty and extremity sarcoma patients. Dr. Allan Gross has been appointed to the Bernard I. Ghert Family Foundation Chair in Reconstructive Orthopaedics at the Mount Sinai Hospital. Dr. Carol Hutchison continues her excellent work as Director of the Surgical

Skills Centre at the Mount Sinai Hospital, and is a co-investigator on a Physicians Services Incorporated Foundation grant evaluating the effectiveness of a two-year curriculum in a surgical skills centre. She also received a Wightman Berris Academy Teaching Award, as mentioned above, and a Dean A.L. Chute Award for excellence in overall teaching. Dr. Jay Wunder received a Medical Research Council of Canada grant for molecular pathology of chondrosarcoma, an R.B. Salter Teaching Award from the Division of Orthopaedic Surgery at the University of Toronto, and a Kappa Delta/OREF Research Award from the American Academy of Orthopaedic Surgery, together with Ben Alman from The Hospital for Sick Children. Dr. Robert Bell was appointed Vice-President at the Princess Margaret Hospital. He will continue his clinical sarcoma work at the Mount Sinai Hospital. Dr. Bell was also responsible for the publication of a sarcoma chapter within the Oxford Textbook of Oncology.

The entire Department remains committed to academic pursuits. There have been a multitude of awards. The grant capture has been excellent, as has been the publication record and the presentations at scientific meetings and visiting professorships. Visitors from around the world have come to the Mount Sinai Hospital to view the programs mentioned above.

DIVISION OF GENERAL SURGERY

Dr. Z. Cohen - Professor
Dr. J. Couture - Assistant Professor
Dr. S. Gallinger - Associate Professor
Dr. M.R. Goldberg - Associate Professor
Dr. I.H. Koven - Associate Professor
Dr. H.M. MacRae - Assistant Professor
Dr. R.S. McLeod - Professor (Division Head)
Dr. I.B. Rosen - Professor
Dr. S. Sidlofsky - Assistant Professor
Dr. C.J. Swallow - Assistant Professor

PUBLICATIONS

Cohen Z: An approach to peri-rectal disease in inflammatory bowel disease. In: Controversies in IBD (Daniel P, ed). Lippincott-Raven Publishers, Philadelphia: 1999: pp 173-186.

Cohen Z: What are the continuing challenges and issues related to restorative proctocolectomy. In: Current Challenges in Colon and Rectal Surgery (Wexner S, Boulos PB, ed). W.B. Saunders Company, Philadelphia: 1999: pp 149-157.

Cohen Z, Sabo G, McLeod RS: Inflammatory bowel disease. In: Shackelford's Surgery of the Alimentary Tract (Pemberton JH, ed). W.B. Saunders Company, Philadelphia: 1999: pp 231-242.

Deitel WL, Rosen IB, Walfish PG: Relevance of past radiation exposure in surgical disease of the head and neck. Mature Medicine Canada: January 2000: 1: pp 1-4.

Kennedy E, Detsky A, Llewellyn-Thomas H, O'Connor B, Varkul M, Steinhart H, Cohen Z, McLeod RS: Can the standard gamble be used to determine utilities for uncertain health states? Medical Decision Making: February 2000: 20: pp 72-78.

Moskovitz D, Maunder R, Cohen Z, McLeod RS, MacRae H: Coping behavior and social support contribute independently to quality of life after surgery for inflammatory bowel disease. Diseases of the Colon and Rectum: April 2000: 43(3): pp 517-521.

Moskovitz DN, Maunder RG, Cohen Z, McLeod RS, MacRae H:

Use of community resources before inflammatory bowel disease surgery is associated with post-surgical quality of life. *Canadian Journal of Gastroenterology*: February 2000; 14(2): pp 95-98.

Moskovitz D, McLeod RS, Greenberg GR, Cohen Z: Operative and environmental risk factors for recurrence of Crohn's disease.

International Journal of Colorectal Disease: November 1999; 14(4): pp 224-226.

Norani M, Bapat B, Gallie B, Detsky A, Gallinger S, McLeod R, Cohen Z, Berk T, Pritzker K: Cost comparison of predictive genetic testing versus conventional clinical screening for familial adenomatous polyposis. *Gut*: July 1999; 44: pp 698-703.**Rioux J, Silverberg M, Daly M, Steinhart A, McLeod RS, Griffiths A, Green T, Brettin T, Stone V, Bull S, Bitten A, Williams CN, Greenberg G, Cohen Z, Lander E, Hudson T, Siminovitch K:**

Genome wide search in Canadian families with inflammatory bowel disease reveals two novel susceptibility loci that potentially implicated the cytokine pathway in disease susceptibility. *American Journal of Human Genetics*: March 2000; 66: pp 1863-1870.

Rosen IB: About a doctor's wife and mistress. *Annals of the Royal College of Physicians and Surgeons*: August 1999; 32: pp 302-305.**Rosen IB:** Partial thyroidectomy. In: *Thyroid Cancer: Diagnosis and Treatment* (Clark OH, Noguchi S, eds). Quality Medical Publishing, St. Louis: 2000: pp 241-256.**Siminovic M, To T, Baxter N, Balslem A, Ross E, Cohen Z, McLeod R, Engstrom T, Sigurdson E:** Hospital procedure volume and teaching status do not influence treatment and outcome measures of rectal cancer surgery in a large general population. *Journal of Gastrointestinal Surgery*: May 2000; 4(3): pp 324-330.**Soravia C, Berk T, Cohen Z:** Genetic molecular testing and surgical decision-making in hereditary colorectal cancer. *International Journal of Colorectal Disease*: January 2000; 15: pp 21-28.**Soravia C, Berk T, McLeod RS, Cohen Z:** Desmoid disease in patients with familial adenomatous polyposis (FAP). *Diseases of the Colon and Rectum*: March 2000; 43: pp 363-369.

Soravia C, Klein L, Berk T, O'Connor B, Cohen Z, McLeod R: Comparison of ileal pouch-anal anastomosis (IPAA) and ileo rectal anastomosis (IRA) in familial adenomatous polyposis (FAP) patients. *Diseases of the Colon and Rectum*: August 1999; 42: pp 1028-1034.

Soravia C, O'Connor B, Berk T, McLeod R, Cohen Z: Functional outcome of conversion of ileo rectal anastomosis (IRA) to ileal pouch-anal anastomosis (IPAA) in patients with familial adenomatous (FAP) and ulcerative colitis (UC). *Diseases of the Colon and Rectum*: July 1999; 42(7): pp 1-6.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Cohen Z: Radcliffe Infirmary, University of Oxford, Oxford, England, March 2000. (1) Crohn's disease: Medical and surgical outcomes, (2) Genetic and surgical considerations in the management of familial adenomatous polyposis, (3) The complex pelvic pouch: Is reconstruction feasible?

Cohen Z: International Course in Gastrointestinal Surgery, Madrid, Spain, May 2000. Crohn's disease factors affecting recurrence.

Cohen Z: The Doctor in Focus, Montreux, Switzerland, February 2000. Crohn's disease outcome of surgery.

Cohen Z: 2000 Davis and Geck Tyco Visiting Professorship, University of Massachusetts., Boston, Massachusetts, June 2000. Genetic and clinical aspects of familial adenomatous polyposis.

Cohen Z: International Course in Gastrointestinal Surgery, Madrid, Spain, May 2000. (1) Genetic and surgical aspects of familial adenomatous polyposis, (2) Principles of surgery for rectal cancer, (3) Proctocolectomy with Kock pouch, (4) Recto-urethral fistula.

Cohen Z: IBD Forum Symposium, Atlanta, Georgia, March 2000. (1) Management of abdominal wall fistula, (2) Management of cancer in ulcerative colitis and Crohn's disease.

Cohen Z: Cleveland Clinic Florida, Naples, Florida, February 2000. (1) Pouch fistula, (2) Pouchitis, (3) Recto-urethral fistula.

Cohen Z: John David Rosin Memorial Lecturer, Greater Baltimore Medical Centre, Baltimore, Maryland, May 2000. (1) Advances and controversies in the management of ulcerative colitis, (2) Surgical and genetic aspects of familial polyposis.

Cohen Z: Trends in Inflammatory Bowel Disease 1999, Vancouver British Columbia, August 1999. Update on proctitis.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Assessment of minor surgical skills for family medicine residents. *Friedlich M, MacRae HM, Reznick R, Regehr G, Tannenbaum D, Batty H, Oandasan I:* Physicians Services Incorporated Foundation (\$38,414 1998 - 1999).

Case control and prospective studies of psychological factors in inflammatory bowel disease. *Maunder R, Cohen Z, Greenberg G, McLeod R, Steinhart H, Lancee WJ:* Crohn's and Colitis Foundation of Canada (\$101,000 1997 - 2000).

Evaluation of family history characteristics and molecular features of hereditary colorectal cancer. *Gallinger S, Bapat B, Holowaty E, Darlington G, Knight J, Chouinard E, Carter R, Stevenson G:* National Cancer Institute of Canada (\$520,000 1997 - 2000).

Genetic basis of hyperparathyroidism-jaw tumor syndrome. *Hobbs MR, Rosen IB, Jackson CE:* National Institutes of Health (\$484,085 1999 - 2002).

Genetic markers of inflammatory bowel disease. *Steinhart AH, Bull S, Cohen Z, Greenberg G, McLeod RS, Siminovitch K:* Crohn's and Colitis Foundation of Canada (\$150,000 1997 - 2000).

Genetics of pancreatic adenocarcinoma. *Gallinger S, Redston M, Narod S, Ozelik H, Brunet JS:* National Cancer Institute of Canada (\$448,000 1999 - 2002).

Neurotensin receptor expression in colorectal and duodenal neoplasms in FAP. *Gallinger S:* Sanofi Pharmaceuticals (\$50,000 1998 - 1999).

Ontario registry for studies of familial colon cancer. *Gallinger S*, Holowaty E: National Institutes of Health (\$3,200,000 1997 - 2001).

Pre-clinical studies of cyclooxygenase-2 (COX-2) inhibitors in mouse models of intestinal neoplasia. *Gallinger S*: Merck Frosst Canada Incorporated/Medical Research Council of Canada/PMAC (\$120,000 1997 - 1999).

The effects of folate on intestinal carcinogenesis in genetically predisposed murine models: A molecular mechanistic understanding of folate deficiency-mediated colorectal carcinogenesis. *Young-In K*, *Gallinger S*: American Institute for Cancer Research (\$165,000 1998 - 2000).

DIVISION OF NEUROSURGERY

Dr. I.B. Schacter – Assistant Professor

DIVISION OF ORTHOPAEDIC SURGERY

Dr. R.S. Bell - Professor

Dr. E.L. Boynton - Assistant Professor

Dr. A.E. Gross – Professor (*Division Head*)

Dr. C.R. Hutchison - Assistant Professor

Dr. F. Langer - Associate Professor

Dr. E.A. Silverstein - Assistant Professor

Dr. J.S. Wunder - Assistant Professor

PUBLICATIONS

Bell RS, Wunder JS, Andrulis IL: Molecular alterations in bone and soft-tissue sarcoma. *Canadian Journal of Surgery*: August 1999; 42(4): pp 259-266.

Davis AM, Punniyamoorthy S, Griffin AM, Wunder JS, Bell RS:

Symptoms and their relationship to disability following treatment for lower extremity tumors. *Sarcoma*: November 1999: 3: pp 73-77.

Davis AM, Sennik S, Griffin AM, Wunder JS, O'Sullivan B, Catton

CN, Bell RS: Predictors of functional outcomes following limb salvage surgery for lower extremity soft tissue sarcoma. *Journal of Surgical Oncology*: May 2000: 73: pp 206-211.

Davis AM, Wunder JS, Bell RS: Tumors of bone and soft tissues:

Osteosarcoma. In: *Prognostic Factors in Cancer, Second Edition* (Gospodarowicz M, ed). John Wiley and Son Incorporated, New York: 1999: pp 253-271.

Ferguson PC, Boynton EL, Wunder JS, Hill RP, O'Sullivan B,

Sandhu JS, Bell RS: Intradermal injection of autologous dermal fibroblasts improves wound healing in irradiated skin. *Journal of Surgical Research*: August 1999: 85: pp 331-338.

Ferracini R, Angelini P, Cagliero E, Linari A, Martano M, Wunder

J, Buracco P: MET oncogene aberrant expression in canine osteosarcoma. *Journal of Orthopaedic Research*: March 2000: 18: pp 253-256.

Gross AE: Guest Editor (Section 1: Symposium, Musculoskeletal Allografts). *Clinical Orthopaedics and Related Research*: February 2000: pp 371.

Gross AE: Primary hip arthroplasty: Operative management problems: Prosthetic management of the dysplastic hip. *Orthopaedics*: September 1999: 22(9): pp 842-844.

Gross AE: Revision arthroplasty of the acetabulum with restoration of bone stock. *Clinical Orthopaedics and Related Research*: December 1999: 369: pp 198-207.

Hopyan S, Gokgoz N, Bell RS, Andrulis IL, Alman BA, Wunder

JS: Expression of osteocalcin and its transcriptional regulators core-binding factor alpha-1 and MSX2 in osteoid-forming tumors. *Journal of Orthopaedic Research*: November 1999: 17(5): pp 633-638.

Kandel RA, Bell RS, Wunder JS, O'Sullivan B, Catton CN, White LM, Davis AM: Comparison between a two and three grade system in predicting metastatic-free survival in extremity soft tissue sarcoma. *Journal of Surgical Oncology*: October 1999: 72(2): pp 77-82.

Lan F, Wunder JS, Griffin AM, Davis AM, Bell RS, White LM, Ichise M, Cole W: Periprosthetic bone remodelling around a prosthesis for distal femoral tumors. *Journal of Bone and Joint Surgery*: January 2000: 82B(1): pp 120-125.

Marco RA, Sheth DS, Boland PJ, Wunder JS, Siegel JA, Healey JH: Functional and oncological outcome of acetabular reconstruction for the treatment of metastatic disease. *Journal of Bone and Joint Surgery*: May 2000: 82A: pp 642-651.

O'Sullivan B, Wylie J, Catton CN, Gutierrez E, Swallow CJ, Wunder JS, Gullane P, Neligan P, Bell R: The local management of soft tissue sarcoma. *Seminars in Radiation Oncology*: October 1999: 9: pp 328-348.

Panagiotopoulos KP, Masnyk RD, Agnidis Z, Ko P, Gross AE: Risk factors for dislocation after revision total hip arthroplasty. *Hong Kong Journal of Orthopaedic Surgery*: September 1999: 3(2): pp 128-133.

Pearce DH, While LM, Wunder JS: Musculoskeletal images: Osteogenic sarcoma in the soft tissues of the hip. *Canadian Journal of Surgery*: February 2000: 43(1): pp 12-13.

Robinson P, White LM, Wunder JS: Musculoskeletal images: Secondary signs of patellofemoral dislocation. *Canadian Journal of Surgery*: April 2000: 43: pp 2.

Saleh KJ, Gafni A, Saleh L, Gross AE, Schatzker J, Tile M: Economic evaluations in the hip arthroplasty literature: Lessons to be learned. *Journal of Arthroplasty*: August 1999: 14(5): pp 527-532.

Shen J, Griffin M, Gross AE, Bell RS: Musculoskeletal images: Granuloma of the buttock after uncemented total hip arthroplasty. *Canadian Journal of Surgery*: August 1999: 42(4): pp 250.

Tejpar S, Nollet F, Li C, Wunder JS, Michils G, dal Cin P, Van Cutsem E, Bapat B, Roy F, Cassiman JJ, Alman BA: Predominance of beta-catenin mutations and beta-catenin dysregulation in sporadic aggressive fibromatosis (desmoid tumor). *Oncogene*: November 1999; 18: pp 6615-6620.

White LM, Kim JK, Mehta M, Merchant N, Schweitzer ME, Morrison WB, Hutchison CR, Gross AE: Complications of total hip arthroplasty: MR imaging: Initial experience. *Radiology*: April 2000; 215(1): pp 254-262.

Woodgate IG, Saleh KJ, Jaroszynski G, Agnidis Z, Woodgate MM, Gross AE: Minor column structural acetabular allografts in revision hip arthroplasty. *Clinical Orthopaedics and Related Research*: February 2000; 371: pp 75 - 85.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Bell RS: University of Alberta Hospital, Edmonton, Alberta, December 1999. (1) Local management of soft tissue sarcoma: Randomized clinical trials, historical studies and cell therapy, (2) Outcomes following tumor reconstruction at the knee: Stress shielding and prosthesis selection.

Bell RS: M.D. Anderson Cancer Centre, Houston, Texas, February 2000. Grand rounds.

Boynton EL: Heinrich-Heine-Universitat Dusseldorf, Dusseldorf, Germany, August 1999. The role of PE surface chemistry in total joint replacement failure.

Gross AE: Massachusetts General Hospital/Harvard Medical School Fall Hip Course, Boston, Massachusetts, September 1999. (1) Auto-grafting experience, (2) Intercalary acetabular allografts, (3) Acetabular bulk allografting, (4) Cortical struts in femoral revisions, (5) Restoration of bone stock in femoral revision.

Gross AE: University of Dundee, Dundee, Scotland, September 1999. (1) Dysplastic hip in total hip arthroplasty, (2) Course: Managing quality in arthroplasty.

Gross AE: SICOT/Italian Orthopaedic Society, Rome, Italy, November 1999. (1) Fresh osteochondral allografts for osteochondral defects of the knee: Secondary to trauma or osteochondritis dissecans, (2) Pelvic allografts in revision hip surgery, (3) The role of osteotomies in the treatment of the arthritic knee.

Gross AE: DePuy Orthopaedic Visiting Professor, Wellington School of Medicine, Wellington, New Zealand, March 2000. (1) Proximal tibial valgus osteotomy for osteoarthritis of the knee, (2) Distal femoral varus osteotomy for osteoarthritis of the knee, (3) Fresh osteochondral allografts for post-traumatic knee defects, (4) Total hip replacement for dysplasia, (5) Revision arthroplasty of the acetabulum with restoration of bone stock, (6) Revision arthroplasty of the femur with restoration of bone stock, (7) Revision arthroplasty of the knee with restoration of bone stock.

Gross AE: Canadian Orthopaedic Resident's Association, Halifax, Nova Scotia, September 1999. (1) Restoration of bone stock in revision arthroplasty of the acetabulum, (2) The use of fresh osteochondral allografts for post-traumatic knee defects.

Gross AE: Visiting Professor, University of Utah Orthopaedic Alumni Association, Salt Lake City, Utah, December 1999. (1) Revision arthroplasty of the hip with restoration of bone stock, (2) The biologic approach to the arthritic knee: Cartilage grafting and osteotomy.

Gross AE: Seddon Society, Stanmore, England, June 2000. (1) The use of osteochondral allografts for post-traumatic joint defects, (2) Restoration of bone stock in revision arthroplasty of the hip.

Gross AE: Gleneagles, Imperatives in Total Hip Arthroplasty VI, Perthshire, Scotland, May 2000. (1) Total hip replacement for dysplasia, (2) Restoration of bone stock in revision arthroplasty of the hip.

Gross AE: John Manley Lecturer, Long Island Jewish Hospital, Albert Einstein School of Medicine, Long Island, New York, May 2000. Fresh osteochondral allografts for post-traumatic defects.

Wunder JS: Visiting Professor, Max-Delbruck Centre for Molecular Medicine, Humboldt University, Berlin, Germany, April 2000.

- (1) Molecular interactions and their effect on outcome in osteosarcoma,
- (2) Management of soft tissue sarcoma and its complications,
- (3) Wound healing initiatives to decrease complications in soft tissue sarcoma.

Wunder JS: Canadian Sarcoma Group, Toronto, Ontario, February 2000. Micro array analysis for sarcomas.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Application of micro array analysis of gene expression to soft tissue sarcoma. *Wunder JS*, Kandel R, Woodgett J: Princess Margaret Hospital Foundation (\$67,920 1999 - 2000).

Clinical research project in micro array analysis of sarcoma. *Wunder JS*, Andrulis IL, Kandel RA, Bell RS, Woodgett J: Princess Margaret Hospital Foundation (\$85,000 1999 - 2000).

Determinants and outcomes of revision total knee arthroplasty. *Myerthall S*, Mahomed N, Gross AE, Davey JR, Koo JM: Canadian Orthopaedic Foundation (\$10,000 1999 - 2000).

Evaluating the effectiveness of a two-year curriculum in a surgical skills centre: The future of surgical training? *Anastakis D*, Brown M, Hutchison CR, Murnaghan JJ, Reznick R, Ali J: Physicians Services Incorporated Foundation (\$82,000 1998 - 2000).

Insulin-like growth factor in sarcoma. *Bell RS*, *Pollak MN*: National Cancer Institute of Canada (\$224,000 1997 - 2000).

Investigations of the biological importance of molecular alterations in sarcoma. *Wunder JS*, Andrulis IL, Bell RS: National Cancer Institute of Canada (\$44,129 1999 - 2000).

Macrophage: Silicone interactions in vitro inflammation versus immunity. *Boynton EL*: Dow Corning Corporation (\$76,000 1998 - 2001).

Molecular pathology of cartilage neoplasia: The role of parathyroid hormone related protein and Indian hedgehog. *Wunder JS, Alman BA*: Medical Research Council of Canada (\$103,774 2000 - 2003).

Predictors of outcome following revision total hip arthroplasty. *Gross AE, Davis A, Agnidis Z, Kreder H, Badley L, Gollish J, Schemitsch E, Davey R, Hutchison CR, Saleh K, Maistrelli G, Szalai JP, Waddell J, Mahomed N*: Arthritis Society (\$64,783 1998 - 1999).

The effect of small intestinal submucosa on wound healing in a rat deep excisional wound model. *Kandel RA, Bell RS*: Cook Biotech Incorporated (\$145,000 2000 - 2001).

The role of cognition in a technical skills course designed for junior surgery residents. *Hutchison CR, Kohls J, Hamstra S, Regehr G*: Association for Surgical Education (\$14,400 1999 - 2000).

The role of the macrophage in total joint replacement failure. *Boynon EL*: Arthritis Society (\$180,000 1999 - 2003).

Wound healing and radiation. *Hill R, Bell RS, Wunder JS, Kandel RA, Neligan P, O'Sullivan B*: Princess Margaret Hospital Foundation (\$145,000 1999 - 2000).

HONOURS RECEIVED

Gross AE: Bernard I. Ghert Family Foundation Chair in Reconstructive Orthopaedics, April 2000.

Wunder JS: OREF/Kappa Delta Research Award, American Academy of Orthopaedic Surgeons, March 2000.

Wunder JS: Robert B. Salter Teaching Award, Division of Orthopaedic Surgery, University of Toronto, November 1999.

DIVISION OF PLASTIC SURGERY

Dr. N.H. McKee - Professor

PUBLICATIONS

Chow RS, Medri MK, Martin DC, Leekam RN, Agur AM, McKee NH: Sonographic studies of human soleus and gastrocnemius muscle architecture: Gender variability. *European Journal of Applied Physiology*: June 2000: 82(3): pp 236-238.

McKee NH: Incidental finding of enchondroma. *Patient Care*: May 2000: 11: pp 34-38.

McKee NH, Agur AM, Ng-Thow-Hing V, Ball KA, Fiume EL: Creation of an anatomically accurate 3-D computer model of the muscle fibers of the human soleus. *Proceedings, Fifth International Muscle Symposium* (Frey M, Giovanoli P, Koller R, eds). Vienna: 2000: pp 168-171.

Smith HK, Plyley MJ, Rodgers CD, McKee NH: Expression of developmental myosin and morphological characteristics in adult rat skeletal muscle following exercise-induced injury. *European Journal of Applied Physiology and Occupational Physiology*: July 1999: 80: pp 84-91.

DIVISION OF UROLOGY

Dr. M.B. Bucksan - Associate Professor (*Division Head*)
Dr. K. Jarvi - Associate Professor
Dr. A. Zini - Assistant Professor

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A microbiological and epidemiological study on prostatitis. *Nickel C, Jarvi K, Mittelman M*: National Institutes of Health (\$238,000 1998 - 2003).

Phenotype and genotype analyses of cystic fibrosis. *Tsui L-C*, Durie P, Corey M, Jarvi K, Levison H, Tullis E: National Institutes of Health (\$533,875 1994 - 1999).

ST. JOSEPH'S HEALTH CENTRE

Surgeon-in-Chief – Dr. D. Jones

HEADS OF DIVISIONS

Dr. C.J. Burul – General Surgery (July 1, 1999 – April 2, 2000)

**Dr. T. Harmantas – General Surgery (April 3, 2000
– June 30, 2000)**

Dr. M. Kliman – Orthopaedic Surgery

Dr. R.H. Levine – Plastic Surgery

Dr. A. Marcuzzi - Urology

There were two departures from our Department this year. Dr. Claude Burul moved to the United Arab Emirates in May 2000, and Dr. Lloyd Smith joined the surgical staff at the Toronto Western Hospital on July 1, 2000.

On April 3, 2000, Dr. Tom Harmantas was appointed Head of the Division of General Surgery. He became Assistant Chief of Staff/Vice-Chair M.A.C. at the St. Joseph's Health Centre effective April 1, 2000.

For the past year, Dr. Douglas Wooster has served as secretary of the Medical Staff Association at the St. Joseph's Health Centre and Dr. Christopher Compeau has served as treasurer.

Dr. Ronald Levine continues as Program Director of the Division of Plastic Surgery, University of Toronto.

DIVISION OF GENERAL SURGERY

Dr. M. Baida – Assistant Professor
Dr. C.J. Burul – Assistant Professor (Division Head:
July 1, 1999 - April 2, 2000)
Dr. C. Compeau - Lecturer
Dr. T. Harmantas – Assistant Professor (Division Head:
April 3, 2000 – June 30, 2000)
Dr. D.P. Jones – Associate Professor
Dr. D. Lindsay – Lecturer
Dr. R. Louch - Lecturer
Dr. L.C. Smith – Assistant Professor
Dr. E.H. Spratt – Associate Professor
Dr. D. Szalay – Assistant Professor
Dr. D. Wooster – Associate Professor
Dr. M. Yaman – Assistant Professor

PUBLICATIONS

Compeau C, Johnston MR: Chest tubes. In: Key Topics in Thoracic Surgery (Casson AG, Johnston MR, eds). Bios Scientific Publishers Limited, Oxford: 1999: pp 42-45.

Compeau C, Johnston MR: Chest wall reconstruction. In: Key Topics in Thoracic Surgery (Casson AG, Johnston MR, eds). Bios Scientific Publishers Limited, Oxford: 1999: pp 46-47.

Compeau C, Johnston MR: Chest wall tumors. In: Key Topics in Thoracic Surgery (Casson AG, Johnston MR, eds). Bios Scientific Publishers Limited, Oxford: 1999: pp 48-51.

Compeau C, Johnston MR: Chylothorax. In: Key Topics in Thoracic Surgery (Casson AG, Johnston MR, eds). Bios Scientific Publishers Limited, Oxford: 1999: pp 52-55.

Compeau C, Johnston MR: Empyema. In: Key Topics in Thoracic Surgery (Casson AG, Johnston MR, eds). Bios Scientific Publishers Limited, Oxford: 1999: pp 75-78.

Jones DP, Redhill M: Malpractice insurance committee progress report. Ontario Medical Review: April 2000: 67(4): pp 22-28.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Wooster DL: Central Alberta Ultrasound Society, Calgary, Alberta, July 1999. Carotid duplex scanning.

DIVISION OF ORTHOPAEDIC SURGERY

Dr. M. Kliman - Lecturer (*Division Head*)
Dr. G. McDonald - Lecturer
Dr. M.W. Roscoe - Lecturer
Dr. M. Wood - Lecturer

DIVISION OF PLASTIC SURGERY

Dr. J.C. Fielding - Lecturer
Dr. R. Knowlton - Lecturer
Dr. R.H. Levine – Associate Professor (*Division Head*)

DIVISION OF UROLOGY

Dr. A. Marcuzzi – Lecturer (*Division Head*)
Dr. J.H. Wait - Lecturer

ST. MICHAEL'S HOSPITAL**Surgeon-in-Chief – Dr. E.C. Poulin****HEADS OF DIVISION****Dr. L.E. Errett – Cardiac Surgery****Dr. M. Burnstein – General Surgery****Dr. W.S. Tucker – Neurosurgery****Dr. R.R. Richards – Orthopaedic Surgery****Dr. J. Mahoney – Plastic Surgery****Dr. R.J. Honey – Urology****Dr. F.M. Ameli – Vascular Surgery**

The two sites of St. Michael's Hospital have entered the final phase of the consolidation process and it is expected that the institution will reside on one site by the end of this calendar year. To comfortably accommodate the extra staff and services, four extra floors are currently being added to the Victoria Wing. In the meantime, in order to streamline patient care and administrative programs, preparations are being made to transfer all perioperative services from the Wellesley site to temporary quarters at the Bond Street site by the end of October. This move will include the Intensive Care Unit, Emergency and Anesthesia Departments, as well as involve the reactivation of five operating rooms in the old Bond surgical suite so that continuity of patient care can be maintained until the addition to the new surgical facility has been completed.

Notable achievements were attained by a number of our divisions during this transition period. The Cardiac Division made substantial progress in minimally invasive cardiac surgery, successfully performing over 500 cases of beating heart coronary artery bypass grafts since the beginning of the year. The Transplantation and Minimally Invasive Surgery Teams jointly performed the first live donor nephrectomy in Ontario, and it is anticipated that this Program will significantly increase the live donor base and, consequently, decrease the waiting list for recipients. As a Department, our surgeons were awarded 32 new research grants, published some 84 articles, and were invited to give over 126 presentations worldwide.

Those enjoying personal accomplishments this year included Dr. John Bohnen, who became the Hospital's Medical Director of the Health Information Research Unit and was also named Outstanding Lecturer for his Principles of Surgery course on surgical infections. Academic recognition was also given to Dr. Wally Peters, who received the Mentor Prize from the Canadian Society of Plastic Surgeons and Dr. Gary Salasidis, who was given a Tutor Award for PBL. Two divisions saw a change in leadership with Dr. Rick Moulton being appointed as Head of the Division of Neurosurgery and Dr. Emil Schemitsch, who assumed the direction of the Division of Orthopaedic Surgery. Dr. Schemitsch was also the recipient of the University of Toronto George Armstrong-Peters Prize for outstanding research. Outside appointments were realized by Dr. Eric Poulin, who was named to the editorial board of the Canadian Journal of Surgery, and Dr. Robin Richards, who was elected President of the Canadian Orthopaedic Research Society.

It is anticipated that this upcoming academic year will see the end of the Restructuring Commission's directives, where the staff and services of the former Wellesley and St. Michael's Hospitals will be completely unified and situated on a common campus. While further growing pains have still to be endured, the staff, as a whole, is looking forward to the centralization of activities and the resultant improved efficiency of our programs and services.

DIVISION OF CARDIAC SURGERY

Dr. D. Bonneau - Associate Professor
Dr. L.E. Errett - Assistant Professor (*Division Head*)
Dr. D.A. Latter - Associate Professor
Dr. Y. LeClerc - Assistant Professor
Dr. J.K.Y. Yao - Assistant Professor

PUBLICATIONS

Carrier M, Rivard M, Kostuk W, Latter D, Daly P, Davies R, Teo K, Gudas V, Sullivan J, White M: The Canadian study of cardiac transplantation atherosclerosis. *Canadian Journal of Cardiology*: July 1999; 15: pp 1337-1344.

Shum-Tim D, Pelletier MP, Latter D, DeVarenes BE, Morin JE: Transplantation versus coronary artery bypass in patients with severe ventricular dysfunction: Surgical outcome and quality of life. *Journal of Cardiovascular Surgery*: July 1999; 40: pp 773-780.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Errett LE: Stikeman Symposium on Cardiothoracic Surgery, Montreal, Quebec, June 2000. (1) Socioeconomic status is a risk factor in cardiac surgery even in universal comprehensive health care system, (2) *Staphylococcus aureus* nasal carriage is a factor in sternal infection that can be treated.

Errett LE: Baxter Young Cardiac Surgeons of Canada, Cancun, Mexico, March 2000. Off pump CABG is better than conventional CABG.

Errett LE: Canadian Arrhythmia Symposium, Cancun, Mexico, January 2000. Pacemaker and ICD implants: Surgical techniques and complications.

Latter DA: Deborah Heart and Lung Institute, Brown Mills, New Jersey, September 1999. Cardiac transplant.

Latter DA: Canadian Cardiac Surgeons, Quebec City, Quebec, October 1999. Moderator: Alternative to coronary bypass surgery.

Latter DA: Stikeman Symposium, Montreal, Quebec, June 2000. The use of bio-glue in thoracic aortic surgery.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A prospective randomized outcome evaluation of beating heart versus cardiopulmonary bypass-arrested heart: Coronary artery bypass grafting. *Errett LE, Bonneau DB, Latter DA, Salasidis GC, LeClerc Y, Courtman DW, Keith M: Medtronic/Genzyme Surgical Products/Cardio Thoracic Systems (\$359,600 2000).*

An observational, prospective evaluation of the St. Jude Medical regent heart valve. *Errett L, Bonneau D, Latter D*: St. Jude Medical Incorporated (\$150,000 1998 - 2001).

Gene therapy: To assess the efficacy and safety of C1-1023 delivered through minimally invasive surgery versus maximum medical treatment in patients with severe angina, advanced coronary artery disease, and no options for revascularization. *Stewart D, Errett L, Latter D*: Parke-Davis Pharmaceutical (\$350,000 1999 - 2002).

Improving outcome in patients with severe ventricular dysfunction that undergo CABG's with complete nutritional supplement: Myovive. *Errett L, Jeejeebhoy F, Barr A, Freeman M, Hutchison S, Mazer D*: (\$100,000 1999 - 2000).

Ischemia management with accupril post-bypass graft via inhibition of converting enzyme (IMAGINE): An evaluation of the effect of 12 to approximately 24 months treatment with Quinapril 40 mg QD post-CABG surgery on ischemic events. *Moe G, Latter D, Fitchett D, Errett L*: Parke-Davis Pharmaceutical (\$200,000 2000 - 2002).

Molecular epidemiology of aneurysm. *Lossing A, Errett L*: Cellex-C Incorporated (\$1,000,000 1999 - 2002).

Multicentre radial artery patency study: A study of radial artery used as a bypass conduit for coronary artery bypass surgery. *Fremes S, Errett LE, Latter D, Bonneau D, Naylor D, Cohen E, Adelman A*: (\$192,380 1998 - 1999).

Octopus beating heart: The effects of cardiopulmonary bypass versus beating heart. *Errett L, Bonneau D, Latter D, Salasidis G, Leclerc Y*: Medtronic Canada (\$80,000 2000 - 2002).

The role of tensile mechanics and the extrinsic pathway of coagulation in vascular anastomotic healing. *Courtman D, Errett LE*: St. Michael's Hospital (\$10,000 1998 - 1999).

The role of vasocare therapy in atherosclerotic progression and regression. *Courtman D, Errett L*: Vasogen Incorporated (\$150,000 1999 - 2000).

DIVISION OF GENERAL SURGERY

Dr. J. Ali - Professor
Dr. J.M.A. Bohnen - Associate Professor
Dr. M.J. Burnstein - Associate Professor (*Division Head*)
Dr. J. Koo - Associate Professor
Dr. L.J. Mahoney - Associate Professor
Dr. J. Mamazza - Assistant Professor
Dr. D.I. McRitchie - Assistant Professor
Dr. R.A. Mustard - Assistant Professor
Dr. E.C. Poulin - Professor
Dr. C.M. Schlachta - Lecturer

PUBLICATIONS

Bohnen J: Principles of perioperative antibacterial prophylaxis: Management of surgical site infections. *Disease Management and Health Outcomes*: August 1999; 6(2): pp 73-81.

Kirkpatrick AW, Koo J, Zalev AH, Burnstein MJ, Warren RE: Endoscopic perforation of the rectum presenting initially as a change in voice. *Canadian Journal of Surgery*: August 1999; 42: pp 305-306.

Pasenau J, Poulin EC, Mamazza J, Schlachta CM, Seshadri PA: Liver hematoma following laparoscopic nissen fundoplication: A case report and review of retraction injuries. *Surgical Laparoscopy and Endoscopy*: April 2000; 10: pp 178-181.

Poulin EC, Schlachta CM, Mamazza J: Early laparoscopy to help diagnose acute non-specific abdominal pain. *Lancet*: June 2000; 355: pp 861-863.

Poulin EC, Schlachta CM, Mamazza J, Seshadri PA: Should enteric fistulae from Crohn's disease or diverticulitis be treated laparoscopically or by open surgery? A matched cohort study. *Diseases of the Colon and Rectum*: March 2000; 43: pp 621-627.

Schlachta CM, Mamazza J, Poulin EC: Laparoscopic sigmoid resection for acute and chronic diverticulitis: An outcome comparison with laparoscopic resection for non-diverticular disease. *Surgical Endoscopy*: July 1999; 13: pp 649-653.

Schlachta CM, Mamazza J, Seshadri PA, Cadeddu M, Poulin EC: Determinants of outcomes in laparoscopic colorectal surgery: A multiple regression analysis of 416 resections. *Surgical Endoscopy*: April 2000: 14: pp 258-263.

Schlachta CM, Poulin EC, Mamazza J: Laparoscopic splenectomy for hematologic malignancies. *Surgical Endoscopy*: December 1999: 13: pp 865-868.

Seshadri PA, Carr LK, Mamazza J, Schlachta CM, Cadeddu M, Poulin EC: Laparoscopic excision of urachal anomalies: A review. *Canadian Journal of Urology*: December 1999: 6(6): pp 906-910.

Seshadri PA, Poulin EC, Mamazza J, Schlachta CM: A simplified laparoscopic approach to "second-look" laparotomy: A review. *Surgical Laparoscopy and Endoscopy*: December 1999: 9(4): pp 286-289.

Seshadri PA, Poulin EC, Mamazza J, Schlachta CM: Laparoscopic partial splenectomy: Technique and case report. *Surgical Laparoscopy and Endoscopy*: May 2000: 10: pp 106-109.

Seshadri PA, Poulin EC, Mamazza J, Schlachta CM: Technique for laparoscopic gastric surgery. *Surgical Laparoscopy and Endoscopy*: December 1999: 9(4): pp 248-252.

Simmang CL, Senatore P, Lowry A, Hicks T, Burnstein M: Practice parameters for detection of colorectal neoplasms. *Diseases of the Colon and Rectum*: September 1999: 42: pp 1123-1129.

Wanzel KR, Jamieson CG, Bohnen JMA: Iatrogenic complications on a general surgery service: Incidence and reporting. *Canadian Journal of Surgery*: April 2000: 43: pp 113-117.

Wong WD, Wexner SD, Lowry A, Vernava A, Burnstein M: Practice parameters for the treatment of sigmoid diverticulitis: Supporting documentation. *Diseases of the Colon and Rectum*: March 2000: 43: pp 290-297.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Ali J: Sacre Coeur Hospital, Montreal, Quebec, September 1999.
Advanced trauma life support course instructor update.

Ali J: Dalhousie University, Halifax, Nova Scotia, April 2000.
Advanced trauma life support instructor course.

Ali J: Hopital du Sacre de Montreal, Montreal, Quebec, February 2000.
Advanced trauma life support instructor course.

Ali J: McMaster University, Hamilton, Ontario, June 2000. Advanced
trauma life support instructor course.

Ali J: Arabian Gulf University, Bahrain, Saudi Arabia, March 2000.
Advanced trauma life support provider course.

Ali J: Hamad Medical Corporation Health Centre, Qatar, Saudi Arabia,
April 2000. Advanced trauma life support provider course.

Ali J: University of Panama, Panama, South America, November 1999.
Director: Provider and instructor courses in advanced trauma life
support.

Ali J: American College of Surgeons, San Francisco, California,
October 1999. International advanced trauma life support presentation
of revision for new text.

Ali J: International Surgical Society, Vienna, Austria, August 1999.
Moderator: Comparison of trauma management among PGY-I surgery
residents after the advanced trauma life support course using a trauma
mannequin.

Bohnen JMA: Ontario Hospital Association, Toronto, Ontario, June
2000. Conference on physician credentialing: Hot issues mock hearing.

Bohnen JMA: American Hernia Society, Toronto, Ontario, June 2000.
Hernia repair, infections and antibiotics.

Bohnen JMA: Thirty-Ninth Interscience Conference on Antimicrobial
Agents and Chemotherapy, San Francisco, California, September 1999.
Meet-the-experts: Surgical infections.

Burnstein MJ: American Society of Colon and Rectal Surgeons, Boston, Massachusetts, June 2000. Moderator: Colonoscopy, laparoscopy, polyps.

Burnstein MJ: Course on Gastroenterology and Digestive Endoscopy, Toronto, Ontario, September 1999. New treatments for anal sphincter dysfunction.

Burnstein MJ: Course on Gastroenterology and Digestive Endoscopy, Toronto, Ontario, December 1999. New treatments for anal sphincter dysfunction.

Burnstein MJ: American Hernia Society/European Hernia Society, Toronto, Ontario, June 2000. Rectal prolapse.

Mamazza J: Canadian Association of General Surgeons, Montreal, Quebec, September 1999. (1) Outcome of laparoscopic colorectal resection in octogenarians, (2) Needlescopic surgery: A logical evolutionary step from conventional laparoscopic surgery, (3) What is the learning curve for laparoscopic colorectal resections? (4) The septic complications of elective laparoscopic colorectal resection, (5) Laparoscopic gastric surgery: Preliminary results.

Mamazza J: Society of American Gastrointestinal Endoscopic Surgeons, Atlanta, Georgia, March 2000. (1) Needlescopic surgery: A logical evolutionary step from conventional laparoscopic surgery.

Poulin EC: Society of American Gastrointestinal Endoscopic Surgeons, Atlanta, Georgia, March 2000. (1) A simple clinical model for predicting conversion to open surgery in laparoscopic colorectal resections, (2) The septic complications of elective laparoscopic colorectal resection.

Poulin EC: A.N. Grace Lecturer, South Western Ontario Surgical Association, London, Ontario, November 1999. (1) Minimally invasive surgery: Past, present, and future, (2) History of the blues.

Poulin EC: Canadian Association of General Surgeons, Montreal, Quebec, September 1999. (1) Advanced laparoscopic surgery, (2) First trocar placement: The open approach: Avoiding pitfalls of laparoscopic cholecystectomy, (3) Laparoscopic gastric surgery: Preliminary results, (4) Needlescopic surgery: A logical evolutionary step from conventional laparoscopic surgery, (5) Outcome of laparoscopic colorectal resections in octogenarians, (6) The septic complications of elective laparoscopic colorectal resection.

Poulin EC: Quebec Association of General Surgeons, Montebello, Quebec, May 2000. (1) La laparoscopie: Ou en sommes-nous? (2) La mini laparoscopie.

Poulin EC: World Congress of Endoscopic Surgery, Singapore, Malaysia, June 2000. Spleen: Laparoscopic splenectomy : The current gold standard: Splenomegaly: A contra-indication?

Poulin EC: Ontario Association of General Surgeons, Ancaster, Ontario, November 1999. The future of minimally invasive surgery.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A randomized, phase III clinical trial to compare sentinel node resection to conventional axillary dissection in clinically node-negative breast cancer patients. *Koo J, Mahoney L, Haq R, Murray D, Greyson D, McRitchie D, Ali J:* National Surgical Adjuvant Breast and Bowel Project (\$100,000 1999 - 2002).

Evaluating the effectiveness of a two-year curriculum in a surgical skills centre: The future of surgical training? *Anastakis D J, Brown M, Ali J, Hamstra S, Hutchison C, Murnaghan J, Regehr G, Reznick R:* Physicians Services Incorporated Foundation (\$82,555 1998 - 2000).

Menstrual cycle and surgical treatment of breast cancer. *Koo K, Haq R, Ali J, McRitchie D:* NCCTG/National Surgical Adjuvant Breast and Bowel Project (\$10,000 1997 - 2000).

Study of tamoxifen and raloxifene for the prevention of breast cancer: The STAR trial. *Koo J, Mahoney L, Haq R:* National Surgical Adjuvant Breast and Bowel Project/National Cancer Institute of Canada (\$600,000 1999 - 2004).

HONOURS RECEIVED

Bohnen JMA: Outstanding Lecturer, Postgraduate Principles of Surgery Course, Department of Surgery, University of Toronto, May 2000.

DIVISION OF NEUROSURGERY

Dr. M.D. Cusimano - Associate Professor
Dr. R.J. Moulton - Associate Professor
Dr. P.J. Muller - Professor
Dr. R.G. Perrin - Associate Professor
Dr. H.S. Smyth - Assistant Professor
Dr. W.S. Tucker - Associate Professor (*Division Head*)

PUBLICATIONS

Cusimano MD: Quality of life assessment in patients with tumors of the cranial base. *Skull Base Surgery*: January 2000: 9(4): pp 259-264.

Cusimano MD: The journey through the intensive care unit. *Canadian Medical Association Journal*: March 2000: 162(5): pp 633-634.

Cusimano MD, Suhardja A: Craniotomy revisited: Techniques for improved access and reconstruction. *Canadian Journal of Neurological Sciences*: June 2000: 27: pp 44-48.

Cusimano MD, Yonke AM, Tucker WS: An analysis of attrition from Canadian neurosurgery residency programs. *Academic Medicine*: August 1999: 74(8): pp 925-931.

Gilbart M, Hutchison C, Cusimano MD, Regehr G: A trauma simulator for teaching trauma management to senior medical students. *American Journal of Surgery*: June 2000: 10: pp 63-74.

Hawkins C, Muller PJ, Bilbao J: Case of the month: 44 year old man with a bleeding cerebral tumor. *Brain Pathology*: October 1999: 9: pp 741-744.

Kovacs K, Horvath E, Stefaneanu L, Bilbao JM, Singer W, Muller P, Scheithauer BW: Two cases of pituitary Crooke's cell adenoma without Cushing's disease: A histologic, immunocytochemical, electron microscopic and in situ hybridization study. *Endocrine Pathology*: November 1999; 10: pp 65-72.

Muller P, Wilson B, Lilje L, Yang V, Hitchcock M, Hetzel F, Chen Q, Fullagar T, Fenstermaker R, Selker R, Abrams J: Clinical trials of photodynamic therapy of malignant brain tumors. *Optical Methods for Tumor Treatment and Techniques in Photodynamic Therapy*: April 2000; 3909: pp 15-24.

Tator CH, Cusimano M, McLellan B, Verrier M, Walker J, Williams JI: Proposal for a spinal injury registry. *Ontario Neurotrauma Foundation*: January 2000: pp 87.

Sharman A, Cusimano MD: Think first: Are there such things as accidents? *Ontario Physical Health Education Journal*: February 2000: pp 26-27.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Cusimano MD: Royal College of Physicians and Surgeons of Canada, Montreal, Quebec, September 1999. Injury prevention in the community: Neurological trauma prevention.

Muller PJ: European Association for Neuro-oncology, Copenhagen, Denmark, June 2000. Clinical trials of photodynamic therapy of malignant brain tumors.

Muller PJ: Satellite Symposium on Brain Immuno-Gene Therapy for Brain Tumors, Lund, Sweden, June 2000. Clinical trials of photodynamic therapy of malignant brain tumors.

Muller PJ: International Symposium on Photodynamic Diagnosis and Therapy in Clinical Practice, Innsbruck, Austria, October 1999. Photodynamic therapy of brain tumors.

Perrin RG: CNS, Boston, Massachusetts, November 1999. Moderator: Management strategies for spinal neoplasms.

Perrin RG: ISPN, Salt Lake City, Utah, September 1999.
Neurosurgical aspects of AIDS.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A feasibility study for a neurotrauma surveillance database in Ontario.
Tator C, Cusimano M, Verrier M, Walker J, Williams J, McLellan B: Ontario Neurotrauma Foundation (\$71,600 1999).

An analysis and dissemination of current neurotrauma incidence and causal data in Ontario. *Walker J, Williams J, Chipman M, Cusimano M, McLellan B, Simson H, Tator C, Verrier M:* Ontario Neurotrauma Foundation (\$49,665 1999 - 2000).

Cerebral auto regulation in severe head injury. *Moulton RJ:* Ontario Neurotrauma Foundation (\$25,000 1998 - 2000).

How effective is an injury prevention program at lessening injuries in children? *Cusimano M, Chipman M, Kalnins I, Freedman B, McRae A:* St. Michael's Hospital Foundation (\$9,630 2000 - 2002).

Implementation and evaluation of a neurotrauma injury prevention program into Ontario's healthy living curriculum: A controlled trial. *Cusimano MD, Chipman M, Kalnins I, Freedman B:* Ontario Neurotrauma Foundation (\$600,000 2000).

Photodynamic therapy: Basic and clinical science studies: Prospective clinical trials in the use of photodynamic therapy (PDT) for the treatment of malignant brain tumors. *Muller PJ, Hetzel F, Chopp M, Hitchcock M, Patterson M, Singh G, Wilson B:* National Institutes of Health (\$6,641,179 1997 - 2003).

Specification of the visual-spatial abilities relevant to surgical training. *Hamstra S, Anastakis D, Cusimano M, Caminiti M, Matsumoto E:* Physicians Services Incorporated Foundation (\$23,200 2000 - 2001).

Stress reaction of the neurosurgical patient: Protein catabolism and cerebral salt wasting in the neurosurgical care unit. *Singh S, Cusimano MD, Halperin M:* Physicians Services Incorporated Foundation (\$13,000 1999 - 2000).

The development and validation of an assessment of communicative competence in physicians. *Cusimano MD, Rothman A, Bilan S, Cuttress L, Keystone J: Medical Research Council of Canada (\$19,300 1997 - 1999).*

DIVISION OF ORTHOPAEDIC SURGERY

Dr. E.R. Bogoch - Associate Professor
Dr. T.R. Daniels - Assistant Professor
Dr. D.E. Hastings - Professor
Dr. R.J. McBroom - Assistant Professor
Dr. M.D. McKee - Assistant Professor
Dr. R.R. Richards - Professor (*Division Head*)
Dr. E.H. Schemitsch - Associate Professor
Dr. J.P. Waddell - Professor

PUBLICATIONS

Bhandari M, Schemitsch EH, Adili A, Lachowski RJ, Schaughnessy SG: High and low pressure pulsatile lavage of contaminated tibial fractures: An in vitro study of bacterial adherence and bone damage. *Journal of Orthopaedic Trauma: July 1999; 13(8): pp 526-533.*

Bogoch E, Firestein G, Frank C, Goldring S, Mort J, Oppenheimer-Marks N, Poole R, Recklies A, Varga J, Zhang Y: Tissue and pathophysiology: Pathophysiologic aspects of inflammation in diarthrodial joints. In: *Orthopaedic Basic Science, Second Edition (Buckwalter J, ed). American Academy of Orthopaedic Surgeons, New York: 2000: pp 490-530.*

Bogoch ER, Moran EL: Bone abnormalities in the surgical treatment of patients with rheumatoid arthritis. *Clinical Orthopaedics and Related Research: September 1999: 366: pp 8-21.*

Dagum A, Best AK, Schemitsch EH, Mahoney JL, Mahomed MN, Blight KR: Salvage after severe lower extremity trauma: Are the outcomes worth the means? *Plastic and Reconstructive Surgery: July 1999: 103(4): pp 1212-1220.*

Daniels TR, Alman B, Wedge JH: Pediatric masterclass: Congenital clubfoot. *Current Orthopaedics*: July 1999: 13(3): pp 229-236.

Daniels TR, Lau JTC: The effect of increasing distal metatarsal closing wedge osteotomies of the DMAA. *Foot and Ankle International*: December 1999: pp 329.

El Maraghy AW, Aksenov SA, Byrick RJ, Richards RR, Schemitsch EH: Pathophysiologic effect of fat embolism in a canine model of pulmonary contusion. *Journal of Bone and Joint Surgery American Volume*: July 1999: 81A(8): pp 1155-1164.

El Maraghy AW, Schemitsch EH, Waddell JP: Acetabular blood flow during total hip arthroplasty. *Canadian Journal of Surgery*: June 2000: 43(3): pp 197-201.

El Maraghy AW, Schemitsch EH, Waddell JP: Greater trochanteric blood flow during total hip arthroplasty using a posterior approach. *Clinical Orthopaedics and Related Research*: July 1999: 363: pp 151-157.

Hansra P, Moran EL, Fornasier VL, Bogoch ER: Carrageenan-induced arthritis in the rat. *Inflammation*: February 2000: 24(2): pp 141-155.

Hupel T, Schemitsch EH, Kowalski M, Swiontkowski MF: In vitro evaluation of a laser doppler flowmetry implantable fiber system: The effect of flow velocity and concentration on perfusion assessment. *International Journal of Surgical Investigation*: July 1999: 1(1): pp 29-37.

Kaar K, Bogoch ER, Devlin R: Case report: Acute metastatic oral infection of a revision total hip arthroplasty following dental treatment. *Journal of Arthroplasty*: August 2000: 15: pp 5.

King GJW, Richards RR, Zuckerman JD, Blasier R, Dillman C, Friedman RJ, Gartsman GM, Iannotti JP, Mow VC, Woo SLY: A standardized method for assessment of elbow function. *Journal of Shoulder and Elbow Surgery*: August 1999: 8: pp 351-354.

Kong YY, Feige U, Sorosi I, Bolon B, Tafuri A, Morony S, Capparelli C, Li J, Elliott R, McCabe S, Wong T, Campagnuolo G, Moran E, Bogoch ER, Van G, Nguyen LT, Ohashi PS, Lacey DL, Fish E, Boyle WJ, Penninger JM: Activated T-cells regulate bone loss and joint destruction in adjuvant arthritis through osteoprotegerin ligand. *Nature*: November 1999: 402: pp 304-309.

Louie BE, McKee MD, Richards RR, Mahoney JL, Waddell JP, Beaton DE, Schemitsch EH, Yoo DJ: Treatment of osteonecrosis of the femoral head by free vascularized fibular grafting: An analysis of surgical outcome and patient health status. *Canadian Journal of Surgery*: August 1999: 42(4): pp 274-283.

McCormack RG, Brien D, Buckley RE, McKee MD, Powell JN, Schemitsch EH: A randomized prospective evaluation of humeral shaft fracture fixation: Compression plate versus intramedullary nail. *Journal of Bone and Joint Surgery*: April 2000: 83(B): pp 336-339.

McKee MD, Schemitsch EH, Waddell JP, Yoo D: A prospective, randomized clinical trial comparing tibial nailing using fracture table traction versus manual traction. *Journal of Orthopaedic Trauma*: September 1999: 13(7): pp 463-469.

Mehdian H, McKee MD: Fractures of the capitellum and trochlea. *Orthopaedic Clinics of North America*: January 2000: 31(1): pp 115-127.

Pysklywec M, Bogoch ER: Theoretical relationship between maximum pore size and toughness in experimental inflammatory arthritis. *Journal of Materials Science: Materials in Medicine*: June 2000: 11: pp 313-318.

Randle J, McKee MD, Miesami B: Mechanical failure of a gamma nail. *Canadian Journal of Surgery*: October 1999: 42(5): pp 384-386.

Richards R: Shoulder instability. In: *Orthopaedic Surgery: The Essentials* (Baratz ME, Watson AD, Imbriglia JE, eds). Thieme Publications, New York: 1999: pp 257-274.

Stephen DJG, Kreder HJ, Day AC, McKee MD, El Maraghy A, Schemitsch EH, Hamilton P, McLellan B: The early detection of arterial bleeding in acute pelvic trauma. *Journal of Trauma*: October 1999: 47(4) pp 638-642.

Wright JG, Young NL, Waddell JP: The reliability and validity of the self-reported patient-specific index for total hip arthroplasty. *Journal of Bone and Joint Surgery*: June 2000: 82A(6): pp 829-837.

Yee AJM, Protzner K, Fornasier VL, Binnington AG, Bogoch E, Davey JR: Cementless acetabular fixation in total hip arthroplasty using polyglycoline-lactide screws: An in vivo canine study. *Journal of Arthroplasty*: June 2000: 15(4): pp 496-504.

Zangger P, Esufali Z, Gladman DD, Bogoch ER: Musculoskeletal surgery for different patterns of psoriatic arthritis. *Journal of Rheumatology*: April 2000: 27(4): pp 967-974.

Zangger P, Gladman DD, Urowitz MR, Bogoch ER: Outcome of total hip replacement for avascular necrosis in systemic lupus erythematosus. *Journal of Rheumatology*: April 2000: 27(4): pp 919-923.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Bogoch ER: British Society for Surgery of the Hand, Blackpool, England, October 1999. (1) Epidemiology and patterns of symmetry and asymmetry in the rheumatoid hand, (2) The management of flexor tendon problems in the thumb, (3) The problems of scleroderma.

Bogoch ER: Canadian Orthopaedic Association, St. John's, Newfoundland, July 1999. Moderator: Fragility fractures.

Daniels TR: Canadian Orthopaedic Association, St. John's, Newfoundland, July 1999. (1) Hallux rigidus: A simple problem? (2) Indications for cheilectomy and debridement, (3) Conservative approach: Is it worth it? (4) Is arthrodesis of the hindfoot effective?

Daniels TR: Canadian Orthopaedic Association, Edmonton, Alberta, June 2000. (1) Trauma to the midfoot: Assessment and treatment: Mechanism of injury to the midfoot: Anatomy and injury patterns, (2) Ankle instability: Current concepts, assessment and treatment, (3) Subtalar instability: Diagnosis, assessment and treatment, (4) Charcot foot: The results of plantar exostectomy for chronic ulceration, (5) Computerized-tomographic (CT) evaluation of the congenital flatfoot deformity.

McBroom RJ: Canadian Orthopaedic Association, St. John's, Newfoundland, July 1999. Complications in spine surgery for deformity.

McKee MD: Canadian Orthopaedic Association, Edmonton, Alberta, June 2000. Complex elbow fractures: ORIF versus replacement.

McKee MD: Orthopaedic Trauma Association, Charlotte, North Carolina, October 1999. Complex upper extremity injuries.

McKee MD: Canadian Orthopaedic Association, St. John's, Newfoundland, July 1999. (1) Controversies with intramedullary nailing of long bone fractures: Nailing versus plating of humeral shaft fractures, (2) Moderator: Fracture dislocation about the elbow, (3) Workshop: Supracondylar nails for the femur: Retrograde nails, (4) Elbow infection.

McKee MD: Trauma Update, Vail, Colorado, January 2000. (1) Distal biceps tendon ruptures: One incision or two?, (2) Distal radial-ulnar instability, (3) Fractures of the coronoid: The key to elbow stability, (4) Fractures of the scapular neck, (5) Injuries to the glenoid, (6) Panel: Elbow injuries.

McKee MD: AO Course, Davos, Switzerland, December 1999. (1) Elbow arthroplasty in fracture surgery, (2) Fractures of the distal radius, (3) Fractures of the patella, (4) Prosthetic replacement for severe fractures of the proximal humerus.

McKee MD: Whistler 2000 Orthopaedic Symposium, Whistler, British Columbia, February 2000. (1) Fractures of the humeral shaft: Nail or plate, (2) Total elbow arthroplasty for fractures of the distal humerus.

McKee MD: American Academy of Orthopaedic Surgeons, Orlando, Florida, March 2000. Stable fixation for fractures: Upper extremity.

McKee MD: Workplace Safety and Insurance Board (WSIB), Toronto, Ontario, February 2000. The effect of rotator cuff surgery on quality of life.

Richards RR: Alpha Club, Cancun, Mexico, February 2000. (1) Rotator cuff tear pathology: Intrinsic etiology, (2) Humeral shaft fractures: Nail or plate?

Richards RR: American Shoulder and Elbow Surgeons, Philadelphia, Pennsylvania, October 1999. General versus specific outcome measures for the assessment of shoulder function.

Richards RR: American Academy of Orthopaedic Surgeons, Orlando, Florida, March 2000. (1) Course: Intramedullary nailing.

Richards RR: American Society for Surgery of the Hand, Boston, Massachusetts, September 1999. Course: Surgical treatment of the patient with a brachial plexus injury.

Richards RR: Canadian Orthopaedic Association, Hull, Quebec, November 1999. Treatment AVN: Child and adult.

Schemitsch EH: American Academy of Orthopaedic Surgeons, Orlando, Florida, March 2000. (1) Decision-making in the management of tibia fractures: Reamed or unreamed intramedullary fixation, (2) Management of acute infection after intramedullary nailing.

Schemitsch EH: Canadian Orthopaedic Association, St. John's, Newfoundland, July 1999. (1) Instructional course lecture: Distal femoral fixation in total hip arthroplasty, (2) Retrograde nailing workshop: Results of retrograde nailing, (3) Moderator: Current controversies in intramedullary nailing, (4) Antegrade versus retrograde femoral nailing, (5) Samson award lecture: Assessment of biological reconstruction methods in repair of the devascularized canine tibia.

Schemitsch EH: International Society for Fracture Repair Workshop, Ulm, Germany, September 1999. (1) Moderator: Fundamental factors in fracture healing, (2) Assessment of blood supply in repair of the devascularized tibia.

Schemitsch EH: Canadian Orthopaedic Association, Ottawa, Ontario, November 1999. (1) Course: Principles of treatment of adult fractures, (2) Course: Complications of fractures and their treatment.

Schemitsch EH: AO Fracture Course, Vancouver, British Columbia, September 1999. (1) Bone response to fracture and implant, (2) Practical exercise: Absolute stability, (3) Humeral shaft fractures, (4) Practical exercise: Intramedullary nailing, (5) Case presentations.

Schemitsch EH: Canadian Orthopaedic Association, Edmonton, Alberta, June 2000. (1) Instructional course lecture: Unicondylar knee replacement, (2) Moderator: Geriatric trauma.

Schemitsch EH: AO Pelvic Course, Toronto, Ontario, April 2000. Anterior approaches to the pelvis.

Schemitsch EH: Orthopaedic Trauma Association, Charlotte, North Carolina, October 1999. Indirect reduction techniques in the lower extremity.

Waddell JP: Basic Concepts in Joint Arthroplasty for Orthopaedic Residents, Toronto, Ontario, April 2000. (1) Ideal cementless stem design: Cylindrical, (2) Reinforcement rings, (3) Moderator: Hip revision.

Waddell JP: Chilean Meeting of Orthopaedic Traumatology, Pucon, Chile, November 1999. (1) Management of femoral fractures in the polytraumatized patient, (2) Fractures of the proximal femur, (3) Chair: Fractures of the humerus: Diaphyseal fractures of the humerus, (4) Total hip replacement for complications of trauma.

Waddell JP: Alexander Gibson Lecturer, Winnipeg Orthopaedic Symposium, Winnipeg, Manitoba, October 1999. (1) Specialty training in orthopaedic surgery: Are we prepared for the future? (2) Total hip replacement for complications of trauma, (3) Total hip replacement for avascular necrosis, (4) Total hip replacement following femoral and pelvic osteotomy.

Waddell JP: Imperatives in Total Hip Arthroplasty IV: The Millennium Meeting, Aberdeen, Scotland, May 2000. (1) Total hip replacement following acetabular trauma, (2) The case for an uncemented straight stem cobalt chrome femoral component.

Waddell JP: Orthopaedic Trauma Association, Charlotte, North Carolina, October 1999. Chair: The role of prosthetic replacement in the management of displaced fractures of the femur neck.

Waddell JP: Japanese Orthopaedic Association, Kobe, Japan, April 2000. (1) Moderator: Tibial diaphyseal fracture, (2) Panelist: Open reduction, internal fixation of humeral diaphyseal fractures, (3) Management of femoral neck non-unions.

Waddell JP: Central European Orthopaedic Congress, Portoroz, Slovenia, June 2000. Chair: Fractures of the distal radius.

Waddell JP: Surgical Strategies in Hip and Knee Reconstruction, Toronto, Ontario, June 2000. (1) Moderator: Hip case review sessions, (2) Lessons learned: International Kinemax study.

Waddell JP: Canadian Orthopaedic Association, Edmonton, Alberta, June 2000. (1) Ian Macnab memorial lecture, (2) Instructional course lecture: Alternatives to and in total knee arthroplasty.

Waddell JP: American Academy of Orthopaedic Surgeons, Orlando, Florida, March 2000. (1) Instructional course lecture: Diaphyseal humeral fractures: Treatment options, (2) Instructional course lecture: Periprosthetic hip and knee replacement fractures.

Waddell JP: Canadian Orthopaedic Association, St. John's, Newfoundland, July 1999. (1) Instructional course lecture: The economics of total hip arthroplasty in Canada: Managing hospital costs, (2) Moderator: Hip arthroplasty, (3) Symposium: Current controversies of intramedullary nailing of long bone fractures: Tibia and humerus management of floating knee injuries.

Waddell JP: Hip '99, Toulouse, France, September 1999. Moderator: Fractures of the proximal end of the femur in elderly patients.

Waddell JP: Challenges and Complications in Hip Arthroplasty, Madrid, Spain, June 2000. (1) Revision total hip arthroplasty: Overview, (2) Session chair, (3) Straight stems: Design rationale and results.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A multicentre prospective randomized clinical trial of reamed versus unreamed nails for femoral shaft fractures. *Powell JN, McKee MD, Schemitsch EH: AO-Stiftung/ASIF Foundation (\$10,000 1996 - 1999).*

A multicentre randomized clinical trial comparing osteogenic protein versus placebo in the treatment of open tibial fractures (pending HPB approval of osteogenic protein). *McKee MD*, Schemitsch EH, Waddell JP, Leighton R, MacCormack R, Blachut P, O'Brien P, Meek R, Buckley R, Powell JN, Kreder H, Stephens D: Stryker Biotech (\$93,120 1997 - 1999).

A randomized trial comparing total elbow arthroplasty to open reduction, internal fixation for displaced intra-articular distal humeral fractures in the elderly. *McKee MD*, Schemitsch EH, Kreder HJ: Zimmer Canada Incorporated (\$20,000 2000 - 2002).

A randomized trial of femoral fracture nailing comparing manual to fracture table traction. *McKee MD*, Schemitsch EH, Kreder HJ, Stephen DJG: Canadian Orthopaedic Foundation (\$4,000 1997 - 1999).

A randomized trial of internal fixation versus arthroplasty for displaced distal humeral fractures. *McKee MD*, Schemitsch EH: Zimmer Canada Incorporated (\$20,000 2000).

A randomized trial of ORIF versus ring fixator for severe proximal tibial fractures. *McKee MD*, Schemitsch EH, Pirani S: Simon Fraser Orthopaedic Fund (\$1,350 1998 - 1999).

A treatment study of the OP-1 device on long bone nonunions. *McKee MD*, Schemitsch EH: Stryker Biotech (\$48,552 1997 - 1999).

An assessment of osteoporosis investigation and treatment in fragility fracture patients in the fracture clinics of three Ontario community hospitals. *Bogoch ER*, Hawker G, Mahomed N, Rideout R: Merck Frosst Canada Incorporated (\$68,258 1998 - 1999).

An investigation of osteoset-T for the management of osteomyelitis in long bones. *Schemitsch EH*, *McKee MD*: Wright Medical Incorporated (\$60,000 1999 - 2001).

An investigation of the effect of intramedullary nail design on blood flow and strength of union in a tibia fracture model. *Schemitsch EH*: St. Michael's Hospital Foundation (\$10,000 1999 - 2000).

An investigation of the influence of direct and indirect lung injury on pulmonary pathophysiology in trauma. *Schemitsch EH*, Richards RR, Byrick RJ: St. Michael's Hospital Foundation (\$50,000 1998 - 1999).

An investigation of the influence of fat embolism and hypotension on pulmonary pathophysiology. *Schemitsch EH, Richards RR*: Orthopaedic Trauma Association (\$90,000 1999 - 2000).

Assessment of biological reconstruction methods in repair of the devascularized canine tibia. *Schemitsch EH*: Canadian Orthopaedic Foundation (\$15,000 1999 - 2000).

Bone marrow inflammation in inflammatory arthritis: Effect of a bisphosphonate in two animal models. *Bogoch ER, Moran E, Buconjic T*: Arthritis Society (\$191,337 1998 - 2001).

Ceramic bearing surfaces in total hip arthroplasty: A blinded study comparing ceramic-ceramic to ceramic-polyethylene. *Waddell JP, Schemitsch EH*: Wright Medical Incorporated (\$20,000 1998 - 2000).

Development of a prospective orthopaedic trauma database at St. Michael's Hospital. *McKee M, Schemitsch EH, Waddell JP, Richards RR, McBroom RJ*: Smith and Nephew Richards (\$40,000 1997 - 1999).

Development of a trauma registry. *Schemitsch EH, McKee MD, Waddell JP*: Smith and Nephew Richards. (\$40,000 1997 - 2000).

Effect of femoral canal preparation and HA coating on bone ingrowth in the femoral components of total hip arthroplasty. *Waddell JP, Schemitsch EH*: Smith and Nephew Richards (\$20,000 1998 - 2000).

Evaluating the outcome of knee replacement using individual preferences. *Wright JG, Hawker G, Schemitsch EH, Young N*: Medical Research Council of Canada (\$102,292 1997 - 1999).

Humeral shaft fractures: What are we doing and is it working? *Kreder HJ, McKee MD*: Institute for Clinical Evaluative Sciences (\$10,000 2000 - 2002).

Identification of fragility fracture patients in two fracture clinics of St. Michael's Hospital. *Bogoch ER, Josse R, Murray T*: Merck Frosst Canada Incorporated (\$50,000 1999 - 2000).

Immunoassays and imaging for the analysis of synthesis and degradation of cartilage in vitro and in vivo. *Poole AR, Bogoch E, Cruz T, Fitzcharles MA, Hartmann N, Keystone S, Lavery S, Menard H, Mort J, St-Pierre Y*: Canadian Arthritis Network (\$14,100,000 1999 - 2003).

Longitudinal measurement of bone mineral density around total hip replacement: Effect of hydroxyapatite coating. *Waddell JP, Schemitsch EH*: Howmedica Incorporated (\$50,000 1998 - 2000).

Neuflex clinical trial. *Bogoch ER*: DePuy Canada (\$60,000 1999 - 2001).

New quantitative imaging techniques for arthritis. *Foster S, Bogoch E, Buschmann M, Kirkley A, Holdsworth D, Poole AR, Webber C*: Canadian Arthritis Network (\$14,100,000 1999 - 2003).

Osteoclastic resorption in inflammatory arthritis: Mechanisms and pharmacological regulation. *Dixon J, Bogoch E, de Brum-Fernandes A, Heersche J, Sims S*: Canadian Arthritis Network (\$14,100,000 1998 - 2003).

Predictors of outcome following revision total hip arthroplasty. *Davis A, Gross AE, Agnidis Z, Badley E, Hutchinson C, Kreder H, Saleh K, Schemitsch EH, Szalai JP*: Arthritis Society (\$64,783 1998 - 2001).

Randomized trial of reamed versus non-reamed nails in tibial fractures. *Bhandari M, Guyatt G, Swiontkowski MF, Schemitsch EH*: Orthopaedic Trauma Association (\$30,000 1999 - 2001).

Randomized trial of reamed versus non-reamed nails in tibial fractures. *Guyatt G, Bhandari M, Walter S, Leighton R, Kreder H, Schemitsch EH, O'Brien B*: Medical Research Council of Canada (\$90,988 2000).

HONOURS RECEIVED

Schemitsch EH: George Armstrong-Peters Prize, Department of Surgery, University of Toronto, May 2000.

DIVISION OF PLASTIC SURGERY

Dr. L.G. Douglas - Assistant Professor
Dr. J.L. Mahoney - Associate Professor (*Division Head*)
Dr. W.J. Peters - Professor

PUBLICATIONS

Nachala P, Mahoney JL, Farkas L: Comparison of techniques used to locate the malar eminence. *Canadian Journal of Plastic Surgery*: February 2000: 8(1): pp 21-24.

Peters WJ: A prospective analysis of patients undergoing silicone breast implant explantation. *Plastic and Reconstructive Surgery*: June 2000: 105: pp 2538-2539.

Peters WJ: Book review: *Making the body beautiful: A cultural history of aesthetic surgery*. *Canadian Medical Association Journal*: December 1999: 161(2): pp 1565-1566.

Peters WJ: Chemical peeling with phenol and trichloroacetic acid. In: *Management of Facial Lines and Wrinkles* (Blitzer A, Boyd JB, eds). Lippincott-Williams and Wilkins, Philadelphia: 2000: pp 25-43.

Peters WJ: Current status of breast implant survival properties and management of the woman with silicone-gel breast implants. *Canadian Journal of Plastic Surgery*: April 2000: 8(2): pp 54-67.

Peters WJ: The hair color-highlighting burn: A unique burn injury. *Journal of Burn Care and Rehabilitation*: March 2000: 211: pp 96-98.

Peters WJ, Smith DC, Lugowski SJ: Silicon assays in women with and without silicone-gel breast implants: A review. *Annals of Plastic Surgery*: September 1999: 43: pp 324-330.

Peters WJ, Smith DC, Lugowski SJ: Simplast inflatable breast implants: Evaluation after 23 years in situ. *Plastic and Reconstructive Surgery*: October 1999: 104: pp 1539-1544.

Peters WJ, Smith DC, Lugowski SJ: The life span of silicone-gel breast implants and a comparison of mammography, ultrasonography, and magnetic resonance imaging in detecting implant rupture: A meta-analysis. *Annals of Plastic Surgery*: July 1999; 43: pp 97-99.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Mahoney JL: Ontario Society of Chiropractors, Toronto, Ontario, February 2000. Trauma in the foot.

Mahoney JL: Wake Forest University School of Medicine, Hilton Head, South Carolina, June 2000. Vacuum closure and management of wounds.

Peters WJ: World Biomaterials Congress, Kamuela, Hawaii, May 2000. (1) Co-chair: Plastic and reconstructive surgery section, (2) Moderator and panel member: Session on silicone breast implants, (3) A comparison of the calcification properties of silicone-gel and saline-filled breast implants: A 20-year analysis.

Peters WJ: Canadian Society of Aesthetic (Cosmetic) Surgery, Calgary, Alberta, October 1999. Calcification and autoinflation: Two unusual complications of saline breast implants.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A cohort study of cancer, autoimmune disorders and other health outcomes in cosmetic breast implant patients. *Halowaty EJ*, Baines CJ, Keystone EC, Peters WJ: Health Canada (\$1,010,000 1995 - 2000).

Further studies on silicone-gel filled breast implants. *Smith DC*, Boynton E, Fornasier V, Lugowski S, Peters WJ, Semple JL: Dow Corning Corporation (\$256,000 1999 - 2002).

Studies on silicone-gel filled breast implants. *Smith DC*, Baines C, Boynton E, Fornasier V, Lugowski S, Peters WJ, Semple JL, Templeton D, Thompson M: Dow Corning Corporation (\$630,000 1996 - 1999).

The influence of augmentation mammoplasty on lactation. *Peters WJ, Halowaty EJ, Maclean H, Ashbury F, Darlington G*: Plastic Surgery Educational Foundation/American Society of Plastic and Reconstructive Surgery (\$120,000 1998 - 2000).

The use of ultrasound in the diagnosis of trigger finger. *Mahoney JL, Beaton D*: Workplace Safety and Insurance Board (\$20,300 1999 - 2000).

HONOURS RECEIVED

Mahoney JL: Best Clinical Practice Poster, Canadian Association of Wound Care, November 1999.

Mahoney JL: Best Research Initiatives Poster, Canadian Association of Wound Care, November 1999.

Peters WJ: Mentor Prize, Canadian Society of Plastic Surgeons, June 2000.

DIVISION OF UROLOGY

Dr. R.J.D. Honey - Assistant Professor (*Division Head*)

Dr. A.G. Keresteci - Associate Professor

Dr. R.J. Stewart - Assistant Professor

PUBLICATIONS

Geddes CC, Cardella CJ, Cattran DC, Fenton S, Bartosik L, Robinette M, Cattral M, Stewart RJ, Cole EH: The importance of functional renal mass in long-term allograft survival: A single centre multivariate analysis: June 2000: 22: pp 138-140.

Honey RJ, Luymes J, Weir M, Kodama R, Tariq N: Mechanical percussion-inversion (MPI) for retained lower pole fragments after ESWL. *Urology*: January 2000: 55: pp 204-206.

Honey RJ, Pace K: The current management of ureteral stones. Canadian Journal of Continuing Medical Education: May 2000: 12(5): pp 89.

Honey RJ, Weir MJ, Incze P: Removal of calyceal stones, inaccessible with the Holmium:YAG laser fiber, during flexible endoscopy. Urolithiasis 2000: January 2000: 2: pp 666.

Honey RJ, Weir MJ, Pace KT, Tariq N: Low success rate of subsequent shock wave lithotripsy for ureteral stones after failed initial treatment. Urolithiasis 2000: January 2000: 2: pp 762.

Logarakis N, Jewett MAS, Luymes J, Honey RJ: Variation in clinical outcome following extra-corporeal shock wave lithotripsy. Journal of Urology: January 2000: 163(3): pp 721-726.

Pavlovich CP, Kraling BM, Stewart RJ, Chen X, Bochner BH, Luster AD, Poppas DP, O'Donnell MA: Intravesical BCG alters the angiogenic potential of human urine by inducing TNF-alpha and IP-10. Journal of Urology: June 2000: 163(4): pp 682-683.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Calcium sensing receptor gene in kidney stone disease. *Logan A, Honey J, Cole D, Pierratos A:* Kidney Foundation of Canada (\$80,000 1998 - 2000).

Laparoscopic donor nephrectomy. *Pace K, Honey RJ:* American Urological Association (\$14,000 1999 - 2001).

Lithotripsy stone database development. *Honey RJ:* St. Michael's Hospital Foundation (\$8,800 2000 - 2001).

Open partial nephrectomy in a porcine model using the holmium and neodymium-yag laser. *Honey J, Incze P:* AMT Incorporated (\$15,000 1998 - 2001).

Role of thiazide receptor gene in primary hypertension. *Logan A, Honey J, Siminovitch K, Pierratos A, Bull S:* Heart and Stroke Foundation (\$129,301 1998 - 2000).

DIVISION OF VASCULAR SURGERY

Dr. F.M. Ameli - Associate Professor (*Division Head*)

Dr. A.G. Lossing - Associate Professor

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Ameli FM: International Symposium on Venous Disease, Cavan, Ireland, November 1999. Patient satisfaction with same-day minimally-invasive varicose vein surgery.

Ameli FM: Canadian Society for Vascular Surgery, Quebec City, Quebec, September 1999. Patient satisfaction with same-day minimally-invasive varicose veins surgery.

Ameli FM: Association of International Vascular Surgeons, Zermat, Switzerland, March 2000. Chair: Case reports.

Ameli FM: Canadian Society of Vascular Technology, Etobicoke, Ontario, April 2000. Venous disease: Treatment, surgical intervention.

**SUNNYBROOK AND WOMEN'S COLLEGE
HEALTH SCIENCES CENTRE**

Surgeon-in-Chief – Dr. B. Goldman
Surgeon-in-Chief (Orthopaedic and Arthritic Campus) –
Dr. J. Cameron
Surgeon-in-Chief (Women's College Campus) - Dr. H.L.A. Lickley

HEADS OF DIVISIONS

Dr. S.E. Fremes – Cardiac Surgery
Dr. S. Hanna – General Surgery (Sunnybrook Campus)
Dr. T. Ross – General Surgery (Women's College Campus)
Dr. M. Schwartz – Neurosurgery
Dr. J. Cameron – Orthopaedic Surgery
(Orthopaedic and Arthritic Campus)
Dr. T. Axelrod – Orthopaedic Surgery (Sunnybrook Campus)
Dr. J. Semple – Plastic Surgery
Dr. S. Herschorn - Urology (July 1, 1999 – December 31, 1999)
Dr. L. Klotz - Urology (January 1, 2000 – June 30, 2000)
Dr. R. Maggisano – Vascular Surgery

Introduction

During the past academic year, the Department of Surgery at the Sunnybrook and Women's College Health Sciences Centre has faced several challenges relating to the merger of the three legacy institutions. There is now functional integration of all surgical divisions across the separate sites. The Surgical Services Task Force has dealt with co-ordination between campuses with movement of patients, procedures, and surgeons to optimize utilization and efficiency during the transition period. Facility planning for additional new operating rooms in the future expanded Sunnybrook campus has been assisted by the long range planning and development document elaborated by the Department and the surgical divisions. Budget reductions and resource limitations in the face of increasing clinical demand and acuity have impacted on service. It is anticipated that recommendations of an external critical care review and consolidation of the departmental mission will contribute to improved patient flow and realization of our clinical and academic goals.

Honours, Awards and Appointments

Drs. Fred Brenneman, Paul Marks and Stewart Wright were each promoted to the rank of Assistant Professor.

Dr. Bernard Goldman was presented with the Department of Surgery E.B. Tovee Award for Postgraduate Teaching. Drs. Sender Herschorn, Ron Kodama, and George Christakis each received the Dr. Marvin Tile Distinguished Service Award of the Department of Surgery. Dr. Mitchell Brown received the Department of Surgery Distinguished Educator Award for Outstanding Contribution of Surgical Skills Education. Dr. Joel Fish was given the 1999 PAIRO Excellence in Clinical Teaching Award for the University of Toronto. Dr. Laurence Klotz was elected Chair of the Global Genitourinary Group, a consortium of GU Oncology Clinical Trial Groups from around the world. Jenny Choi, working with Drs. Rob Cartotto and Joel Fish, won the Moyer Award for best student presentation at the 32nd annual American Burn Association meeting. Dr. Manuel Gomez was awarded the best presentation award from the Canadian Special Interest Group at the same meeting. Dr. Stephen Femes was appointed Senior Adjunct Scientist at the Institute for Clinical Evaluative Sciences and was appointed Head, Division of Cardiac Surgery in January 2000, after an external search. Dr. Gopal Bhatnagar was appointed Head of the new Division of Cardiac Surgery at the Trillium Health Centre scheduled to open in November. Dr. Sender Herschorn was elected as Deputy Canadian Delegate to the Societe Internationale d'Urologie. Dr. George Christakis was President of the Medical Dental Staff at the Sunnybrook and Women's College Health Sciences Centre and subsequently President of SHUTC. Dr. Joseph Schatzker was University of Cordoba Extraordinary Visiting Member of Faculty and President of the AO Foundation, Davos, Switzerland. Dr. Joel Finkelstein received the International Society for the Study of Lumbar Spine Fellowship and the Leranbaum Award for Short Term Specialized Training in Cancer Care. Dr. Ted Ross was given the Directors Award of the Peters-Boyd Academy. Dr. Laurence Klotz was appointed Head of the Division of Urology in January 2000. Dr. Labib Abouzahr was appointed to the surgical staff in cardiac surgery at McMaster University.

The A.W. Harrison Resident Awards for Undergraduate Teaching were presented to Dr. Owen Prowse (plastics), Dr. Dennis Dipasquale (plastics), and Dr. Edward Matsumoto (urology). Dr. Sender Herschorn has been appointed Director of Continuing Professional Development

for the University Department of Surgery. An office for International Health for the University Department of Surgery has been sited at the Sunnybrook and Women's College Health Sciences Centre, and Dr. Massey Beveridge was appointed the Surgical Co-ordinator. The Orthopaedic and Arthritic Foundation has established the Marvin Tile Professorship in Orthopaedic Surgery. The first Visiting Professor was Dr. Dana Mears, who spoke on the role of primary arthroplasty in acetabular fractures. Dr. Marvin Tile continues in his important role as Chair of the Sunnybrook Foundation. Dr. Fred Brenneman was appointed Vice-President of the Trauma Program.

SUNNYBROOK CAMPUS

Education

For the 1999-2000 academic year, Sunnybrook campus staff surgeons provided 208 hours of pre-clerkship teaching. Sunnybrook housestaff and fellows provided 38 hours of pre-clerkship teaching, and Women's College campus staff surgeons provided 120 hours of pre-clerkship teaching.

At the Sunnybrook campus, there were four staff who were PBL tutors for Year 2 Foundations of Medical Practice and two staff who were PBL tutors for Year 1 Brain and Behavior. Sunnybrook campus surgeons did 186 hours of Year 3 (phase I) clerkship seminar teaching and 75 hours of Year 4 (phase II) clerkship seminar teaching.

Division of Cardiac Surgery

Cardiac surgery is one of the key divisions of the Heart and Circulation Program, now known as the Schulich Heart Centre at the Sunnybrook and Women's College Health Sciences Centre. The Division of Cardiac Surgery at the Sunnybrook campus performed a volume of approximately 1200 open-heart cases in 1999-2000. The key theme of the past year has been transitions. Dr. Bernard Goldman has stepped down as Division Head after 10 years. Dr. Stephen Fremes, who started at Sunnybrook with Dr. Goldman and was serving as the Acting Head, was selected as the new Division Head. Dr. Gopal Bhatnagar, who joined the Division in 1996, has been selected as the Division Head of the new open-heart unit sited at the Trillium Health Centre. Dr. Bhatnagar transferred his educational portfolio, which he had managed extremely well, to Dr. Charles Cutrara (undergraduate

education within Sunnybrook and postgraduate education for the cardiac surgery residents at the university level). Dr. George Christakis has served as Head of SHUTC during the tri-hospital merger and will continue in this position.

The Division has continued to be very active in clinical research. Drs. Stephen Fremes and George Christakis have had a leadership role in peer-reviewed, multicentre, randomized clinical trials, with Sunnybrook campus serving as the co-ordinating centre. The funded research has complemented the clinical areas of excellence, namely radial artery conduits for coronary surgery (supported by the Medical Research Council of Canada), myocardial protection (supported by the Medical Research Council of Canada), and alternative prostheses for aortic valve replacement (supported by the Heart and Stroke Foundation of Ontario). Dr. Stephen Fremes now has an adjunct appointment at the Institute for Clinical Evaluative Sciences to help facilitate cardiac surgery outcomes research. Dr. Gopal Bhatnagar is the surgical representative of an industry-sponsored angiogenesis gene therapy trial for patients with end-stage ischemic heart disease.

Division of General Surgery

General surgery at the Sunnybrook campus has continued its focus on trauma and oncology. Drs. Sherif Hanna and Hensley Miller have participated actively in the Trauma Program directed by Dr. Fred Brenneman. The use of ultrasound in the diagnosis of abdominal trauma has been supported by grants and has been reported upon. Specific interests in oncology are hepatobiliary, breast and GI cancers. Dr. Sherif Hanna was instrumental in opening a Liver Tumor Clinic at the Toronto Sunnybrook Regional Cancer Centre. He continues his clinical work in liver cryosurgery.

Dr. Andrew Smith joined the staff July 1st, 1999 and has contributed significantly to teaching programs and to the area of GI cancers, especially colorectal cancers. He has established a database for colorectal cancer and is active in the Toronto Sunnybrook Regional Cancer Centre.

The Surgical Flow Through Unit (level II care) has been successful over the past year in facilitating the care of critically ill general surgery patients, especially those with cancer.

Functional planning for the new Henrietta Banting Breast Centre at the Sunnybrook campus is well under way with the involvement of Drs. Lavina Lickley, Claire Holloway and Glen Taylor. In May 2000, surgeons at the Women's College campus and the Sunnybrook campus agreed to appoint Dr. Sherif Hanna as the joint Chief of the two Divisions in order to facilitate amalgamation and recruitment.

Division of Neurosurgery

The Division of Neurosurgery has been active in a number of subspecialty areas. Dr. Mahmood Fazl has pursued his special interest in spinal surgery in addition to maintaining a busy clinical practice. The acquisition of a new image-guidance system for spinal use will enhance our divisional activity in that domain.

Dr. Mahmood Fazl has been a teacher in the problem-based learning curriculum. Dr. David Rowed has continued to be active in skull based surgery and aspects of intra-operative monitoring. In collaboration with colleagues in otolaryngology, he continues to treat patients with acoustic neuromas from across Canada. He too is a problem-based learning teacher. Dr. Rajiv Midha has peer-reviewed funding for his laboratory research in repair and regeneration of peripheral nerves and, in addition has secured a very generous bequest from the Crothers family. He attracts a wide referral of clinical cases in this subspecialty. Dr. Michael Schwartz has continued his work in radiosurgery and has established collaboration with medical imaging colleagues in the evaluation of brain arteriovenous malformations using an innovative method of MR angiography. He has continued to study the outcome of patients after traumatic brain injury.

David Houlden, Ph.D., has attracted peer-reviewed funding and graduate students for clinical research into aspects of neurophysiological monitoring for operative procedures and for the prediction of outcome after spinal cord and brain injury. He continues to provide neurophysiological monitoring for several surgical services.

Division of Orthopaedic Surgery

The two Divisions of Orthopaedic Surgery continue to work to develop the strategic plans and directions of the new combined Division. All parties involved are enthusiastic about the clinical, academic, teaching and research possibilities of this amalgamation.

Dr. Cari Whyne, Biomechanical Engineer, joined the Division in January 2000 and has been busy upgrading the Biomechanics Laboratory at the Sunnybrook campus.

Dr. Marvin Tile will retire from active surgical practice in July 2000, but will continue on as a non-operative consultant within our combined Division. Dr. Tile was Co-Chair of the 10th Toronto Pelvic and Acetabular Fracture Course.

Dr. Joseph Schatzker completes his second year term as Chair of the AO Foundation. He has achieved the status of Professor Emeritus at the University of Toronto, and continues on in active clinical and surgical practice.

Dr. Terry Axelrod was the Co-Chair of the Biannual AO Hand Course in Davos, Switzerland. He has accepted the role as Vice-Chair of the Royal College of Physicians and Surgeons of Canada Examination Board in Orthopaedic Surgery.

Dr. David Stephen was invited faculty to the annual Winnipeg Orthopaedic Symposium. He served as the Co-Chair to the Biannual University of Toronto Foot and Ankle Symposium and the 10th Toronto Pelvic and Acetabular Fracture Course. He has been successful in achieving funding for clinical and biomechanics research.

Dr. Hans Kreder continues to have success in supervising a multitude of clinical epidemiology studies. He was Co-Chair of the 10th Toronto Pelvic and Acetabular Fracture Course. He continues as a member of the American Association of Orthopaedic Surgeons Outcomes Committee and has been asked to join the OTA Coding and Classification Committee.

Dr. Joel Finkelstein has successfully initiated the spine trauma database with external funding support. He has developed a multidisciplinary clinic with the Division of Radiation Oncology for the management of spinal metastases with peer reviewed funding for prospective studies. He has been successful in achieving funding for biomechanical studies on the cervical and lumbar spine.

Division of Plastic Surgery

In 1999-2000, the Division of Plastic Surgery at the Sunnybrook and Women's College Health Sciences Centre has continued to expand and

develop its programs. The Craniofacial Program is now the busiest adult craniofacial program in Canada. Dr. Oleh Antonyshyn (Director of Craniofacial Programs) has continued his research in 3-dimensional facial analysis with five publications and is a recipient of a \$59,000 grant from Stryker Canada.

Dr. Jeff Fialkov has received a Leibinger educational grant for \$50,000 to establish the Maxillofacial Skills Laboratory for the teaching of residents and fellows. Dr. Fialkov has received two additional grants, Physicians Services Incorporated Foundation and ASERF, for tissue engineering and facial anatomy.

Along with Dr. Antonyshyn and Dr. Fialkov, Dr. Paul Binhammer participated in a \$138,000 AO Foundation grant for an international multicentre outcome study on zygoma fractures. Dr. Binhammer is also a co-investigator in an outcomes study on carpal tunnel syndrome funded by Workplace Safety and Insurance Board.

The Ross Tilley Burn Unit is now the largest burn unit in the country with 186 admissions in 1999. Dr. Joel Fish was a co-investigator on a Medical Research Council of Canada grant establishing a national burn care network.

Dr. Rob Cartotto has had an excellent first year in the Burn Unit and has been heavily involved in the teaching program.

Dr. Mitch Brown continues his research efforts in research in surgical skills with a two-year Physicians Services Incorporated Foundation grant for \$82,000. Dr. Brown also won the Department of Surgery, Distinguished Educator Award for Outstanding Contribution to Surgical Skills Education.

Dr. John Semple has headed the Tissue Engineering Initiative with the development of two multi-million dollar infrastructure proposals at the provincial and federal levels to fund the development of a tissue engineering platform at the Sunnybrook and Women's College Health Sciences Centre. He was also a platform leader "Soft Tissue Applications" at the recent Tissue Engineering Industry Day at the University of Toronto. Dr. Semple was a visiting professor at the University of New Brunswick and guest speaker at the Atlantic Breast Health Conference in St. John, New Brunswick.

Surgical Oncology

Surgical oncology is one of the four major programs within the Toronto Sunnybrook Regional Cancer Centre and the Sunnybrook and Women's College Health Sciences Centre. The program is organized along site-based lines, with representation from all divisions of surgery as well as otolaryngology and obstetrics and gynecology.

Dr. Ralph Gilbert (ENT) is the Director of Surgical Oncology and Dr. Carol Sawka is Medical Director of the Cancer Program and Chief Executive Officer of the Toronto Sunnybrook Regional Cancer Centre; both work closely with the Department of Surgery.

Involvement of the surgeons at the Sunnybrook campus includes: the breast site group (Dr. Glen Taylor and Dr. Hensley Miller); the GI site group (Dr. Sherif Hanna and Dr. Andrew Smith); the uro-oncology site group (Dr. Laurie Klotz and Dr. Neil Fleshner); the skin site group (Dr. John Semple, Dr. Oleh Antonyshyn and Dr. Jeff Fialkov); the CNS site group (Dr. Michael Schwartz) and the melanoma site group (Dr. John Semple and Dr. Jane Salter).

At the Women's College campus, the breast group consists of Dr. Lavina Lickley, Dr. Claire Holloway and Dr. Ted Ross. The GI group consists of Dr. Ted Ross and the skin group and melanoma group, Dr. John Semple.

Trauma Program

The Trauma Program, under the leadership of Dr. Fred Brenneman, has experienced another increase in trauma patient volumes during this past year caring for over 900 seriously injured patients, most with an injury severity score greater than 15. The Trauma Program continues to be the largest trauma centre in Canada, due to clinical expertise. This high volume provides many opportunities for trauma research and educational experiences for residents and fellows. The Trauma Program is multidisciplinary and involves members of numerous departments beyond surgery including anesthesia and medicine, and all divisions within the Department of Surgery.

Division of Urology

Members of the Division of Urology continue to report their clinical and research efforts in a significant number of publications. Dr. Sender

Herschorn is the director of the annual University of Toronto Urology Update. He continues his research activities in urinary incontinence and male erectile dysfunction. Dr. Lesley Carr has joined the Division with interests in women's pelvic health.

Dr. Laurence Klotz is active in national and international cancer organizations, is the principle investigator in a National Cancer Institute of Canada trial in prostate cancer, is Chair of the Canadian Uro-oncology Group and the National Cancer Institute of Canada GU Group, and is the Editor-in-Chief of the Canadian Journal of Urology. Dr. Neil Fleshner has maintained peer-reviewed funded research endeavours in prostate cancer and recently became principle investigator for an international trial of micronutrients in prevention of prostate cancer. He and Dr. Klotz are active in the uro-oncology site at the Toronto Sunnybrook Regional Cancer Centre and are working with the Foundation to develop a prostate centre. Dr. Ron Kodama is Program Director for the University Urology Program, and continues his active role in education as Chief Examiner for the MCCQE Part II, and as Co-ordinator of MOCOMP for the Canadian Urological Association. Dr. Lesley Carr has assumed responsibilities for MOCERT within the Department of Surgery at Sunnybrook.

ORTHOPAEDIC AND ARTHRITIC CAMPUS

Significant teaching activities have continued with emphasis on the Clinical Fellowship Program, focussed elective experience for orthopaedic residents, and orthopaedic electives for family practice residents. Continuing education has also been provided to practicing orthopaedic surgeons from Canada and abroad, in advanced orthopaedic surgical techniques through the Arthroscopy Learning Centre and the Spine Learning Centre that were established in partnership with private enterprise. The Arthroscopy and Sports Medicine Fellowship was re-accredited by the Arthroscopy Association of North America.

There has been ongoing development of clinical research activities through participation in multicentre studies, in collaboration with Toronto colleagues, on the outcomes of joint replacement surgery. There have also been expanded private partnerships in the conduct of controlled clinical trials related to pharmaceutical and technical advancements.

The combined orthopaedic unit from the Orthopaedic and Arthritic campus and the Sunnybrook campus participated in the development of a strategic plan for the Orthopaedic and Arthritic Institute. The Institute's mission is to be the international leader in musculoskeletal care, first choice for patients, benchmarked by researchers and renowned among educators. It will focus on core areas of excellence in joint replacement, spine care and osteoarthritis.

The Orthopaedic and Arthritic Foundation established the Dr. Marvin Tile Visiting Professorship in Orthopaedic Surgery and a Chair in orthopaedic epidemiology research is in development.

WOMEN'S COLLEGE CAMPUS

Clinical services, staffing and teaching in the Department of Surgery at the Women's College campus have remained stable during the 1999-2000 year.

In the Division of Urology, Dr. Lesley Carr moved her main office to the Sunnybrook campus. She does, however, maintain an office at Women's College and provides clinical services to this campus.

The surgeons continued their teaching activities, contributing to the training of general and plastic surgery residents, and participating in undergraduate teaching.

They taught in the Foundations of Medical Practice (PBL), the Art and Science of Clinical Medicine (ASCM), and assisted with Year 3 oral exams and Year 4 OSCE's. The general surgeons also ran bedside clinics for Year 3 students from the University Health Network and Women's College. The general and plastic surgeons provided clinical experiences for Peters-Boyd Year 3 and Year 4 students, as well as a number of elective students. Dr. Ted Ross continues in his role as University of Toronto Surgical Clerkship Supervisor for Year 3 and Year 4.

Dr. Lavina Lickley and Dr. Claire Holloway continue to be involved in the NSABP STAR protocol study of tamoxifen and raloxifene for breast cancer prevention. Dr. Lickley is the principal investigator for this study for the Women's College campus of the Sunnybrook and Women's College Health Sciences Centre with satellite centres at the Toronto Sunnybrook Regional Cancer Centre, the North York General

Hospital and the Toronto General Hospital. Dr. Holloway is participating in a project involving novel radio pharmaceuticals for radio-guided surgery of intraductal carcinoma (DCIS), funded by the Canadian Breast Cancer Research Initiative. Dr. Holloway and Dr. Lickley have been working closely with researchers at the Toronto Sunnybrook Regional Cancer Centre and the Women's College campus to examine multiple aspects of DCIS, involving molecular biology to assess progression of disease to invasive cancer and new and exciting methods of imaging to determine extent of disease in the breast. Dr. Holloway is also involved in a metastatic breast cancer genome anatomy project. Dr. Lickley is a co-principal investigator with Dr. Maureen Trudeau and Dr. John Blondal, in a study of 10-year survivors of breast cancer.

During this transitional phase, we strive to provide the best possible service for our patients and an excellent learning experience for our medical students and residents.

ORTHOPAEDIC AND ARTHRITIC CAMPUS

DIVISION OF ORTHOPAEDIC SURGERY

Dr. H.U. Cameron - Associate Professor
Dr. J.C. Cameron - Assistant Professor (*Division Head*)
Dr. M.H.G. Ford - Lecturer
Dr. J.D. Gollish – Lecturer
Dr. H. Hall - Professor
Dr. R.M. Holtby - Assistant Professor
Dr. B.W. Malcolm - Assistant Professor
Dr. P.H. Marks – Assistant Professor
Dr. J.J. Murnaghan - Assistant Professor
Dr. C.S. Wright – Assistant Professor

PUBLICATIONS

Berg EE, Murnaghan JJ: Orthopaedic surgery: Diseases of the musculoskeletal system. In: *Essentials of Surgical Specialties*, Second Edition (Lawrence PF, Bell RM, Dayton MT, eds). Lippincott-Williams and Wilkins, Philadelphia: 2000: pp 298-355.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Cameron HU: Visiting Professor, Canadian Orthopaedic Association, St. John's, Newfoundland, July 1999. (1) Fixation options for primary hip arthroplasty, (2) Proximal femoral fixation for primary hip arthroplasty.

Murnaghan JJ: Canadian Orthopaedic Association, St. John's, Newfoundland, July 1999. Teaching orthopaedics "on the run", (2) Educators' forum: Evaluation issues during residency.

Murnaghan JJ: Association for Surgical Education, Toronto, Ontario, May 2000. Workshop: Research methodology.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Indications and results of a fixed axis fully constrained prosthesis. *Cameron HU: Orthopaedic and Arthritic Hospital (\$800 1995 - 1999).*

Knee fusion take down. *Cameron HU: Orthopaedic and Arthritic Hospital (\$800 1995 - 1999).*

Long-term follow-up of full constrained knee prosthesis. *Cameron HU: Orthopaedic and Arthritic Hospital (\$1,000 1995 - 1999).*

Long-term follow-up of the results of the international total hip. *Cameron HU: Orthopaedic and Arthritic Hospital (\$1,000 1995 - 1999).*

Long-term results of supracondylar femoral osteotomy. *Cameron HU: Orthopaedic and Arthritic Hospital (\$1,000 1995 - 1999).*

Open versus closed acromioplasty: A randomized controlled study. *Holtby R: Hospital Research Fund/Department of Surgery Academic Fund (\$24,000 1996 - 2000).*

Study of the influence of the Crowe rating on the outcome of total hip replacement in congenital hip dislocation. *Cameron HU: Orthopaedic and Arthritic Hospital (\$1,000 1995 - 1999).*

The gasket theory in joint replacement: Fact or fiction. *Cameron HU: Orthopaedic and Arthritic Hospital (\$1,000 1995 - 1999).*

Total knee replacement following patellectomy. *Cameron HU: Orthopaedic and Arthritic Hospital (\$1,000 1995 - 1999).*

Use of bioscrew in ACL reconstruction. *Holtby R: Lineate (\$10,080 1993 - 1999).*

SUNNYBROOK CAMPUS

DIVISION OF CARDIAC SURGERY

Dr. G. Bhatnagar - Lecturer
Dr. G.T. Christakis - Associate Professor
Dr. C. Cutrara - Lecturer
Dr. S.E. Fremes - Associate Professor (*Division Head*)
Dr. B.S. Goldman - Professor

PUBLICATIONS

Abrahamov D, Bhatnagar G, Goldman BS: When is surgery indicated? In: *Cardiac Surgery Secrets* (Soltoski P, Karamanoukian H, Salerno T, eds). Hanley and Belfus Incorporated, Philadelphia: 2000: pp 79-89.

Abrahamov D, Tamaris M, Guru V, Fremes SE, Christakis GT, Bhatnagar G, Sever J, Goldman BS: Clinical results of endarterectomy of the right and left anterior descending coronary arteries. *Journal of Cardiac Surgery*: October 1999: 14(1): pp 16-25.

Borger MA, Fremes SE, Weisel RD, Cohen G, Rao V, Lindsay TF, Naylor CD: Coronary bypass and carotid endarterectomy: Does a combined approach increase risk: A meta-analysis. *Annals of Thoracic Surgery*: August 1999: 68: pp 14-21.

Del Rizzo DF, Sever J, Christakis GT, Fremes SE, Goldman BS: Left ventricular remodelling following aortic valve replacement with the Toronto SPV valve. In: *Stentless Bioprostheses, Second Edition* (Huysman HA, David T, Westaby S, eds). Isis Medical Media, Oxford: 1999: pp 143-151.

Goldman B, Christakis G, David T, Rakowski H, Bach D, Ross D, Goldman S, Pepper J, Yacoub M, Verrier E, Petrusek M: Will stentless valves be durable: The Toronto Valve (TSPV) at 5-6 years. *Seminars in Thoracic and Cardiovascular Surgery*: October 1999: 11(4): pp 42-49.

Goldman BS, Schampaert E, Christakis GT, Sever J, Fremes SE:

Coronary stenosis following AVR with a stentless bioprosthesis: Complication or coincidence? In: *Stentless Bioprosthesis, Second Edition* (Huysman HA, David T, Westaby S, eds). Isis Medical Media, Oxford: 1999: pp 193-198.

Guru V, Fremes SE: Post-operative bleeding and coagulopathies. In: *Cardiac Surgery Secrets*. Hanley and Belfus Incorporated, Philadelphia: 2000: pp 213-221.

Rao V, Christakis GT, Sever J, Fremes SE, Bhatnagar G, Cohen G, Borger MA, Abouzar L, Goldman BS: A novel comparison of stentless versus stented valves in the small aortic root. *Journal of Thoracic and Cardiovascular Surgery*: August 1999: 117: pp 431-438.

Wong BI, McLean RF, Fremes SE, Deemar KA, Harrington EM, Christakis GT, Goldman BS: Aprotinin and tranexamic acid for high transfusion risk cardiac surgery. *Annals of Thoracic Surgery*: March 2000: 69: pp 808-816.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Christakis GT: MCP Hahnemann University School of Medicine, Philadelphia, Pennsylvania, November 1999. Stented valves or non-stented valves: Issues and choices.

Fremes SE: Ottawa Heart Institute, Ottawa, Ontario, December 1999. Radial artery study.

Goldman BS: International Society of Cardiothoracic Surgeons, Lisbon, Portugal, November 1999. (1) A perspective on minimally invasive valve surgery, (2) Worldwide experience with the Toronto stentless aortic valve.

Goldman BS: World Society of Cardiothoracic Surgeons, Lisbon, Portugal, November 1999. (1) A perspective on minimally invasive valve surgery, (2) Aortic root: Normal function and pathology, (3) Live surgery: Aortic valve replacement with Toronto SPV valve, (4) Mid-term results with Toronto SPV valve, (5) Wet lab hands on implantation experience with Toronto SPV valve (pig heart model).

Goldman BS: NASPE, Washington, D.C., May 2000. Case study workshop on complex pacemaker problems.

Goldman BS: Society of Thoracic Surgeons, Fort Lauderdale, Florida, January 2000. Is the radial artery superior to the saphenous vein graft in contemporary coronary bypass surgery: A case matched study.

Goldman BS: Trillium Health Centre, Mississauga, Ontario, December 1999. The development and organization of a cardiac surgery facility.

Goldman BS: Canadian Society of Interventional Cardiologists, Quebec City, Quebec, October 1999. The future of coronary revascularization: Tomorrow's promise, the debate: Will the catheter dominate?

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Angiogenesis trial of vascular endothelial growth factor (VEGF). *Bhatnagar G, Cohen EA:* Parke-Davis Incorporated (\$35,000 2000 - 2001).

Insulin cardioplegia for urgent coronary bypass surgery. *Christakis GT, Weisel RD, Naylor CD:* Medical Research Council of Canada (\$161,380 1999 - 2000).

Multicentre radial artery patency study. *Fremes SE, Cohen E, Naylor CD, Fradet G, Buller C, Able J, Carrera R, Gelfand E, Tymchak W, Menkis A, Almond D, Myers M, Errett L, Watson R, Yau T, Schwartz L, Rubens F, Higginson L, Carrier M, Cote G, Morin J, Doyle D, Gleeton O:* Medical Research Council of Canada (\$266,699 1998 - 1999).

HONOURS RECEIVED

Goldman BS: E.B. Tovee Award for Postgraduate Teaching, Department of Surgery, University of Toronto, May 2000.

DIVISION OF GENERAL SURGERY

Dr. F.D. Brenneman - Assistant Professor
Dr. S.S. Hanna - Assistant Professor (*Division Head*)
Dr. A.W. Harrison - Professor
Dr. H.A.B. Miller - Associate Professor
Dr. A. Smith – Assistant Professor
Dr. G.A. Taylor - Associate Professor

PUBLICATIONS**Boulanger B, McLellan B, Brenneman F, Kirkpatrick A:**

Prospective evidence of the superiority of a sonography-based algorithm in the assessment of blunt abdominal injury. *Journal of Trauma*: October 1999; 47(4): pp 632-637.

Brenneman FD, Wright JG, Kennedy ED, McLeod RS: Outcomes research in surgery. *World Journal of Surgery*: December 1999; 12: pp 1220-1223.

Hanna SS, Plausinis D, Yeung R: Strategies for minimizing blood loss and homologous blood transfusions during liver surgery. *Proceedings, Third World Congress of the International Hepato-Pancreato-Biliary Association* (Gonzalez EM, Pascual MH, eds). Jarpyo Editores, Madrid: 1999: pp 16-18.

Smith AJ, Borgen PI: Management of the contra-lateral breast in the patient with breast cancer. In: *Advanced Therapy of Breast Disease*. B.C. Decker Incorporated, Toronto: 2000: pp 222-235.

Smith AJ, Lewis JJ, Merchant N, Leung D, Woodruff J, Brennan MF: Surgical management of intra-abdominal desmoid tumors. *British Journal of Surgery*: May 2000; 87: pp 608-613.

Smith AJ, Nissan A, Lanouette NM, Shi W, Guillem JG, Wong WD, Cohen AM: Prokinetic effect of erythromycin after colorectal surgery: A randomized, placebo controlled, double blind study. *Diseases of the Colon and Rectum*: March 2000; 43: pp 333-337.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Brenneman FD: Royal College of Physicians and Surgeons of Canada/Trauma Association of Canada, Montreal, Quebec, September 1999. Abdominal ultrasound in trauma.

Brenneman FD: Paramedic Trauma Conference, Toronto, Ontario, October 1999. Penetrating trauma.

Brenneman FD: North Network, Parry Sound, Ontario, September 1999. Preparation for transfer of patients who have suffered major trauma.

Brenneman FD: Critical Care and Emergency Medicine Rounds, Peterborough Regional Health Centre, Peterborough, Ontario, November 1999. The use of ultrasound in trauma: The Sunnybrook experience.

Brenneman FD: Canadian Association of Medical Radiological Technologists Conference, June 2000. Trauma patient: Imaging during the initial assessment.

Brenneman FD: Trauma Rounds, Hotel-Dieu Grace Hospital, Windsor, Ontario, November 1999. Trauma ultrasound.

Brenneman FD: University of Western Ontario, London Health Sciences Centre, London, Ontario, January 2000. Workshop: Trauma ultrasound.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Changes in hemoglobin associated with colorectal cancer treatment.
Smith AJ, Law C: Janssen-Ortho Incorporated (\$25,000 1999 - 2000).

Colorectal cancer database. *Smith AJ*, Hanna SS: Upjohn-Pharmacia (\$60,000 1999 - 2001).

DIVISION OF NEUROSURGERY

Dr. M. Fazl - Assistant Professor

Dr. R. Midha - Assistant Professor

Dr. D.W. Rowed - Associate Professor

Dr. M.L. Schwartz – Professor (*Division Head*)

PUBLICATIONS

Best TJ, Mackinnon SE, Midha R, Hunter DA, Evans PJ:

Revascularization of peripheral nerve autografts and allografts. *Plastic Reconstructive Surgery*: July 1999; 104: pp 152-160.

Matsuyama T, Midha R, Mackinnon SE, Munro CA, Wong PY,

Ang LC: Long nerve allografts in sheep with cyclosporin A immunosuppression. *Journal of Reconstructive Microsurgery*: April 2000; 16(3): pp 219-225.

Midha R: Surgical management of peripheral nerve injuries:

Indications and techniques. In: *Advances in Clinical Neurosciences* (Sinha KK, ed). Association of Neuroscientists of Eastern India, India: 1999: pp 339-360.

Midha R, Mackay M: Harvesting techniques of sural and other

cutaneous nerves for cable graft repair. *Neurosurgical Operative Atlas*: January 2000; 9: pp 241-247.

Perry SD, McLellan B, McIlroy WE, Maki BE, Schwartz ML,

Fernie GR: The efficacy of head immobilization techniques during simulated vehicle motion. *Spine*: September 1999; 24(17): pp 1839-1844.

Prasad VS, Schwartz A, Bhutani R, Sharkey PW, Schwartz ML:

Characteristics of injuries to the cervical spine and spinal cord in polytrauma patient population: Experience from a regional trauma unit. *Spinal Cord*: August 1999; 37(8): pp 560-568.

Rowed DW, Nedzelski JM, Chen JM: Hearing preservation in

removal of intracanalicular acoustic neuromas by the retro sigmoid approach. In: *Acoustic Neurinoma and Other CPA Tumors* (Sanna M, Taibah A, Russo A, Mancini F, eds). Manduzzi Editore, Bologna: 2000: pp 601-606.

Stanisz GJ, Munro CA, Midha R, Henkelman RM: NMR properties of rat sciatic nerve following trauma. Proceedings, International Society of Magnetic Resonance In Medicine, Denver: 2000: pp 2152.

Stuss DT, Binns MA, Carruth FG, Levine BL, Brandys CE, Moulton RJ, Snow WG, Schwartz ML: Prediction of recovery of continuous memory after traumatic brain injury. *Neurology*: March 2000: 54: pp 1337-1344.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Fazl M: International Association for the Study of Pain, Vienna, Austria, August 1999. Spinal cord mapping with evoked responses for accurate localization of the dorsal root entry zone.

Midha R: University of Calgary, Calgary, Alberta, March 2000. Contemporary management of brachial plexus injuries: Biology, pathology and management of nerve injuries.

Midha R: Uniformed Services University of the Health Sciences, Bethesda, Maryland, June 2000. (1) Principles of nerve regeneration and repair, (2) Hands on cadaver dissection: Peripheral nerve.

Schwartz ML: Banff Millennium Stroke Conference, University of Calgary, Banff, Alberta, January 2000. AVM: Radiosurgery.

Schwartz ML: Congres de la Societe de Neurochirurgie de Langue Francaise, Reims, France, June 2000. (1) Radiochirurgie des malformations arterio-veineuse (MAV), (2) Radiochirurgie stereotaxique pour neurinomes de l'acoustique.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Delivery of therapeutic agents via a novel synthetic graft to augment axonal regeneration. *Midha R, Schoichet M, Tator CH:* Ontario Neurotrauma Foundation (\$120,000 1999 - 2001).

Fibroblast growth factor (FGF) enhanced tubes for repair of peripheral nerve injuries. *Midha R:* Dean's Fund (\$9,811 1997 - 1999).

Host and donor Schwann cells in nerve allografts. *Midha R*:
Connaught Foundation (\$26,520 1997 - 1999).

Lymphatic drainage of the central nervous system: Relevance to
pediatric hydrocephalus. *Johnston M, Midha R, Fleshner MF*: Medical
Research Council of Canada (\$482,234 1999 - 2004).

Sensory and motor axons in long peripheral nerve allografts under
temporary immunosuppression. *Midha R, Ang LC*: Physicians
Services Incorporated Foundation (\$46,500 1998 - 1999).

DIVISION OF ORTHOPAEDIC SURGERY

Dr. T.S. Axelrod - Associate Professor (*Division Head*)

Dr. J.A. Finkelstein - Assistant Professor

Dr. G.A. Hunter - Professor

Dr. H.J. Kreder - Assistant Professor

Dr. J. Schatzker - Professor

Dr. D.G.S. Stephen - Assistant Professor

Dr. M. Tile - Professor

PUBLICATIONS

Anderson L, Chow E, Finkelstein JA: Prospective assessment of
symptom palliation for patients attending a rapid response radiotherapy
program and bone metastasis clinic. *Canadian Oncology Nurses
Journal*: September 1999: 9(2): pp 103.

Finkelstein JA, Chapman JR, Mirza S: Anterior cortical allograft in
thoracolumbar fractures. *Journal of Spinal Disorders*: November 1999:
12: pp 424-429.

Kreder HJ: Evidence-based surgery: What is it and do we need it?
World Journal of Surgery: December 1999: 23: pp 1232-1235.

Kreder HJ, Williams JI, Jaglal S, Axcell T, Stephen D: A
population study of the complications following conversion of hip or
knee arthrodesis to total joint replacement in the province of Ontario.
Canadian Journal of Surgery: December 1999: 42(6): pp 433-439.

Saleh KJ, Gafni A, Macaulay WB, Miric A, Saleh L, Schatzker J: Understanding economic evaluations: A review of the knee arthroplasty literature. *American Journal of Knee Surgery*: July 1999; 12(3): pp 155-160.

Schatzker J: Rings and cages in acetabular revision. *Clinical Orthopaedics and Related Research*: July 1999; 4: 58-63.

Stephen D, Kreder HJ, Day A, Hamilton P, McLellan B: The early detection of occult arterial bleeding in acute pelvic fractures by contrast enhanced CT. *Journal of Trauma*: October 1999; 47(4): pp 638-642.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Axelrod TS: AO-ASIF Hand and Wrist Fracture Course, Colorado Springs, Colorado, March 2000. (1) Materials, metallurgy, implant removal, (2) Moderator: Wrist fusion plate: Arthrodesis of the wrist.

Axelrod TS: Palliative Care Conference, Toronto, Ontario, March 2000. Pain and symptom management: Evaluation of our first year experience of new combined bone metastases clinic: The first of its kind in Canada: Are we achieving what we initially planned?

Axelrod TS: Canadian Society of Orthopaedic Technologists, Toronto, Ontario, April 2000. Radial head fractures.

Finkelstein JA: Palliative Care Conference, Toronto, Ontario, March 2000. Surgical management of metastatic spine survival.

Finkelstein JA: Workplace Safety and Insurance Appeal Tribunal on the Lower Spine, Toronto, Ontario, December 1999. Age-reflected changes in the lumbar spine.

Finkelstein JA: Western Canada Spine Course, University of Calgary, Calgary, Alberta, October 1999. Anterior thoraco-lumbar surgery: Surgical and anatomical considerations.

Kreder HJ: American Academy of Orthopaedic Surgeons Outcomes Course, Los Angeles, California, February 2000. (1) Critical appraisal and evidence-based medicine, (2) The Canadian total joint registry initiative.

Kreder HJ: Orthopaedic Research Society Symposium, Orlando, Florida, March 2000. Health measurement.

Kreder HJ: AO-ASIF Principles of Fracture Management Course for Residents, Vancouver, British Columbia, September 1999. (1) Intra-capsular fractures of the hip: Sub-capital hip fractures, (2) Principles of fracture management.

Kreder HJ: Canadian Orthopaedic Association, Edmonton, Alberta, June 2000. (1) Post-traumatic infection of bones and joints: Epidemiology and prevention, (2) Post-traumatic infection of bones and joints: Etiology and pathogenesis, (3) Trauma in the geriatric patient: Displaced sub-capital hip fractures: ORIF versus replacement, (4) Bone substitutes in trauma and reconstructive surgery: Norian upper extremity outcomes and analysis.

Kreder HJ: Canadian Orthopaedic Association, St. John's Newfoundland, July 1999. (1) Supracondylar nails for the femur: Indications and methods of retrograde femoral nailing, (2) The economics of total hip arthroplasty in Canada: Surgeon and hospital volume and complication rates, (3) Controversies with intramedullary nailing of long-bone fractures: Management of ipsilateral neck and shaft fractures.

Schatzker J: American Association of Orthopaedic Surgeons/Brazilian Orthopaedic and Trauma Society, Rio de Janeiro, Brazil, July 1999. (1) The surgical care of tibial plateau fractures, (2) Fractures of the distal femur, (3) Fractures of the shoulder, (4) Acetabular rings and cages in acetabular reconstruction, (5) Chair: Symposium and challenging fracture management, (6) Chair: Symposium sponsored by BAOAA.

Schatzker J: Chilean Society of Orthopaedics and Traumatology, Santiago, Chile, November 1999. (1) The treatment of intra-articular malunion, (2) The treatment of fractures of the distal femur, (3) The use of acetabular rings and cages in acetabular reconstruction.

Schatzker J: AO International, Davos, Switzerland, December 1999.

(1) AO basic course: Classification of fractures, (2) Fractures of the tibial plateau, (3) AO advanced course: The treatment of periprosthetic fractures, (4) Fractures of the distal femur, (5) Fireside discussion: Failed fracture fixation course: The place of total knee replacement in fracture surgery, (6) The surgical treatment of intra-articular malunions of the knee.

Schatzker J: AO Symposium/University of Warsaw, Warsaw, Poland, September 1999. (1) Chair: Principles of surgical treatment of articular fractures, (2) Treatment of fractures of the tibial plateau, (3) Fractures of the distal femur.

Schatzker J: AO International, Davos, Switzerland, September 1999. Gene therapy in orthopaedics.

Schatzker J: Interior of British Columbia Orthopaedic Surgeons, Vancouver, British Columbia, January 2000. (1) Intra-articular malunions and non-unions, (2) New trends in internal fixation, (3) Case discussion.

Schatzker J: Zimmer Update Hip and Knee Surgery, Toronto, Ontario, October 1999. Rings and cages in acetabular revision surgery.

Schatzker J: Baylor University, Dallas, Texas, February 2000.

(1) The surgical treatment of intra-articular non-union and malunion, (2) The history of internal fixation, (3) The history of AO, (4) Case discussion with residents and staff.

Schatzker J: Visiting Professor, University of Cordoba, Cordoba, Argentina, August 1999. (1) Rings and cages in acetabular reconstruction, (2) New developments in fracture surgery, (3) Update on fractures of the distal femur.

Stephen DGS: Orthopaedic Symposium, Winnipeg, Manitoba, October 1999. (1) Retrograde femoral nailing, (2) Manual traction for femoral shaft fracture fixation, (3) Management of late complications of calcaneal fractures, (4) Current concepts of tibial plafond fractures.

Stephen DGS: AO-ASIF, Vancouver, British Columbia, September 1999. Principles of fracture management.

Stephen DGS: AO-ASIF, Brunswick, New Jersey, January 2000.
Principles of treatment management.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A randomized trial of bipolar versus internal fixation for displaced sub capital hip fractures. *Jaglal S, Kreder H, Schatzker J, Szalai J, Williams J:* Medical Research Council of Canada (\$111,750 1997 - 1999).

An economic evaluation of internal fixation as compared with bipolar hemiarthroplasty for displaced femoral neck fractures. *Jaglal S, Kreder H, Goel V, Schatzker J:* Orthopaedic Trauma Association (\$30,000 1998 - 2001).

Arthroscopic debridement for knee arthritis: What are we doing, and is it useful? *Kreder HJ, Wai E, Williams J:* Institute for Clinical Evaluative Sciences (\$10,000 1999 - 2000).

Developing a consistent method of evaluating malrotation following tibial fracture nailing. *Kreder HJ, Stephen DGS, Schemitsch EH, McKee M:* Smith and Nephew Richards (\$5,000 1998 - 1999).

Evaluation of remineralization due to radiotherapy for breast cancer patients with bone metastases using computerized tomography (CT) density measurements. *Chow E, Finkelstein JA, Wong D, Franssen C, Szumacher A:* Susan G. Komen Breast Cancer Foundation (\$15,565 1999).

Evaluation of remineralization due to radiotherapy for breast cancer patients with bone metastases using computerized tomography (CT) density measurements. *Chow E, Finkelstein JA:* Canadian Breast Cancer Research Initiative (\$15,565 1999 - 2000).

Examining the relationship between evidence-based practice and physician and patient opinion. *Wright JG, Kreder HJ, Coyte PC, Glazier RH, Mahomed NN, Hawker GA:* Arthritis Society (\$65,000 1999 - 2002).

Examining the relationship between evidence-based practice and physician and patient opinion. *Wright JG, Kreder HJ, Hawker GA, Mahomed NN, Coyte PC, Glazier RH*: Medical Research Council of Canada (\$212,988 1999 - 2002).

Humeral shaft fractures: What are we doing and does it work? *Kreder HJ, Stephen DGS, McKee MD, Schemitsch EH*: Canadian Orthopaedic Foundation (\$10,000 2000 - 2001).

Long-term outcomes in pelvic ring fractures. *Tile M, Kreder HJ, Stephen DGS, Jaglal S*: AO-Stiftung/ASIF Foundation (\$220,000 1997 - 2000).

Metastatic femoral lesions: Current practice and survival. *Stephen DGS, Kreder HJ, Finkelstein JA*: Institute for Clinical Evaluative Sciences (\$10,000 1999 - 2000).

Outcomes following total hip replacement after acetabular fracture. *Borkhoff C, Kreder HJ, Tile MT, Stephen DGS*: Canadian Orthopaedic Foundation (\$10,000 1999 - 2000).

Prospective assessment of symptom palliation for patients attending a rapid response radiotherapy program and bone metastasis clinic. *Chow E, Danjoux C, Szumacher E, Wong R, Axelrod T, Finkelstein J, Stephen D, Geoffrey H. Wood* Foundation (\$10,000 2000).

Rehabilitation following total hip replacement. *Mori B, Lundon K, Kreder HJ*: Canadian Orthopaedic Foundation (\$10,000 1999 - 2000).

Revision total hip replacement: Why do primaries fail? *Davis A, Kreder HJ, Schemitsch EH, Gollish G, Waddell JP, Gross AE*, University of Toronto Arthroplasty Group: Canadian Orthopaedic Foundation (\$10,000 2000 - 2001).

Sunnybrook spinal trauma prospective database. *Finkelstein JA, Sofamor Danek* (\$60,000 1999 - 2000).

Survival rates of individuals with metastatic spinal lesions following palliative surgery. *Finkelstein JA, Kreder HJ, Stephen DGS*: Institute for Clinical Evaluative Sciences (\$10,000 1999 - 2000).

The at-home early discharge (AHEAD) project for hip fracture patients. *Jaglal S, Kreder HJ, Coyte, P, Naglie G, Schatzker J*: Medical Research Council of Canada (\$284,289 1997 - 2001).

The Canadian arthritis network. *Cruz TF, Kreder HJ*, 124 other co-investigators: Network Centres of Excellence (\$3,800,000 1998 - 2002).

The Canadian joint registry: Methodologies and outcomes. *Bourne R, Kreder HJ, Hawker G, Fortin P*: Canadian Arthritis Network (\$64,000 1999 - 2000).

The determination of tibial malrotation following intramedullary nailing. *Kreder HJ, Stephen DGS, Schemitsch EH, McKee MD*: Smith and Nephew Richards (\$10,000 1998 - 1999).

The functional consequences of femoral malrotation as measured using limited CT scanning following IM nailing. *Kreder HJ, Stephen DGS, Schemitsch EH, McKee M*: Smith and Nephew Richards (\$10,000 1999 - 2000).

Validity and utility of biomechanically determined guidelines in metastatic burst fracture risk assessment. *Whyne C, Finkelstein J, Chow E*: Canadian Breast Cancer Foundation (\$38,000 2000 - 2001).

HONOURS RECEIVED

Finkelstein JA: Spine Fellowship, International Society for the Study of the Lumbar Spine, November 1999.

Finkelstein JA: Leranbaum Award, January 2000.

DIVISION OF PLASTIC SURGERY

Dr. O. Antonyshyn - Associate Professor

Dr. P. Binhammer - Lecturer

Dr. R.C. Cartotto - Assistant Professor

Dr. J. Fialkov - Assistant Professor

Dr. J.S. Fish - Assistant Professor

Dr. J.L. Semple – Associate Professor (Division Head)

PUBLICATIONS

Antonyshyn OM: Soft tissue deformity after craniofacial fracture repair: Analysis and treatment. *Journal of Cranio-Maxillofacial Trauma*: November 1999; 5(3): pp 19-29.

Bernstein MP, Caldwell CB, Antonyshyn OM, Cooper PW, Ehrlich LE: Spatial and temporal registration of CT and SPECT images: Development and validation of a technique for in vivo three-dimensional semi quantitative analysis of bone. *Journal of Nuclear Medicine*: June 2000; 41(6): pp 128-129.

McGill SM, Cartotto RC: Herpes simplex infection following burn injury. *Burns*: January 2000; 26: pp 194-199.

O'Grady KF, Antonyshyn OM: Facial asymmetry: Three-dimensional analysis using laser surface scanning. *Plastic Reconstructive Surgery*: September 1999; 104: pp 928-937.

Semple JL: The primary management of cutaneous melanoma. *Canadian Journal of Continuing Medical Education*: May 2000; 12(5): pp 159-166.

Semple JL, Lugowski S, Baines CJ, Smith DC, McHugh A: Breast milk contamination and silicone implants: Preliminary results using silicon as a proxy measurement for silicone. *Year Book of Plastic, Reconstructive and Aesthetic Surgery*: January 2000: pp 185-193.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Antonyshyn O: Stryker Leibinger National Sales Meeting, Indian Wells, California, January 2000. Clinical application of lock-jaw maxillomandibular fixation appliance.

Cartotto RC: Ontario Paramedic Trauma Conference, Toronto, Ontario, October 1999. Inhalation injury.

Cartotto RC: Canadian Association of Burn Nurses, St. John's, Newfoundland, September 1999. The major achievements in burn care in the past 100 years.

Fialkov JA: International Workshop: Bone Engineering, Toronto, Ontario, December 1999. Strategies for craniofacial bone regeneration.

Sample JL: Visiting Professor, Walter Reed Army Institute of Research, Lima, Peru, September 1999. High altitude frostbite: Pathophysiology and management.

Sample JL: Atlantic Breast Health Conference, Saint John, New Brunswick, April 2000. Modern approaches, utilization and outcome issues for breast reconstruction.

Sample JL: Visiting Professor, University of New Brunswick, Saint John, New Brunswick, April 2000. Techniques in breast reconstruction.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Advanced facial modeling for computer-aided simulation and planning of craniofacial surgical procedures. *Terzopoulos D, McInerney T, Antonyshyn O:* Communications and Information Technology Ontario (\$240,000 1998 - 2000).

BoneSource survival following applications in craniofacial surgery: An in vivo study of volume retention and revascularization. *Antonyshyn O, Fialkov J, Caldwell C:* Stryker Canada (\$59,600 1999 - 2001).

Carpal tunnel syndrome morbidity and management outcomes in Ontario. *Manktelow R*, Binhammer P, Brill V, Szalai J: Workplace Safety and Insurance Board (\$205,025 1999 - 2001).

Comparison of allevyn versus acticoat as a skin graft donor site dressing. *Cartotto R*, Innes M: Research and Development Health Research Foundation/Canadian Institutes of Health Research (\$4,048 2000).

Prophylactic bilateral mastectomy in Ontario. *Narod SA*, Semple JL, Lickley L, Esplen MJ, Metcalfe K: Canadian Breast Cancer Foundation (\$40,000 1998 – 1999).

The retinacula cutis of the face. *Fialkov JA*, Lipa JE, Mendelson BC: Aesthetic Surgery Education and Research Foundation (\$4,800 1999 - 2000).

Zygoma fracture outcome study. *Antonyshyn O*, Binhammer P, Forrest C, Manson P, Rohrich R, Hobart C, Gruss J: AO-Stiftung/ASIF Foundation (\$138,000 1998 - 2000).

HONOURS RECEIVED

Cartotto RC: Moyer Award, American Burn Association (with Choi J, Cooper A, Gomez M, Fish J), March 2000.

DIVISION OF UROLOGY**Dr. L.K. Carr - Lecturer****Dr. N.E. Fleshner - Assistant Professor****Dr. S. Herschorn - Associate Professor (Division Head: July 1, 1999
– December 31, 1999)****Dr. L.H. Klotz - Associate Professor (Division Head: January 1,
2000 – June 30, 2000)****Dr. R.T. Kodama - Assistant Professor****PUBLICATIONS****Klotz LH:** A Patient's Guide to Prostate Cancer (Coles Notes Medical Series, ed). Chapters Books Incorporated, Toronto: 1999.**Klotz LH:** Office based clinical research. Canadian Journal of Urology: August 1999; 6(4): pp 826.**Klotz LH, Bruchovsky N, Crook JM, Armitage GRR, Hoffart D, Gleave ME, Goldenberg SL:** Intermittent endocrine therapy for prostate cancer. In: Progress and Controversies in Oncological Urology (Kurth KH, Mickisch GH, Schroder F, eds). Parthenon Publishing Group, New York: 1999: pp 203-209.**INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES****Carr LK:** Canadian Continence Foundation, Toronto, Ontario, November 1999. What's new in the pharmacologic treatment of incontinence?**Klotz LH:** Paget Foundation Conference, Montreal, Quebec, October 1999. Hormone therapy for prostate cancer.**Kodama RT:** Jackson Hole Urologic Conference, Jackson Hole, Wyoming, January 2000. (1) Current acute management of urethral injuries, (2) Genito-urinary trauma: An overview, (3) Management of posterior urethral strictures.

Kodama RT: St. Lawrence Urological Group, Pinehill, Quebec, February 2000. (1) Pelvic trauma and presentation of interesting urologic cases, (2) Recent advances in lower urinary tract reconstruction, (3) Reconstructive principles and tissue transfer techniques, (4) The management of anterior urethral structures, (5) Treatment of urethral carcinoma.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A double-blind, randomized, fixed-dose, placebo controlled study to assess the efficacy and safety of sildenafil in preventing erectile dysfunction in patients who have undergone a bilateral nerve sparing radical prostatectomy. *Herschorn S:* Pfizer Canada (\$60,000 1999).

A prospective phase 3 randomized trial comparing intermittent versus continuous androgen suppression for patients with PSA progression in the clinical absence of distant metastases following radiotherapy for prostate cancer. *Klotz LH, Crook J:* National Cancer Institute of Canada/Hoechst Marion Roussel (\$2,800,000 1997 - 2002).

A randomized, double-blind parallel comparison of the efficacy and safety of controlled release oxybutynin and immediate release oxybutynin for urinary incontinence. *Herschorn S, Carr L:* Purdue Frederick (\$20,000 1999).

A randomized, double-blind, placebo-controlled study of IC351 (LY450190) administered "on demand" to patients with male erectile dysfunction. *Herschorn S:* Eli Lilly (\$25,000 1999).

A single-centre comparison of elmiron with and without polycitra-K in patients with interstitial cystitis. *Herschorn S:* Alza Pharmaceuticals (\$30,000 1999).

Basic science companion studies to NCIC trial PR-7 (intermittent versus continuous androgen ablation). *Klotz LH, Crook J, Fleshner N, Pollak M:* National Cancer Institute of Canada (\$305,925 1998 - 2001).

Prognostic factors for metastatic progression of localized prostate cancer. *Narod S, Klotz LH, Pollak M, Jewett M, Trachtenberg J, Fleshner N, Kapusta L, Sweet J, Banerjee D:* National Cancer Institute of Canada (\$251,179 1998 - 2000).

Vitamin E and selenium for prevention of prostate cancer: A randomized trial. *Coltman C*, South Western Oncology Group (including Klotz LH): National Institutes of Health (\$170,000 1999 - 2009).

DIVISION OF VASCULAR SURGERY

Dr. D.S. Kucey – Assistant Professor
Dr. R. Maggisano – Assistant Professor (*Division Head*)

PUBLICATIONS

Mathie AG, Bell SD, Saibil EA, Maggisano R, Kucey DS: Safety of out-patient arterial stenting. *Journal of the Canadian Association of Radiologists*: August 1999; 50(4): pp 268-271.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Maggisano R: Canadian Society of Vascular Technology, Toronto, Ontario, April 2000. Treatments and surgical intervention for peripheral artery disease.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Carotid endarterectomy health services research program. *Tu JV*, Kucey DS, Anderson G, Perry M: Heart and Stroke Foundation (\$150,000 1998 - 2000).

WOMEN'S COLLEGE CAMPUS

DIVISION OF GENERAL SURGERY

Dr. G.Y. Hiraki - Assistant Professor
Dr. C.M.B. Holloway - Assistant Professor
Dr. L. Lickley - Professor
Dr. T.M. Ross - Associate Professor (*Division Head*)

PUBLICATIONS

Holloway CMB: Benign breast disease: Approaching management. Canadian Journal of Diagnosis: January 2000: 17(1): pp 62-73.

Kahn HJ, Yang L-Y, Blondal J, Lickley L, Holloway C, Wedad H, Narod S, McCreedy DR, Seth S, Marks A: RT-PCR amplification of CK19 mRNA in the blood of breast cancer patients: Correlation with established prognostic parameters. Breast Cancer Research and Treatment: January 2000: pp 143-151.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Holloway CMB: Willow Ontario Breast Cancer Support and Resource Centre, Toronto, Ontario, June 2000. New advances in surgical management of breast cancer.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A community pilot study of an information aid for women with a family history of breast cancer. *Lickley L, Goel V, Heisey R, Meschino W, Doan B, Chart P, Taylor K:* Medical Research Council of Canada (\$38,293 1999 - 2000).

A comparison of the volume and projected area of mammographically dense breast tissue as risk factors for breast cancer. *Yaffe MJ, Boyd NF, Fishell E, Hanna W, Holloway C, Jong R, Tritchler DL, Wright B:* Canadian Breast Cancer Research Initiative (\$472,930 1998 - 2000).

Novel radiopharmaceuticals for radio-guided surgery of ductal carcinoma in situ of the breast. *Reilly RM, Holloway C, Catzavelos C, Sandhu J, Hendler A*: US Army Diagnostic and Surgical Breast Imaging (\$364,410 2000 - 2003).

Novel radiopharmaceuticals for radio-guided surgery of ductal carcinoma in situ of the breast. *Reilly RM, Holloway C, Catzavelos C, Sandhu J, Hendler A*: Canadian Breast Cancer Research Initiative (\$232,043 2000 - 2003).

Ten-year breast cancer survival: At what cost in human and physical terms? A case-control study of long-term survivors of breast cancer and their physical and functional well-being. *Trudeau ME, Blondal J, Lickley HLA, Narod S, McCready D, Sawka C, Hawker G, Doane F, Rubin L, Miller J, Chiamvinonvat V*: National Cancer Institute of Canada (\$318,349 1997 - 2000).

DIVISION OF PLASTIC SURGERY

Dr. M.H. Brown - Assistant Professor

Dr. J.L. Semple - Associate Professor (*Division Head*)

PUBLICATIONS

Brown MH, Backstein D, Regehr G: Evaluation of a resident selection process in plastic surgery. *Canadian Journal of Plastic Surgery*: December 1999: 7: pp 261-265.

Semple JL: The primary management of cutaneous melanoma. *Canadian Journal of Continuing Medical Education*: May 2000: 12(5): pp 159-166.

Semple JL, Lugowski S, Baines CJ, Smith DC, McHugh A: Breast milk contamination and silicone implants: Preliminary results using silicon as a proxy measurement for silicone. *Year Book of Plastic, Reconstructive and Aesthetic Surgery*: January 2000: pp 185-193.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Brown MH: Wellspring, Toronto, Ontario, November 1999. Options in breast reconstruction.

Semple JL: Visiting Professor, Walter Reed Army Institute of Research, Lima, Peru, September 1999. High altitude frostbite: Pathophysiology and management.

Semple JL: Atlantic Breast Health Conference, Saint John, New Brunswick, April 2000. Modern approaches, utilization and outcome issues for breast reconstruction.

Semple JL: Visiting Professor, University of New Brunswick, Saint John, New Brunswick, April 2000. Techniques in breast reconstruction.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Evaluating the effectiveness of a two-year curriculum in a surgical skills centre: The future of surgical training? *Brown MH*, Anastakis D, Reznick R, Hutchison C, Regehr G, Herold J, Ali J: Physicians Services Incorporated Foundation (\$82,000 1998 - 2000).

Prophylactic bilateral mastectomy in Ontario. *Narod SA*, Semple JL, Lickley L, Esplen MJ, Metcalfe K: Canadian Breast Cancer Foundation (\$40,000 1998 - 1999).

DIVISION OF UROLOGY

Dr. J.G. Connolly - Professor

TORONTO EAST GENERAL HOSPITAL**Surgeon-in-Chief - Dr. I. J. Harrington****HEADS OF DIVISIONS****Dr. R. Zeldin - General Surgery****Dr. G. Maistrelli - Orthopaedic Surgery****Dr. R. MacMillan - Urology**

The Toronto East General Hospital has had a successful year under the guidance of its new Chief Executive Officer, Mr. Ronald Mulchey. Mr. Mulchey was recently given a solid vote of confidence by the hospital staff and hospital board after completing his first two years as Chief Executive Officer.

The hospital building plan is well underway with completion of new operating room facilities expected early next year. Thirteen new surgical suites will address the growing demand for technologically advanced procedures. Plans are well underway for new out-patient facilities and an MRI suite. The Toronto East General Hospital will also offer expanded pediatric services through its designation as a level two regional child health care centre.

The Department of Surgery continues to provide training for family practice and emergentology residents, as well as active participation in the teaching of postgraduate surgical trainees in general surgery and orthopaedic surgery.

Dr. Ian Harrington completed his ten-year term as Head, Division of Orthopaedic Surgery on January 1, 2000 and was recognized for his contributions to the Toronto East General Hospital at the hospital staff appreciation dinner in May 2000. He, Mr. Martin McPolin and Mr. Gary James were the winners of the Yvon Peltier Poster Award for "Rigid plaster dressing: A simple pylon technique following below knee amputation" at the Canadian Society of Orthopaedic Technologist's meeting in April 2000.

Dr. Wayne Tanner, Chair of the Specialists Coalition of Ontario and Section Chair for Vascular Surgery of the Ontario Medical Association, was a member of the Ontario Medical Association team that negotiated

a new contract with the Ministry of Health for Ontario physicians in May 2000. An important item in the agreement was the payment of physicians and surgeons for emergency work.

Dr. Gary Stoik has taken a leave-of-absence from the Toronto East General Hospital in order to work as a thoracic surgeon in Adis Ababa.

Dr. Robert Mackenzie has been appointed Medical Director for the Ambulatory and Community Services at the Toronto East General Hospital.

Dr. Gianni Maistrelli discussed the importance of offset in total hip arthroplasty and functional osseo-integration of implants at the Italian Hip Society annual meeting in Rome, Italy, October 1999. He also discussed balancing the valgus knee and knee osteotomies at the Strategies in Hip and Knee Joint Reconstruction Symposium in Toronto, June 2000. As well, he was a participant in the Challenges of Total Hip Replacement in Madrid, Spain, June 2000.

Dr. Maistrelli, Dr. Peter Weiler and Dr. Kellie Leitch were co-presenters of a paper entitled "The outcomes and economic costs of bilateral staged versus simultaneous total knee arthroplasty" at the Canadian Orthopaedic Association meeting in Edmonton, Alberta, June 2000.

Dr. Paul Wong remains active in orthopaedic research and recently has had two papers published in peer reviewed journals regarding the classification for failed hip arthroplasty and morselised allograft with roof ring re-enforcement.

Dr. Laura Tate attended the Canadian Medical Association Leadership Workshop for Medical Women, November 1999 and the AO-ASIF Hand and Wrist Fracture Course in Colorado Springs.

The Department of Surgery has formulated a policy to be used as a guide for treatment of Jehovah Witness patients with regards to the use of blood and blood substitutes.

The Toronto East General Hospital is in its 71st year of providing care for East York residents. A new surgical suite re-development, the addition of complex continuing care services, a new maternal and newborn care centre, a newly established ambulatory and community care health service and the addition of magnetic resonance imaging will

enhance the hospital's ability to respond to the needs of its community. The hospital plans to continue to function as a community-teaching centre for family practice, medicine, general and orthopaedic surgery trainees.

DIVISION OF GENERAL SURGERY

Dr. V. Campbell – Lecturer
Dr. T. Gilas – Assistant Professor
Dr. R. Mackenzie – Assistant Professor
Dr. G.L. Stoik – Assistant Professor
Dr. W. R. Tanner – Lecturer
Dr. R.A. Zeldin – Assistant Professor (*Division Head*)

DIVISION OF ORTHOPAEDIC SURGERY

Dr. I.J. Harrington - Associate Professor
Dr. W.J. Kraemer - Lecturer
Dr. G.L. Maistrelli - Associate Professor (*Division Head*)
Dr. P.J. Weiler - Lecturer
Dr. P. Wong - Lecturer

PUBLICATIONS

Harrington IJ, Catre MG: Distal radius fractures: Radiographic results versus range of motion. *Orthopaedic Update (India)*: August 1999; 9(2): pp 156-159.

Mahomed M, Harrington IJ: Biomechanical analysis of the Medoff sliding plate. *Journal of Trauma, Injury, Infection and Critical Care*: January 2000; 48(1): pp 93-100.

HONOURS RECEIVED

Harrington IJ: Yvon Peletier Poster Award , CSOT, Toronto, Ontario, April 2000.

DIVISION OF UROLOGY

Dr. W.C.F. Forder - Lecturer

Dr. R.D. MacMillan – Assistant Professor (*Division Head*)

UNIVERSITY HEALTH NETWORK

Surgeon-in-Chief - Dr. B.R. Taylor

HEADS OF DIVISIONS

Dr. T.E. David - Cardiac Surgery

Dr. O.D. Rotstein - General Surgery

Dr. M. Bernstein – Neurosurgery

Dr. J.R. Davey - Orthopaedic Surgery

Dr. P. Neligan - Plastic Surgery

Dr. T.R.J. Todd – Thoracic Surgery (July 1, 1999

– December 31, 1999)

Dr. S. Keshavjee – Thoracic Surgery (*Acting*) (January 1, 2000

– June 30, 2000)

Dr. M.A.S. Jewett – Urology

Dr. K.W. Johnston - Vascular Surgery

The University Health Network completed its first academic year under the new organizational structure. Surgical services were offered at the Toronto General Hospital, the Toronto Western Hospital and the Princess Margaret Hospital

Cardiac Surgery

The Division of Cardiac Surgery under the leadership of Dr. Tirone David was one of the few cardiac divisions to meet provincial volume targets in patient care, and boasted excellent clinical results as documented by the Cardiac Care Network. Ten clinical fellows received training in advanced cardiac surgery, a total of 58 national and international surgeons having applied. Drs. Richard Weisel, Terry Yau, Charles Peniston and Chris Feindel were all successful in obtaining peer-reviewed funds from both the Medical Research Council of Canada and the Heart and Stroke Foundation of Canada. This work resulted in a large number of peer-reviewed papers being published. In addition, of note was the election of Dr. Hugh Scully as President of the Canadian Medical Association as well as President-Elect of the Canadian Cardiovascular Society. Dr. Tirone David assumed the office of Secretary of the American Association for Thoracic Surgery. In addition, Dr. Viv Rao was this year's winner of the Royal College Medal for Resident Research.

General Surgery

Dr. David Grant was welcomed as Surgical Director of Transplantation at the University Health Network, adding experienced surgical leadership to that important program.

Strong grant capture by Dr. Andras Kapus (Medical Research Council of Canada scholar), Dr. John Marshall (Medical Research Council of Canada grant), Dr. Ori Rotstein (Medical Research Council of Canada grant) and Dr. Mark Catral (Juvenile Diabetes Foundation), marked a successful year in investigation. Dr. Richard Reznick was given the Hubbard Award by the National Board of Medical Examiners. Dr. Lorne Rotstein won the Ross Fleming Teaching Award, and Dr. Bryce Taylor was awarded the Colin Woolf Award for Continuing Medical Education. In addition, Dr. Bernie Langer was elected President of the Royal College of Physicians and Surgeons of Canada, his term to begin in September 2000. At the end of the academic year, the Peter Crossgrove Chair in General Surgery was inaugurated at the University Health Network with Dr. Ori Rotstein as the first recipient. Dr. Lorne Rotstein was appointed Co-Director of the General Surgery Training Program, with a plan to replace Dr. Marcus Burnstein in 2001. Dr. David Hackam won the Bernard Langer Surgeon Scientist Award for resident research after working in Dr. Ori Rotstein's laboratory during his general surgery residency.

Neurosurgery

The prodigious academic achievements of the Division of Neurosurgery continued. There are currently a total of three chairs held by members of the Division: The Robert O. Lawson Chair in Neural Repair and Regeneration (Dr. Michael Fehlings); the Tasker Chair in Functional Neurosurgery (Dr. Andres Lozano); and the Ricard Chair in Cerebrovascular Surgery (Dr. Chris Wallace). Many research grants were awarded to Drs. Ab Guha, Michael Tymianski, Charles Tator, Michael Fehlings, and Andres Lozano. The Division continues to recruit aggressively, and awaits the arrival of two new academic surgeons in July 2000 to contribute to established programs.

Clinically, the Division is developing innovative treatments including the intra-operative magnet, out-patient craniotomy for tumor, out-patient stereotactic brain tumor biopsy, out-patient lumbar discectomy, and deep brain stimulation procedures for new indications.

In the past year, Dr. Charles Tator was awarded the Order of Canada, and Dr. Mark Bernstein received the A.R. Hudson Award which is given annually to the best neurosurgical teacher at the University of Toronto. Drs. Andres Lozano and Christopher Wallace were promoted to Full Professor as of July 1, 1999.

Orthopaedic Surgery

Dr. Raj Rampersaud, a specialist in radio-guided spinal surgery, was recruited to the Orthopaedic Division and the Spine Program in October of 1999. The Sports Medicine and Arthroscopy Program continued to be very active clinically in such high profile areas as care of the Toronto Blue Jays, Toronto Argonauts, Toronto Maple Leafs, and the National Ballet of Canada. The Orthopaedic Division also actively participated in the Arthritis Program in collaboration with the rheumatology service. The Lower Extremity Arthritis Program was developed and is closely linked with the Arthritis Centre of Excellence. Research in outcomes, biomechanical studies, prosthesis evaluation and epidemiology of arthritis was actively pursued. Dr. Brent Graham was officially appointed as the Director of the Hand Program at the University Health Network.

Plastic Surgery

The Division of Plastic Surgery continued to collaborate on a number of fronts. Dr. Peter Neligan in his new position in the Wharton Chair in Reconstructive Plastic Surgery supported the Head and Neck Cancer Program under the directorship of Dr. Pat Gullane. The Division of Plastic Surgery also made significant contributions to surgical education and to the Hand Program. Dr. Dimitri Anastakis was the Head of Surgical Programs at the Toronto Western Hospital, as well as an active researcher in the field of surgical education. In addition, Dr. Arnis Freiberg won the Arnis Freiberg Teaching Excellence Award.

Dr. Peter Neligan was elected President of the Canadian Microsurgical Society, and also won the W.K. Lindsay Resident Research Supervisor Award.

Thoracic Surgery

Dr. Tom Waddell was recruited to the Division on January 1st, 2000, and joins Dr. Shaf Keshavjee in the field of pulmonary transplantation. Dr. Waddell has undergone training in xenotransplantation, and will also be a major contributor to the Living Related Donor Program. The Lung Transplantation Program exceeded its provincial targets in the 1999-2000 year.

The University of Toronto Program also played a significant role in the lung reduction surgery clinical trial which will be completed shortly. Dr. Tom Todd departed for Abu Dhabi in February 2000, and at the end of the academic year, negotiations were underway with a prospective new leader and Chair of the Division of Thoracic Surgery.

Dr. Tom Waddell won the Young Faculty Award of the American Association for Thoracic Surgery, and Dr. Shaf Keshavjee's laboratory continued its success with grant capture, peer-reviewed papers, and national and international presentations. Dr. Keshavjee himself was elected to Canada's "Top 40 Under 40" prestigious group, and Dr. Gail Darling won the E. Bruce Tovee Undergraduate Teaching Award.

Urology

Dr. John Tsihlias was recruited as a uro-oncologist after further training at M.D. Anderson Cancer Centre in Houston. The Prostate Centre at the Princess Margaret Hospital was opened under the direction of Dr. John Trachtenberg, and immediately became a very successful unit. Dr. Trachtenberg and his colleagues developed a web site for prostate cancer, tools for improved decision-making and education for patients, and a psychosocial support program for prostate cancer patients. In addition, Dr. Michael Jewett and colleagues initiated a program in minimally invasive radical prostatectomy which has been successful in its early stages. The program of neuromodulation of bladder function at the Toronto Western Hospital with the use of implanted nerve stimulators continued with successful results under the direction of Dr. Magdy Hassouna, who was also appointed Director of Postgraduate Education at the University Health Network. Finally, Dr. Sid Radomski won the Surgical Skills Centre Teaching Award for his contributions to the technical curriculum.

Vascular Surgery

The Division maintained its pre-eminent position in Canadian vascular surgery. Dr. Wayne Johnston continues with his work in advanced diagnostics, Dr. Tom Lindsay and Dr. Paul Walker in the area of ischemia/reperfusion injury, and Dr. Barry Rubin in his work on cardiomyocyte cytotoxicity and neutrophil phospholipid metabolism. The Division members held high profile positions, with Dr. Wayne Johnston as Editor-in-Chief of the Journal of Vascular Surgery, Dr. Peter Kalman as Past-President of the Canadian Society of Vascular Surgery, Dr. Tom Lindsay as President-Elect of the Peripheral Vascular Surgical Society, and Dr. Paul Walker as Vice-President of the Toronto General Hospital.

DIVISION OF CARDIAC SURGERY

Dr. S.J. Brister - Associate Professor
Dr. R.J. Cusimano - Assistant Professor
Dr. T.E. David – Professor (*Division Head*)
Dr. C.M. Feindel - Associate Professor
Dr. L.L. Mickleborough - Professor
Dr. C.M. Peniston - Assistant Professor
Dr. A.C. Ralph-Edwards - Lecturer
Dr. H.E. Scully - Professor
Dr. R.D. Weisel - Professor
Dr. T.M. Yau - Assistant Professor

PUBLICATIONS

Borger MA, Fremes SE, Weisel RD, Rao V, Cohen G, Lindsay TF, Naylor DC: Coronary bypass and carotid endarterectomy: Does combined surgery increase risk? A meta-analysis. *Annals of Thoracic Surgery*: July 1999; 68: pp 14-21.

Borger MA, Taylor RL, Weisel RD, Kularni G, Benarolia M, Rao V, Cohen G, Fedorko L, Feindel CM: Cannulation of the distal aortic arch results in less cerebral micro-emboli than cannulation of the ascending aorta: A randomized clinical trial. *Journal of Thoracic and Cardiovascular Surgery*: October 1999; 118: pp 740-745.

Borger MA, Wei KS, Weisel RD, Ikonomidis JS, Rao V, Cohen G, Shirai T, Omran AS, Siu SC, Rakowski H: Myocardial perfusion during warm antegrade and retrograde cardioplegia: A contrast echo study. *Annals of Thoracic Surgery*: September 1999: 68: pp 955-961.

Borger MA, Weisel RD: Myocardial protection. In: *Perioperative Care in Cardiac Anesthesia and Surgery* (Cheng DCH, David TE, eds). Landes Bioscience, Austin: 1999: pp 106-110.

Butany J, de Sa M, Feindel CM, David TE: The Toronto SPV bioprosthesis: Review of morphological findings in eight valves. *Seminars in Thoracic and Cardiovascular Surgery*: October 1999: 11: pp 157-162.

Chin C, Feindel CM, Cheng D: Duration of pre-operative amiodarone treatment may be associated with post-operative hospital mortality in patients undergoing heart transplantation. *Journal of Cardiothoracic and Vascular Anesthesia*: October 1999: 13(5): pp 562-566.

Cohen G, Borger M, Weisel RD, Rao V: Intra-operative myocardial protection: Current trends and future perspectives. *Annals of Thoracic Surgery*: November 1999: 68: pp 1995-2001.

David TE: Aortic valve repair for management of aortic insufficiency. *Advances in Cardiac Surgery*: November 1999: 11: pp 129-159.

David TE: Aortic valve surgery: Where we are and where we shall go. *Journal of Heart Valve Disease*: September 1999: 8: pp 495-498.

David TE: Innovation in surgery. *Journal of Thoracic and Cardiovascular Surgery*: April 2000: 119: pp S38-S41.

David TE: The Toronto SPV bioprosthesis: Clinical and hemodynamic results at six years. *Annals of Thoracic Surgery*: September 1999: 68(3): pp S9-S13.

David TE, Bos J: Aortic valve replacement with stentless porcine aortic valve: A pioneer series. *Seminars in Thoracic and Cardiovascular Surgery*: October 1999: 11(4): pp 9-11.

David TE, Omran A, Ivanov J, Armstrong S, de Sa MP, Sonnenberg B, Webb G: Dilation of the pulmonary autograft after the Ross procedure. *Journal of Thoracic and Cardiovascular Surgery*: February 2000: 119: pp 210-220.

de Sa M, Moshkovitz Y, Butany J, David TE: Histologic abnormalities of the aorta and pulmonary trunk in patients with aortic valve disease: Clinical relevance to the Ross procedure. *Journal of Thoracic and Cardiovascular Surgery*: October 1999: 118: pp 588-594.

Dellgren G, David TE, Raanani E, Bos J, Ivanov J, Rakowski H: The Toronto SPV: Hemodynamic data at one and five years post-implantation. *Seminars in Thoracic and Cardiovascular Surgery*: October 1999: 11(4): pp 107-113.

Feindel CM: Circulatory arrest and neuroprotection. In: *Perioperative Care in Cardiac Anesthesia and Surgery* (Cheng DCH, David TE, eds). Landes Bioscience, Austin: 1999: pp 84-88.

Goldman B, Christakis G, David T, Rakowski H, Bach D, Wood J, Goldman S, Pepper J, Yacoub M, Verrier E, Petracek M: Will stentless valves be durable? The Toronto valve (TSPV) at five to six years. *Seminars in Thoracic and Cardiovascular Surgery*: October 1999: 11: pp 42-49.

Jamieson WRE, Marchand MA, Pelletier CL, Norton R, Pellerin M, Dubiel TW, Daenen WJA, Holden MP, David TE, Ryba EA, Anderson WN Jr: Structural valve deterioration in mitral replacement surgery: Comparison of supra-annular porcine and perimount pericardial bioprostheses. *Journal of Thoracic and Cardiovascular Surgery*: August 1999: 118(2): pp 297-304.

Li R-K, Jia Z-Q, Weisel RD, Mickle DAG, Choi A, Yau TM: Construction of a bioengineered cardiac graft. *Journal of Thoracic and Cardiovascular Surgery*: February 2000: 119: pp 368-375.

Li R-K, Jia Z-Q, Weisel RD, Mickle DAG, Choi A, Yau TM: Survival and function of bioengineered cardiac grafts. *Circulation*: July 1999: 100: pp II63-II69.

Li R-K, Weisel RD, Mickle DAG, Jia Z-Q, Boylen P, Kim E-J, Sakai T, Tomita S, Schwartz L, Iwanochko M, Husain M, Cusimano RJ, Burns RJ, Yau TM: Autologous porcine heart cell transplantation improved heart function after a myocardial infarction. *Journal of Thoracic and Cardiovascular Surgery*: January 2000: 119: pp 68-69.

Li R-K, Yau TM, Weisel RD, Mickle DAG, Sakai T, Choi A, Jia Z-Q: Construction of a bioengineered graft. *Journal of Thoracic and Cardiovascular Surgery*: February 2000: 119: pp 368-375.

Ling FT, David TE, Merchant N, Yu E, Butany JW: Intra-cardiac extension of intravenous leiomyomatosis in a pregnant woman: Review of the literature. *Canadian Journal of Cardiology*: January 2000: 16: pp 73-79.

Mailis A, Umana M, Feindel CM: Anterior intercostal nerve damage after coronary artery bypass graft surgery with use of internal thoracic artery graft. *Annals of Thoracic Surgery*: May 2000: 69(5): pp 1455-1458.

Mickleborough LL: Ventricular aneurysm resection. In: *Perioperative Care in Cardiac Anesthesia and Surgery* (Cheng DCH, David TE, eds). Landes Bioscience, Austin: 1999: pp 146-147.

Mickleborough LL, Carson S, Tamariz M, Ivanov J: Results of revascularization in patients with severe left ventricular dysfunction. *Journal of Thoracic and Cardiovascular Surgery*: March 2000: 119: pp 550-557.

Oreopoulos G, Mickleborough LL, Daniel L, de Sa M, Merchant N, Butany J: Primary pericardial mesothelioma presenting as constrictive pericarditis. *Canadian Journal of Cardiology*: December 1999: 15(12): pp 1367-1372.

Rao V, Borger MA, Weisel RD, Ivanov J, Christakis GT, Cohen G, Yau TM: Insulin cardioplegia for elective coronary bypass surgery. *Journal of Thoracic and Cardiovascular Surgery*: June 2000: 119: pp 1176-1184.

Sakai T, Li R-K, Weisel RD, Mickle DAG, Jia Z-Q, Tomita S, Kim E-J, Yau TM: Fetal cell transplantation: A comparison of three cell types. *Journal of Thoracic and Cardiovascular Surgery*: July 1999: 118: pp 715-725.

Sakai T, Li R-K, Weisel RD, Mickle DAG, Kim E-J, Tomita S, Jia Z-Q, Yau TM: Autologous heart cell transplantation improves cardiac function after myocardial injury. *Annals of Thoracic Surgery*: December 1999: 68: pp 2074-2081.

Tambeur L, David TE, Unger M, Armstrong S, Ivanov J, Webb G: Results of surgery for aortic root aneurysm in patients with the Marfan syndrome. *European Journal of Cardiothoracic Surgery*: April 2000: 17: pp 415-419.

Taylor RL, Borger MA, Weisel RD, Fedorko L, Feindel CM: Cerebral micro-emboli during cardiopulmonary bypass: Increased emboli during perfusionist interventions. *Annals of Thoracic Surgery*: July 1999: 68: pp 89-93.

Tomita S, Li R-K, Weisel RD, Mickle DAG, Kim E-J, Sakai T, Jia Z-Q: Autologous transplantation of bone marrow cells improves damaged heart function. *Circulation*: November 1999: 100: pp II247-II256.

Yau TM, El-Ghoneimi YA, Armstrong S, Ivanov J, David TE: Mitral valve repair and replacement for rheumatic disease. *Journal of Thoracic and Cardiovascular Surgery*: January 2000: 119: pp 53-60.

Yau TM, Fedak PW, Weisel RD, Teng C, Ivanov J: Predictors of operative risk of coronary bypass surgery in patients with left ventricular dysfunction. *Journal of Thoracic and Cardiovascular Surgery*: December 1999: 118: pp 1006-1013.

Yau TM, Li R-K, Weisel RD, Mickle DAG: Heart cell transplantation for the failing heart. In: *State of the Heart* (Van Zile J, ed). Write Stuff Enterprises Incorporated, Fort Lauderdale: 1999: pp 202-204.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Brister SJ: Centenary Health Centre, Scarborough, Ontario, April 2000. Indications and timing for valvular surgery.

David TE: Adult Cardiac Surgery Symposium, American Association for Thoracic Surgery, Toronto, Ontario, April 2000. (1) Aortic valve replacement with aortic valve homograft, (2) Technique of aortic root inclusion.

David TE: Cleveland Clinic Foundation, Cleveland, Ohio, September 1999. (1) Follow-up after Ross procedure, (2) Special consideration for Marfan's valves: Valve sparing procedures, (3) Papillary muscle rupture, right ventricular infarction, and ventricular septal rupture: Complications of myocardial infarction.

David TE: American College of Cardiology, Snowmass, Colorado, January 2000. (1) Minimally invasive surgery: Is the pump here to stay?, (2) Mitral valve repair or replacement: Matching the patient to the procedure and the condition, (3) Humanizing the aortic valve and outflow mechanism: Is the Ross failing?

David TE: St. Thomas Hospital, London, England, April 2000. Aortic valve replacement with stentless valves.

David TE: Rodman E. Taber Lecturer, Michigan Society of Thoracic and Cardiovascular Surgeons, Bay Harbor, Michigan, August 1999. Aortic valve surgery.

David TE: Harvard Medical School, Boston, Massachusetts, October 1999. (1) Patch enlargement of the aortic annulus, (2) Aortic valve-sparing operations.

David TE: Phoenix Cardiovascular Society, Phoenix, Arizona, February 2000. Choices of prosthetic valves in aortic valve replacement.

David TE: New York Cardiothoracic Surgeons, Buffalo, New York, November 1999. Hancock II bioprosthesis.

David TE: European Association for Cardiothoracic Surgery, Glasgow, Scotland, September 1999. Results of surgery for aortic root aneurysm in patients with the Marfan syndrome.

David TE: Klinik und Poliklinik Fur Herz-Und Thoraxchirurgie, University of Koln, Koln, Germany, April 2000. Teleconference and lectures on aortic valve replacement with Toronto SPV.

David TE: Hanover Medical School, Hanover, Germany, September 1999. (1) Aortic valve-sparing operations, (2) Aortic valve replacement with stentless valves.

David TE: Centro Cardiologico Fondazione Monzino, University of Milan, Milan, Italy, April 2000. (1) Functional anatomy of the aortic valve, (2) Aortic valve sparing operations, (3) Aortic valve replacement with Toronto SPV.

David TE: Lankenau Hospital and Medical Research Centre, Wynnewood, Pennsylvania, June 2000. (1) Mitral valve: Pathophysiology of mitral regurgitation and techniques of valve repair, (2) Clinical outcomes of mitral valve repair.

David TE: Saint Thomas Hospital, Nashville, Tennessee, October 1999. Teleconference and symposium: Why use stentless valves: Stentless valves and the Maze procedure.

David TE: Learning From Experience Symposium, Glasgow, Scotland, September 1999. Twelve years of experience with the Toronto SPV valve.

David TE: American College of Cardiology, Anaheim, California, March 2000. Understanding mitral valve anatomy: Perspectives from a surgeon.

David TE: Mayo Clinic, Rochester, Minnesota, June 2000. (1) Stentless aortic prosthesis: A universal solution for the small aortic annulus? (2) Annuloaortic ectasia and Marfan's: From genetics to valve sparing operation.

Feindel CM: Comprehensive Review of Intra-operative Echo, San Diego, California, February 2000. (1) Aortic root procedures: Valve resuspension, (2) Choice of valve procedure in aortic valve disease, (3) Dissecting aneurysms of the thoracic aorta, (4) Discussant: Intra-operative decision-making in aortic valve disease.

Feindel CM: University of Nijmegen, Nijmegen, The Netherlands, April 2000. (1) Aortic root reconstruction, (2) Demonstration: Aortic valve replacement: How to do it.

Feindel CM: Association des Chirugiens Cardiovasculaires et Thoraciques du Quebec, Mont Tremblant, Quebec, June 2000. (1) Aortic valve sparing procedures, (2) Toronto stentless valve experience.

Feindel CM: Guy's and St. Thomas Hospital, London, England, November 1999. SPV: The Toronto experience at ten years: Survival, hemodynamics and pathology.

Feindel CM: Heart and Stroke: Clinical Update 1999, Toronto, Ontario, December 1999. The patient with a prosthetic valve.

Feindel CM: American Association for Thoracic Surgery, Toronto, Ontario, April 2000. The Toronto SPV: Implantation technique.

Mickleborough LL: American Association for Thoracic Surgery, Toronto, Ontario, May 2000. Controversies in cardiothoracic surgery: Multivessel CABG should be done on the pump.

Mickleborough LL: Du Centre Cardio-Thoracique De Monaco, Monte Carlo, Monaco, November 1999. Medical and surgical left ventricular remodeling: The Canadian experience.

Mickleborough LL: Sudbury Heart Failure Summit 2000, Sudbury, Ontario, April 2000. Surgical management of heart failure.

Peniston CM: Far Eastern Memorial Hospital, Taipei, Taiwan, May 2000. (1) Toronto stentless valve, (2) Toronto stentless valve insertion: Workshop, wet lab.

Peniston CM: St. Jude Medical, Melbourne, Australia, May 2000. (1) Toronto stentless valve, (2) Wet lab.

Peniston CM: Cathay General Hospital, Kaohsiung City, Taiwan, May 2000. (1) Toronto stentless valve, (2) Toronto stentless valve insertion: Workshop, wet lab.

Peniston CM: Cheng Hsin Hospital, Kaohsiung City, Taiwan, May 2000. Toronto stentless valve.

Peniston CM: National Taiwan University, Taipei, Taiwan, May 2000. Toronto stentless valve.

Weisel RD: American College of Surgeons, San Francisco, California, October 1999. (1) Cell transplantation: A novel treatment for the failing heart, (2) Cell therapy to restore ventricular function.

Weisel RD: Visiting Professor, University of Minnesota, Minneapolis, Minnesota, October 1999. (1) Cell therapy to restore ventricular function, (2) Cell transplantation to improve heart function and induce angiogenesis.

Weisel RD: Langdon Hall Meeting, Cambridge, Ontario, April 2000. Cell transplantation to prevent congestive heart failure.

Weisel RD: Techniques in Minimally Invasive Cardiac Surgery, Glasgow, Scotland, September 1999. Cell transplantation: A novel treatment for the failing heart.

Weisel RD: Visiting Professor, Cleveland Clinic Foundation, Cleveland, Ohio, March 2000. Cell transplantation: A novel treatment for the failing heart.

Weisel RD: Europa Bio '99 Congress, Munich, Germany, November 1999. Cell transplantation: A novel treatment for the failing heart.

Weisel RD: National Heart, Lung and Blood Institute, Bethesda, Maryland, April 2000. Cell transplantation: A novel treatment for the failing heart.

Weisel RD: Society for Cardiovascular Pathology, New Orleans, Louisiana, March 2000. Cell transplantation: A novel treatment for the failing heart.

Weisel RD: International Congress of Cardiovascular Anesthesia, Quebec City, Quebec, May 2000. Cell transplantation: A novel treatment for the failing heart.

Weisel RD: Heart Failure Summit, American College of Cardiology, Toronto, Ontario, June 2000. Cell transplantation: A novel treatment for the failing heart.

Weisel RD: Cardiostim 2000, Nice, France, June 2000. Cell transplantation: A novel treatment for the failing heart.

Weisel RD: American Heart Association, Atlanta, Georgia, November 1999. Developing interactions with industry and venture capital.

Weisel RD: Canadian Cardiovascular Society, Quebec City, Quebec, October 1999. The cardiac workforce in Canada: Where do we go from here?

Weisel RD: Society for Cardiovascular Anesthesiologists, Breckenridge, Colorado, March 2000. The practice of myocardial protection: Temperature, composition and delivery system.

Yau TM: Young Cardiac Surgeons of Canada, Cancun, Mexico, March 2000. Determinants of increased risk in redo aortic valve replacement.

Yau TM: Canadian Cardiovascular Society, Quebec City, Quebec, October 1999. (1) Chair: Myocardial revascularization, (2) Chair: Cardiopulmonary bypass, (3) Chair: Pediatrics.

Yau TM: Canadian Surgeons Club of Canada, Scottsdale, Arizona, April 2000. Update on gene therapy and cell transplantation.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Cardiac surgery health services research program. *Naylor CD, Keon WJ, Morgan CD, Szalai JP, Christakis GT, Pym J, Knudtson ML, Fremes SE, Anderson GM, McLaughlin JR, David TE, Goldbach MM, Goldman BS, McGlynn E, Scully HE, Schragge W, Gelfand ET, Hux J, Tu J:* Medical Research Council of Canada (\$210,151 1996 - 1999).

Cerebral protection by insulin for cardiac surgery. *Peniston CM, Weisel RD, Naylor CD, McLean RF:* Heart and Stroke Foundation (\$131,584 1999 - 2001).

Insulin cardioplegia for poor left ventricular function. *Yau TM, Weisel RD:* Heart and Stroke Foundation (\$69,000 1999 - 2001).

Magnetic resonance imaging for ischemic heart disease. *Merchant N, Mickleborough LL:* Medical Research Council of Canada (\$37,613 1999 - 2000).

Mosaic heart valve study. *Peniston CM*, David TE: Medtronic Incorporated (\$30,000 1999 - 2000).

Prolonged storage of cardiac allografts with shed donor blood. *Feindel CM*: Heart and Stroke Foundation (\$134,724 1999 - 2001).

Re-stenosis and acute antithrombotic therapy. *Buchanan MR*, Brister SJ: Heart and Stroke Foundation (\$72,908 1997 - 1999).

The safety and effects of O-raffinose crosslinked human hemoglobin in patients undergoing coronary artery bypass grafting: Phase II. *Cheng DCH*, Karski JM, Mazer D, Ralph-Edwards AC, Cusimano RJ, Yeo E: Hemosol Incorporated (\$85,000 1999 - 2000).

Women and blood transfusions in cardiac surgery. *Karkouti K*, Mickleborough LL: Janssen-Ortho Incorporated (\$20,000 2000 - 2001).

DIVISION OF GENERAL SURGERY

Dr. R.A. Affifi - Lecturer
Dr. U. Ambus - Associate Professor
Dr. M.S. Cattral – Associate Professor
Dr. L. Chaikof - Instructor
Dr. D. Grant - Professor
Dr. P.D. Greig - Professor
Dr. H.S. Himal - Associate Professor
Dr. B. Langer - Professor
Dr. J.C. Marshall – Associate Professor
Dr. R.E. Mathews - Assistant Professor
Dr. D.R. McCready - Associate Professor
Dr. R.K. Reznick - Professor
Dr. L.E. Rotstein - Associate Professor
Dr. O.D. Rotstein - Professor (*Division Head*)
Dr. B.R. Taylor - Professor
Dr. H.A.E. Weizel - Associate Professor

PUBLICATIONS

Ahmed N, Marshall JC: Corticosteroid therapy in critical illness: A changing paradigm. In: Yearbook of Intensive Care and Emergency Medicine (Vincent JL, ed). Springer-Verlag, New York: 2000: pp 175-186.

Bigam DL, Hemming AW, Sanabria JR, Cattral MS: Innominate artery interposition graft simplifies the portal venous drainage method of pancreas transplantation. Transplantation 1999; July 1999: 68: pp 1-10.

Cook DJ, Heyland D, Griffith L, Cook R, Marshall JC, Pagliarello G, Canadian Critical Care Trials Group: Risk factors for clinically important upper gastrointestinal bleeding in patients requiring mechanical ventilation. Critical Care Medicine: November 1999: 27: pp 2812-2817.

Dath D, Reznick RK: Objectifying skills assessment: Bench model solutions. In: Surgical Competence: Challenges of Assessment in Training and Practice (Royal College of Surgeons of England/Smith and Nephew Foundation, eds). Royal College of Surgeons of England, London: 1999: pp 52-66.

Fan J, Kapus A, Li YH, Rizoli S, Marshall JC, Rotstein OD:

Priming for enhanced fibrin deposition after hemorrhagic shock: Role of tumor necrosis factor. *American Journal of Respiratory and Cell Molecular Biology*: April 2000: 22: pp 412-421.

Foster DM, Cook DJ, Granton J, Steinberg M, Marshall JC,

Canadian Critical Care Trials Group: Use of a screen log to audit patient requirement into multiple randomized trials in the intensive care unit. *Critical Care Medicine*: March 2000: 28: pp 867-871.

Fowler RA, Cheung AM, Marshall JC: Selective decontamination of the digestive tract in critically ill patients. *Intensive Care Medicine*: October 1999: 25: pp 1323-1326.

Hackam DJ, Rotstein OD, Grinstein S: Phagosomal acidification: Mechanisms and functional significance. In: *Advances in Cell and Molecular Biology of Membranes and Organelle*, JAI Press Incorporated, England: 1999: pp 299-319.

Jones JJ, Fan J, Nathens AB, Kapus A, Shekman M, Marshall JC, Parodo J, Rotstein OD: Redox manipulation using the thiol oxidizing agent diethyl-maleate prevents hepatocellular necrosis and apoptosis in a rodent endotoxemia model. *Hepatology*: September 1999: 30: pp 714-724.

Kapus A, Szasz K, Sun J, Rizoli S, Rotstein OD: Cell shrinkage regulates Src kinases and induces tyrosine phosphorylation of cortactin, independent of the osmotic regulation of Na⁺/H⁺ exchangers. *Journal of Biological Chemistry*: May 2000: 274: pp 8093-8102.

MacRae H, Regehr G, Leadbetter W, Reznick RK: A comprehensive examination for senior surgical residents. *American Journal of Surgery*: March 2000: 179: pp 190-193.

Malkan G, Cattral MS, Humar A, Al Ashgar H, Greig PD, Hemming AW, Levy GA, Lilly LB: Lamivudine for hepatitis B in liver transplantation: A single centre experience. *Transplantation* 2000: May 2000: 69: pp 1403-1407.

Marshall JC: Clinical trials of mediator-directed therapy in sepsis: What have we learned? *Intensive Care Medicine*: February 2000: 26: pp S75-S83.

Marshall JC: Organ dysfunction as an outcome measure in clinical trials. *European Journal of Surgery*: October 1999: 165: pp 62-67.

Marshall JC: Re-thinking sepsis: From concepts to syndromes to diseases. *Sepsis*: September 1999: 3: pp 5-10.

Marshall JC: SIRS, MODS, and the brave new world of ICU acronyms: Have they helped us? In: *Multiple Organ Failure* (Baue AE, Faist E, Fry D, eds). Springer-Verlag, New York: 2000: pp 14-22.

Marshall JC, Cohen J: Immune Response in the Critically Ill, Volume 31 (Marshall JC, Cohen J, eds). Springer-Verlag, New York: 2000.

McCready DR, Bodurtha AJ, Davis NL, Meterissian S, Robert J, Temple WJ: Sentinel lymph node biopsy in breast cancer. *Canadian Journal of Surgery*: December 1999: 42(6): pp 406-407.

McGilvray ID, Rotstein OD: Anti-oxidant modulation of skin inflammation: Preventing inflammatory progression by inhibiting neutrophil influx. *Canadian Journal of Surgery*: July 1999: 42: pp 109-115.

Oreopoulos GD, Fan J, Li YH, Rotstein OD: Hemorrhagic shock modulates pulmonary I κ B gene expression. *Surgical Forum*: May 2000: 50: pp 203-205.

Reznick RK, Rajaratnam K: Performance-based assessment. In: *Teaching and Learning in Medical and Surgical Education: Lessons Learned for the 21st Century* (Distlehorst LH, Dunnington GL, Folse JR, eds). Lawrence Erlbaum Associates, New Jersey: 2000: pp 237-243.

Rizoli SB, Kapus A, Parodo J, Fan J, Rotstein OD: Hypertonic immunomodulation is reversible and accompanied by changes in CD11b expression. *Journal of Surgical Research*: May 2000: 83: pp 130-135.

Rizoli SB, Kapus A, Parodo J, Rotstein O: Hypertonicity interferes with actin cytoskeleton organization. *Surgical Forum*: May 2000: 50: pp 196-197.

Rizoli SB, Rotstein OD, Kapus A: Cell volume-dependent regulation of L-selectin shedding in neutrophils: A role for p38 mitogen-activated protein kinase. *Journal of Biological Chemistry*: May 2000: 274: pp 22072-22080.

Rotstein OD: Surgical approach #1 to severe necrotizing pancreatitis. In: *Current Opinion in Critical Care*. Lippincott-Williams and Wilkins, Philadelphia: 1999: pp 160-161.

Urbach DR, Rotstein OD: Typhlitis. *Canadian Journal of Surgery*: May 2000: 42: pp 415-419.

von Dadelszen P, Watson RWG, Noorwali F, Marshall JC, Parodo J, Farine D, Lye SJ, Ritchie JWK, Rotstein OD: Maternal neutrophil apoptosis in normal pregnancy, pre-clampsia and normotensive intrauterine growth restriction. *American Journal of Obstetrics and Gynecology*: May 2000: 181: pp 408-414.

Watson RWG, Brannigen AE, Coffey R, O'Neill A, Marshall JC, Brady HR, Fitzpatrick JM: Regulation of Fas antibody induced neutrophil apoptosis is both caspase and mitochondrial dependent. *FEBS Letters*: July 1999: 453: pp 67-71.

Wei AC, Fan J, Jones JJ, Hamilton J, Li YH, Marshall JC, Rotstein OD: Delayed treatment with diethyl-maleate prevents E-selectin expression in human endothelial cells. *Surgery*: October 1999: 126: pp 286-292.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Greig PD: Michener Institute, Toronto, Ontario, September 1999. Liver transplantation.

Greig PD: Royal College of Physicians and Surgeons of Canada/Canadian Association of General Surgeons, Montreal, Quebec, September 1999. Liver tumors: Resect or transplant?

Greig PD: Toronto Critical Care Medicine Symposium, Toronto, Ontario, October 1999. Management of variceal bleeding.

Greig PD: International Hepato-Pancreato-Biliary Association, Brisbane, Australia, May 2000. (1) Neoral or FK506 as primary immunosuppression following liver transplantation, (2) Optimal therapeutic monitoring for neoral following liver transplantation.

Greig PD: Canadian Liver Transplant Study Group, Mount Tremblant, Quebec, March 2000. Split liver transplantation: Canadian experience.

Greig PD: Hepatology Update 2000, Toronto, Ontario, April 2000. Surgical treatment of variceal hemorrhage.

Greig PD: Canadian Transplantation Society, Mount Tremblant, Quebec, March 2000. The living donor: Split liver.

Marshall JC: Workshop on the Design of Clinical Trials in Sepsis, London, England, February 2000. Sepsis clinical research: Historical background and perspectives.

Marshall JC: ANZICS 2000 Conference: Life on the Edge, Hawkes Bay, New Zealand, March 2000. (1) Antimicrobials in the post-antibiotic era, (2) Measuring endotoxin in the intensive care unit, (3) Transfusion: How much is enough? (4) Sepsis clinical trials: What have we learned?

Marshall JC: Toronto Critical Care Symposium, Toronto, Ontario, October 1999. (1) Clinical research in sepsis: What have we learned? (2) The gut in multiple organ failure.

Marshall JC: Symposium on Intensive Care Medicine, Grindelwald, Switzerland, February 2000. (1) Clinical trials in sepsis: Have we failed and how can we do better? (2) The multiple organ dysfunction syndrome, (3) Apoptosis: What is it, and why is it important for the intensivist?, (4) Panel: How to run the intensive care unit as an enterprise, (5) Panel: Essential monitoring in severe sepsis, (6) Panel: Clinical trials in the intensive care unit: How much can we expect?

Marshall JC: International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium, March 2000. (1) Measuring endotoxin levels, (2) Neutrophil survival during acute inflammation, (3) Surgical source control, (4) My intensive care unit beyond 2000: The inflammatory response is completely manipulated, (5) Minimizing antimicrobial use in the intensive care unit, (6) Charting a new course for clinical trials in sepsis.

Marshall JC: International Congress on the Immune Consequences of Trauma, Shock, and Sepsis, Munich, Germany, February 2000.

(1) Measuring organ dysfunction as a clinical outcome in the intensive care unit, (2) Regulation of neutrophil apoptosis during inflammation, (3) Preventing infection in acute lung injury, (4) Markers of inflammation.

Marshall JC: Society of Critical Care Medicine, Orlando, Florida, February 2000. (1) Organ dysfunction in ARDS: Incidence, prevention, and management, (2) The optimal hematocrit in the critically ill, (3) Organ dysfunction as an outcome in sepsis trials, (4) Pro- and anti-inflammatory strategies in sepsis: Do we know where we are?

Marshall JC: Critical Issues in Respiratory and Critical Care Medicine, Juan les Pins, France, June 2000. (1) The immune response in critical illness, (2) The gut-liver axis in critical illness, (3) Iatrogenesis in the intensive care unit.

Marshall JC: Surgical Infection Society, Halle, Germany, October 1999. (1) The multiple organ dysfunction syndrome, (2) Pulmonary failure, (3) Workshop: Source control in intra-abdominal infection.

Marshall JC: Residents Research Conference, Canadian Association of General Surgeons, Rocky Crest, Ontario, June 2000. An introduction to surgical knowledge.

Marshall JC: APICE/Organ Failure Academy, Trieste, Italy, November 1999. Clinical trials in sepsis: Current status and the lessons learned.

Marshall JC: Collins Day Visiting Professor, University of Ottawa, Ottawa, Ontario, May 2000. Concepts, syndromes, and diseases: The ongoing challenges of sepsis research.

Marshall JC: Surgical Infection Society, Providence, Rhode Island, April 2000. Controversies in surgical source control.

Marshall JC: Vienna Shock Forum, Vienna, Austria, November 1999. Host microbial interactions in critically ill patients.

Marshall JC: Roundtable Conference on Evaluating Critical Care Using Health Services Research to Improve Quality, Brussels, Belgium, March 2000. Measuring treatment outcomes in intensive care: Mortality, morbidity, and organ dysfunction.

Marshall JC: Infection and Host Responses in Critical Illness, Lago Maggiore, Italy, July 1999. Mediator-directed therapy in sepsis: What have we learned?

Marshall JC: Greenslopes Hospital, Brisbane, Australia, March 2000. Necrotizing pancreatitis.

Marshall JC: Canadian Association of General Surgeons, Montreal, Quebec, September 1999. Co-chair: Preparing for a career in academic surgery.

Marshall JC: American Thoracic Society, Toronto, Ontario, May 2000. Sepsis: New perspectives.

Marshall JC: Margaux Conference on Critical Illness, Margaux, France, November 1999. Therapeutic implications of anticoagulation mediator replacement in sepsis and DIC.

Marshall JC: Visiting Professor, Rush Presbyterian St. Luke's Medical Centre, Chicago, Illinois, February 2000. Update in the management of necrotizing pancreatitis.

McCready DR: Royal Victoria Hospital, Barrie, Ontario, May 2000. Breast cancer.

McCready DR: William Ersil Lecture, Queen's University, Kingston, Ontario, March 2000. Sentinel lymph node biopsy: Theory and practical realities.

McCready DR: Surgical Oncology Network Symposium, Toronto, Ontario, October 1999. The sentinel node and axillary dissection.

Reznick RK: Royal Australasian College of Surgeons, Melbourne, Australia, May 2000. (1) Using an assessment method to study innovation in surgical education, (2) Curriculum planning: Competencies of a surgical specialist workshop.

Reznick RK: Society of University Surgeons, Toronto, Ontario, February 2000. A rationale for teaching in a skills lab.

Reznick RK: Council of Medical Specialty Societies, Chicago, Illinois, March 2000. Assessing performance in procedures: We need to do better.

Reznick RK: International Ottawa Conference on Medical Education, Cape Town, South Africa, March 2000. Assessment of minor surgical skills for family medicine residents.

Reznick RK: Association for Surgical Education, Toronto, Ontario, May 2000. Presidential address: I am a good teacher, maybe even a really good teacher: Is that okay?

Reznick RK: Royal College of Surgeons of England/Smith and Nephew Foundation, London, England, November 1999. Objectifying skills assessment: Bench model solutions.

Reznick RK: Royal College of Physicians and Surgeons of Canada, Montreal, Quebec, September 1999. Preparing for a career in surgical education.

Reznick RK: McMaster University, Hamilton, Ontario, December 1999. She can't cut her way out of a wet paper bag.

Rotstein LE: Royal College of Physicians and Surgeons of Canada, Montreal, Quebec, September 1999. (1) Be it resolved that primary hyperparathyroidism is best treated by a limited, minimalist, focused surgical intervention, (2) Is conventional surgical management of primary hyperparathyroidism unduly morbid?

Rotstein OD: American College of Surgeons Clinical Congress, San Francisco, California, October 1999. Chair: Papers session.

Rotstein OD: Brown University, Providence, Rhode Island, February 2000. Immunomodulation using novel resuscitation strategies in the trauma patient.

Rotstein OD: McGill University, Montreal, Quebec, February 2000. Immunomodulation using novel resuscitation strategies in the trauma patient.

Rotstein OD: University of Medicine and Dentistry of New Jersey, Newark, New Jersey, February 2000. Immunomodulation using novel resuscitation strategies in the trauma patient.

Rotstein OD: Scarborough Centenary Health Centre, Toronto, Ontario, October 1999. Management of intra-abdominal infection.

Rotstein OD: Northwestern University, Chicago, Illinois, November 1999. Novel fluid resuscitation strategies following trauma.

Rotstein OD: University of Minnesota, Minneapolis, Minnesota, December 1999. Novel strategies for fluid resuscitation following trauma.

Rotstein OD: World Congress on Trauma, Shock, Inflammation and Sepsis: Pathophysiology, Immune Consequences and Therapy, Munich, Germany, February 2000. Pancreatitis: Inflammation or infection or both?

Rotstein OD: Canadian Forces Operational Medicine Conference, Quebec City, Quebec, November 1999. Pharmacology: Recent advances in trauma unit.

Taylor BR: University of British Columbia, Vancouver, British Columbia, May 2000. General surgeons versus the media: A confrontation.

Taylor BR: British Columbia Surgical Society, Vancouver, British Columbia, May 2000. (1) Treatment of metastatic and recurrent colorectal cancer, (2) Pancreatic cancer: What should be done, and who should be doing it? (3) Speech recognition technology: Is it for real?

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A case-control study of long-term survivors of breast cancer and their physical and functional well-being. *Trudeau M, Blondal J, Lickley HLA, Narod S, McCready DR, Sawka C, Hawker G, Doane F, Rubin L, Miller J, Chiamvimonvat V*: National Cancer Institute of Canada (\$327,807 1997 - 2000).

A comparison of the inflammatory response following the transfusion of leukodepleted compared to non-leukodepleted, stored red blood cells in critically ill patients. *Granton J, Smith T, Bannack B, Marshall J*: Bayer Canada Limited/CRCS (\$95,000 1997 - 1999).

A phase II study of multiple dose safety, tolerability, pharmacokinetics, and pharmacodynamics of PMX-622 in patients with severe SIRS and evidence of infection. *Marshall JC, Walker PM, Romaschin A, Foster D*: Novartis Pharmaceuticals Corporation (\$100,000 1998 - 1999).

A phase III study to determine the efficacy and safety for recombinant human activated protein C in severe sepsis. *Marshall JC*: Eli Lilly and Company (\$80,000 1998 - 1999).

A pilot study of antiviral activity of entecavir in liver transplant recipients re-infected with hepatitis B. *Lilly LS, Greig PD, Cattral MS, Levy GA, Girrah N, Grant DR*: Bristol Myers Squibb Incorporated (\$45,000 2000 - 2001).

A randomized controlled trial to assess the need for breast radiation in addition to tamoxifen in women 50 years of age and over with node negative breast cancer. *Fyles AW, Manchul LA, McCreedy DR, Trudeau ME*: Ministry of Health (\$68,319 1999 - 2000).

A randomized double-blinded comparative study of the efficacy and safety of intravenous and oral mycophenolate mofetil and azathioprine in combination with cyclosporine and corticosteroids in liver transplantation. *Levy GA, Hemming AW, Cattral MS, Greig PD*: Roche/Syntex (\$1,200,000 1997 - 1999).

Are advanced laparoscopic skills for senior residents learned in a short training course and transferred to operations? *Dath D, MacRae H, Friedlich M, Mamazza J, Schlachta C, Reznick RK, Regehr G*: Association for Surgical Education (\$36,568 1999 - 2000).

Assessment of minor surgical skills for family medicine residents. *Friedlich M, MacRae H, Reznick RK, Regehr G, Tannenbaum D, Batty H, Oandasan I*: Physicians Services Incorporated Foundation (\$38,400 1998 - 1999).

Cellular and molecular mechanisms of organ injury. *Rotstein OD, Levy GA, Marsden P, Issekutz T*: Medical Research Council of Canada (\$375,000 1995 - 2000).

Designing new strategies in combat casualty care: From bench to bedside. *Rotstein OD*: Defense and Civil Institute of Environmental Medicine (\$107,000 1999 - 2002).

Development and evaluation of computer-based versions of the decision board for early breast cancer. *Whelan TJ*, Gafni M, Sebalt A, Lewis R, Julian J, Reid S, Arnold A, McCready DR, Ryno L, Sanders K: United States Army Medical and Material Command (\$448,994 1998 - 2001).

Evaluating the effectiveness of a two-year curriculum in a surgical skills centre: The future of surgical training? *Brown M*, Hutchison C, Anastakis D, Reznick RK, Regehr G, Herold J: Physicians Services Incorporated Foundation (\$82,000 1998 - 2000).

Evaluation of excretion of a biopharmaceutical oral cyclosporine formulation in clinical studies of bile diverted liver transplant recipients. *Levy GA*, Greig PD, Catral MS, Grant DR, Lilly LS: Novartis Pharmaceuticals Corporation (\$84,000 1999 - 2000).

Focused skills training versus sequential peripheral skills curriculum. *Caminiti M*, Regehr G, Brown M, Hamstra S, Reznick RK: Association of Canadian Medical Colleges (\$20,937 1999 - 2000).

Glycine conjugation of para-aminobenzoic acid (PABA): A new quantitative test of liver function. *Hemming AW*, Furuka K, Greig PD: Physicians Services Incorporated Foundation (\$92,000 1998 - 2000).

Measurement of hypoxia in breast tumors. *Ballinger JR*, Fyles AW, McCready DR, Hedley DW: Canadian Breast Cancer Foundation (\$35,000 1999 - 2000).

Molecular medicine: Fluorescence-based methodologies. *Marsden PA*, Levy GA, Cybulsky M, Rotstein OD: Medical Research Council of Canada (\$110,330 1997 - 2000).

Obesity and related factors in breast cancer: A prospective cohort study. *Goodwin P*, Pritchard K, Trudeau M, McCready DR, Koo J, Diamandis E, Page D: Canadian Breast Cancer Research Initiatives (\$156,193 1998 - 2001).

Open label comparative trial of two daclizumab doses versus no induction with tacrolimus, MMF, and steroids following pancreas kidney transplantation. *Cattral MS, Greig PD, Grant DR, Levy GA, Lilly LS*: Hoffman LaRoche Limited (\$48,000 2000 - 2001).

Prognostic value of novel pathologic markers in women with lymph node negative breast cancer. *Liu FF, Fyles A, Banerjee D, Tsao M, Benchimol S, McCready DR, Youngson B, Manchul L, Trudeau M, Pintilie M, Henry M*: Canadian Breast Cancer Research Initiatives (\$190,296 1998 - 2001).

Prograf as intervention in treatment of hypercholesterolemia after liver transplantation. *Lilly LS, Greig PD, Levy GA, Girgrah N*: Fujisawa Canada Incorporated. (\$20,000 2000 - 2001).

Radiation and tamoxifen for breast cancer. *Fyles AW, Manchul LA, McCready DR, Trudeau ME*: Ministry of Health (\$74,766 2000 - 2001).

Randomized clinical trial of conventional dose tacrolimus and steroids compared with reduced dose tacrolimus and steroids in liver transplant patients. *Lilly LS, Greig PD, Levy GA, Cattral MS, Grant DR, Girgrah N*: Wyeth-Ayerst Research Canada Incorporated (\$200,000 2000 - 2001).

Regulation of neutrophil programmed cell death (apoptosis) in clinical and experimental inflammation. *Marshall JC*: Medical Research Council of Canada (\$270,000 1999 - 2002).

Ten-year breast cancer survival: At what cost in human and physical terms?: A case-control study of long-term survivors of breast cancer and their physical and functional well-being. *Trudeau ME, Blondal J, Lickley HLE, Hawker G, Rubin L, Narod S, Sawka C, Doane F, Miller J, Chiamvimonvat V, McCready DR*: Canadian Breast Cancer Research Initiatives (\$118,914 1999 - 2000).

The multicentre endotoxin detection in critical illness (MEDIC) study: An evaluation of a novel assay for the detection of endotoxemia in critically ill patients. *Marshall JC, Walker PM, Romaschin A, Foster D*: Sepsis Incorporated (\$700,000 1998 - 1999).

Three year randomized multicentre study of the efficacy and safety of RAD versus MMF in liver transplantation. *Levy GA, Greig PD, Cattral MS, Lilly LS, Grant DR, Girgrah N: Novartis Pharmaceuticals Corporation (\$60,000 2000 - 2001).*

HONOURS RECEIVED

Langer B: Duncan Graham Award, Royal College of Physicians and Surgeons of Canada, September 1999.

Reznick RK: Haemonetics Corporation Outstanding Paper Award, Association for Surgical Education, May 2000.

Reznick RK: John P. Hubbard Award, National Board of Examiners, March 2000.

Reznick RK: Northwest Society of Colon and Rectal Surgeons Award, September 1999.

Rotstein LE: Ross Fleming Surgical Educator Award, University Health Network, May 2000.

Taylor BR: Colin Woolf Award for Continuing Medical Education, University of Toronto, May 2000.

DIVISION OF NEUROSURGERY

Dr. M. Bernstein – Professor (*Division Head*)

Dr. M.G. Fehlings - Associate Professor

Dr. J.F.R. Fleming - Professor

Dr. F. Gentili - Associate Professor

Dr. A. Guha - Associate Professor

Dr. A.M. Lozano - Professor

Dr. C.H. Tator - Professor

Dr. M. Tymianski - Assistant Professor

Dr. M.C. Wallace - Professor

PUBLICATIONS

Al-Yamany M, Lozano A, Nag S, Laperriere N, Bernstein M: Spontaneous remission of primary central nervous system lymphoma: Report of three cases and discussion of pathophysiology. *Neuro-Oncology*: July 1999; 2: pp 151-159.

Ashby P, Chen R, Wennberg R, Lozano AM, Lang AE: Cortical reflex myoclonus studies with cortical electrodes. *Clinical Neurophysiology*: July 1999; 110: pp 1521-1530.

Ashby P, Lang AE, Kumar R, Rothwell J, Lozano AM: Physiological attributes of subthalamic nucleus stimulation. *Brain*: July 1999; 122(10): pp 1919-1931.

Bernstein M, Bampoe J: Low-grade gliomas. In: *Neuro-Oncology: The Essentials* (Bernstein M, Berger M, eds). Thieme Publications, New York: 2000: pp 302-308.

Bernstein M, Berger M: *Neuro-Oncology: The Essentials* (Bernstein M, Berger M, eds). Thieme Publications, New York: 2000.

Bhide VM, Edmonds VE, Tator CH: Prevention of spinal cord injuries caused by diving: Evaluation of the distribution and usage of a diving safety video in high schools. *Injury Prevention*: June 2000; 6: pp 154-156.

Chen R, Lozano AM, Ashby P: Mechanisms of the silent period following transcranial magnetic stimulation: Evidence from epidural recordings. *Experimental Brain Research*: July 1999; 128: pp 539-542.

Cheung HH, Takagi N, Teves L, Logan R, Wallace MC, Gurd JW: Altered association of protein tyrosine kinases with post-synaptic densities after transient cerebral ischemia in the rat brain. *Journal of Cerebral Blood Flow*: January 2000; 20: pp 505-512.

Fehlings MG, Tator CH: An evidence-based review of decompressive surgery in acute spinal cord injury: Rationale, indications and timing based on experimental and clinical studies. *Spine*: July 1999; 91: pp 1-11.

Feldkamp M, Lau N, Guha A: Astrocytomas are growth-inhibited by farnesyl transferase inhibitors through a combination of anti-proliferative and anti-angiogenic activities. *Oncogene*: December 1999; 18: pp 7514-7526.

Feldkamp M, Lala P, Lau N, Guha A: Expression of activated epidermal growth factor receptor and mitogen-activated protein kinase in human glioblastoma multiforme specimens. *Journal of Neurosurgery*: December 1999; 45(6): pp 1442-1453.

Ferguson GG, Eliasziw M, Barr HW, Clagett GP, Barnes RW, Wallace MC, Daylor DW, Haynes RB, Finan JW, Hachinski VC, Barnett JJ: The North American symptomatic carotid endarterectomy trial: Surgical results in 1,415 patients. *Stroke*: September 1999; 30(9): pp 1751-1758.

Hallett M, Litvan M, Task Force on Surgery for Parkinson's Disease (including Lozano AM): Evaluation of surgery for Parkinson's disease. *Neurology*: July 1999; 53: pp 1910-1921.

Hill MD, Kumar R, Lozano AM, Tator C, Ashby P, Lang AE: Syringomyelic dystonia and athetosis. *Movement Disorders*: July 1999; 14: pp 684-688.

Honey C, Gross RE, Lozano AE: New developments in surgery for Parkinson's disease. *Canadian Journal of Neurological Sciences*: July 1999; 25(2): pp S45-S52.

Kim YS, Chin DK, Tator CH, Nakagawa H, Pentelenyi TJ, Park HC: Surgical management of incomplete cervical cord injury with stenosis secondary to ossification of the posterior longitudinal ligament. *Spinal Cord*: March 2000; 3: pp 140-145.

Kulkarni A, Bernstein M: Stereotactic biopsy. In: *Neuro-Oncology: The Essentials*. (Bernstein M, Berger M, eds). Thieme Publications, New York: 2000: pp 122-129.

Kumar R, Dagher A, Hutchison WD, Lang AE, Lozano AM: Globus pallidus deep brain stimulation (DBS) for generalized dystonia: Clinical efficacy and reversal of abnormal PET activation pattern. *Neurology*: July 1999: 53(4): pp 871-874.

Kumar R, Lozano AM, Sime E, Halket E, Lang AE: Comparative effects of unilateral and bilateral subthalamic nucleus deep brain stimulation in advanced Parkinson's disease. *Neurology*: July 1999: 53(3): pp 561-566.

Lang AE, Duff J, Saint-Cyr JA, Trepanier L, Gross RE, Lombardi W, Montgomery E, Hutchison WD, Lozano AM: Posteroventral medial pallidotomy in Parkinson's disease. *Journal of Neurology*: July 1999: 246(2): pp II28-II41.

Li S, Tator CH: Action of locally administered NMDA and AMPA/kainate receptor antagonists in spinal cord injury. *Neurology Research*: June 2000: 22: pp 171-180.

Li S, Tator CH: Spinal cord blood flow and evoked potentials as outcome measures for experimental spinal cord injury. In: *Spinal Cord Monitoring: Basic and Clinical Aspects* (Stalberg E, Sharma HS, Olsson Y, eds). Springer Verlag, New York: 2000: pp 365-392.

Mikkelsen T, Shaw EG, Bernstein M, Cairncross JG, Kim JH, Rosenblum M, Rock JP: Practical case scenarios. In: *The Practical Management of Low-Grade Primary Brain Tumors* (Rock J, Rosenblum M, Shaw E, Cairncross G, eds). Lippincott-Williams and Wilkins, Philadelphia: 1999: pp 181-189.

Nashmi R, Jones O, Fehlings MG: Abnormal axonal physiology is associated with altered expression and distribution of Kv1.1 and Kv1.2 K⁺ channels after chronic spinal cord injury. *European Journal of Neuroscience*: February 2000: 12: pp 491-506.

Ng WP, Lozano AM: Neuronal age influences the response to neurite outgrowth inhibitory activity in the central and peripheral nervous systems. *Brain Research*: July 1999: 836: pp 49-61.

Pahapill PA, Levy R, Dostrovsky JO, Davis KD, Rezai MR, Tasker RR, Lozano AM: Arrest of tremor with intracerebral microinjections of muscimol in patients with essential tremor. *Annals of Neurology*: July 1999; 46(2): pp 249-252.

Peres-Velazquez JL, Khosravani H, Lozano AM, Carlen PL, Wennberg R: Intermittent dynamics in human epilepsy. *European Journal of Neuroscience*: July 1999; 11: pp 1-6.

Redekop G, Willinsky R, Montanera W, ter Brugge K, Tymianski M, Wallace MC: Endovascular occlusion of basilar bifurcation aneurysms with electronically detachable coils. *Canadian Journal of Neurological Science*: August 1999; 26(3): pp 172-181.

Rezai A, Hutchison WD, Lozano AM: Chronic subthalamic nucleus stimulation for Parkinson's disease. *Neurosurgical Operative Atlas*: July 1999: pp 195-207.

Ross IB, Koyanagi I, Wallace MC, Tator CH: Autoradiographic (3H) nimodipine distribution after experimental spinal cord injury in rats. *Journal of Neurotrauma*: November 1999; 16(8): pp 739-746.

Schumacher PA, Siman R, Fehlings MG: Pre-treatment with calpain inhibitor CEP4143 inhibits calpain I activation and cytoskeletal degradation, improves neurological function and enhances axonal survival after traumatic spinal cord injury. *Journal of Neurochemistry*: April 2000; 74: pp 1646-1655.

Shaker H, Wang Y, Loung D, Balbaa L, Fehlings MG, Hassouna MM: Role of C-afferent fibers in the mechanism of action of sacral nerve root neuromodulation of chronic spinal cord injury. *British Journal of Urology International*: May 2000; 85: pp 905-910.

Shand N, Weber F, Mariani L, Bernstein M, Gianella-Borradori A, Long Z, Sorenson AG, Barbier N: A phase 1-2 clinical trial of gene therapy for recurrent glioblastoma multiforme by tumor transduction with the herpes simplex thymidine kinase gene followed by ganciclovir. *Human Gene Therapy*: September 1999; 10: pp 2325-2335.

Shiba K, El-Masry WS, Moraes AC, Park C, Waters RL, Tator CH: Anterior dislocation and extruded disc of the lower cervical spine. *Spinal Cord*: August 1999; 37: pp 538-541.

Skaf G, Fehlings MG: The medical and surgical management of spontaneous and post-operative diskitis. *Techniques in Neurosurgery*: November 1999; 5: pp 1-16.

Takagi N, Cheung HH, Bissonn N, Teves L, Wallace MC, Gurd JW: The effect of transient global ischemia on the interaction of Src and Fyn and with N-methyl-D-aspartate receptor and post-synaptic densities: Possible involvement of Src homology 2 domains. *Journal of Cerebral Blood Flow and Metabolism*: August 1999; 8: pp 880-888.

Takagi N, Logan R, Teves L, Wallace MC, Gurd JW: Altered interaction between PSD-95 and the NMDA receptor following transient global ischemia. *Journal of Neurochemistry*: January 2000; 74(1): pp 169-178.

Tator CH: Clinical manifestation of acute spinal cord injury. In: *Contemporary Management of Spinal Cord Injury: From Impact to Rehabilitation* (Tator CH, Benzel EC, eds). American Association of Neurological Surgery, Illinois: 2000: pp 21-32.

Tator CH: Epidemiology and general characteristics of the spinal cord injured patient. In: *Contemporary Management of Spinal Cord Injury: From Impact to Rehabilitation* (Tator CH, Benzel EC, eds). American Association of Neurological Surgery, Illinois: 2000: pp 15-20.

Tator CH: The stimulus for an acute spinal cord injury unit. *Canadian Journal of Neurological Sciences*: August 1999; 26: pp 239-241.

Tator CH, Benzel EC: The evolution of modern day spine surgery: An historical perspective. In: *Contemporary Management of Spinal Cord Injury: From Impact to Rehabilitation* (Tator CH, Benzel ED, eds). American Association of Neurological Surgery, Illinois: 2000: pp 9-14.

Tator CH, Carson JD, Cushman R: Hockey injuries of the spine in Canada, 1966-1996. *Canadian Medical Association Journal*: March 2000; 6: pp 787-788.

Tator CH, Carson JD, Cushman R: Spinal injuries in Canadian ice hockey players, 1966-1996. In: *Neurologic Athletic Head and Spine Injuries* (Cantu RC, ed). W.B. Saunders Company, Philadelphia: 2000: pp 289-296.

Tator CH, Fehlings MG, Thorpe K, Taylor W: Current use and timing of spinal surgery for management of acute spinal cord injury in North America: Results of a retrospective multicentre study. *Spine*: July 1999: 71: pp 12-18.

Tator CH, Li S: Effects of MK801 on evoked potentials, spinal cord blood flow and cord edema in acute spinal cord injury in rats. *Spinal Cord*: December 1999: 37: pp 820-832.

Tator CH, Skaf GS: Trauma of the nervous system. In: *Neurology in Clinical Practice: The Neurological Disorders* (Bradely WG, Daroff RB, Fenichel GM, Marsden CD, eds). Butterworth-Heinemann, Boston: 2000: pp 1089-1111.

Vitek G, Lozano AM, Lenz F: Surgery for Parkinson's disease: Review. *Neurosurgery Quarterly*: July 1999: 9(2): pp 103-119.

Walsh RM, Bath AP, Bance ML, Keller A, Tator CH, Rutka JA: The role of conservative management of vestibular schwannomas. *Clinical Otolaryngology*: February 2000: 1: pp 28-39.

Walsh RM, Bath AP, Bance ML, Keller A, Tator CH, Rutka JA: The natural history of untreated vestibular schwannomas: Is there a role for conservative management? *Revue de Laryngologie Otologie Rhinologie*: June 2000: 1: pp 21-26.

Zhang L, Zhang Y, Tian GF, Wallace MC, Eubanks JH: Reversible attenuation of glutamatergic transmission in hippocampal CA1 neurons of rat brain slices following transient cerebral ischemia. *Brain Research*: July 1999: 832: pp 31-39.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Bernstein M: Neuro-Oncology Symposium, Naples, Florida, February 2000. Awake craniotomy for brain tumor.

Bernstein M: First Division of Neurosurgery, Beijing, China, October 1999. Image and function-guided brain tumor surgery.

Bernstein M: Terry Fox Symposium, Taipei, Taiwan, October 1999. Image and function-guided brain tumor surgery.

Bernstein M: Visiting Professor, University of British Columbia, Vancouver, British Columbia, May 2000. Out-patient brain tumor surgery: A pilot study with 104 patients.

Fehlings MG: Spine Centre Course, Whistler, British Columbia, January 2000. (1) Lumbar radiculopathy: Diagnosis and management options, (2) Indications and technique of Codman anterior cervical plate fixation.

Fehlings MG: FASEB, Saxton River, Vermont, July 1999. Cellular mechanisms of spinal cord injury.

Fehlings MG: American Academy of Orthopedic Surgery, Orlando, Florida, March 2000. Cervical spondylotic myelopathy: Indications for early surgical intervention.

Fehlings MG: McGill University/Montreal Neurological Institute, Montreal, Quebec, May 2000. Current concepts in the pathophysiology and treatment of acute spinal cord injury: From gene to the operating room.

Fehlings MG: Congress of Neurological Surgeons, Boston, Massachusetts, November 1999. (1) Current management of odontoid fractures, (2) Course: Image-guided spinal surgery, (3) Course: Reconstruction of the anterior cervical spine.

Fehlings MG: American Association of Neurological Surgeons, San Francisco, California, April 2000. (1) Image-guided spinal surgery, (2) Indications and techniques of anterior decompression and reconstruction for sub-axial cervical spine trauma, (3) Role of surgery in acute spinal cord injury: Indications, techniques and timing.

Fehlings MG: American Association of Neurological Surgeons/Canadian Association of Neurological Surgeons, Palm Springs, California, February 2000. (1) Indications for surgery in acute cervical spinal cord injury, (2) Surgery for acute spinal cord injury: The case for early surgery.

Fehlings MG: AO/ASIF Comprehensive and Interactive Spine Course, Tucker's Town, Bermuda, November 1999. (1) Spinal cord anatomy and common neurological syndromes, (2) Occipitocervical fusion in trauma, (3) Posterior laminectomy and fusion and laminoplasty: Indications and outcomes, (4) Moderator: ATLP and ventrofix instrumentation, (5) Moderator: Challenging cervical spine problems.

Fehlings MG: Workers' Safety and Insurance Board, Toronto, Ontario, December 1999. Lumbar spinal stenosis and mechanical instability: Diagnosis and indications for surgical treatment and outcomes.

Fehlings MG: National Neurotrauma Society, Miami, Florida, October 1999. Role of early surgical decompression in spinal cord injury.

Fehlings MG: Altschul Conference in Neurobiology, Saskatoon, Saskatchewan, August 1999. Role of inflammatory mediators in the pathophysiology of acute spinal cord injury.

Fehlings MG: Canadian Syringomyelia Network, Toronto, Ontario, September 1999. Syringomyelia and spinal cord injury: Pathophysiology, molecular biology and treatment perspectives.

Fehlings MG: Visiting Professor, University of Miami, Miami, Florida, March 2000. (1) Management of complex disorders of the craniocervical junction, (2) Novel mechanisms of traumatic axonal dysfunction after spinal cord injury.

Guha A: Visiting Professor, University of Wisconsin, Madison, Wisconsin, September 1999. Comprehensive cancer care clinic.

Guha A: Canadian Brain Tumor Network, Toronto, Ontario, December 1999. (1) Organizer and chair.

Guha A: International Brain Tumor Symposium, Sapporo, Japan, October 1999. Transgenic model of human astrocytomas.

Lozano AM: Congress of Neurological Surgeons, Boston, Massachusetts, October 1999. (1) Movement disorders: Pathophysiology, diagnosis, treatment, (2) Regeneration of transected optic nerve axons in vivo, (3) Transplantation and functional restoration, (4) Subthalamic nucleus stimulation for movement disorders: Patient selection, surgical technique, outcome and complications, (5) Future prospects: Emerging applications of brain stimulation.

Lozano AM: Congress of the Brazilian Academy of Neurosurgery, Gramado, Brazil, September 1999. (1) Pallidotomy in the treatment of Parkinson's disease, (2) Stereotactic treatment of primary dystonia, (3) The STN target, (4) Thalamic and pallidal DBS for Parkinsonian symptoms, (5) The future of Parkinson's disease surgery.

Lozano AM: Japanese Society for Stereotactic and Functional Neurosurgery, Tokyo, Japan, October 1999. Advances in the surgical treatment of movement disorders.

Lozano AM: International Symposium, Medical College of Korea University, Seoul, Korea, September 1999. Anatomy and pathophysiology of Parkinson's disease: The evolution of surgery for movement disorders.

Lozano AM: Unidad Multidisciplinar de Neurocirugia Funcional, Hospital Central de Asturias, Oviedo, Spain, November 1999. Pallidal surgery for Parkinson's disease.

Lozano AM: International Parkinson's Disease Congress, Vancouver, British Columbia, July 1999. Pallidotomy: State of the art.

Lozano AM: University of Michigan Medical School, Ann Arbor, Michigan, November 1999. (1) Surgery for Parkinson's disease, (2) Parkinson's disease update: Treatment issue.

Lozano AM: National Parkinson's Foundation, Miami, Florida, October 1999. Surgical strategies in Parkinson's disease.

Lozano AM: Mexican Association for Neurosurgery, Cancun, Mexico, July 1999. Vim thalamic stimulation for tremor and rigidity.

Wallace MC: Brazilian Academy of Neurosurgery, Gramado, Brazil, September 1999. (1) Asymptomatic carotid disease: Concepts of treatment, (2) Giant intracranial aneurysms, (3) Surgical treatment of critical carotid stenosis, (4) Dural AVM's: Treatment strategy.

Wallace MC: Harvard Medical School of Medicine, University of California, San Francisco, California, May 2000. (1) AVM's: Treatment goals, combined therapy, (2) Discussion: AVM's.

Wallace MC: Congress of Neurological Surgeons, Boston, Massachusetts, November 1999. (1) Co-Director: Carotid surgery course, (2) Surgery of the carotid artery: Indications and techniques, (3) Controversies in the management of brain stem cavernous malformations, (4) Moderator: Section on cerebrovascular surgery I.

Wallace MC: Olivecrona Lecture Series, Karolinska, Sweden, December 1999. (1) Cerebrovascular program, (2) Neurosurgery.

Wallace MC: American Association of Neurological Surgeons/Canadian Association of Neurological Surgeons, Palm Springs, California, February 2000. Diagnosis and management of cavernous malformations.

Wallace MC: American Association of Neurological Surgeons, San Francisco, California, April 2000. Intracranial dural arteriovenous malformations.

Wallace MC: St. John's Convalescent Hospital/West Park Hospital, Toronto, Ontario, October 1999. Treatment of ischemic and hemorrhagic stroke.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Angiogenic growth factors in cerebral ischemia. *Guha A, Wallace C, Nagy A:* Heart and Stroke Foundation (\$231,000 1998 - 2001).

Canadian brain tumor network. *Guha A, Kaplan D, Mason W, Murphy R, Rutka J:* Medical Research Council of Canada/Canadian Institutes of Health Research (\$30,000 1999 - 2000).

Canadian brain tumor network. *Guha A, Kaplan D, Mason W, Murphy R, Rutka J*: National Cancer Institute of Canada (\$20,000 1999 - 2000).

Centralized flow cytometry: Ontario Cancer Institute/Princess Margaret Hospital. *Guha A*: Medical Research Council of Canada (\$641,895 1999 - 2004).

Characterization of adaptive changes in the brain of individuals with cervical spinal cord injury: Associations between fMRI, electrophysiology and function. *Mikulis D, Fehlings MG, Verrier M, Hutchison W*: Ontario Neurotrauma Foundation (\$74,000 1999 - 2000).

Effect of neuromodulation of the lower urinary tract following spinal cord injury. *Hassouna M, Fehlings MG*: Spinal Cord Research Foundation (\$144,720 1998 - 1999).

Ependymal stem cells for spinal cord repair. *Tator CH*: Ontario Neurotrauma Foundation (\$63,000 1999 - 2001).

Examination of the excitotoxic hypothesis of spinal cord injury using genetically modified mice. *Roder J, Fehlings MG*: Spinal Cord Research Foundation (\$156,000 1999 - 2000).

Expression and functional role of angiotensin in human astrocytomas. *Guha A*: Medical Research Council of Canada (\$270,000 1999 - 2002).

fMRI investigation of the temporal changes that occur in cerebral sensorimotor cortex following cervical spinal cord injury. *Mikulis D, Fehlings MG, McIlroy W, Verrier M*: Ontario Neurotrauma Foundation (\$165,000 2000 - 2003).

Growth factor and signal transduction pathway reactive astrocytosis. *Guha A*: Physicians Services Incorporated Foundation (\$50,000 1998 - 1999).

International subarachnoid aneurysm trial. *Willinsky RA, Wallace MC*: Medical Research Council of Canada (\$32,400 1998 - 2001).

Investigation and treatment of traumatic axonal dysfunction after spinal cord injury. *Fehlings MG*: Canadian Institutes of Health Research (\$346,332 2000 - 2003).

Investigation and treatment of traumatic axonal dysfunction after spinal cord injury. *Fehlings MG*: Medical Research Council of Canada (\$161,233 1997 - 2000).

Investigation of changes in potassium and glutamate ion channel activity in glial cells after SCI: Patch clamp studies in adult rat spinal cord slice. *Fehlings MG, Zhang L*: Ontario Neurotrauma Foundation (\$80,000 1999 - 2000).

Neoangiogenesis in cerebral ischemia. *Guha A, Wallace MC, Nagy A*: Heart and Stroke Foundation (\$246,428 1998 - 2004).

Neuroprotection of the injured spinal cord: Evaluation of the therapeutic role of caspase inhibitors in blocking post-traumatic apoptosis. *Fehlings MG*: Cervical Spine Research Society (\$46,000 1999 - 2000).

Neuroprotection of the injured spinal cord: Role of the mGluR1 receptor. *Fehlings MG*: Physicians Services Incorporated Foundation (\$140,000 2000 - 2002).

p53 protection of radiation injury in a rat brain tumor model. *Bernstein M, Rutka J*: Ontario Cancer Institute (\$50,000 1998 - 2000).

Ras mediated signaling by EGF-R and PDGF-R in human malignant astrocytomas. *Guha A*: Medical Research Council of Canada (\$302,000 1996 - 1999).

Repair of spinal cord injury with peripheral nerve grafts, neurotrophic factors and neutralization of inhibitory factors. *Tator CH*: Ontario Neurotrauma Foundation (\$73,000 1999 - 2001).

Role of FAS-activated caspases in the pathophysiology of spinal cord injury. *Fehlings MG*: Premier's Research Excellence Award (\$148,850 1999 - 2002).

Role of glial AMPA/Kainite receptors in neurotrauma. *Fehlings MG, Zhang L, Eubanks J, Gurd J, Carlen P, Baker A*: Medical Research Council of Canada/Canadian Neurotrauma Research Program (\$279,000 1999 - 2002).

Role of metabotropic glutamate receptors in acute spinal cord injury. *Fehlings MG*: Physicians Services Incorporated Foundation (\$123,000 1998 - 2000).

Role of the mGluR1 metabotropic glutamate receptor in the pathophysiology of central nervous system trauma. *Fehlings MG, Baker A*: Ontario Neurotrauma Foundation (\$163,300 2000 - 2003).

Studies of regeneration in the injured spinal cord. *Tator CH*: Ontario March of Dimes (\$30,000 1999 - 2000).

Support of the Canadian Paraplegic Association spinal cord injury research laboratory. *Tator CH*: Canadian Paraplegic Association (\$34,000 1996 - 1999).

The role of the NGF receptors TrkA and p75 and calcium in neurite regeneration. *Tator CH*: Ontario Neurotrauma Foundation (\$41,000 1999 - 2001).

Transgenic modeling of human astrocytomas. *Gutmann D, Guha A*: Monsanto Biomedical Research (\$40,000 1999 - 2000).

Tyrosine phosphorylation and molecular organization of the NMDA receptor following transient global ischemia: Implications for neuronal survival. *Gurd J, Wallace MC*: Heart and Stroke Foundation (\$230,700 1998 - 2001).

University of Toronto nervous system tumor bank. *Guha A*: Lunenfeld Foundation (\$30,000 1998 - 1999).

Use of genetically modified mice to probe the excitotoxic hypothesis of spinal cord injury. *Roder J, Fehlings MG*: Ontario Neurotrauma Foundation (\$150,000 1998 - 2001).

Vascular growth factor receptors as a target for auger electron radiotherapy of malignant astrocytomas. *Sandhu J, Guha A, Reilly R*: Natural Sciences and Engineering Research Council (\$239,607 1999 - 2002).

HONOURS RECEIVED

Bernstein M: Alan Hudson Teaching Award, University Health Network, June 2000.

Guha A: Best Scientific Paper Award, Society of Neuro-oncology, December 1999.

Tator CH: A.R. Hudson Teaching Award, Division of Neurosurgery, University of Toronto, May 2000.

Tator CH: Appointed a Member of the Order of Canada, January 2000.

DIVISION OF ORTHOPAEDIC SURGERY

Dr. J.R. Davey - Assistant Professor (*Division Head*)

Dr. B.A. Graham - Assistant Professor

Dr. J.D. Graham - Assistant Professor

Dr. N. Mahomed - Assistant Professor

Dr. K.W. Marshall - Assistant Professor

Dr. A. Miniaci - Associate Professor

Dr. D.J. Ogilvie-Harris - Associate Professor

Dr. R. Rampersaud - Lecturer

Dr. H.P. von Schroeder - Assistant Professor

Dr. T.A. Wright - Assistant Professor

PUBLICATIONS

Damyanovich AZ, Staples JR, Marshall KW: The effects of freeze/thawing on human synovial fluid observed by 500 MHz 1H magnetic resonance spectroscopy. *Journal of Rheumatology*: March 2000; 27(3): pp 746-752.

Fortin PF, Clarke AE, Joseph L, Liang MH, Tanzer M, Freeland D, Philip C, Partridge AJ, Belisle P, Fossel AH, Mahomed NN, Sledge CB, Katz JN: Outcomes of total hip and knee replacement: Pre-operative functional status predicts outcomes at six months after surgery. *Arthritis and Rheumatism*: September 1999; 42: pp 1722-1728.

Mahomed NN: Does occupational lifting cause hip osteoarthritis? *Journal of Rheumatology*: February 2000; 27(2): pp 292-293.

Mahomed NN, Koo M, Levesque J, Lan S, Bogoch ER: Determinants and outcomes of in-patient versus home-based rehabilitation following elective hip and knee replacement. *Journal of Rheumatology*: June 2000; 27(7): pp 1753-1758.

Manolopoulos V, Marshall KW, Zhang H, Trogadis J, Tremblay L, Doherty PJ: Factors affecting the efficacy of bovine chondrocyte transplantation in vitro. *Osteoarthritis and Cartilage*: September 1999; 7(5): pp 453-460.

Marshall KW, Waddell DD: Non-operative management of osteoarthritis of the knee. *The Physician and Sports Medicine*: May 2000; pp 14-19.

Ogilvie-Harris DJ, Sarosa E: Failed open surgery for osteochondritis of the ankle: Arthroscopic salvage. *Arthroscopy*: November 1999; 15: pp 809-812.

Yee AJ, Protzner K, Fornasier VL, Binnington AG, Bogoch E, Davey JR: Cementless acetabular fixation in total hip arthroplasty using polyglucolide lactide screw. *Journal of Arthroplasty*: June 2000; 15: pp 496-504.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Davey JR: Cleveland Clinic Course in Orthopaedics, White Sulphur Springs, West Virginia, June 2000. (1) Femoral offset restoration, (2) Avoiding dislocation following THR.

Davey JR: Canadian Orthopaedic Association, Edmonton, Alberta, June 2000. Alternatives to and in total knee arthroplasty: Mobile bearing knee arthroplasties.

Davey JR: Belgium and Dutch Orthopaedic Societies, Antwerp, Belgium, March 2000. Cementless total hip arthroplasty.

Mahomed N: Dartmouth University, Lebanon, New Hampshire, May 2000. Epidemiology of primary and revision THR in the United States medicare population.

Mahomed N: Canadian Orthopaedic Association, Edmonton, Alberta, June 2000. Evaluation of commonly used hip scoring systems.

Mahomed N: Canadian Orthopaedic Foundation, Toronto, Ontario, October 1999. Keynote address: Orthopaedics in the new millennium.

Mahomed N: Canadian Orthopaedic Association, St. John's, Newfoundland, July 1999. Post-operative strategies to minimize transfusion.

Mahomed N: The Arthritis Society, Toronto, Ontario, March 2000. When is surgery necessary?

Marshall KW: Baltic Conference on Orthopaedics and Traumatology, Jurmala, Latvia, October 1999. Current trends in OA.

Marshall KW: Hellenic Orthopaedic Association, Athens, Greece, October 1999. New developments in knee OA.

Marshall KW: Quebec Orthopaedic Association, Mount St. Anne, Quebec, September 1999. Non-arthroplasty management of knee OA.

Marshall KW: University of Nebraska, Omaha, Nebraska, September 1999. Non-arthroplasty management of knee OA.

Marshall KW: University of Massachusetts, Worcester, Massachusetts, November 1999. Non-arthroplasty management of knee OA.

Marshall KW: New England Baptist Bone and Joint Institute, Boston, Massachusetts, September 1999. The role of visco-supplementation in chondral lesions.

Marshall KW: Norwegian Orthopaedic Association, Oslo, Norway, October 1999. Visco-supplementation.

Marshall KW: St. Barnabas Medical Centre, West Orange, New Jersey, September 1999. Visco-supplementation.

von Schroeder HP: North American Traveling Fellowship, Fifteen Cities, North America, October 1999. (1) Osteoblast biology: What's new? (2) Extensor tendons: Form and function, (3) Vascularized bone grafts in the hand, (4) Mutilating hand injuries, (5) Common hand injuries.

von Schroeder HP: American Orthopaedic Association, Hot Springs, Virginia, June 2000. Invited guest: Awards presentation: North American Traveling Fellow.

von Schroeder HP: Worker's Safety and Insurance Board, Toronto, Ontario, November 1999. Microsurgery: The surgical experience.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Determinants and outcomes of revision total knee arthroplasty. *Mahomed N*, Myerthal S, Davey JD, Gross AE, Koo M: Canadian Orthopaedic Foundation (\$10,000 1999 - 2000).

Determinants of the outcomes of primary and revision total hip replacement in the United States medicare population. *Katz JN*, Baron J, Liang MH, Harris WH, *Mahomed NN*: National Institutes of Health (\$642,748 1999 - 2000).

Development of diagnostic criteria for carpal tunnel syndrome. *Graham B*, Wright JG: Physicians Services Incorporated Foundation (\$59,000 1998 - 2000).

Evaluation of commonly used hip rating systems. *Mahomed N*, Lau J, Koo M, Davey JR: Canadian Orthopaedic Foundation (\$15,000 1999 - 2001).

Evaluation of the reliability, validity and responsiveness of commonly used hip rating systems. *Mahomed N*, Lau J, Koo M, Davey JR: Canadian Orthopaedic Foundation (\$10,000 1999 - 2000).

Examining the relationship between evidence-based practice and physician and patient opinion. *Wright JG*, Coyte P, Glazier R, Hawker G, Kreder H, Mahomed NN: Arthritis Society (\$72,489 1999 - 2001).

Examining the relationship between evidence-based practice and physician and patient opinion. *Wright JG*, Coyte P, Glazier R, Hawker G, Kreder H, Mahomed NN: Medical Research Council of Canada (\$56,239 1999 - 2002).

In vivo chondrocyte resurfacing and gene transfer in rat articular cartilage. *Marshall KW*, Salo P, Doherty PJ: Arthritis Society (\$60,000 1998 - 2000).

Mid-term follow-up of primary and revision total hip arthroplasty. *Katz JN*, Mahomed NN, Harris WH, Phillips CS, Baron J: Arthritis Society (\$450,000 2000 - 2005).

Osteoblast biology. *von Schroeder HP*: The Toronto Hospital (\$50,000 1998 - 2001).

Prospective comparative analysis of tutoplast and MORE bone-patellar allografts for human ACL reconstruction. *Marshall KW*: Biodynamics Incorporated (\$140,000 1995 - 1999).

Randomized controlled trial of in-patient versus home-based rehabilitation following primary total hip and knee arthroplasty. *Mahomed NN*, Wright J, Hawker G, Badley L, Davis A, Coyte P, Naglie G, Steve F, Jaglal S, Koo M, Kraaetschmer B: Physicians Services Incorporated Foundation (\$129,000 1999 - 2001).

The potential for hylan therapy to provide for chondroprotection in evolving osteoarthritis. *Marshall KW*: Physicians Services Incorporated Foundation (\$120,000 1998 - 2000).

Validation of quality measures for hip replacement. *Katz JN*, Baron J, Liang MH, Harris WH, Mahomed NN: Agency for Health Care Policy and Research (\$472,306 1998 - 2000).

HONOURS RECEIVED

Mahomed NN: Second Prize, Best Clinical Research Paper, Annual Ogryzlo Day, June 2000.

DIVISION OF PLASTIC SURGERY

Dr. D.J. Anastakis - Assistant Professor

Dr. T.A.B. Bell - Lecturer

Dr. A. Freiberg – Professor

Dr. B.A. Graham – Assistant Professor

Dr. R.T. Manktelow - Professor

Dr. P.C. Neligan - Associate Professor (*Division Head*)

Dr. H.P. von Schroeder – Assistant Professor

PUBLICATIONS

Carraway JH, Manktelow RT: Static sling reconstruction of the lower eyelid. *Operative Techniques in Plastic and Reconstructive Surgery*: August 1999; 6(3): pp 163-166.

Carroll CMA, Pathak I, Irish J, Neligan PC, Gullane PJ: Reconstruction of total lower lip and chin defects using the composite radial forearm-palmaris longus tendon free flap. *Archives of Facial Plastics*: January 2000; 2: pp 53-56.

Chiodo AA, Gur E, Pang CY, Neligan PC, Boyd JB, Binhammer PM, Forrest CR: The vascularized pig fibula bone flap model: Effect of segmental osteotomies fixation on blood flow. *Plastic and Reconstructive Surgery*: March 2000; 105: pp 1004-1012.

Hopper RA, Griffiths S, Murray J, Manktelow RT: Factors influencing use of digital prosthesis in worker's compensation recipients. *Journal of Hand Surgery*: January 2000; 25A(1): pp 80-85.

Manktelow RT: Use of the gold weight for lagophthalmos. *Operative Techniques in Plastic and Reconstructive Surgery*: August 1999; 6(3): pp 157-158.

Manktelow RT, Zuker RM: Cross-facial nerve graft: The long and short graft: The first stage for micro-neurovascular muscle transfer. *Operative Techniques in Plastic and Reconstructive Surgery*: August 1999; 6(3): pp 174-179.

Manktelow RT, Zuker RM: Introduction. *Operative Techniques in Plastic and Reconstructive Surgery*: August 1999; 6(3): pp 151.

Neligan PC: Rectus femoris for groin reconstruction. In: *Operative Plastic Surgery* (Evans GD, ed). McGraw-Hill Incorporated, Chicago: 2000: pp 762-767.

Neligan PC: Tensor fascia lata for groin reconstruction. In: *Operative Plastic Surgery* (Evans GD, ed). McGraw-Hill Incorporated, Chicago: 2000: pp 757-761.

O'Sullivan B, Wylie J, Catton C, Gutierrez E, Swallow CJ, Wunder J, Gullane P, Neligan PC, Bell R: The local management of soft tissue sarcoma. *Seminars in Radiation Oncology*: October 1999: 9: pp 328-348.

Shpitzer T, Neligan PC, Gullane PJ, Boyd JB, Gur E, Rotstein LE, Brown DH, Irish JC, Freeman JE: The free iliac crest and fibula flaps in vascularized oromandibular reconstruction: Comparison and long-term evaluation. *Head and Neck Surgery*: October 1999: 21: pp 639-647.

Terzis JK, Kalantarian B, Manktelow RT: Microsurgical strategies in 74 patients for restoration of dynamic depressor muscle mechanism: A neglected target in facial reanimation. *Plastic and Reconstructive Surgery*: February 2000: 105: pp 3.

Zuker RM, Manktelow RT: The technique of muscle transplantation to the face in children with Moebius syndrome. *Operative Techniques in Plastic and Reconstructive Surgery*: August 1999: 6(3): pp 204-209.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Anastakis DJ: Association for Surgical Education, Toronto, Ontario, May 2000. (1) Workshop instructor: Research methodology, (2) Moderator: Training across the professions: From competence to virtuosity.

Anastakis DJ: Worker's Safety and Insurance Board, Toronto, Ontario, June 2000. Research endeavors.

Anastakis DJ: Great Lakes Hand Meeting, London, Ontario, March 2000. Reanimation of the paralyzed shoulder.

Manktelow RT: International Symposium in Reconstructive Surgery of Facial Paralysis, Pamplona, Spain, March 2000. (1) Dynamic reconstruction of facial paralysis in adults and children, (2) The first and second step of dynamic reconstructive surgery of facial paralysis performed on a cadaver and transmitted on television.

Manktelow RT: American Society of Reconstructive Microsurgery, Miami, Florida, January 2000. Resident review course: Facial paralysis reconstruction.

Manktelow RT: International Muscle Symposium, Vienna, Austria, May 2000. Facial paralysis reconstruction with muscle transplantation: A personal journey.

Manktelow RT: International Symposium in Reconstructive Surgery, Stuttgart, Germany, November 1999. Past and future of gracilis transfer.

Neligan PC: British Virgin Islands Workshop in Plastic Surgery, Tortola, British Virgin Islands, January 2000. (1) Perforator flaps: Useful addition or fad?, (2) Reconstruction of the neck and shoulder following sarcoma resection.

Neligan PC: American Society of Reconstructive Microsurgery, Miami, Florida, January 2000. Instructional course: Craniofacial reconstruction.

Neligan PC: American Society of Plastic and Reconstructive Surgeons, New Orleans, Louisiana, October 1999. (1) Instructional course: Lip reconstruction following tumor ablation, (2) Multimedia presentations for education.

Neligan PC: GAM Canada, Winnipeg, Manitoba, June 2000. Panel: Complications in microsurgery.

Neligan PC: North American Skull Base Society, Scottsdale, Arizona, March 2000. Surgical approaches: Craniofacial resection.

Neligan PC: Plastic Surgery Educational Foundation, San Diego, California, June 2000. Teleplast: Distraction osteogenesis.

von Schroeder HP: North American Traveling Fellowship, Fifteen Cities, North America, October 1999. (1) Osteoblast biology: What's new? (2) Extensor tendons: Form and function, (3) Vascularized bone grafts in the hand, (4) Mutilating hand injuries, (5) Common hand injuries.

von Schroeder HP: American Orthopaedic Association, Hot Springs, Virginia, June 2000. Invited guest: Awards presentation: North American Traveling Fellow.

von Schroeder HP: Worker's Safety and Insurance Board, Toronto, Ontario, November 1999. Microsurgery: The surgical experience.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Determinants of treatment outcomes in work-related carpal tunnel syndrome. *Manktelow RT*, Binhammer P, Bril V, Szalai JP, Tomat L: Worker's Safety and Insurance Board (\$205,025 1999 - 2001).

Development of diagnostic criteria for carpal tunnel syndrome. *Graham B*, Wright JG: Physicians Services Incorporated Foundation (\$59,000 1998 - 2000).

Evaluating the effectiveness of a two-year curriculum in a surgical skills centre: The future of surgical training? *Anastakis DJ*, Brown M, Ali J, Hamstra S, Hutchison C, Murnaghan J, Regehr G, Reznick R: Physicians Services Incorporated Foundation (\$82,555 1998 - 2000).

Functional MRI: Mapping brain activity following amputation and peripheral nerve injury. *Anastakis DJ*, Mikulis D: Worker's Safety and Insurance Board (\$47,700 1998 - 2000).

Investigation of histopathophysiology and pharmacologic intervention of radiation-induced craniofacial bone growth retardation. *Neligan PC*, Forrest C, Pang CY: The Hospital for Sick Children Foundation (\$124,810 2000 - 2002).

Mechanism and intervention for radiation-induced impaired wound healing. *Neligan PC*, Pang CY: Plastic Surgery Educational Foundation (\$4,927 2000 - 2001).

Osteoblast biology. von Schroeder HP: The Toronto Hospital (\$50,000 1998 - 2001).

HONOURS RECEIVED

Neligan PC: Hardesty Award, Plastic Surgery Research Council, May 2000.

Neligan PC: W.K. Lindsay Resident Research Supervisor Award, University of Toronto, May 2000.

DIVISION OF THORACIC SURGERY

Dr. G.E. Darling - Assistant Professor

Dr. M.R. Johnston - Associate Professor

Dr. S.H. Keshavjee - Associate Professor (*Acting Division Head: January 1, 2000 – June 30, 2000*)

Dr. M.F. McKneally - Professor

Dr. T.R.J. Todd - Professor (*Division Head: July 1, 1999 – December 31, 1999*)

Dr. T.K. Waddell - Assistant Professor

Dr. T.L. Winton - Assistant Professor

PUBLICATIONS

Bai SH, Fischer S, Keshavjee SH, Liu M: Heparin interference with RT-PCR of RNA extracted from lungs after ischemia-reperfusion. *Transplant International*: January 2000; 13: pp 146-150.

Cassivi SD, Cardella JA, Fischer S, Liu M, Slutsky AS, Keshavjee SH: Trans-tracheal gene transfection of donor lungs prior to organ procurement increases transgene levels at reperfusion and following transplantation. *Heart and Lung Transplantation*: December 1999; 18(12): pp 1181-1188.

Darling G: Diaphragmatic herniae (congenital). In: *Key Topics in Thoracic Surgery* (Casson AG, Johnston MR, eds). Bio-Scientific Publishers, Washington: 1999: pp 70-72.

Darling G: Mediastinum and mediastinal masses. In: Key Topics in Thoracic Surgery (Casson AG, Johnston MR, eds). Bio-Scientific Publishers, Washington: 1999: pp 170-175.

Darling G: The Belsey mark IV fundoplication. In: Repair of Esophageal Hiatal Herniae for Operative Techniques in General Surgery (Van Heerden JA, Farley D, eds). W.B. Saunders Company, Philadelphia: 2000: pp 138-145

Darling G: Thymoma. In: Key Topics in Thoracic Surgery (Casson AG, Johnston MR, eds). Bio-Scientific Publishers, Washington: 1999: pp 244-250.

DeCampos KN, Keshavjee S, Slutsky S, Liu M: Alveolar recruitment prevents reperfusion-induced injury of lung transplants. Heart and Lung Transplantation: November 1999: 18(11): pp 1096-1102.

Fischer S, Cassivi SD, Xavier AM, Cardella JA, Cutz E, Edwards V, Liu M, Keshavjee S: Cell death in human lung transplantation: Apoptosis induction in human lungs during ischemia and after transplantation. Annals of Surgery: March 2000: 231(3): pp 424-431.

Fischer S, Hopkinson D, Liu M, Keshavjee S: Raffinose improves the function of rat pulmonary grafts stored for twenty-four hours in low potassium dextran solution. Journal of Thoracic and Cardiovascular Surgery: March 2000: 119(3): pp 488-492.

Guyatt GH, Cook DJ, Griffith LE, Miller JD, Todd TRJ, Johnston MR, Winton TL, Casson AG, Inculet RI, Darling G, Finley RJ, Deslauriers J, Canadian Lung Oncology Group: Surgeon's assessment of symptoms suggesting extra-thoracic metastases in patients with lung cancer. Annals of Thoracic Surgery: August 1999: 68(2): pp 309-315.

Isoawa N, Xavier A, Dziak E, Opas M, McRitchie D, Slutsky A, Keshavjee S, Liu M: LPS-induced depolymerization of cytoskeleton and its role in TNF: A production by rat alveolar epithelial cells. American Journal of Physiology: September 1999: 277: pp L606-L615.

Jannsen LJ, Prernji M, Lu-Chao H, Cox G, Keshavjee S: NO (+) but not NO radical relaxes airway smooth muscle via cGMP-independent release of internal Ca (2+). *American Journal of Physiology and Lung Cell Molecular Physiology*: May 2000: 278(5): pp L899-L905.

Keshavjee S: Lung and heart-lung transplantation. In: *Handbook of Perioperative Cardiac Surgical Care: The Toronto Cardiac Centre* (David T, Cheung D, eds). Landes Bioscience, Georgetown: 1999.

Liu M, Tremblay L, Cassivi SK, Bai XH, Mourgeon E, Pierre AF, Slutsky AS, Post M, Keshavjee SH: Alteration of nitric oxide synthase expression and activity after ischemia-reperfusion in rat lung transplants. *American Journal of Physiology and Lung Cell Molecular Physiology*: May 2000: 278(5): pp L1071-L1081.

McRitchie DI, Isowa N, Edelson J, Xavier AM, Cai L, Man HY, Wang YT, Keshavjee S, Slutsky AS, Liu M: Production of tumor necrosis factor- α by alveolar epithelial cells. *Cytokine*: June 2000: 12(6): pp 644-654.

Simon SI, Cherapanov V, Nadra I, Waddell TK, Seo S, Wang Q, Doerschuk CM, Downey GP: Signaling functions of L-selectin in neutrophils: Alterations in the cytoskeleton and co-localization with CD18. *Journal of Immunology*: September 1999: 163(5): pp 2891-2901.

Slinger PD, Johnston MR: Pre-operative assessment for pulmonary resection. *Journal of Cardiothoracic and Vascular Anesthesia*: April 2000: 14(2): pp 202-211.

Waddell TK, Johnston MR: Lung abscess. In: *Surgical Decision-Making* (Norton LW, Steigman GV, Eiseman B, eds). W.B. Saunders Company, Philadelphia: 2000: pp 64-67.

Wang G, Stepushkin V, Zabner J, Keshavjee S, Johnston JC, Sauter SL, Jolly DJ, Dubensky T, Davidson BL, McRay PB: Feline immunodeficiency virus vectors persistently transduce non-dividing airway epithella and correct the CF defect. *Journal of Clinical Investigation*: December 1999: 104(11): pp R55-R62.

Xavier AM, Isowa N, Cai L, Dziak E, Opas M, McRitchie DI, Slutsky AS, Keshavjee S, Liu M: Tumor necrosis factor-alpha mediates lipopolysaccharide-induced macrophage inflammatory protein-2 release from alveolar epithelial cells: Autoregulation in host defense. *American Journal of Respiratory Cell Molecular Biology*: October 1999: 21(4): pp 510-520.

Zamora MR, Davis RD, Keshavjee SH, Schulman LR, Ryan U, Patterson GA: Complement inhibition attenuates human lung transplant injury. *Chest*: July 1999: 116(1): pp 46-47.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Darling GE: Canadian Universities Surgical Education Committee, Halifax, Nova Scotia, November 1999. (1) Workshop: How to be a memorable mentor, (2) Remediating the problem student.

Darling GE: Canadian Association of Thoracic Surgeons, Montreal, Quebec, September 1999. Chair symposium: Update in lung transplantation.

Darling GE: American Thoracic Society, Toronto, Ontario, May 2000. (1) Inter-and intra-observer variability in identification of inflection points on pressure-volume (PV) curves, (2) Temporal changes in pressure-volume (PV) curves in adults with ARDS, (3) The utility of routine chest radiographs in the intensive care unit, (4) Evaluation of palm hand-held computers for patient management in the intensive care unit.

Johnston MR: Queen Elizabeth II Health Sciences Centre, Dalhousie University, Halifax, Nova Scotia, June 2000. Options for treating stage IIIA non small cell lung cancer.

Johnston MR: Canadian Association of Thoracic Surgeons, Toronto, Ontario, June 2000. Pulmonary metastatectomy.

Johnston MR: University of Ottawa, Ottawa, Ontario, April 2000. (1) Resection of pulmonary metastases, (2) Treatment of T3/T4 lung cancers.

Keshavjee SH: International Society of Cardiothoracic Surgeons, Awaji, Japan, July 1999. Lung transplantation: Challenges for the new millennium.

Keshavjee SH: Royal College of Physicians and Surgeons of Canada, Montreal, Quebec, September 1999. Reperfusion injury.

Keshavjee SH: Society of Thoracic Surgeons, Orlando, Florida, February 2000. Extended versus minimally invasive thymectomy for myasthenia gravis.

Keshavjee SH: Canadian Association for Transplantation/Canadian Transplant Society, Mont Tremblant, Quebec, March 2000. Lung resuscitation and criteria for lungs.

Keshavjee SH: South American Transplant Society, Punta del Este, Uruguay, March 2000. (1) Pulmonary transplantation: Results from 300 consecutive cases, (2) The organization of a pulmonary transplant program.

Keshavjee SH: Northeastern Brazilian Society of Thoracic Surgery, Fortaleza, Brazil, June 2000. (1) Techniques and results of lung volume reduction surgery for COPD, (2) Management of stage IIIa – N2 lung cancer.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A molecular epidemiologic study of modifiers of the association between tobacco smoke and lung cancer. *McLaughlin J*, Johnston MR, Casson A, Narod S, Rohan T, Tsao MS: National Cancer Institute of Canada (\$750,000 1997 - 2000).

A phase II randomized/placebo controlled trial of inhaled nitric oxide following lung transplantation. *Granton JT*, Keshavjee S, Meade M: Canadian Cystic Fibrosis Foundation (\$64,922 1998 - 2000).

A phase III comparison between concurrent chemotherapy plus radiotherapy and concurrent chemotherapy and radiotherapy followed by surgical resection for stage IIIa (N2) nonsmall cell lung cancer. *Darling G*: National Cancer Institute of Canada (per patient) (\$1,300 2000).

A randomized trial of mediastinal lymph node sampling versus complete lymphadenectomy during pulmonary resection in the patient with N0 or N1 (less than hilar) nonsmall cell lung cancer. *Allen M, Darling G, Ginsberg R*: American College of Surgeons Oncology Group (per patient) (\$1,500 2000).

Breast diseases and early detection of breast cancer: A study of effectiveness of a course of home-study on medical student performance. *Chart P, Darling G, Franssen G, Tipping J, Poldre P, Taylor G*: National Breast Cancer Fund (\$10,000 2000).

CF transplant centre. *Hutcheon M, Keshavjee S*: Canadian Cystic Fibrosis Foundation (\$172,728 1997 - 2000).

Critical thinking about informed consent: A patient-based empiric study. *McKneally MF*: Physicians Services Incorporated Foundation (\$121,000 1998 - 2000).

Development of a small animal model for lung cancer adjuvant therapy. *Johnston MR*: Agouron Pharmaceuticals (\$15,000 2000 – 2001).

Early detection of second primary lung cancers by sputum cytology immunostaining. *Johnston MR, Bayer Corporation, Lung Cancer Early Detection Working Group*: Bayer Corporation (\$150,000 1998 - 2001).

Gene therapeutic applications in transplant-related acute lung injury. *Keshavjee SH*: Medical Research Council of Canada (\$268,413 2000 – 2003).

Gene therapy in lung transplantation. *Keshavjee SH, Slutsky AS*: National Sanatorium Association (\$1,500,000 1996 - 1999).

Influence of lung volume reduction surgery on health related quality of life and functional exercise capacity versus rehabilitation alone in patients with COPD: A randomized controlled trial. *Keshavjee SH, Guyatt G, Todd TR, Goldstein R*: Physicians Services Incorporated Foundation (\$140,000 1997 - 1999).

Kinetek/H460 lung cancer study. *Johnston MR, Tsao M*: Kinetek Pharmaceuticals Incorporated (\$33,627 2000).

Leukocyte-endothelial interactions in xenotransplantation. *Waddell TK*: American Association for Thoracic Surgery (\$165,000 2000 - 2002).

Lung volume reduction surgery in chronic obstructive lung disease. *Keshavjee S, Guyatt G, Todd TRJ, Goldstein R*: Physicians Services Incorporated Foundation (\$140,000 1998 - 2000).

Novel biomarkers and screening strategies in early detection of lung cancer. *Tsao MS, Minden M, Banerjee D, Johnston MR, Shepherd F: C.I.T.* (\$300,000 2000 - 2002).

Nutritional factors and gene-environment interactions in the etiology of adenocarcinoma of the esophagus. *Birkett N, Maziak D, Labuda D, Sinnott D, Darling G, Incelet R, Guindi M, McKeown-Eyssen G, Ambrosone C, Casson A*: Cancer Research Society (\$300,000 2000 - 2003).

Protective effect of adenoviral-mediated IL-10 gene transfer on allograft transplant-induced airway lesions. *Keshavjee S, Liu M*: Canadian Cystic Fibrosis Foundation (\$141,960 1999 - 2001).

The effects of perioperative analgesic techniques on morbidity and economic outcome after thoracic surgery. *McRae K, Winton T*: Ontario Thoracic Society (\$35,000 1998 - 2000).

The role of Bcl-2 family proteins in TNF-mediated NF-KB activation. *Waddell TK*: Thoracic Surgery Foundation for Research and Education (\$90,000 2000 - 2002).

Xenotransplantation. *Waddell TK*: Canadian Foundation for Innovation (\$150,000 2000 - 2003).

HONOURS RECEIVED

Darling GE: E.B. Tovee Award for Undergraduate Teaching, Department of Surgery, University of Toronto, May 2000.

Keshavjee SH: Canada's "Top 40 Under 40" Award, May 2000.

DIVISION OF UROLOGY

Dr. G.A. Farrow - Assistant Professor
Dr. M. Hassouna - Associate Professor
Dr. M.A.S. Jewett – Professor (Division Head)
Dr. S.B. Radomski - Associate Professor
Dr. M. Robinette - Associate Professor
Dr. J. Trachtenberg - Professor
Dr. J. Tsihlias - Assistant Professor

PUBLICATIONS

Logarakis N, Jewett MAS, Luymes J, Honey RJ: Variation in clinical outcome following extracorporeal shock wave lithotripsy. *Journal of Urology*: September 1999: 163: pp 323-325.

Schmidt R, Jonas U, Oleson K, Janknegt R, Hassouna M, Siegel S, Vankerbroeck L: Sacral nerve stimulation for treatment of refractory urinary urge incontinence. *Journal of Urology*: August 1999: 162: pp 352-357.

Trachtenberg J, Chen J, Kucharczyk W, Toi A, Lancaster C: Microwave thermoablation for localized prostate cancer: Role for neoadjuvant hormone therapy. *Molecular Urology*: November 1999: 3(3): pp 247-250.

Tsihlias J, Zhang W, Bhattacharya N, Flanagan M, Klotz L, Slingerland J: Involvement of p27 kip1 in G1 arrest by high dose 5 α -dihydrotestosterone in LNCaP human prostate cancer cells. *Oncogene*: January 2000: 19: pp 670-679.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Hassouna M: International Continence Society, Denver, Colorado, August 1999. Chair: Bladder neurophysiology.

Hassouna M: Intrestim Therapy Education Program for Nurses, Minneapolis, Minnesota, September 1999. Sacral neuromodulation: Anatomy/physiology of the lower urinary tract patient selection and trouble-shooting.

Trachtenberg J: CaP Cure, Lake Tahoe, Nevada, October 1999.
Hormonal therapy of prostate cancer.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A randomized, double-blind parallel group comparison of the efficacy and safety of controlled-release oxybutynin and immediate-release oxybutynin for urinary incontinence. *Radomski SB*: Purdue Frederick Incorporated (\$54,000 1999 - 2000).

Accrual to prostate cancer trials: A collaborative project investigating factors influencing patient recruitment. *Robinson J*, Ernst S, Venner P, Jewett MAS, Moritz S, Sampson H, Repka G, Gospodarowicz M: National Cancer Institute of Canada (\$10,000 1999 - 2000).

Clinical efficacy and tolerability: Safety of tolterodine prolonged release capsules and tolterodine immediate release tablets versus placebo: A randomized, double-blind, placebo-controlled, multi-national study in patients with symptoms of overactive bladder. *Radomski S*, Herschorn S: Upjohn-Pharmacia Incorporated (\$22,500 1999).

Comparison of population-weighted generic utility instruments to direct utility assessments in prostate cancer patients. *Krahn M*, *Ritvo P*, Trachtenberg J, Naglie G, Irvine J: Medical Research Council of Canada (\$136,494 1997 - 2000).

Determining the predictive significance of serum human glandular kallikrein-2 protease levels and its optimal cut-off value for detecting prostate cancer. *Nam R*, Jewett MAS: Canadian Urologic Oncology Group (\$5,000 1999 - 2000).

Differential gene expression in prostate cancer. *Squire J*, Zielenska AM, Sweet J, Jewett MAS, Trachtenberg J, Klotz L, Kapusta L: CaP Cure Award (\$200,000 2000).

Effect of sacral neuromodulation of bladder function following spinal cord injury. *Hassouna M*, Fehlings M: Paralyzed Veterans of America Spinal Cord Research Foundation (\$45,000 1998 - 1999).

Effects of the antiandrogen casodex on the progression of prostatic intraepithelial neoplasia: Clinical and molecular correlates.

Trachtenberg J, Brown T, McLusky N: Zeneca Pharma Incorporated (\$300,000 1998 - 2000).

Feasibility of a randomized study comparing follow-up strategies for prostate cancer survivors. *Jewett MAS*, Gospodarowicz M, Crook J, Trachtenberg J, Jenkinson J, Krahn M, Ritvo P, Matthew A, Evans M, Gallie B: Canadian Prostate Cancer Research Foundation (\$25,400 1999 - 2000).

Long-term safety and efficacy of tolterodine prolonged release capsules: An open-label, uncontrolled, multinational study in patients with symptoms of over-active bladder. *Radomski SB*: Upjohn-Pharmacia Incorporated (\$12,000 1999 - 2000).

Magnetic resonance imaging of diode laser ablation of prostate tissue: An in vitro and in vivo study. *Kucharczyk W*, Trachtenberg J: Indigo Medical (\$66,000 1998 - 1999).

Molecular markers of progression of prostate cancer: Effects of 5-alpha reductase inhibition. *Trachtenberg J*, Brown T, McLusky N: PMAC/Medical Research Council of Canada/Glaxo Pharmaceuticals Incorporated (\$370,000 1998 - 2001).

Non-metastatic renal cell carcinoma GU. *Jewett MAS*: EORTC-GU Group (\$200 1995 - 1999).

Prognostic factors for metastatic progression of localized prostate cancer. *Narod S*, Nam RK, Pollak M, Jewett MAS, Trachtenberg J, Klotz LH, Fleshner N, Sweet J, Kapusta L, Banerjee D, Diamondis E: National Cancer Institute of Canada (\$251,790 1997 - 2000).

Randomized controlled study of neoadjuvant reversible androgen withdrawal therapy in the surgical management of localized prostate cancer. *Jewett MAS*: Canadian Urologic Oncology Group (\$64,000 1993 - 2001).

Randomized controlled study of three versus eight month neoadjuvant hormone therapy prior to prostatectomy in localized prostate cancer. *Jewett MAS*: Canadian Urologic Oncology Group (\$33,000 1996 - 2000).

The role of intravesical capsaicin in the management of neurogenic bladder of patients with spinal cord lesion. *Hassouna M*: Canadian Spinal Research Foundation (\$45,000 1999 - 2000).

The role of SRD5A2 gene in prostate cancer progression: A molecular epidemiologic analysis. *Nam R, Jewett MAS*: Canadian Urologic Oncology Group (\$5,000 1998 - 1999).

The role of the cyclin-dependent kinase inhibitor p27 kip1 in mediating growth inhibition and apoptosis of human prostate cancer in response to androgen withdrawal. *Tsihlias J*: Canadian Urologic Association (\$40,000 1999 - 2001).

Thermal ablation of small renal tumors. *Jewett MAS, Sherar M, Asch MR, Trachtenberg J, Tsihlias J, Robinette M, Sweet J, Rendon RA*: Kidney Foundation of Canada (\$50,000 2000 - 2002).

DIVISION OF VASCULAR SURGERY

Dr. K.W. Johnston – Professor (*Division Head*)
Dr. P.G. Kalman - Associate Professor
Dr. T.F. Lindsay - Assistant Professor
Dr. B.B. Rubin - Assistant Professor
Dr. P.M. Walker - Professor

PUBLICATIONS

Borger MA, Fremes SE, Weisel RD, Cohen G, Rao V, Lindsay TF, Naylor CD: Coronary bypass and carotid endarterectomy: Increased risk of combined surgery by meta-analysis. *Annals of Thoracic Surgery*: July 1999: 68(1): pp 14-20.

Couch GG, Johnston KW, Ojha M: An in vitro comparison of the hemodynamics of two inferior vena cava filters. *Journal of Vascular Surgery*: March 2000: 31: pp 539-549.

Gloviczki P, Baker WH, Kalman PG, Han D: The management of primary aortocaval and ilio-iliac arteriovenous fistulae. *Perspectives in Vascular Surgery*: December 1999: 12: pp 133-148.

Johnston KW, Rutherford RB: Disclosure of competition of interest. *Journal of Vascular Surgery*: July 1999: 30: pp 200-202.

Johnston KW, Rutherford RB: Failure to disclose competitive interest. *Journal of Vascular Surgery*: June 2000: 31: pp 1306.

Kalman PG: Stent-graft repair of abdominal aortic aneurysms. *Canadian Medical Association Journal*: November 1999: 161: pp 1133.

Kalman PG, Johnston KW: Regarding the value of late computed tomographic scanning in identification of vascular abnormalities after abdominal aortic aneurysm repair. *Journal of Vascular Surgery*: November 1999: 30: pp 961-962.

Kalman PG, Pope M, Bhola C, Richardson R, Sniderman KW: A practical approach to vascular access for hemodialysis and predictors of success. *Journal of Vascular Surgery*: October 1999: 30: pp 727-733.

Marshall J, Han C-H, Thatcher B, Erickson R, Krump E, Curnutte J, Lambeth D, Grinstein S, Martin B, Lindsay TF, Walker PM, Rubin BB: Discovery of the arachidonic acid binding domains of P67phox. *Surgical Forum*: September 1999: XL363: pp 361-363.

Marshall J, Krump E, Lindsay T, Downey G, Ford D, Zhu P, Walker P, Rubin B: Involvement of cytosolic phospholipase A2 and secretory phospholipase A2 in arachidonic acid release in human neutrophils. *Journal of Immunology*: February 2000: 164(4): pp 2084-2091.

Rutherford RB, Johnston KW: Potential problems with industry-supported clinical research. *Journal of Vascular Surgery*: May 2000: 31: pp 1066-1076.

Szalay D, Wong D, Lindsay TF: The impact of red cell salvage on transfusion requirements during elective abdominal aortic aneurysm repair. *Annals of Vascular Surgery*: November 1999: 13(6): pp 576-581.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Johnston KW: American College of Surgeons, Winnipeg, Manitoba, November 1999. (1) Challenges of introducing balance with progress.

Johnston KW: American College of Surgeons, San Francisco, California, October 1999. (1) Panel: New technology: What's proven, what's not, (2) Stents and intravascular devices.

Johnston KW: Portland Vascular Society, Portland, Oregon, May 2000. Application of the results of the United Kingdom small aneurysm trial to the management of an individual patient.

Johnston KW: Albert Einstein College of Medicine/Montefiore Medical Centre, New York, New York, November 1999. How to apply the result of the United Kingdom small aneurysm study to the management of an individual patient.

Johnston KW: Bergquist-Reed Memorial Lecturer, Portland Medical Foundation, Portland, Oregon, May 2000. Issues in the management of abdominal aortic aneurysm in the rapidly changing health care system.

Johnston KW: Oregon Health Sciences University, Portland, Oregon, May 2000. Problems and solutions in reporting and analyzing the results of surgical treatment.

Johnston KW: Society for Vascular Surgery, Toronto, Ontario, June 2000. The manuscript: Communication skills for the young investigator.

Johnston KW: Canadian Society for Vascular Surgery, Quebec City, Quebec, September 1999. United Kingdom small aneurysm study: Application of the results to the management of an individual patient.

Kalman PG: King's Health Centre, Toronto, Ontario, September 1999. Current management of lower extremity occlusive disease.

Kalman PG: Presidential Address, Canadian Society for Vascular Surgery, Quebec City, Quebec, September 1999. Risk perception.

Kalman PG: Critical Problems, New Horizons and Techniques in Vascular and Endovascular Surgery, New York, New York, November 1999. Technical factors in mesenteric revascularization.

Lindsay TF: Peripheral Vascular Surgery Society, Denver, Colorado, January 2000. Course co-director.

Lindsay TF: Canadian Society for Vascular Technology, Toronto, Ontario, April 2000. (1) Role of vascular ultrasound in clinical management: What ABI's provide? (2) Information that duplex provides: When are they clinically relevant, (3) When will a patient need surgery or conservative management?

Rubin BB: Canadian Society for Vascular Technology, Toronto, Ontario, April 2000. Current and future trends in venous surgery: An update on subfascial endoscopic perforator ligation.

Rubin BB: Society of University Surgeons, Toronto, Ontario, February 2000. (1) Discussant: Quality of life after distal bypass, (2) Moderator: Resident research presentations session.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Does lipopolysaccharide cause multiple organ failure after ruptured abdominal aortic aneurysm surgery? *Lindsay TF*, Stewart J: Life-Line Foundation (\$2,000 1999).

Fundamental ultrasound studies. *Johnston KW*, Cobbold RSC: Medical Research Council of Canada (\$368,225 1997 - 2002).

Magnetic resonance imaging for ischemia. *Wright G*, *Rubin B*, *Merchant B*: Medical Research Council of Canada (\$468,000 2000 - 2004).

Mechanistic studies in organ injury after ruptured aortic aneurysm. *Lindsay TF*: Physicians Services Incorporated Foundation (\$135,000 2000 - 2001).

Mechanistic studies in the pathophysiology of remote organ injury after ruptured abdominal aortic aneurysm. *Lindsay TF*: Physicians Services Incorporated Foundation (\$138,200 1998 - 2000).

Molecular mechanisms of neutrophil activation: Role of cytosolic phospholipase A2 isoforms. *Rubin B*: Pacific Vascular Research Foundation (\$225,000 1998 - 2001).

Myocardial dysfunction after ruptured aortic aneurysm. *Lindsay TF*: Canadian Society for Vascular Surgery (\$5,000 1998 - 1999).

Neutrophil mediated cardiomyocyte cytotoxicity: Role of phospholipase A2. *Rubin B*: Heart and Stroke Foundation (\$220,000 1999 - 2002).

Propranolol for small abdominal aortic aneurysms. *Laupacis P, Kalman PG*: Medical Research Council of Canada (\$1,100,000 1998 - 2000).

The role of phospholipase A2 in neutrophil activation during myocardial ischemia. *Rubin BB*: Heart and Stroke Foundation (\$114,000 1997 - 1999).

DIVISION OF ANATOMY

Dr. A. Agur - Associate Professor
Dr. B. Liebgott - Professor
Dr. C.M. Morshead – Assistant Professor
Dr. J.A. Saint-Cyr - Associate Professor
Dr. P.A. Stewart - Professor
Dr. I.M. Taylor - Professor
Dr. M.J. Wiley – Professor (*Division Head*)

PUBLICATIONS

Chow RS, Medri MK, Martin DC, Leekam RN, Agur AM, McKee NH: Sonographic studies of human soleus and gastrocnemius muscle architecture: Gender variability. *European Journal of Applied Physiology*: June 2000: 82(3): pp 236-244.

Defer G-L, Widner H, Marie R-M, Remy P, Levivier M, Conference Participants (including Saint-Cyr JA): Core assessment program for surgical interventional therapies in Parkinson's disease (CAPSIT-PD). *Movement Disorders*: September 1999: 14: pp 572-584.

Goyal M, Versnick E, Tuite P, Saint-Cyr JA, Kucharczyk W, Montanera W, Willinsky R, Mikulis D: MRI of hypertrophic olivary degeneration: Meta-analysis of the temporal evolution of MRI findings. *American Journal of Neuroradiology*: June 2000: pp 1073-1077.

Lang AE, Duff J, Saint-Cyr JA, Trepanier L, Gross RE, Lombardi W, Montgomery E, Hutchison W, Lozano AM: Posteroventral medial pallidotomy in Parkinson's disease. *Journal of Neurology*: September 1999: 246(2): pp 1128-1141.

Leekam R, Agur AM, McKee N: Sonographic diagnosis of plantaris muscle and tendon injury. *American Journal of Roentgenology*: July 1999: 172(1): pp 185-189.

Lombardi WJ, Gross RE, Trepanier LL, Lang AE, Lozano AM, Saint-Cyr JA: Relationship of lesion location to cognitive outcome following microelectrode-guided pallidotomy for Parkinson's disease: Support for the existence of cognitive circuits in the human pallidum. *Brain*: June 2000; 123: pp 746-758.

Morshead CM, van der Kooy D: A cell survival factor (N-acetyl-L-cysteine) alters the in vivo fate of constitutively proliferating subependymal cells in the adult forebrain. *Journal of Neurobiology*: January 2000; 42: pp 338-346.

Saint-Cyr JA, Trepanier LL: Neuropsychological assessment of patients for movement disorder surgery. *Movement Disorders*: June 2000; 15: pp 771-783.

Saint-Cyr JA, Trepanier LL: Neuropsychological considerations in movement disorder surgery. In: *Movement Disorder Surgery: Progress and Challenges: Progress in Neurological Surgery* (Lozano AM, ed). Karger, Basel 2000: pp 266-271.

Saint-Cyr JA, Trepanier LL, Kumar R, Lozano AM, Lang AE: Neuropsychological consequences of chronic bilateral stimulation of the subthalamic nucleus in Parkinson's disease. *Brain*: June 2000; 123: pp 101-118.

Stewart PA: Endothelial vesicles: Are they related to permeability. *Cellular and Molecular Neurobiology*: January 2000; 20(2): pp 149-163.

Trepanier LL, Kumar R, Lozano AM, Lang AE, Saint-Cyr JA: Neuropsychological outcome of neurosurgical therapies in Parkinson's disease: A comparison of GPi pallidotomy and deep brain stimulation of GPi or STN. *Brain and Cognition*: January 2000; 42: pp 324-347.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Saint-Cyr JA: National Residents Seminar on Movement Disorders, Alliston, Ontario, February 2000. (1) Neuroanatomy, normal and pathophysiology of the basal ganglia, (2) Neuropsychology of basal ganglia.

Saint-Cyr JA: North York General Hospital, North York, Ontario, November 1999. Neuropsychological impact of surgery for Parkinson's disease.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Co-enzyme Q10 and remacemide: Evaluation in HD. *Saint-Cyr JA, Guttman:* National Institutes of Health (\$181,118 1997 - 2000).

Deep brain stimulation effects on task-driven fMRI. *Saint-Cyr JA:* Natural Sciences and Engineering Research Council (\$64,000 2000 - 2004).

Functional neuroanatomy. *Stewart P, Agur A, Liebgott B, Wiley MJ, Mikulis D:* Provost's Information Technology Development Fund (\$108,000 1998 - 2000).

HONOURS RECEIVED

Agur A: Certificate of Merit for Poster Presentation, Radiological Society of North America (with Haider M, Couture J), December 1999.

Taylor IM: E. Mary Hollington Award for teaching in the pre-clinical curriculum, University of Toronto, June 2000.

Taylor IM: Harry Whittaker Memorial Teaching Award, University of Toronto, June 2000.

DIVISION OF BIOMEDICAL COMMUNICATIONS

D. Aldrich - Assistant Professor
K. Brine - Assistant Professor
K. Chorney - Lecturer
S. Gilbert - Professor
C. Godkin – Associate Professor
I. Healey – Lecturer
J. Jenkinson - Lecturer
N. Joy - Professor
L. Lax - Assistant Professor
M. Mackay - Associate Professor
L. Magdenko - Lecturer
D. Mazierski - Assistant Professor
S. Nancekivell - Assistant Professor
P. Reid – Lecturer
Dr. J. Semple – Associate Professor
Dr. S. Tulk - Assistant Professor
T. Watkinson - Assistant Professor
Dr. L. Wilson-Pauwels – Associate Professor (*Division Head*)
N. Woolridge - Assistant Professor

AUTHORSHIP (Textbooks, Journals, Theses or Papers)

Gilbert S: Outline of Cat Anatomy with Reference to the Human. University of Washington Press, Seattle, 2000.

Godkin C: The Storymakers: Illustrating Children's Books (O'Reilly G, ed). Pembroke Publishers, Toronto, 1999.

JOURNAL ILLUSTRATIONS

Balter M, Coyle S, Flook N: How I treat abuse of inhalers. Family Practice: September 1999; 11(16): pp 13-16. (**Tulk S:** 1 illustration).

Bell T, Dixon-Warren B, Zubec E: How I treat depression and St. John's work. Family Practice: May 2000; 12(9): pp 14-15. (**Tulk S:** 1 illustration).

Borins M, MacLean C, Sussman G: How I treat food allergy. *Family Practice*: January 2000: 12(1): pp 11-12. (**Tulk S**: 1 illustration).

Bryant S, Caldwell P, McSherry J: How I treat chest pain, sex worry. *Family Practice*: March 2000: 12(5): pp 11-12. (**Tulk S**: 1 illustration).

Casey R, Saul D, Ward R: How I treat sexual dysfunction. *Family Practice*: February 2000: 12(3): pp 14-15. (**Tulk S**: 1 illustration).

D'Urzo AD, Feldman P, Reynolds L: How I treat... What to do about a bad cough. *Family Practice*: June 2000: 12(11): pp 18-19. (**Tulk S**: 1 illustration).

D'Urzo AD, Thow D, Ward R: How I treat frequent use of salbutamol. *Family Practice*: November 1999: 11(19): pp 17-18. (**Tulk S**: 1 illustration).

Ipp M: Relief for child with severe spasmodic cough. *Patient Care Canada*: July 1999: 10(7): pp 16. (**Tulk S**: 1 illustration).

Le Clair K, Roberts M, Ungar T: How I treat depression in elderly. *Family Practice*: April 2000: 12(7): pp 12-13. (**Tulk S**: 1 illustration).

Matsuyama T, Mackay MB, Midha R: Peripheral nerve repair and grafting techniques: Preview. *Neurologia Medico-Chirurica*: January 2000: 40(4): pp 187-199. (**Mackay MB**: 9 illustrations)

Pryse-Phillips W: Tennis elbow versus posterior interosseous nerve entrapment. *Patient Care Canada*: July 1999: 10(7): pp 10. (**Tulk S**: 1 illustration).

The Medical Post: Medical Post Forum, Stroke Supplement: August 1999 (illustrated by **Mazierski D**).

TEXTBOOK ILLUSTRATIONS

Bula M, Goering-Boone U, Hirsch A, James E, Plumb D, Ritter B, Thorpe R, Vavitsas A: Science 9 TR reproduction unit. Nelson Thompson Learning, Scarborough, 1999. (**Mazierski D**: 8 illustrations).

Darling G, Mackay MB: The Belsey mark IV and Collis-Belsey funduplications. In: *Operative Techniques in General Surgery: A Comparative Atlas*, 2000: pp 60-81. (**Mackay MB**: 23 illustrations).

Dengler NG, Taylor WC: Developmental aspects of C4 photosynthesis. In: *Photosynthesis: Physiology and Metabolism*. (Leegood R, Sharkey T, von Cammerer S, eds). (**Godkin C**: 2 venation development diagrams).

Glegg C, Williams P, Bloch M: Mechanical efficiency. Nelson Thompson Learning, Scarborough, 1999. (**Mazierski D**: 6 illustrations).

Greenberg J: *BSCS biology: A molecular approach*, blue version. Everyday Learning, Chicago, 2000. (**Mazierski D**: 75 illustrations).

Lieb Gott B: *The anatomical basis of dentistry*. Mosby Incorporated, St. Louis, 2000. (**Mazierski D**: 56 illustrations).

Midha R, Mackay MB: Harvesting techniques of sural or other cutaneous nerves for cable graft repair. In: *Neurosurgical Operative Atlas* (Rengachary SS, ed). American Association of Neurological Surgeons, 2000: pp 241-247. (**Mackay MB**: 3 illustrations).

Pimento B, Kernsted D: *Healthy foundations*. Nelson Thompson Learning, Scarborough, 1999. (**Mazierski D**: 1 illustration).

Risau W, Rubanyi G (editors): *Morphogenesis of endothelium*, 2000. (Wilson-Pauwels L: 1 illustration).

Ritter B, Plumb P, Jenkins F, van Kessel H, Hirsch A: *Science 10*. Nelson Thompson Learning, Scarborough, 1999. (**Mazierski D**: 16 illustrations).

MEDICAL LEGAL ILLUSTRATIONS (storyboard and digital output)

Demonstrative Aid/Animation: Delayed rupture of the spleen: 15 minute animation on video. Brampton, Ontario Law Firm/Artery Studios Incorporated, Toronto, 2000. (**Chorney K**: animation director).

Injuries to the ankle: 9 minute animation on video. Toronto, Ontario Law Firm/Artery Studios Incorporated, Toronto, 2000. (**Chorney K:** animation director).

Fractures of the right ankle: 5 minute animation on video. London Law Firm/Artery Studios Incorporated, Toronto, 2000. (**Chorney K:** animation director).

MULTIMEDIA/HYPERMEDIA

Website Development

Jenkinson J: The Prostate Centre Website, 2000 - ongoing, <http://www.prostatecanada.net>

Lax L, Spero L: Canadian Association for Medical Education Website, 1999 - ongoing, <http://dante.med.utoronto.ca/came>

New Media Design

Breast Cancer Patient. Education Program. WebMD Interactive Patient Education Module, Hurd Studios, New York, 2000. (animated by **Jenkinson J**).

Osteoporosis Patient. Education Program. WebMD Interactive Patient Education Module. Hurd Studios, New York, 2000. (animated by **Jenkinson J**).

Projection Media

Anastakis D: Deltoid reconstruction with free muscle transfer slide presentation (**Mackay MB:** 4 illustrations).

Carlsen L: Rhytidectomy slide presentation (**Mackay MB:** 7 illustrations).

McKee M: Lateral collateral ligament tears of the elbow slide presentation (**Mackay MB:** 6 illustrations).

Video

Leyland N, Caspers A: PALM procedure (pelvoscopic arterial ligation for myoma) (**Mackay MB**: 4 illustrations).

Feature Film Storyboards

Fuque A, **Brine K**: Bait, Castle Rock.

Lemmon K, **Brine K**: Caveman Valentine, Universal.

O'Haver T, **Brine K**: Getting over Allison, Miramax.

Surjik S, **Brine K**: Bull, TNT/Warner.

HEALTH COMMUNICATIONS

Aldrich D: 2 illustrations on a poster detailing the pathogenesis of osteoporosis and atherosclerosis. Berlin et Associes, Montreal, 1999.

Aldrich D: 6 illustrations on a patient education wheel detailing the comparative pathologies of various nasal infections. Publicite Anderson, Montreal, 1999.

Aldrich D: 1 illustration of the functional components of the kidney. LBJ-FRB Communications, Toronto, 1999.

Aldrich D: 1 illustration detailing the digestive tract. Schwab Piquette, Toronto, 1999.

Aldrich D: 5 illustrations of the functional relationships of organs related to digestion. Schwab Piquette, Toronto, 2000.

Aldrich D: 1 illustration of the pathologies of atherosclerosis and arterial spasms within the coronary circulation. Publicite Anderson, Montreal, 2000.

Aldrich D: 2 illustrations depicting the pathogenesis of ischemic strokes and transitory ischemic attacks and the potential functional impairments that could result. Jeffery Simbrow Associates, Toronto, 2000.

Chorney K: 4 illustrations on a patient education tear sheet explaining kidney transplantation. Cosopt/Headcan, Toronto, 2000.

Chorney K: 5 illustrations on a tear sheet to education patients about their kidney. Wyeth Ayerst/Headcan, Toronto, 2000.

Chorney K: 4 illustrations on a poster to educate teens about acne. Galderma/Headcan, Toronto, 2000.

Chorney K: 12 illustrations of sport figures on a sport medicine calendar. Biovail /Headcan, Toronto, 1999.

Chorney K: 4 illustrations on a breast disease easel to educate patients about hormone therapy for breast cancer. Novartis/Headcan, Toronto, 1999.

Chorney K: 11 illustrations on a poster to educate patients about the respiratory system and asthma. Merck Frosst/Headcan, Toronto, 1999.

Chorney K: 4 illustrations on a poster to educate patients about understanding chronic obstructive pulmonary disease. Boehringer Ingelheim/Headcan, Toronto, 1999.

Mazierski D: 1 illustration on a consumer education tear sheet on cetaphil skin care. Publicis Wellcare/Galderma Canada Incorporated, Unionville, 1999.

Mazierski D: 1 illustration on a patient education poster on understanding hormone replacement therapy. Headcan/Wyeth-Ayerst Canada, Montreal, 1999.

Mazierski D: 1 illustration on a patient education poster about understanding the uveitic eye. Headcan/Alcon Canada Incorporated, Mississauga, 1999.

Mazierski D: 1 illustration on a patient education poster about understanding allergies. Headcan/Bencard Allergy Laboratories, Mississauga, 1999.

Mazierski D: 1 illustration on a patient education handbook on the pituitary gland and hormone deficiencies. Headcan/Pharmacia and Upjohn, New Jersey, 1999.

Mazierski D: 1 illustration on a patient education tear sheet on down-to-earth advice for people with diabetes. Sudler and Henessey/Schering -Plough HealthCare Products Canada, Etobicoke, 1999.

SELECTED MEDICAL LEGAL ILLUSTRATIONS

Chorney K: 4 illustrations on a courtroom exhibit on right knee injury concepts: Artery Studios Incorporated, for Vancouver Law Firm, Toronto, 2000.

Chorney K: 3 illustrations on a courtroom exhibit on craniotomy surgery concepts: Artery Studios Incorporated, for Toronto Law Firm, Toronto, 2000.

Chorney K: 3 illustrations on a courtroom exhibit on reflex headache concept: Artery Studios Incorporated, for Toronto Law Firm, Toronto, 2000.

Chorney K: 2 illustrations on a courtroom exhibit on anatomy of the lower gastrointestinal tract: Artery Studios Incorporated, for Toronto Law Firm, Toronto, 2000.

Chorney K: 3 illustrations on a courtroom exhibit on concepts of surgical decompression: Artery Studios Incorporated, for Brampton Law Firm, Toronto, 2000.

Chorney K: 6 illustrations on a courtroom exhibit on bladder trauma and complications: Artery Studios Incorporated, for Toronto Law Firm, Toronto, 2000.

Chorney K: 3 illustrations on a courtroom exhibit on concepts of right wrist injury complications: Artery Studios Incorporated, for Ontario Law Firm, Toronto, 2000.

Chorney K: 1 illustration on a courtroom exhibit on resulting nervous system paralysis: Artery Studios Incorporated, for Toronto Law Firm, Toronto, 2000.

Chorney K: 12 illustrations on a nine-panel courtroom exhibit on fracturing of the ankle joints: Artery Studios Incorporated, for Toronto Law Firm, Toronto, 2000.

Chorney K: 4 illustrations on two courtroom exhibits which detail brain injury, and concept of spinal fractures: Artery Studios Incorporated, for Ontario Law Firm, Toronto, 1999.

Chorney K: 5 illustrations on a courtroom exhibit on temporo mandibular joint complications: Artery Studios Incorporated, for Hamilton Law Firm, Toronto, 1999.

Chorney K: 3 illustrations on a courtroom exhibit on concepts of future long-term risks to the left eye: Artery Studios Incorporated, for Toronto Law Firm, Toronto, 1999.

PHYSICIAN EDUCATION

Aldrich D: 4 illustrations for print and projection media to visually document the development of bacterial resistance to antibiotics. Science and Medicine Canada, Markham, 1999.

Aldrich D: 5 illustrations for print and projection media to visually document the progress of urinary tract infections. Science and Medicine Canada, Markham, 2000.

Aldrich D: 5 illustrations for print and projection depicting the pathogenesis of hepatitis C infection in the liver. Science and Medicine Canada, Markham, 2000.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Aldrich D: Art, Media and Non-Sense Lecture Series, Cleveland, Ohio, February 2000. Perception, emotional response and the present tense.

Gilbert S: Johns Hopkins School of Medicine, Baltimore, Maryland, April 2000. The history of embryological illustration at the Department of Art as Applied to Medicine.

Lax L: Association of Medical Illustrators, Atlanta, Georgia, July 1999. Visual problem solving in an internet-based collaborative learning environment.

Mazierski D: Association of Medical Illustrators, Atlanta, Georgia, July 1999. Developing and evaluating a digital anatomy lab.

Nancekivell S: American Medical Writers Association, Philadelphia, Pennsylvania, October 1999. Plain language.

HONOURS AND AWARDS

Aldrich D: Biomedical Communications Director's Award for Outstanding Contribution to the Profession of Medical Illustration, Division of Biomedical Communications, University of Toronto, September 1999.

Jenkinson J: Certificate of Appreciation for Excellence in Teaching, Division of Biomedical Communications, University of Toronto, April 2000.

Lax L: Biomedical Communications Director's Award for Innovation in Teaching, Division of Biomedical Communications, University of Toronto, September 1999.

Mazierski D: Certificate of Appreciation for Excellence in Teaching, Division of Biomedical Communications, University of Toronto, May 2000.

RESEARCH

Dr. C.E. Bayliss - Professor
Dr. L.L. Burrows - Assistant Professor
Dr. D.W. Courtman - Assistant Professor
Dr. K.D. Davis - Assistant Professor
Dr. M. Dennis – Associate Professor
Dr. J.H. Eubanks - Assistant Professor
Dr. L.G. Farkas - Associate Professor
Dr. G.R. Fernie - Professor
Dr. R.M. Gorczynski - Professor
Dr. S.J. Hamstra - Assistant Professor
Dr. P.J. Holliday - Research Associate
Dr. D.A. Houlden - Assistant Professor
Dr. W.D. Hutchison - Assistant Professor
Dr. A. Kapus - Assistant Professor
Dr. A. Krassioukov – Assistant Professor
Dr. R.K. Li - Associate Professor
Dr. M. Liu - Assistant Professor
Dr. G.L. Lukacs – Assistant Professor
Dr. B.E. Maki - Associate Professor
Dr. C.Y. Pang - Professor
Dr. J.S. Sandhu – Assistant Professor
Dr. G.A. Tait - Assistant Professor
Dr. E. Theriault - Assistant Professor
Dr. J.A. Wade - Professor
Dr. C. Whyne - Assistant Professor
Dr. C. Wittnich - Associate Professor

PUBLICATIONS

Baba A, Yound K, Zhang H, Liu M, Slutsky AS: Perfluorocarbon blocks TNF alpha-induced interleukin-8 release from alveolar epithelial cells. *Critical Care Medicine*: April 2000; 28(4): pp 1113-1118.

Bai XH, Fischer S, Keshavjee S, Liu M: Heparin interference with reverse-transcriptase polymerase chain reaction of RNA extracted from lung transplants after ischemia-reperfusion. *Transplantation International*: February 2000; 13: pp 146-150.

Belanger M, Burrows LL, Lam JS: Functional analysis of genes responsible for the synthesis of the B-band O-antigen of *Pseudomonas aeruginosa* serotype O6 lipopolysaccharide. *Microbiology*: December 1999: 145: pp 3505-3521.

Belanger MP, Wallen WJ, Wittnich C: Special feeding and care of senescent spontaneously hypertensive rats. *Contemporary Topics in Laboratory Animal Science*: July 1999: 38(4): pp 7-11.

Burrows LL, Khoury AE: Issues surrounding the prevention and management of device-related infections. *World Journal of Urology*: December 1999: 17: pp 402-409.

Burrows LL, Rocchetta HL, Lam JS: Pathways of lipopolysaccharide biosynthesis in *Pseudomonas aeruginosa*. In: *Glycomicrobiology* (Doyle R, ed). Kluwer Academic/Plenum Publishers, New York: 2000: pp 127-143.

Burrows LL, Urbanic RV, Lam JS: Functional conservation of the polysaccharide biosynthetic protein WbpM and its homologues in *Pseudomonas aeruginosa* and other medically-significant bacteria. *Infection and Immunity*: February 2000: 68: pp 931-936.

Cardella JA, Keshavjee S, Mourgeon E, Cassivi SD, Fischer S, Isowa N, Slutsky AS, Liu M: A novel cell culture model for ischemia reperfusion injury of lung transplantation. *Journal of Applied Physiology*: January 2000: 89: pp 1553-1560.

Cassivi SD, Cardella J, Fischer S, Slutsky AS, Liu M, Keshavjee S: Gene transfection of donor lungs prior to organ procurement increases transgene levels at reperfusion and following transplantation. *Journal of Heart and Lung Transplantation*: December 1999: 18(12): pp 1181-1188.

Chiodo AA, Gur E, Pang CY, Neligan PC, Boyd JB, Binhammer PM, Forrest CR: The vascularized pig fibula bone flap model: Effect of segmental osteotomies and internal fixation on blood flow. *Plastic and Reconstructive Surgery*: March 2000: 105: pp 1004-1012.

Davis KD: The neural circuitry of pain as explored with functional MRI. *Neurological Research*: April 2000: 22: pp 313-317.

Davis KD, Hutchison WD, Lozano AM, Tasker RR, Dostrovsky JO: Human anterior cingulate cortex neurons modulated by attention-demanding tasks. *Journal of Neurophysiology*: June 2000: 83: pp 3575-3577.

Davis KD, Kwan CL, Crawley AP, Mikulis DJ: Electrical nerve stimulation can be used as a tool in fMRI studies of pain and tingling-evoked activations. *Pain Research and Management*: May 2000: 5: pp 81-86.

Davis KD, Kwan CL, Crawley AP, Mikulis DJ: fMRI of cortical and thalamic activations correlated to the magnitude of pain. *Proceedings, World Congress on Pain* (Devor M, Rowbotham MC, Wiesenfeld-Hallen Z, eds). IASP Press, Seattle: 2000: pp 497-505.

Davis KD, Lozano AM, Tasker RR, Dostrovsky JO: Brain targets for pain control. *Stereotactic and Functional Neurosurgery*: August 1999: 71: pp 173-179.

Davis KD, Taub E, Duffner F, Lozano AM, Tasker RR, Houle S, Dostrovsky JO: Activation of the anterior cingulate cortex by thalamic stimulation in patients with chronic pain: A positron emission tomography study. *Journal of Neurosurgery*: January 2000: 92: pp 64-69.

DeCampos KN, Keshavjee S, Slutsky AS, Liu M: Airway recruitment prevents reperfusion-induced injury of lung transplants. *Journal of Heart and Lung Transplantation*: November 1999: 18(11): pp 1096-1102.

Dennis M, Barnes MA: Speech acts after mild or severe childhood head injury. *Aphasiology*: February 2000: 14: pp 391-405.

Dennis M, Lockyer L, Lazenby AL: How high-function children with autism understand real and deceptive emotion in narratives. *Autism*: May 2000: 4: pp 371-382.

Dostrovsky JO, Manduch M, Davis KD, Tasker RR, Lozano AM: Thalamic stimulation-evoked pain and temperature sites in pain and non-pain patients. *Proceedings, World Congress on Pain* (Devor M, Rowbotham MC, Wiesenfeld-Hallen Z, eds). IASP Press, Seattle: 2000: pp 419-425.

Downar J, Crawley AP, Mikulis DJ, Davis KD: A multi-modal cortical network for the detection of changes in the sensory environment. *Nature Neuroscience*: March 2000: 3: pp 277-283.

Farkas LG, Forrest CHR, Phillips JH: Comparison of the "cleft face" and the normal face: Defining the anthropometric differences. *Journal of Craniofacial Surgery*: March 2000: 11(2): pp 76-83.

Fernie GR: Moving up in the world: Safe handrails for seniors. *Geriatrics and Aging*: August 1999: 2: pp 1-27.

Fernie GR: Solving the problem of low toilets. *Geriatrics and Aging*: March 2000: 3: pp 2.

Fernie GR, Maki BE: Research and development at the Centre for Studies in Aging, Sunnybrook and Women's College Health Sciences Centre, Toronto, Canada. *Rehabilitation Engineering Journal of Japan*: July 1999: 14: pp 30-41.

Fischer S, Cassivi SD, Xavier AM, Cardella JA, Liu M, Keshavjee S: Cell death in human lung transplantation: Apoptosis induction in human lungs during ischemia and after reperfusion. *Annals of Surgery*: March 2000: 231(3): pp 424-431.

Fischer S, Hopkinson D, Liu M, Keshavjee S: Raffinose improved the function of rat pulmonary grafts stored for 24 hours in low potassium dextrin solution. *Journal of Thoracic and Cardiovascular Surgery*: March 2000: 119(3): pp 488-492.

Fischer S, MacLean AA, Liu M, Kalirai B, Keshavjee S: Angiotensin converting enzyme inhibition by captopril: A novel approach to reduce ischemia reperfusion injury following lung transplantation. *Journal of Thoracic and Cardiovascular Surgery*: January 2000: 120(3): pp 573-580.

Harrison JLK, Davis KD: Cold-evoked pain varies with skin type and cooling rate: A psychophysical study in humans. *Pain*: November 1999: 83: pp 123-135.

Inoue T, Fernie G, Santaguida P: Measurement of trajectory and push/pull force maneuvering a wheeled lifting device. *Proceedings, RESNA 2000 Conference* (Winters J, ed). RESNA Press, Arlington: 2000: pp 387-389.

Isowa N, Xavier AX, Dziak E, Opas M, McRitchie DI, Slutsky AS, Keshavjee S, Liu M: LPS-induced depolymerization of cytoskeleton and its role in TNF alpha production by rat pneumocytes. *American Journal of Physiology Lung Cellular and Molecular Physiology*: October 1999: 277: pp L606-L615.

Isowa N, Yoshimura T, Kosaka S, Liu M, Hitomi S, Yodoi J, Wada H: Human thioredoxin attenuates hypoxia-reoxygenation injury of murine endothelial cells in thiol-free condition. *Journal of Cellular Physiology*: January 2000: 182(1): pp 33-40.

Kawashima M, Bando T, Nakamura T, Isowa N, Liu M, Toyokuni S, Hitomi S, Wada H: Cytoprotective effects of nitroglycerin, a nitric oxide donor, on ischemic reperfusion induced lung injury. *American Journal of Respiratory and Critical Care Medicine*: March 2000: 161(3): pp 935-943.

Keshavjee S, Zhang XM, Fischer S, Liu M: Ischemia reperfusion-induced dynamic changes of protein tyrosine phosphorylation during human lung transplantation. *Transplantation*: January 2000: 70(3): pp 525-531.

Kwan CL, Crawley AP, Mikulis DJ, Davis KD: An fMRI study of the anterior cingulate cortex and surrounding medial wall activations evoked by noxious cutaneous heat and cold stimuli. *Pain*: April 2000: 85: pp 359-374.

Lam JS, Rocchetta HL, Belanger M, Burrows LL: Lipopolysaccharide of *Pseudomonas aeruginosa*: Transferases and enzymes that link the biosynthesis of various surface polysaccharides. *Clinical Microbiology and Infection* (Hoiby N, Kobayashi H, Ramphal R, Doring G, Holder A, eds). B.C. Decker Incorporated, Europe: 2000: pp 5S14-5S16.

Lam JS, Rocchetta HL, Burrows LL: Glycosyl-transferases of *Pseudomonas aeruginosa* that assemble the O-antigens of A-band and B-band lipopolysaccharide. *Journal of Endotoxin Research*: September 1999: pp 97-101.

Lee TC, Zhao YD, Courtman DW, Stewart DJ: Abnormal aortic valve development in mice lacking endothelial nitric oxide synthase. *Circulation*: May 2000: 101: pp 2345-2348.

Li R-K: Human cell culture. In: *Cardiomyocytes: Primary Mesenchymal Cells*, Kluwer Academic Publishers: 2000: pp 302.

Li R-K, Jia Z-Q, Weisel RD, Mickle DAG, Choi A: Survival and function of cardiac bioengineered graft. *Circulation*: August 1999: 100: pp 63-69.

Li R-K, Weisel RD, Mickle DAG, Jia Z-Q, Kim EJ, Sakai T, Tomita S, Schwartz L, Iwanochko M, Husain M, Cusimano R, Burns R, Yau T: Autologous porcine heart cell transplantation improved heart function after a myocardial infarction. *Journal of Thoracic and Cardiovascular Surgery*: January 2000: 119: pp 62-68.

Li R-K, Yau T, Weisel RD, Mickle DAG, Sakai T, Choi A, Jia Z-Q: Construction of a bioengineered cardiac graft. *Journal of Thoracic and Cardiovascular Surgery*: February 2000: 119: pp 368-375.

Liu M, Tremblay L, Cassivi SD, Bai XH, Mourgeon E, Pierre AF, Slutsky AS, Post M, Keshavjee S: Mechanical strain and dexamethasone selectively increase surfactant protein C and tropoelastin gene expression. *American Journal of Physiology Lung Cellular and Molecular Physiology*: June 2000: 278: pp L1071-L1081.

MacLean AA, Suga M, Liu M, Fischer S, Slutsky AS, Keshavjee S: Targeting the angiotensin system in post-transplant airway obliteration: The antifibrotic effect of ACE inhibition. *American Journal of Respiratory and Critical Care Medicine*: January 2000: 162(1): pp 310-315.

Maki BE, Edmondstone MA, McIlroy WE: Age-related differences in laterally directed compensatory stepping behavior. *Journal of Gerontology*: May 2000: 55(A): pp M270-M277.

Maki BE, McIlroy WE: Control of compensatory stepping reactions: Age-related impairment and the potential for remedial intervention. *Physical Therapy Theory and Practice*: July 1999: 15: pp 69-90.

McIlroy WE, Maki BE: The control of lateral stability during rapid stepping reactions evoked by antero-posterior perturbation: Does anticipatory control play a role? *Gait and Posture*: July 1999: 9: pp 190-198.

McIlroy WE, Norrie RG, Brook JD, Bishop DC, Nelson AJ, Maki BE: Temporal properties of attention-sharing consequent to disturbed balance. *Neuro-Report*: October 1999: 10: pp 2895-2899.

McRitchie DI, Xavier AM, Edelson J, Cai L, Man HY, Wang YT, Keshavjee S, Slutsky AS, Liu M: Production of tumor necrosis factor alpha by primary cultured alveolar epithelial cells. *Cytokine*: June 2000: 12(6): pp 644-654.

Mihailidis A, Fernie G: The development of an intelligent cueing device for use by people with dementia during activities of daily living. *Proceedings, RESNA 2000 Conference* (Winters J, ed). RESNA Press, Arlington: 2000: pp 22-24.

Mourgeon E, Xu J, Tanswell AK, Liu M, Post M: Mechanical strain-induced post-transcriptional regulation of fibronectin production in fetal lung cells. *American Journal of Physiology Lung Cellular and Molecular Physiology*: August 1999: 277: pp L142-L149.

Mourgeon E, Isowa N, Keshavjee S, Zhang XM, Slutsky AS, Liu M: Mechanical stretch stimulates macrophage inflammatory protein-2 secretion from fetal rat lung cells. *American Journal of Physiology Cell Molecular Physiology*: January 2000: 279(1): pp L699-L706.

Najm JH, Wallen J, Belanger MP, Coles JG, Williams WG, Van Arsdell, Black MD, Wittnich C: Does the degree of cyanosis affect myocardial adenosine triphosphate levels and function in children undergoing surgical procedures for congenital heart disease? *Journal of Thoracic and Cardiovascular Surgery*: March 2000: 119: pp 515-524.

Nakamura T, Liu M, Mourgeon E, Slutsky AS, Post M: Mechanical strain and dexamethasone selectively increase surfactant protein C and tropoelastin gene expression. *American Journal of Physiology Lung Cellular and Molecular Physiology*: June 2000: 278: pp L974-L980.

Nechala P, Mahoney J, Farkas LG: Comparison of techniques used to locate the malar eminence. *Canadian Journal of Plastic Surgery*: March 2000: 8(1): pp 21-24.

Niisato N, Van Driessche W, Liu M, Marunaka Y: Involvement of protein tyrosine kinase in osmoregulation of Na⁺ transport and membrane capacitance in renal A6 cells. *Journal of Membrane Biology*: January 2000: 175(1): pp 63-77.

Pahapill PA, Levy R, Dostrovsky JO, Davis KD, Rezai AR, Tasker RR, Lozano AM: Tremor arrest with thalamic microinjections of muscimol in patients with essential tremor. *Annals of Neurology*: August 1999; 46: pp 249-252.

Pai YC, Maki BE, Iqbal K, McIlroy WE, Perry SD: Thresholds for step initiation induced by support-surface translation: A dynamic center-of-mass model provides much better prediction than a static model. *Journal of Biomechanics*: January 2000; 33: pp 387-392.

Perry SD, McIlroy WE, Maki BE, Fernie GR: The efficacy of head immobilization techniques during simulated vehicle motion. *Spine*: July 1999; 24: pp 1839-1844.

Pinkney S, Fernie GR: 3-D computer modeling in wheelchair design: A case study. *Proceedings, RESNA 2000 Conference* (Winters J, ed). RESNA Press, Arlington: 2000: pp 477-479.

Posnick JC, Farkas LG: Anthropometric surface measurements in the analysis of craniomaxillofacial deformities: Normal values and growth trends. In: *Craniofacial and Maxillofacial Surgery in Children and Young Adults* (Posnick JC, ed). W.B. Saunders Company, Philadelphia: 2000: pp 55-79.

Rocchetta HL, Burrows LL, Lam JS: Genetics of O-antigen biosynthesis in *Pseudomonas aeruginosa*. *Microbiology and Molecular Biology Reviews*: September 1999; 63: pp 523-553.

Sakai T, Li R-K, Weisel RD, Mickle DAG, Jia Z-Q, Tomita S, Kim EJ, Yau T: Fetal cell transplantation: A comparison of three cell types. *Journal of Thoracic and Cardiovascular Surgery*: August 1999; 118: pp 715-725.

Sakai T, Li R-K, Weisel RD, Mickle DAG, Kim EJ, Tomita S, Jia Z-Q: Autologous heart cell transplantation improves cardiac function after myocardial injury. *Annals of Thoracic Surgery*: November 1999; 68: pp 2074-2081.

Shahani R, Marshall JG, Rubin BB, Li R-K, Walker PM, Lindsay TF: The role of TNF-alpha in myocardial dysfunction following hemorrhagic shock and lower torso ischemia. *American Journal of Physiology*: March 2000; 278: pp H942-H950.

Tomita S, Li R-K, Weisel RD, Mickle DAG, Jia Z-Q: Autologous transplantation of bone marrow cells improves damaged heart function. *Circulation*: September 1999: 100: pp 247-256.

Torrance SM, Belanger MP, Wallen WJ, Wittnich C: Neonatal pig hearts metabolic and functional response to the development of ischemic contracture: Is recovery possible? *Pediatric Research*: March 2000: 48(2): pp 1-9.

Walsh AG, Mawish M, Burrows LL, Monteiro M, Perry MB, Lam JS: Genetic and chemical analysis of waaP and waaG of *Pseudomonas aeruginosa*: Lipopolysaccharide core phosphates are essential for cell viability. *Molecular Microbiology*: February 2000: 35: pp 718-727.

Wittnich C, Wallen WJ, Belanger MP, Ikonomidis JS: Extracellular calcium concentration affects susceptibility to global ischemic injury in newborn but not adult hearts. *Journal of Heart and Lung Transplantation*: July 1999: 18: pp 1-9.

Xavier AM, Isowa N, Cai L, Dziak E, Opas M, McRitchie DI, Slutsky AS, Keshavjee S, Liu M: TNF- α mediates lipopolysaccharide-induced macrophage inflammatory protein-2 from type II pneumocytes: Auto-regulation in host defense. *American Journal of Respiratory Cell Molecular Biology*: October 1999: 21(4): pp 510-520.

Yau TM, Li R-K, Weisel RD, Mickle DAG: Heart cell transplantation for the failing heart. In: *State of the Heart: The Practical Guide to Your Heart and Heart Surgery* (Stephenson LW, Rodengen JL, eds). Write Stuff Enterprises Incorporated, Fort Lauderdale: 1999: pp 202-203.

Zhang H, Kim YK, Govindarajan A, Baba A, Binnie M, Ranieri M, Liu M, Slutsky AS: Effect of adeno-receptor on endotoxin-induced cytokines and lipid peroxidation in lung explants. *American Journal of Respiratory and Critical Care Medicine*: December 1999: 160(6): pp 1703-1710.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Davis KD: Israel Pain Society, Herzelia, Israel, August 1999. Can functional MRI be used to "see" acute or chronic pain?

Davis KD: International Brain Research Organization, Jerusalem, Israel, August 1999. Can functional MRI be used to "see" pain?

Davis KD: American Pain Society, Fort Lauderdale, Florida, October 1999. Neural plasticity: Insights into persistent pain states: Functional imaging of pain.

Davis KD: Canadian Pain Society, Banff, Alberta, May 2000. Neuromodulation workshop: Functional brain imaging and pain.

Davis KD: St. John's Rehabilitation Hospital, Toronto, Ontario, October 1999. Plasticity and functional imaging of pain in amputees.

Dennis M: American Speech and Hearing Association, San Francisco, California, November 1999. Organized symposium: Plasticity and learning.

Dennis M: International Neuropsychological Society, Denver, Colorado, February 2000. Organized workshop: Functions of cerebellum.

Dennis M: National Institutes of Health, Bethesda, Maryland, March 2000. Workshop: Delineating a behavioral profile: Some lessons from hydrocephalus and spina bifida.

Dennis M: Spina Bifida Association of America, Milwaukee, Wisconsin, June 2000. Cognitive profile in children with spina bifida and implications for non-verbal learning disabilities.

Farkas LG: Center for Neuropsychiatric Outcome and Rehabilitation Research, Glen Oaks, New York, April 2000. (1) Anthropometric landmarks of the head and face: The technique of identification of the soft and bony landmarks, (2) Basic anthropometric methods of the craniofacial complex: Demonstration of the linear projective, surface area, and angular measurements (inclinations and angles).

Fernie GR: Ontario Gerontological Association, Toronto, Ontario, May 2000. Barriers to use of technology and how to overcome them.

Fernie GR: McMaster Summer Institute on Gerontology, Hamilton, Ontario, June 2000. Developments in assistive technology for seniors.

Hamstra SJ: Association for Surgical Education, Toronto, Ontario, April 2000. A successful surgical skills program: Let's get started.

Hamstra SJ: Canadian Undergraduate Surgical Education Committee, Halifax, Nova Scotia, November 1999. Orienting the clinical clerk.

Li R-K: Visiting Professor, National Medical Research Council, Singapore, Malaysia, November 1999. (1) Myocardial repair and cell implantation, (2) The Canadian experience with cellular transplantation: Its potential for application in the repair of the damaged heart.

Li R-K: Visiting Professor, Cardiovascular Research Institute, Washington, D.C., June 2000. Autologous bone marrow and heart cell transplantation strategies for achieving myocardial angiogenesis and myogenesis.

Li R-K: Visiting Professor, Cleveland Clinic Foundation, Cleveland, Ohio, June 2000. Cell transplantation for cardiovascular disease.

Li R-K: European Society of Cardiology, Ascona, Switzerland, February 2000. Cell transplantation: A possible therapeutic means for the failing heart.

Li R-K: Felsentsein Medical Research Centre, Petah Tikva, Israel, March 2000. Cell transplantation: A novel therapy for failed heart: Past, present and future.

Li R-K: European Society of Cardiology, Barcelona, Spain, August 1999. Fetal cardiomyocytes transplantation.

Liu M: Jinan General Hospital, Shandong, China, March 2000. Cytokine and acute lung injury.

Liu M: Biomedical Science Symposium, Toronto, Ontario, July 1999. Mechanical stretch and MIP-2 secretion.

Liu M: Kyoto University, Kyoto, Japan, April 2000. Physical forces and lung injury: Mechanotransduction.

Liu M: University of Waterloo, Waterloo, Ontario, November 1999. Stretch cells in the culture: Why, how and what's going on?

Liu M: Lung Cancer Research Workshop, Toronto, Ontario, June 2000. Two novel genes from a human lung cancer cell line.

Maki BE: Centre for Rehabilitation Medicine/Emory University Medical School, Atlanta, Georgia, December 1999. Compensatory stepping, aging and falls.

Maki BE: Georgia Institute of Technology, Atlanta, Georgia, December 1999. Control of compensatory stepping and grasping: Effects of aging and stroke.

Maki BE: International Society of Biomechanics, Calgary, Alberta, August 1999. Effects of aging on control of change-in-support stepping and grasping reactions.

Maki BE: Canadian Institutes of Health Research, Toronto, Ontario, March 2000. Invited participant.

Maki BE: Dalhousie University, Halifax, Nova Scotia, April 2000. (1) Why aren't you falling? (2) Control of limb movements to preserve postural balance in young and older adults.

Wittnich C: Heart and Stroke Foundation, Newmarket, Ontario, March 2000. Hot flash on menopause.

Wittnich C: Heart and Stroke Foundation, Toronto, Ontario, June 2000. Menopause, heart disease and stroke.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A digital imaging system. *Liu M:* Ontario Thoracic Society (\$3,500 1999 - 2000).

Alteration of nitric oxide synthases during human lung transplantation. *Liu M, Keshavjee S:* Ontario Thoracic Society (\$31,500 2000 – 2001).

Analysis of the biomechanics of a novel cervical spine plate. *Whyne C, Finkelstein J:* Sofamor-Danek Incorporated (\$17,628 2000).

Assistive technology for mobility. *Fernie GR*: Ministry of Health (\$196,000 1999 - 2000).

Assistive technology for mobility. *Fernie GR*: Ministry of Health (\$200,000 2000 - 2001).

Balance. *Maki BE*, *Fernie GR*: Medical Research Council of Canada (\$340,000 1999 - 2004).

Balance control in Parkinson's disease: Biomechanical benefits resulting from the use of an "independence dog". *Maki BE*, *McIlroy WE*: SmithKline Beecham Pharma Incorporated (\$6,000 1999).

Biobehavioural predictors of post-operative pain and immune status. *Katz J*, *Cohen L*, *Gorczynski RM*, *Sandler A*: National Institutes of Health (\$450,000 1997 - 2000).

Biomechanical stability of intramedullary nailed high proximal tibial fractures with oblique screws. *Whyne C*, *Stephens D*: Zimmer Canada (\$33,592 2000 - 2001).

Cell volume-dependent signaling mechanisms. *Kapus A*: Medical Research Council of Canada (\$165,162 1998 - 2000).

Cellular and molecular mechanisms of ventilation-induced acute lung injury. *Liu M*: Medical Research Council of Canada (\$240,000 1998 - 2001).

Characterization and treatment of category III prostatitis. *Nickel JC*, *Jarvi K*, *Burrows LL*: National Institutes of Health (\$200,000 1998 - 2002).

Characterization of adaptive changes in the brain of individuals with cervical spinal cord injury: Associations between fMRI, electrophysiology and function. *Mikulis DJ*, *Davis KD*, *Fehlings M*, *McIlroy W*, *Verrier M*, *Aimone H*: Ontario Neurotrauma Foundation (\$74,288 1999 - 2000).

Chronically hypoxic newborn hearts response to stress. *Wittnich C*: Heart and Stroke Foundation (\$266,869 1999 - 2002).

Control of limb movements to recover balance: Effect of environment and activity. *Maki BE, McIlroy WE, Fernie GR*: Medical Research Council of Canada (\$368,160 1999 - 2004).

Creation of viable graft material through tissue engineering for congenital heart surgery. *Li R-K*: The Hospital for Sick Children Foundation (\$130,000 1998 - 2000).

Development of peritoneal dialysis catheters that resist colonization following simultaneous catheter exchange. *Khoury AE, Burrows LL*: The Hospital for Sick Children Foundation (\$13,213 2000 - 2001).

Development of Rocket (powered wheelchair). *Fernie GR*: Nimble Incorporated (\$115,284 1999 - 2000).

Effect of smokeless tobacco on endothelial functions in human skin. *Pang CY*: Smokeless Tobacco Research Council (\$201,000 2000 - 2002).

Effect of VasocareTM on regression of atherosclerosis: The development of LDL receptor knock-out mouse and Watanabe heritable hyperlipidemic rabbit models for the investigation of a novel immune modulating therapy. *Courtman D*: Vasogen Incorporated (\$205,678 1999 - 2001).

Eutrophic vascular remodeling. *Courtman D, Stewart D*: Heart and Stroke Foundation (\$132,610 1999 - 2001).

Evaluating the effectiveness of a two-year curriculum in a surgical skills centre: The future of surgical training? *Brown M, Anastakis D, Ali J, Hamstra SJ, Hutchison C, Murnaghan J, Regehr G, Reznick R*: Physicians Services Incorporated Foundation (\$41,278 1998 - 2001).

Human studies of pain and temperature sensation. *Davis KD*: Medical Research Council of Canada (\$251,314 1998 - 2001).

Hypertonicity-induced signaling in neutrophils: Cellular mechanisms underlying a beneficial immunomodulatory effect. *Kapus A*: Connaught Foundation (\$29,500 1998 - 2000).

Identification and characterization of genes encoding antibiotic resistance in the multidrug-resistant pathogen, *Burkholderia cepacia*. *Burrows LL*: Dean's Fund (\$9,905 1999 - 2001).

Impact of gender on myocardial pathology and responses to ischemia/reperfusion. *Wittnich C*: Heart and Stroke Foundation (\$225,989 1998 - 2001).

Impact of sertraline and paroxetine on postural stability in seniors: A pilot study. *Maki BE, Liu BA, Mittman N, Herrmann N*: Physicians Services Incorporated Foundation (\$104,500 1999 - 2000).

Kindling induced changes in gene expression: A study involving differential display. *Burnham WM, Eubanks JH*: Medical Research Council of Canada (\$165,774 1996 - 1999).

Magnetic resonance imaging for ischemic heart disease. *Wright M, Graham B, Burns P, Coates G, Downar E, Fort S, Hendler A, Hu B, McKerlie C, Merchant N, Mickleborough L, Wittnich C*: Medical Research Council of Canada (\$350,000 1999 - 2002).

Mechanism and pharmacologic intervention of radiation induced craniofacial bone growth retardation. *Forrest CR, Pang CY*: Medical Research Council of Canada (\$134,210 2000 - 2002).

Molecular basis of aminoglycoside resistance in the emerging pathogen, *Burkholderia cepacia*. *Burrows LL*: National Foundation for Infectious Diseases (\$6,000 2000 - 2001).

Molecular evaluation of gene expression in epilepsy. *Burnham WM, Eubanks JH*: Bloorview Epilepsy Foundation (\$75,000 1997 - 1999).

Molecular mechanisms of ischemia-reperfusion injury in human lung transplantation. *Liu M, Keshavjee S*: Ontario Thoracic Society (\$8,200 1998 - 1999).

Neurobehavioral outcome of head injury in children. *Levin HS, Dennis M, Barnes MA*: National Institutes of Health/National Institute of Neurological Diseases and Stroke (\$655,233 1998 - 2003).

Neuronal contribution to delayed onset muscle soreness (DOMS). *Theriault E*: Natural Sciences and Engineering Research Council (\$60,000 1996 - 2000).

Planning and organization of the International Conference on Technology and Aging to be held in conjunction with a federal/provincial/territorial meeting of ministers responsible for senior citizens. *Fernie GR*: Ministry of Energy/Science and Technology Ontario Seniors' Secretariat (\$150,000 2000 - 2001).

Protective effect of adenoviral-mediated IL-10 gene transfer on allograft transplant-induced airway lesions. *Keshavjee S, Liu M*: Canadian Cystic Fibrosis Foundation (\$200,000 1999 - 2002).

Pseudomonas aeruginosa biofilm-specific gene expression. *Burrows LL*: Connaught Foundation (\$30,000 2000 - 2002).

Regulation of cutaneous circulation in skin flaps. *Pang CY*: Medical Research Council of Canada (\$367,750 1996 - 2001).

Regulation of skin circulation. *Pang CY*: Medical Research Council of Canada (\$605,240 1994 - 1999).

Role of cytoskeleton in cytokine production from lung alveolar epithelial cells. *Liu M*: Canadian Institutes of Health for Research (\$196,194 2000 - 2003).

Role of globus pallidus in dyskinesia. *Hutchison WD*: Connaught Foundation (\$18,000 1998 - 2000).

Role of growth factor over-expression in idiopathic hypertrophic cardiomyopathy. *Li R-K*: Medical Research Council of Canada (\$170,000 1998 - 2001).

Shape discrimination in stereopsis. *Hamstra SJ*: Natural Sciences and Engineering Research Council (\$20,790 1998 - 2002).

Spina bifida: Cognitive and neurobiological variability. *Dennis M, Fletcher JM, Barnes MA, Blanton SH, Brandt ME, Buncic JR, Carlson C, Drake JM, Francis DJ, Hannay HJ, Ewing-Cobbs L, Clifton GD, Saunders A, Yeakley J*: National Institutes of Health (\$1,284,320 1998 - 2003).

Spina bifida: Cognitive and neurobiological variability in dandy walker and aqueduct stenosis. *Fletcher JM, Dennis M, Barnes MA, Blanton SH, Blaser S, Brandt ME, Buncic JR, Carlson C, Drake JM, Francis DJ, Hannay HJ, Hetherington R, Inwood S, Kramer LA, Landry SH, MacGregor D, Northrup HL, Scherer S, Townsend I, Brookshire B, Francis DJ, Davidson K, Kaufman J, Max J, Lansing A, Logan G, Martin R, Chapman SB, Mendelsohn D, Bruce D, McColl R, Kowatch R, Roach ES, Rutka JT, MacGregor D*: National Institutes of Health/National Institute of Child Health and Human Development (\$152,487 2000 – 2002).

Surface anatomy and proportions of the head and face in Down Syndrome patients. *Farkas LG, Phillips JH, Katic M*: Physicians Services Incorporated Foundation (\$2,650 1994 - 2000).

Teaching technical skills in oral surgery: Evaluating the utility of basic dexterity training. *Caminiti MF, Brown M, Regehr G, Hamstra SJ, Reznick RK*: Association of Canadian Medical Colleges/Medical Research Council of Canada (\$20,437 1999 - 2000).

Thalamic mechanisms of pain. *Dostrovsky JO, Davis KD, Lozano AM*: Department of Health and Human Services/Public Health Service/National Institutes of Health (\$256,963 1997 - 2000).

The evaluation of tritium coated sutures in vascular anastomotic remodeling. *Courtman D, Petrasek P*: Atlanta Vascular Specialists (\$9,472 2000).

The Hu-SCID mouse: An experimental model for the development and testing of candidate TB vaccines. *Sandhu JS, Gorczynski R*: Natural Sciences and Engineering Research Council (\$80,883 1997 - 2000).

The natural history of colonization, transmission, and resistance mechanisms of beta-lactam resistant Enterobacteriaceae in solid organ transplant recipients. *Gardam MA, Burrows LL, Humar A, Brunton J, Conly J*: Physicians Services Incorporated Foundation (\$124,500 2000 - 2001).

The role of cognition in a technical skills course designed for junior surgery residents. *Hutchison C, Kohls J, Hamstra SJ, Regehr G*: Association for Surgical Education (\$14,400 1999 - 2000).

The role of IL-10 in allograft transplant induced obliterative airway lesions. *Keshavjee S, Liu M*: Canadian Cystic Fibrosis Foundation (\$120,000 1997 - 1999).

The role of MHC in mediating resistance to HIV-1. *MacDonald KS, Barber BH, Wade JA*: Medical Research Council of Canada (\$736,032 1996 - 1999).

Thromboresistance of acellular matrix vascular prosthesis. *Wilson G, Courtman DW*: Heart and Stroke Foundation (\$126,016 1998 - 2000).

Use of a SCID mouse model to develop vaccines for tuberculosis in mice. *Sandhu J, Gorczynski RM*: Natural Sciences and Engineering Research Council (\$270,000 1997 - 2000).

Validity and utility of biomechanically determined guidelines in metastatic burst fracture risk assessment. *Finkelstein J, Whyne C, Chow E*: Canadian Breast Cancer Foundation (\$38,000 2000 - 2001).

HONOURS RECEIVED

Fernie GR: Best New Canadian Product for 2000 Canadian Hardware and Building Materials Show, April 2000.

Liu M: Scholarship Award, Medical Research Council of Canada, July 1999.

Wittnich C: Lister Prize, Department of Surgery, University of Toronto, May 2000.

EMERGENCY MEDICINE

**Dr. P.A. Arnold - Assistant Professor
(University Health Network)**

**Dr. L. Fulton - Lecturer
(Sunnybrook and Women's College Health Sciences Centre)**

**Dr. B.A. McLellan - Associate Professor
(Sunnybrook and Women's College Health Sciences Centre)**

**Dr. S. Reicheld - Instructor
(University Health Network)**

**Dr. D. Saslove - Instructor
(St. Michael's Hospital)**

**Dr. D. Williams - Assistant Professor
(Sunnybrook and Women's College Health Sciences Centre)**

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Feasibility study for a neurotrauma surveillance database. *Tator C*, Cusimano M, McLellan BA, Verrier M, Walker J, Williams J: Ontario Neurotrauma Foundation (\$71,600 1999).

Neurotrauma injury prevention project. *Banfield J*, McLellan BA: Neurotrauma Institute (\$110,000 1998 - 2001).

Northern Ontario remote telecommunications health network demonstration project. *Brown EM*, McLellan BA, Williams R: Ministry of Economic Development (\$1,200,000 1998 - 1999).

CROSS APPOINTMENTS

- Dr. A.J. Baker - Assistant Professor (Anesthesia)**
Dr. B.V. Bapat - Assistant Professor
(Laboratory Medicine and Pathobiology)
Dr. P. Birek – Associate Professor (Dentistry)
Dr. A. Campbell – Assistant Professor (Medicine)
Dr. J. Carson - Assistant Professor
(Family and Community Medicine)
Dr. A. Damyanovich – Assistant Professor (Medical Imaging)
Dr. J.E. Davies - Associate Professor (Dentistry)
Dr. A.M. Davis - Assistant Professor (Physical Therapy)
Dr. W.A. Demajo - Assistant Professor (Anesthesia)
Dr. D. DePetrillo - Professor (Obstetrics and Gynecology)
Dr. F. DiCosmo - Associate Professor (Botany)
Dr. R.J. Eby - Lecturer (Medicine)
Dr. V.L. Fornasier - Associate Professor
(Laboratory Medicine and Pathobiology)
Dr. R. Gilbert - Assistant Professor (Otolaryngology)
Dr. M. Greenberg - Associate Professor (Pediatrics)
Dr. M.D. Grynbas - Associate Professor
(Laboratory Medicine and Pathobiology)
Dr. P.J. Gullane - Professor (Otolaryngology)
Dr. B. Harvey - Assistant Professor (Public Health Sciences)
Dr. J. Irvine – Associate Professor (Medicine)
Dr. G. Jackowski - Assistant Professor
(Laboratory Medicine and Pathobiology)
Dr. M.G. Johnston - Associate Professor
(Laboratory Medicine and Pathobiology)
Dr. W. Kucharczyk - Professor (Medical Imaging)
Dr. G.A. Levy - Professor (Medicine)
Dr. A. McDonald - Assistant Professor (Medicine)
Dr. D.A.G. Mickle - Professor
(Laboratory Medicine and Pathobiology)
Dr. M. Milner - Professor (Rehabilitation Science)
Dr. W. Montanera - Assistant Professor (Medical Imaging)
Dr. S. Narod - Associate Professor (Public Health Sciences)
Dr. C.D. Naylor - Associate Professor (Medicine)
Dr. M. Ojha - Assistant Professor (Rehabilitation Sciences)
Dr. K.P.H. Pritzker - Professor
(Laboratory Medicine and Pathobiology)
Dr. R. Rameseshan – Lecturer (Radiation Oncology)

Dr. G. Regehr - Assistant Professor (Psychiatry)
Dr. P. Ritvo - Assistant Professor (Public Health Sciences)
Dr. A. Romaschin - Associate Professor
(Laboratory Medicine and Pathobiology)
Dr. A.S. Slutsky – Professor (Medicine)
Dr. B. Steinhart - Instructor (Medicine)
Dr. D.E. Stewart - Professor (Psychiatry)
Dr. K.G. terBrugge - Professor (Medical Imaging)
Dr. R. Willinsky - Associate Professor (Medical Imaging)
Dr. G.J. Wilson - Professor
(Laboratory Medicine and Pathobiology)
Dr. T.W. Wu - Professor (Laboratory Medicine and Pathobiology)

PUBLICATIONS

Abbey SE, Stewart DE: Gender and psychosomatic aspects of ischemic heart disease. *Journal of Psychosomatic Medicine*: April 2000; 48: pp 417-423.

Alkhani A, Willinsky RA, terBrugge K: Spontaneous resolution of bilateral traumatic carotid cavernous fistulas and development of trans-sellar intercarotid vascular communication: Case report. *Surgical Neurology*: December 1999; 52: pp 627-629.

Alter DA, Basinski ASH, Cohen EA, Naylor CD: Fairness in the coronary angiography queue. *Canadian Medical Association Journal*: July 1999; 161: pp 813-817.

Alter DA, Naylor CD: Catherization after myocardial infarction and the mismeasure of un-American inactivity. *Journal of the American College of Cardiology*: July 1999; 34: pp 23-24.

Alter DA, Naylor CD, Austin P, Tu JV: The effect of socioeconomic status on access to invasive cardiac procedures and on mortality following acute myocardial infarction in Ontario, Canada. *New England Journal of Medicine*: July 1999; 341: pp 1359-1367.

Baba A, Kim YK, Zhang H, Liu M, Slutsky AS: Perfluorocarbon blocks tumor necrosis factor-alpha-induced interleukin-8 release from alveolar epithelial cells in vitro. *Critical Care Medicine*: April 2000; 28(4): pp 1113-1118.

Bapat B, Esufali S: Tumor suppressor genes and cancer modifier loci. In: *DNA Alterations in Cancer: Genetic and Epigenetic Changes* (Ehrlich M, ed). BioTechniques Books, Massachusetts: 2000: pp 78-83.

Berkovitch M, Bistritzer T, Milone SD, Perlman K, Kucharczyk W, Koren G, Olivieri NF: Iron deposition in the anterior pituitary in homozygous beta-thalassemia: MRI evaluation and correlation with gonadal function. *Journal of Pediatric Endocrinology and Metabolism*: February 2000: 13(2): pp 179-184.

Bernstein M, Al-Anazi AR, Kucharczyk W, Manninen P, Bronskill M, Henkelman M: Brain tumor surgery with the Toronto open magnetic resonance imaging system: Preliminary results for 36 patients and analysis of advantages, disadvantages, and future prospects. *Neurosurgery*: April 2000: 46(4): pp 907-909.

Borger MA, Fremes SE, Weisel RD, Rao V, Cohen G, Lindsay TF, Naylor CD: Coronary bypass and carotid endarterectomy: Does a combined approach increase risk? A meta-analysis. *Annals of Thoracic Surgery*: August 1999: 68: pp 14-20.

Busto UE, Bremner KE, Knight K, terBrugge KG, Sellers EM: Long-term benzodiazepine therapy does not result in brain abnormalities. *Journal of Clinical Psychopharmacology*: February 2000: 20: pp 2-6.

Cao-Yang J, Esufali S, Berk T, Gallinger S, Cohen Z, Toby M, Redston M, Bapat B: STK11/LKB1 germ-line mutations are not identified in most Peutz-Jeghers syndrome patients. *Clinical Genetics*: July 1999: 56(2): pp 136-138.

Carroll CMA, Pathak I, Irish J, Neligan PC, Gullane P: Reconstruction of total lower lip and chin defects using the composite radial forearm: Palmaris longus tendon free flap. *Archives of Facial Plastic Surgery*: January 2000: 2: pp 53-56.

Carson JD, Roberts M, White A: The epidemiology of women's rugby injuries. *Clinical Journal of Sports Medicine*: September 1999: 9: pp 75-78.

Cassivi SD, Cardella JA, Fischer S, Liu M, Slutsky AS, Keshavjee S: Trans-tracheal gene transfection of donor lungs prior to organ procurement increases transgene levels at reperfusion and following transplantation. *Journal of Heart and Lung Transplantation*: December 1999: 18(2): pp 1181-1188.

Chachra D, Lee JM, Kasra M, Grynbas MD: Differential effects of ovariectomy on the mechanical properties of cortical and cancellous bone in rat femora and vertebrae. In: *Proceedings, Rocky Mountain Bioengineering Symposium*: 2000: pp 123-128.

Chen JC, Moriarty JA, Derbyshire A, Peters R, Trachtenberg J, Bell S, Doyle J, Arrelano R, Wright G, Henkelman RM, Hinks RS, Lok SY, Toi A, Kucharczyk W: Prostate cancer: MR imaging and thermometry during microwave thermal ablation-initial experience. *Radiology*: January 2000: 214(1): pp 290-297.

Chiumello D, Pristine G, Slutsky AS: Mechanical ventilation affects local and systemic cytokines in an animal model of ARDS. *American Journal of Respiratory and Critical Care Medicine*: July 1999: 160(1): pp 109-116.

Clark DC, Ding JW, Chaouat G, Coulam CB, August C, Levy GA: The emerging role of immunoregulation of fibrinogen-related procoagulant fgl2 in the success or spontaneous abortion of early pregnancy in mice and humans. *American Journal of Reproductive Immunology*: July 1999: 42(1): pp 37-43.

Cooper AB, Ferguson ND, Hanly PJ, Meade MO, Kachura JR, Granton JT, Slutsky AS, Stewart TE: Long-term follow-up of survivors of acute lung injury: Lack of effect of a ventilation strategy to prevent barotrauma. *Critical Care Medicine*: December 1999: 27(12): pp 2616-2621.

Cooper AB, Thornley KS, Young GB, Slutsky AS, Stewart TE, Hanly PJ: Sleep in critically ill patients requiring mechanical ventilation. *Chest*: March 2000: 117(3): pp 809-818.

Couture J, Schmit R, Alman B, Berk T, Mitri A, Fodde R, Bapat B: A germline mutation at the extreme 3' end of the APC gene results in a severe desmoid phenotype and is associated with over-expression of beta-catenin in the desmoid tumor. *Clinical Genetics*: January 2000: 57: pp 205-212.

Crawford B, Stewart DE, Meana M: Treatment decision-making in mature adults: Gender differences. *Health Care for Women International*: March 2000: 21(2): pp 91-104.

Curran AJ, Gullane PJ, Irish J, Macmillan C, Freeman J, Kamel-Reid S: Telomerase activity is up-regulated in laryngeal squamous cell carcinoma. *Laryngoscope*: March 2000: 110: pp 391-396.

Damyanovich AZ, Peternelj J, Pintar MM: Spectroscopy from proton spin magnetization evolution in their rotating frame: A study of small tunneling splitting. *Journal of Magnetic Resonance*: September 1999: 140(1): pp 9-16.

Damyanovich AZ, Pintar MM: Design for a high-power, low-temperature NMR probe with cryogen-sample contact. *Journal of Magnetic Resonance*: May 2000: 144(1): pp 1-5.

Damyanovich AZ, Staples JR, Marshall KW: The effects of freeze/thawing on human synovial fluid observed by 500 MHz ^1H magnetic resonance spectroscopy. *Journal of Rheumatology*: March 2000: 27(3): pp 746-752.

Dancey DR, Hayes J, Gomez M, Schouten D, Fish J, Peters W, Slutsky AS, Stewart TE: ARDS in patients with thermal injury. *Intensive Care Medicine*: December 1999: 25: pp 1231-1236.

DeCampos KN, Keshavjee S, Slutsky AS, Liu M: Alveolar recruitment prevents rapid-reperfusion-induced injury of lung transplants. *Journal of Heart and Lung Transplantation*: November 1999: 18(1): pp 1096-1102.

Denaro V, Fornasier VL: Hip joint replacement implant: Fit versus conformation. *European Journal of Orthopaedic Surgery and Traumatology*: July 1999: 9: pp 1-8.

dos Santos CC, Slutsky AS: Mechanotransduction, ventilator-induced lung injury and multiple organ dysfunction syndrome. *Intensive Care Medicine*: May 2000: 26(5): pp 638-642.

Goyal M, Versnick E, Tuite P, Cyr JS, Kucharczyk W, Montanera W, Willinsky R, Mikulis D: Hypertrophic olivary degeneration: Meta-analysis of the temporal evolution findings. *American Journal of Neuroradiology*: June 2000: 21(6): pp 1073-1077.

Goyal M, Willinsky R, Montanera W, terBrugge K: Spontaneous vertebrovertebral arteriovenous fistulae clinical features, angioarchitecture and management of twelve patients. *Interventional Neuroradiology*: December 1999; 5: pp 219-224.

Grady DM, Baker AJ: Recent advances in neuroprotection following subarachnoid hemorrhage. *Current Anesthesiology Reports*: May 2000; 2(3): pp 171-174.

Granton J, Slutsky AS: Mechanical ventilation: What's new when your patient is blue? *Canadian Medical Association Journal*: January 2000; 162(2): pp 241-242.

Grasso S, Puntillo F, Mascia L, Ancona G, Fiore T, Bruno F, Slutsky AS, Ranieri VM: Compensation for increase in respiratory workload during mechanical ventilation: Pressure support (PSV) versus proportional assist (PAV) ventilation. *American Journal of Respiratory and Critical Care Medicine*: March 2000; 161(3): pp 819-826.

Hansra P, Moran EL, Fornasier VL, Bogoch ER: Carrageenan-induced arthritis in the rat. *Inflammation*: January 2000; 24(2): pp 319.

Henry TD, Setum CM, Wilson GJ, Morris JE, Johnston RB, Jensen ML: Pre-clinical evaluation of a rheolyticTM catheter for percutaneous coronary artery/saphenous vein graft thrombectomy. *Journal of Invasive Cardiology*: August 1999; 11(8): pp 475-484.

Humar A, Gregson D, Caliendo AM, McGeer A, Malkan G, Krajden M, Corey P, Greig P, Walmsley S, Levy G, Mazzulli T: Clinical utility of quantitative cytomegalovirus viral load determination for predicting cytomegalovirus disease in liver transplant recipients. *Transplantation*: November 1999; 68(9): pp 1305-1311.

Hunter GK, Curtis HA, Gryn timer MD, Simmer JP, Finchman AG: Effects of recombinant amedogenin on hydroxyapatite formation *in vitro*. *Calcified Tissue International*: November 1999; 65: pp 226-231.

Hyman A, Yim C, Krajden M, Read S, Basinski A, Wanless I, Levy G, Heathcote J: Oral prostaglandin (PGE2) therapy for chronic viral hepatitis B and C. *Journal of Viral Hepatitis*: August 1999; 6: pp 329-336.

Irvine J, Baker B, Smith J, Jandciu S, Paquette M, Cairns J, Connolly S, Roberts R, Gent M, Dorian P: Poor adherence to placebo therapy predicts mortality: Results from the CAMIAT study. *Psychosomatic Medicine*: July 1999; 61: pp 566-575.

Irvine J, Basinski A, Baker B, Jandciu S, Paquette M, Cairns J, Connolly S, Gent M, Roberts R, Dorian P: Psychosocial predictors of sudden cardiac death in CAMIAT. *Psychosomatic Medicine*: November 1999; 61: pp 729-737.

Irvine J, Newman D: Quality of life issues in the management of patients with ventricular arrhythmias. *Canadian Journal of Cardiology*: June 2000; 16: pp 41C-44C.

Isowa N, Xavier AM, Dziak E, Opas M, McRitchie DI, Slutsky AS, Keshavjee SH, Liu M: LPS-induced depolymerization of cytoskeleton and its role in TNF-alpha production by rat pneumocytes. *American Journal of Physiology*: September 1999; 277(3): pp L606-L615.

Ivanov J, Borger MA, David TE, Cohen G, Walton N, Naylor CD: Predictive accuracy study: Comparing a statistical model to clinicians' estimates of outcomes after coronary bypass surgery. *Annals of Thoracic Surgery*: May 2000; 70: pp 162-168.

Katz MR, Irish JC, Devins GM, Rodin GM, Gullane PJ: Reliability and validity of an observer-rated disfigurement scale for head and neck cancer patients. *Head and Neck*: January 2000; 22(2): pp 132-141.

Kawamae K, Pristine G, Chiumello D, Tremblay LN, Slutsky AS: Partial liquid ventilation decreases serum TNF-alpha levels in a rat acid aspiration lung injury model. *Critical Care Medicine*: June 2000; 28(2): pp 479-483.

Lapinsky SE, Aubin M, Mehta S, Boiteau P, Slutsky AS: Safety and efficacy of a sustained inflation for alveolar recruitment in adults with respiratory failure. *Intensive Care Medicine*: December 1999; 25: pp 1297-1301.

Lapinsky SE, Slutsky AS: Ventilator management. In: *Hospital Medicine* (Wachter RM, Goldman L, Hollander H, eds). Lippincott-Williams and Wilkins, Philadelphia: 2000: pp 105-114.

Lazinski D, Willinsky R, terBrugge KG, Montanera W: Dissecting aneurysms of the posterior cerebral artery: Angioarchitecture and a review of the literature neuroradiology. *Neuroradiology*: February 2000: 42: pp 128-133.

Lee KJ, McCrindle BW, Bohn DJ, Wilson GJ, Taylor GP, Freedom RM, Smallhorn JF, Benson LN: Clinical outcomes of acute myocarditis in childhood. *Heart*: August 1999: 82(2): pp 226-233.

Lent B, Richardson BF, Wilson S, Stewart DE: Promoting parental leave for female and male physicians. *Canadian Medical Association Journal*: May 2000: 162(11): pp 1575-1576.

Levy GA: Neoral/cyclosporine-based immunosuppression. *Liver Transplantation and Surgery*: July 1999: 5(4): pp S37-S47.

Levy GA, Liu MF, Ding JW, Yuwaraj S, Leibowitz JL, Marsden P, Ning Q, Kovalinka A, Phillips MJ: Molecular and functional analysis of the human prothrombinase gene (h-fgl2) and its role in viral hepatitis. *American Journal of Pathology*: April 2000: 156(4): pp 1217-1225.

Liu M, Tremblay L, Cassivi SD, Bai XH, Mourgeon E, Pierre AF, Slutsky AS, Post M, Keshavjee S: Alterations of nitric oxide synthase expression and activity during rat lung transplantation. *American Journal of Physiology Lung Cell Molecular Physiology*: May 2000: 278(5): pp L1071-L1081.

Llewellyn-Thomas HA, Paterson JM, Carter JA, Basinski A, Myers MG, Hardacre GD, Dunn EV, D'Agostino RB, Naylor CD, Preventive Decision-Making Research Group: Primary prevention drug therapy: Can it meet patients' demands for reduced risk? *Medical Decision Making*: July 1999: pp 23-24.

MacKenzie R, Franssen E, Balogh J, Gilbert RW, Birt D, Davidson MJ: Comparing treatment outcomes of radiotherapy and surgery in locally advanced carcinoma of the larynx: A comparison limited to patients eligible for surgery. *International Journal of Radiation Oncology, Biology and Physics*: April 2000: 47(1): pp 65-71.

Malkan G, Cattral MS, Humar A, Alashgar H, Greig PD, Hemming AW, Levy GA, Lilly LB: Lamivudine for hepatitis B in liver transplantation. *Transplantation*: April 2000; 69(7): pp 1403-1407.

Mamdani M, van Walraven CA, Bica A, Williams JI, Naylor CD: Is there an association between lipid-lowering drugs and cholecystectomy? *American Journal of Medicine*: April 2000; 108(5): pp 418-421.

Manninen PH, Kucharczyk W: A new frontier: Magnetic resonance imaging-operating room. *Journal of Neurosurgical Anesthesiology*: April 2000; 12(2): pp 141-148.

Mao C, Wong DT, Slutsky AS, Kavanagh BP: A quantitative assessment of how Canadian intensivists believe they utilize oxygen in the intensive care unit. *Critical Care Medicine*: December 1999; 27(12): pp 2806-2811.

Marcus VA, Madlensky L, Gryfe R, Kim H, So K, Millar A, Temple LKF, Hsieh E, Hiruki T, Narod S, Bapat B, Gallinger S, Redston M: Immunohistochemistry for hMLH1 and hMSH2: A practical test for DNA mismatch repair deficient tumors. *American Journal of Surgery and Pathology*: July 1999; 23(10): pp 1248-1255.

Mariotto A, De Leo D, Dello Buono M, Favaretti C, Austin P, Naylor CD: Will the elderly stand aside for younger patients in the queue for cardiac services? *Lancet*: July 1999; 354: pp 467-470.

Matsubara S, Manzia J, terBrugge K, Willinsky RA, Montanera W, Faughnan ME: Angiographic and clinical characteristics of patients with cerebral arteriovenous malformations associated with hereditary hemorrhagic teleangiectasia. *American Journal of Neuroradiology*: June 2000; 21: pp 1016-1020.

McGinn TG, Guyatt GH, Wyer PC, Naylor CD, Stiell IG, Richardson WS, Evidence-Based Medicine Working Group: Users' guides to the medical literature XXII: How to use articles about clinical decision rules. *Journal of the American Medical Association*: January 2000; 284: pp 79-84.

McRitchie DI, Isowa N, Edelson JD, Xavier AM, Cai L, Man HY, Wang YT, Keshavjee SH, Slutsky AS, Liu M: Production of tumor necrosis factor alpha by primary cultured rat alveolar epithelial cells. *Cytokine*: June 2000: 12(6): pp 644-654.

Meade MO, Cook RJ, Guyatt GH, Groll R, Kachura JR, Bedard M, Cook DJ, Slutsky AS, Stewart TE: Inter-observer variation in interpreting chest radiographs for the diagnosis of acute respiratory distress syndrome. *American Journal of Respiratory and Critical Care Medicine*: January 2000: 161(1): pp 85-90.

Meana M, Stewart DE, Lickrish GM, Murphy J, Rosen N: Patient preference for the management of mildly abnormal PAP smears. *Journal of Women's Health*: September 1999: 8: pp 941-947.

Merguerian PA, Reddy PP, Barrieras DJ, Wilson GJ, Woodhouse K, Bagli D, McLorie GA, Khoury AE: Acellular bladder matrix allografts in the regeneration of functional bladders: Evaluation of large segment (<24 cm²) substitution in a porcine model. *British Journal of Urology International*: May 2000: 85: pp 894-898.

Mirabelli-Primdahl L, Gryfe R, Kim H, Millar A, Luceri C, Dale D, Holowaty E, Bapat B, Gallinger S, Redston M: Beta-catenin mutations are specific for colorectal carcinomas with microsatellite instability but occur in endometrial carcinomas irrespective of mutator pathway. *Cancer Research*: July 1999: 59(14): pp 3346-3351.

Morrison LJ, Brooks S, Sawadsky BV, McDonald A, Verbeek PR: Mortality and thrombolysis time intervals with pre-hospital 12-lead electrocardiogram and advance emergency department notification: A meta-analysis. *Academic Emergency Medicine*: May 2000: 7(5): pp 479.

Morrison LJ, Verbeek R, McDonald A, Sawadsky BV: Meta-analysis in pre-hospital thrombolysis and the affect on mortality in acute myocardial infarction. *Journal of the American Medical Association*: May 2000: 283(20): pp 2686-2692.

Nakamura T, Liu M, Mourgeon E, Slutsky A, Post M: Mechanical strain and dexamethasone selectively increase surfactant protein C and tropoelastin gene expression. *American Journal of Physiology Lung Cell Molecular Physiology*: May 2000: 278(5): pp L974-L980.

Naylor CD, Slaughter PM: Cardiovascular Health and Services in Ontario (Naylor CD, Slaughter PM, eds). Institute for Clinical Evaluative Sciences, Toronto: 1999: pp 1-394.

Naylor CD, Szalai JP, Katic M: Benchmarking the vital risk of waiting for coronary surgery in Ontario, Canada. *Canadian Medical Association Journal*: March 2000: 162(6): pp 775-779.

Neligan PC, Gullane PJ, Gentili F: A surgical and philosophical approach to the cranial base. *Formosan Journal of Surgery*: November 1999: 32(3): pp 107-110.

Norris CM, Ghali WA, Knudtson ML, Naylor CD, Saunders LD, Alberta Provincial Project for Outcome Assessment in Coronary Heart Disease: Dealing with missing data in observational health care outcomes analyses. *Journal of Clinical Epidemiology*: April 2000: 53(4): pp 377-383.

O'Sullivan B, Wylie J, Catton C, Gutierrez E, Swallow CJ, Wunder J, Gullane P, Neligan P, Bell R: The local management of soft tissue sarcoma. *Seminars in Radiation Oncology*: October 1999: 9(4): pp 328-348.

Parker AB, Naylor CD: Subgroups, baseline risks, and treatment effects: Some lessons from major cardiovascular trials. *American Heart Journal*: June 2000: 139(6): pp 952-961.

Pathak I, Gullane P: Management of the posterior commissure and thyrotracheal anastomosis. *Operative Techniques in Otolaryngology: Head and Neck Surgery*: December 1999: 20(4): pp 299-302.

Perampalam S, Wang L, Myers-Mason N, Stanietsky N, Weitz JL, Phillips MJ, Ackerley C, Levy GA, Cole E: Identification of a unique glomerular factor X activator in murine lupus nephritis. *Journal of the American Society of Nephrology*: November 1999: 10(11): pp 2332-2341.

Peternelj J, Damyanovich AZ, Pintar MM: Two-dimensional Zeeman polarization spectroscopy of tunneling atomic groups in solids. *Physical Review Letters*: July 1999: 82(12): pp 2587-2589.

Peters W, Smith D, Lugowski S, Pritzker KPH: Simaplast inflatable breast implants: Evaluation after 23 years in situ. *Plastic Reconstructive Surgery*: October 1999: 104(5): pp 1539-1544.

Phillipson EA, Slutsky AS: Hypoventilation and hyperventilation syndromes. In: *Textbook of Respiratory Medicine, Third Edition* (Murray JF, Nadel JA, eds). W.B. Saunders Company, Philadelphia: 2000: pp 2139-2152.

Powdorny N, Kandel RA, Renlund R, Grynblas MD: Zoledronate partially protects the articular cartilage in a rabbit model of inflammatory arthritis. *Journal of Rheumatology*: July 1999: 26: pp 1972-1982.

Ranieri VM, Slutsky AS: Respiratory physiology and acute lung injury: The miracle of Lazarus. *Intensive Care Medicine*: October 1999: 25(10): pp 1040-1043.

Ranieri VM, Suter PM, Tortorella C, De Tullio R, Dayer JM, Brienza A, Bruno F, Slutsky AS: Effect of mechanical ventilation on inflammatory mediators in patients with acute respiratory distress syndrome: A randomized controlled trial. *Journal of the American Medical Association*: July 1999: 282(1): pp 54-61.

Redekop G, terBrugge K, Willinsky R: Subarachnoid hemorrhage from vertebrobasilar dissecting aneurysm treated with staged bilateral vertebral artery occlusion: The importance of early follow-up angiography: Technical case report. *Neurosurgery*: November 1999: 45: pp 1258-1263.

Redekop G, Willinsky RA, Montanera W, terBrugge KG, Tymianski M, Wallace MC: Endovascular occlusion of basilar bifurcation aneurysms with electrolytically detachable coils: Clinical considerations, outcome, and angiographic results. *Canadian Journal of Neurological Sciences*: August 1999: 26: pp 172-181.

Rimensberger PC, Pristine G, Mullen JBM, Cox PN, Slutsky AS: Lung recruitment during small tidal volume ventilation allows minimal positive end-expiratory pressure without augmenting lung injury. *Critical Care Medicine*: September 1999: 27(9): pp 1940-1945.

Ritvo PG, Irvine J, Katz J, Matthew A, Sacamano J, Shaw BP: The patient's motivation in seeking alternative medical therapies. *Patient Education and Counselling*: July 1999: 38: pp 161-165.

Ritvo PG, Irvine MJ, Katz J, Shaw BF: Medical patients. In: *Cognitive Behavioral Group Therapy for Specific Problems and Populations* (White JR, Freeman A, eds). American Psychological Association Books, Washington: 2000: pp 263-280.

Ritvo PG, Robinson G, Irvine J, Brown L, Murphy KJ, Stewart D, Styra R, Wang C, Mullin M, Rosen B: A longitudinal study of psychological adjustment to family genetic risk assessment for ovarian cancer. *Gynecologic Oncology*: September 1999: 74: pp 331-337.

Ritvo PG, Robinson G, Irvine J, Brown L, Murphy KJ, Stewart DE, Styra R, Wang C, Rosen B: Psychological adjustment to familial genetic risk assessment in ovarian cancer: A comparison of two samples. *Patient Education and Counselling*: May 2000: 40(2): pp 163-172.

Rubinfeld GD, Angus DC, Pinsky MR, Curtis JR, Connors AF, Bernard GR, Members of the Outcomes Research Workshop (including Slutsky AS): Outcomes research in critical care: Results of the American Thoracic Society critical care assembly workshop on outcomes research. *American Journal of Respiratory and Critical Care Medicine*: September 1999: 160: pp 358-367.

Shpitzer T, Neligan PC, Gullane PJ, Boyd BJ, Gur E, Rotstein LE, Brown DH, Irish JC, Freeman JE: The free iliac crest and fibula flaps in vascularized oromandibular reconstruction: Comparison and long-term evaluation. *Head and Neck*: October 1999: 21: pp 639-647.

Slutsky AS: Lung injury caused by mechanical ventilation. *Chest*: July 1999: 116: pp 9S-15S.

Sodek RL, Tupy JH, Sodek J, Grynblas MD: Relationships between bone protein and mineral in developing porcine long bones and calvaria. *Bone*: February 2000: 26(2): pp 189-198.

Stewart DE: Can gender affect your health? In: *Advances in Women and Health Research* (Kolk AM, Bekker MHJ, Vliet KP, eds). University Press, Tilburg: 1999: pp 65-83.

Stewart DE, Ahmad F, Cheung A, Bergman B, Dell D: Women physicians and stress. *Journal of Women's Health and Gender Based Medicine*: March 2000: 19(2): pp 185-190.

Stewart DE, Cheung AM, Layne D, Evis M: Are we there yet? The representation of women as subjects in clinical research. *Annals of the Royal College of Physicians and Surgeons*: June 2000: 33(4): pp 229-231.

Stewart DE, Wenger NK: Health conditions and diseases in gender differences and gender specific approaches to depression, anxiety, cardiovascular diseases, ovarian cancer, osteoporosis. *Proceedings, Canada-USA Women's Health Forum, Health Canada*: 1999: pp 118-127.

Stewart DE, Wong F, Cheung AM, Dancey J, Meana M, Cameron JI, McAndrews MP, Bunston T, Murphy J, Rosen B: Information needs and decisional preferences among women with ovarian cancer. *Gynecologic Oncology*: June 2000: 77: pp 357-361.

Stirtzinger R, Robinson GE, Stewart DE: Parameters of grieving in spontaneous abortion. *International Journal of Psychiatry in Medicine*: July 1999: 29(2): pp 235-249.

Takeuchi A, Vesely A, Rucker J, Sommer LZ, Tesler J, Lavine E, Slutsky AS, Maleck WH, Volgyesi G, Fedorko L, Iscoe S, Fisher JA: A simple 'new' method to accelerate clearance of carbon monoxide. *American Journal of Respiratory and Critical Care Medicine*: June 2000: 161(6): pp 1816-1819.

Tator CH, Carson JD, Cushman R: Hockey injuries of the spine in Canada. *Canadian Medical Association Journal*: March 2000: 162(6): pp 787-788.

Tator CH, Carson JD, Cushman R: Spinal injuries in Canadian ice hockey players 1966-1996. In: *Neurologic Athletic Head and Spinal Injuries* (Cantu R, ed). W.B. Saunders Company, Philadelphia: 2000: pp 183-189.

- Tejpar S, Nollett F, Li C, Wunder JS, Michils G, dal Cin P, Van Cutsem E, Bapat B, van Roy F, Cassiman JJ, Alman BA:** Predominance of beta-catenin mutations and beta-catenin dysregulation in sporadic aggressive fibromatosis (desmoid tumor). *Oncogene*: July 1999; 18(47): pp 6615-6620.
- terBrugge KG:** Neurointerventional procedures in the pediatric age group. *Child's Nervous System*: November 1999; 15: pp 751-754.
- Tian GF, Baker AJ:** Glycolysis prevents anoxia-induced synaptic transmission damage in rat hippocampal slices. *Journal of Neurophysiology*: April 2000; 83(4): pp 1830-1839.
- Trachtenberg J, Chen J, Kucharczyk W, Toi A, Lancaster C:** Microwave thermoablation for localized prostate cancer after failed radiation therapy: Role of neoadjuvant hormonal therapy. *Molecular Urology*: December 1999; 3(3): pp 247-250.
- Tremblay LN, Slutsky AS:** Continuous gas flow and high frequency ventilation. In: *Textbook of Critical Care, Fourth Edition* (Shoemaker WC, Grenvik A, Ayres SM, Holbrook PR, eds). W.B. Saunders Company, Philadelphia: 1999; pp 1293-1301.
- Tu JV, Naylor CD, Austin P:** Temporal changes in the management and outcomes of acute myocardial infarction in Canada. *Canadian Medical Association Journal*: July 1999; 161: pp 1257-1261.
- Turner CH, Hsieh YF, Muller R, Bouxsein ML, Baylink DJ, Rosen CJ, Grynblas MD, Donahue LR, Beamer WG:** Genetic regulation of cortical and trabecular bone strength and microstructure in inbred strains of mice. *Journal of Bone and Mineral Research*: June 2000; 15(6): pp 1126-1131.
- van Walraven C, Naylor CD:** Use of vitamin B12 injections among elderly patients by primary care practitioners in Ontario, Canada. *Canadian Medical Association Journal*: July 1999; 161: pp 146-149.
- Warrick PD, Irish JC, Mancer K, Dardick I, Pynn BR, Gullane P:** Basal cell adenocarcinoma: A rare malignancy of the salivary glands. *Journal of Otolaryngology*: January 2000; 29(2): pp 102-109.

Willinsky R, Goyal M, terBrugge KG, Montanera W: Tortuous, engorged pial veins in intracranial dural arteriovenous fistulas: Correlation with presentation, location, and MR findings in 122 patients. *American Journal of Neuroradiology*: July 1999; 20: pp 1031-1036.

Wise MR, Stewart DE, Liu P, Abramson BL: Use of hormone replacement therapy among cardiac patients at a Canadian academic centre. *Canadian Medical Association Journal*: July 1999; 161(1): pp 33-36.

Xavier AM, Isowa N, Cai L, Dziak E, Opas M, McRitchie DI, Slutsky AS, Keshavjee SH, Liu M: Tumor necrosis factor- α mediates lipopolysaccharide-induced macrophage inflammatory protein-2 release from alveolar epithelial cells: Autoregulation in host defense. *American Journal of Respiratory Cell Molecular Biology*: October 1999; 21(4): pp 510-520.

Zhang H, Kim YK, Govindarajan A, Baba A, Binnie M, Ranieri VM, Liu M, Slutsky AS: Effect of adrenoreceptors on endotoxin-induced cytokines and lipid peroxidation in lung explants. *American Journal of Respiratory and Critical Care Medicine*: December 1999; 160(5): pp 1703-1710.

Zhao YF, Mendes M, Symington JM, Listrom RD, Pritzker KPH: Experimental study of bone growth around a dental implant after surigibone grafting. *International Journal of Oral Maxillofacial Implants*: December 1999; 14(6): pp 889-897.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Baker AJ: World Congress of Anesthesiologists, Montreal, Quebec, June 2000. (1) Case discussion: Head trauma, (2) Co-chair: Trauma: Neurological injury, (3) Secondary injury.

Baker AJ: Toronto Critical Care Medicine Symposium, Toronto, Ontario, October 1999. (1) Co-chair: Neurosciences in critical care, (2) Subarachnoid hemorrhage.

Baker AJ: National Conference on Organ and Tissue Donation for Transplantation, Toronto, Ontario, June 2000. Innovative solutions: Making it work: One model.

Baker AJ: Organ Donation Ontario Volunteer Committee of Durham Region, Whitby, Ontario, April 2000. St. Michael's Hospital task force on organ donation.

Baker AJ: Brain Injury Association of Toronto, Toronto, Ontario, October 1999. Traumatic brain injury research: Present and future.

Damyantovich A: Canadian NMR Summer Institute, Waterloo, Ontario, July 1999. (1) NMR in biomedicine I: Body fluids and tissue extracts, (2) NMR in biomedicine II: In vivo spectroscopy.

Damyantovich A: Chemical Institute of Canada, Toronto, Ontario, July 1999. The evolving role of magnetic resonance spectroscopy in biomedicine.

Fornasier VL: Traveling Speaker, Japanese Orthopaedic Association, Gifu, Japan, July 1999. (1) Biopsy in soft tissue sarcoma: What we have learned in the 21st century, (2) Pathology of rheumatoid arthritis, (3) Implants: Pathology, hope, success and failure, (4) Current concepts in pathology of orthopaedic diseases.

Fornasier VL: CIOSM, Rome, Italy, November 1999. (1) Fine needle aspiration biopsy in sarcoma, (2) Panel: Bone and soft tissue sarcomas.

Gilbert R: Mount Sinai Comprehensive Course on Head and Neck Reconstruction, New York, New York, March 2000. (1) Temporoparietal free flap, (2) Flap selection, orientation and inseting, (3) Temporoparietal free flap plus cartilage in laryngeal reconstruction, (4) Anterolateral thigh flap.

Gilbert R: British Virgin Islands Medical Conference, Tortola, British Virgin Islands, January 2000. New reconstructive approaches in head and neck surgery.

Gilbert R: Visiting Professor, University of Alberta, Calgary, Alberta, April 2000. Recent advances in head and neck reconstruction.

Grynpas MD: AO Centre, Davos, Switzerland, April 2000. How trace elements influence bone mineralization.

Gullane PJ: Australian Society of Otolaryngology/Head and Neck Surgery, Melbourne, Australia, March 2000. (1) Early glottic cancer: Irradiation and surgery for salvage, (2) Adult subglottic stenosis and laryngotracheal reconstruction, (3) Analysis and therapy of advanced carcinoma of the laryngopharynx lip reconstruction, (4) Outcomes on young patients with squamous carcinoma of the head and neck, (5) Advances in mandibular reconstruction, (6) Panel: Management of advanced oropharyngeal carcinoma.

Gullane PJ: American Academy of Otolaryngology/Head and Neck Surgery, New Orleans, Louisiana, September 1999. (1) Lip reconstruction, (2) Adult laryngotracheal stenosis, (3) Panel: Adult and pediatric subglottic stenosis: Standard of care 1999.

Gullane PJ: American College of Head and Neck Surgeons Clinical Congress, San Francisco, California, October 1999. (1) Panel: Current controversies in the management of the mandible in head and neck reconstructive surgery, (2) The role of the mandibular reconstruction plates.

Gullane PJ: Congress of the Association of Argentinean Society for Head and Neck Surgery, Buenos Aires, Argentina, September 1999. (1) Panel: Evaluation and diagnosis of skull base tumors, (2) Parotid neoplasms: Extent of resection and facial reanimation, (3) Subglottic tracheal stenosis: Surgical technique and outcome, (4) Panel: Alternative treatment in management of head and neck neoplasms, (5) Panel: Education for head and neck surgeons.

Gullane PJ: Joint Shanghai/Hong Kong Surgical Convention, Hong Kong, China, January 2000. (1) Reconstruction of the oral cavity, (2) Facial nerve management in parotid cancer, (3) Subglottic tracheal stenosis, (4) Soft tissue sarcoma in the head and neck.

Gullane PJ: Combined Otolaryngological Spring Meetings, Orlando, Florida, May 2000. (1) Soft tissue reconstruction of maxillary cavity defects, (2) An objective subject-controlled analysis of the impact of lateral rhinotomy on facial aesthetics.

Gullane PJ: Canadian Society of Surgical Oncology, Toronto, Ontario, April 2000. (1) Targeting HMG-CoA reductase induces a pronounced apoptotic response in HNSCC, (2) Tumor derived cell lines: Re-evaluating a potential therapeutic approach.

Gullane PJ: Birmingham International Multidisciplinary Head and Neck Course, Birmingham, Alabama, October 1999. (1) The treatment of advanced disease, (2) The treatment of the neck, (3) Management of adult subglottic stenosis, (4) How I do it: Paroidecomy, (5) Treatment of advanced laryngeal cancer, (6) Management of hypopharyngeal tumors, (7) The overview: How I approach and manage sinus and skull base tumors.

Gullane PJ: Irish Society of Otolaryngology/Head and Neck Surgery/Royal College of Surgeons, Dublin, Ireland, September 1999. Craniofacial resection: The Toronto experience: Antero-lateral and postero-lateral skull base.

Gullane PJ: Eastern Section of Triological Society, Pittsburgh, Pennsylvania, January 2000. Moderator: Scientific session.

Gullane PJ: Resident Research Day, University of Manitoba Health Sciences Centre, Winnipeg, Manitoba, April 2000. Skull base neoplasms.

Gullane PJ: University of Montreal, Montreal, Quebec, April 2000. Thyroid: Diagnosis and management.

Kucharczyk W: Brigham and Women's Hospital/Harvard University, Boston, Massachusetts, October 1999. (1) Basic principles of MRI, (2) Radiology of white matter diseases, (3) Imaging in hemorrhagic conditions.

Kucharczyk W: University of Minnesota, Minneapolis, Minnesota, September 1999. (1) Intracranial vascular malformations and fistulae, (2) A pattern recognition approach to the differential diagnosis of white matter disease.

Kucharczyk W: ISMRM, Denver, Colorado, April 2000. (1) Spin gymnastics I, (2) Spin gymnastics II.

Kucharczyk W: Imaging Advances: Head-to-Toe, Whistler, British Columbia, March 2000. (1) Tumors and tumor-like lesions of the spinal cord, (2) Lesions of the internal auditory canal and cerebellopontine angle, (3) Interventional MRI: Current status and future directions, (4) Imaging of white matter diseases, (5) The pituitary gland and parasellar region.

Kucharczyk W: International Diagnostic Course, Davos, Switzerland, March 2000. Diseases of the sella turcica and skull base.

Kucharczyk W: Image-Guided Neurosurgery Symposium, Maui, Hawaii, February 2000. MRI guided neurosurgery: Experience in Toronto.

Kucharczyk W: University of British Columbia, Whistler, British Columbia, February 2000. Neuro MR imaging and intervention.

Levy GA: Israel Transplant Society, Tel Aviv, Israel, June 2000. Cyclosporine-based protocols in organ transplantation.

Levy GA: World Congress in Pediatric Intensive Care, Montreal, Quebec, June 2000. Designer organs.

Levy GA: Xenotransplant Congress, Nagoya, Japan, October 1999. The role of fibrinogen-like protein (fg12/fibroleukin) in xenograft rejection: Induction of fgl2 prothrombinase by xenoserum.

Levy GA: Rochester Liver Club, Rochester, New York, November 1999. Transplantation in the 21st century.

Levy GA: Visiting Research Professor, University of Alberta, Calgary, Alberta, January 2000. Transplantation in the 21st century.

Levy GA: University of Rochester, Rochester, New York, November 1999. Xenotransplantation.

Levy GA: Canadian Transplant Society, Mont Tremblant, Quebec, March 2000. Xenotransplantation in the new millennium.

Naylor CD: American Heart Association/American College of Cardiology, Washington, D.C., April 2000. Assessing and improving appropriateness of care.

Naylor CD: American Neurological Association, Seattle, Washington, October 1999. Assessing processes and outcomes of care: Achievements, pitfalls and prospects.

Naylor CD: Toronto Critical Care Medicine Symposium, Toronto, Ontario, October 1999. Beyond evidence-based medicine.

Naylor CD: International Conference on the Scientific Basis of Health Services, Toronto, Ontario, October 1999. Getting evidence into practice: What have we learned and what do we do next?

Naylor CD: Sydenham Society/Society for Clinical Epidemiology and Health Care Research, Boston, Massachusetts, May 2000. The clinical epidemiology of an academic health sciences complex: Non-random reflection.

Naylor CD: Ontario Public Health Association, Toronto, Ontario, November 1999. The future configuration of health care.

Naylor CD: CIHR Consensus Conference, Toronto, Ontario, March 2000. The future of health research in Canada.

Pritzker KPH: Canadian Connective Tissue Conference, Quebec City, Quebec, May 2000. A novel articular cartilage molecule: Time course of dimethyldifuroprone release from cartilage with acid hydrolysis.

Pritzker KPH: International Cartilage Repair Society, Gothenburg, Sweden, April 2000. Insulin-like growth factor effects on articular cartilage morphology and morphometry in model osteoarthritis.

Pritzker KPH: World Congress of the Osteoarthritis Research Society International, Vienna, Austria, September 1999. Workshop: Standardization of osteoarthritis histopathology.

Regehr G: International Association for Medical Science Educators, Washington, D.C., July 1999. Cognitive and social dimensions of learning: The basic science of education.

Slutsky AS: University of Missouri, Columbia, Missouri, November 1999. (1) Genetics of asthma, (2) Mechanisms of hypoxemia, (3) Ventilator-induced lung injury: Clinical implications.

Slutsky AS: South Brazilian Congress of Intensive Care, Porto Alegre, Brazil, October 1999. (1) Lung injury induced by ventilation: An overview, (2) Mechanical ventilation as a cause of systemic organ dysfunction, (3) High frequency ventilation is dead? (4) Clinical trials in protective strategies.

Slutsky AS: International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium, March 2000. (1) Moderator: Mechanical ventilation today, (2) Ventilation using constant flows, (3) Heat shock response.

Slutsky AS: Stanford University, Palo Alto, California, January 2000. (1) Mechanical ventilation: From barotrauma to biotrauma to bedside, (2) Ventilator-induced lung injury: From basic science to the bedside.

Slutsky AS: Society of Critical Care Medicine, Orlando, Florida, February 2000. (1) Course: Ventilatory management: Ventilatory strategies for ARDS: Lung protective approach, (2) Pulmonary and ventilatory therapy, (3) Co-moderator: Respiratory failure clinic, (4) Pulmonary: Ventilatory: The patient with ALI.

Slutsky AS: Cambridge Health Resources, Washington, D.C., December 1999. (1) Successful management strategies: Getting the most out of your ventilator, (2) Ventilator-induced lung injury, (3) Ventilating the ARDS patient: From theory to practice.

Slutsky AS: European Society of Intensive Care Medicine, Berlin, Germany, October 1999. (1) The impact of mechanical ventilation on the release of pulmonary cytokines, (2) Why we do not need new modes of mechanical ventilation, (3) Co-chair: Experimental models of acute lung injury symposia, (4) Ventilator-induced lung injury.

Slutsky AS: American Thoracic Society, Toronto, Ontario, May 2000. (1) Ventilator-induced lung injury: Fact or fiction? (2) Ventilator-induced lung injury: Molecular mechanisms and implications for organ dysfunction, (3) Co-chair: Ventilator-induced lung injury.

Slutsky AS: World Conference on Acute Lung Injury, Canary Islands, Spain, February 2000. (1) Co-director of course, (2) Ventilator-induced lung injury, (3) High frequency ventilation in ALI, (4) Chair: Ventilatory support session.

Slutsky AS: Ottawa Hospital, Ottawa, Ontario, May 2000. (1) Ventilator-induced lung injury, (2) The clinician-scientist: A personal perspective.

Slutsky AS: American Thoracic Society/European Society of Intensive Care Medicine, Paris, France, April 2000. ATS representative to steering committee.

Slutsky AS: University of Alabama, Mobile, Alabama, December 1999. Mechanical ventilation: From barotrauma to biotrauma to bedside.

Slutsky AS: Toronto Critical Care Medicine Symposium, Toronto, Ontario, October 1999. (1) Co-chair: Fluid resuscitation in sepsis and shock, (2) Co-chair: Case discussion.

Slutsky AS: International Therapeutic Fluids Group, Paris, France, June 2000. Role of ventilator in lung injury.

Slutsky AS: Simposio e Mostra di Anestesia Rianimazione e Terapia Intensiva, Milan, Italy, May 2000. Summary of clinical trials for ARDS.

Slutsky AS: Chinese Medical Association, Taipei, Taiwan, June 2000. Ventilator-induced lung injury.

Slutsky AS: Ake and Inger Grenvik Lecturer in Critical Care, University of Pittsburgh Medical Centre, Pittsburgh, Pennsylvania, November 1999. Ventilator-induced lung injury: From barotrauma to biotrauma to bedside.

Slutsky AS: International Workshop: Treatment of Acute and Chronic Respiratory Failure, Bari, Italy, May 2000. Ventilator-induced lung injury: From bench to bedside.

Stewart DE: Ontario Hospital Association, Toronto, Ontario, November 1999. Applying a gender lens to a restructured health care system.

Stewart DE: University of Natal, Natal, South Africa, March 2000. Depression in pregnancy.

Stewart DE: University of Stellenbosh Neuroscience Symposium, Somerset West, South Africa, March 2000. Drugs in pregnancy.

Stewart DE: Society for Women's Health Research, Washington, D.C., October 1999. Neurologic and psychiatric disorders in women.

Stewart DE: Royal College of Physicians and Surgeons of Canada, Montreal, Quebec, September 1999. Plenary education session on resident harassment and intimidation.

Stewart DE: University of Capetown, Capetown, South Africa, March 2000. Women's health and curriculum reform.

terBrugge KG: South African Interventional Neuroradiology Peer Review Group, Kruger Park, South Africa, September 1999. (1) Endovascular management of aneurysms, (2) Acute stroke, (3) Brain arteriovenous malformations, (4) Dural AVF's, (5) Spinal vascular lesions.

terBrugge KG: FLENI Annual Course on Interventional Neuro-radiology, Buenos Aires, Argentina, April 2000. (1) Imaging and the role of endovascular treatment of vein of Galen malformations, (2) Pediatric brain AVM's and aneurysms, (3) Acute stroke of arterial and venous causes.

terBrugge KG: ABC/WIN Course, Val d'Isere, France, January 2000. Brain AVM management: The Toronto experience from 1984 to 1999.

terBrugge KG: Canadian Congress of Neurological Sciences, Ottawa, Ontario, June 2000. Endovascular horizons in cerebrovascular disease.

terBrugge KG: Olivecrona Symposium, Karolinska Institute, Stockholm, Sweden, December 1999. Endovascular management of small size brain arteriovenous malformations: The Toronto experience.

terBrugge KG: Canadian Association of Radiology, Toronto, Ontario, June 2000. Imaging and endovascular treatment of acute stroke.

terBrugge KG: Scientific Symposium on Brain AVM, New Orleans, Louisiana, February 2000. Imaging for therapeutic decision-making.

terBrugge KG: Visiting Professor, Karolinska Hospital, Stockholm, Sweden, December 1999. Management of intracranial dural.

terBrugge KG: Visiting Professor, University of Illinois, Chicago, Illinois, October 1999. Management of spinal and paraspinous arteriovenous malformations and fistulas.

terBrugge KG: Neuroradiology Symposium, Toronto, Ontario, June 2000. Natural history of intracranial aneurysms.

terBrugge KG: World Congress of Pediatric Neurosurgery, Martinique, November 1999. Pediatric interventional neuroradiology: Current status and future perspectives.

Willinsky R: Neuro-Radiology Symposium, Toronto, Ontario, June 2000. (1) Decision-making and complication avoidance: Aneurysm treatment by GDC, (2) Pre-surgical embolization of spinal vascular lesions: Pitfalls.

Willinsky R: Barrow Neurological Institute, Phoenix, Arizona, May 2000. Angioarchitecture of spinal arteriovenous malformations.

Willinsky R: Interventional Subarachnoid Aneurysm Trial, Oxford, England, November 1999. Decision-making regarding feasibility of GDC treatment in patients with aneurysmal subarachnoid hemorrhage.

Willinsky R: American Association of Neurological Surgeons/ Canadian Association of Neurological Surgeons/ASITN, New Orleans, Louisiana, February 2000. Management of pediatric AVM's.

Wilson GJ: Canadian Cardiovascular Society, Quebec City, Quebec, October 1999. Discussant: Workshop: Ischemic pre-conditioning.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A molecular epidemiologic case-control study of pediatric brain tumors in Ontario. *McLaughlin J*, Greenberg M, Malkin D, Rutka J: National Cancer Institute of Canada (\$480,829 1997 - 2000).

A randomized double-blind controlled clinical trial of insulin cardioplegia for urgent coronary bypass surgery. *Christakis GT*, Weisel RD, Naylor CD: Medical Research Council of Canada (\$484,180 1996 - 1999).

Acellular matrix technology for multiple tissue implant applications. *Wilson GJ*, Woodhouse K: Materials Manufacturing Ontario (\$400,000 1998 - 2000).

Acellular matrix technology research and development program. *Wilson GJ*: The Hospital for Sick Children Foundation/Ontario Research and Development Challenge Fund (\$210,000 1999 - 2000).

Acellular matrix: Tissue engineering approaches for pediatric cardiovascular reconstruction. *Wilson GJ, Courtman DW*: Medical Research Council of Canada/Canadian Institutes of Health Research (\$236,811 2000 - 2003).

Alpha-care: A national educational research and dissemination project. *Midmer D, Wilson L, Biringer A, Reid A, Stewart D*: Lawson Foundation (\$92,500 1998 - 1999).

ALPHA group culturally appropriate prenatal care. *Carroll J, Reid A, Midmer D, Wilson L, Glazner R, Chalmers B, Biringer A, Seddon F, Stewart DE*: Ministry of Health (\$21,800 1998 - 1999).

Analysis of the structure of clinical interviews of novices and experts. *Hodges B, Tiberius R, Regehr G, Hanson M*: Medical Research Council of Canada (\$4,750 1998 - 1999).

Assessment of minor surgical skills for family medicine residents. *Freidlich M, MacRae H, Reznick R, Regehr G, Tannenbaum D, Batty H, Oandasan I*: Physicians Services Incorporated Foundation (\$38,414 1998 - 1999).

Best mechanisms to influence health risk behavior. *Hyman I, Stewart D, Cheung A, Cameron J, Ahmad F*: Ministry of Health (\$22,000 1999).

Biotrauma: Physiological mechanisms, biological consequences. *Slutsky AS*: Medical Research Council of Canada (\$579,651 1999 - 2004).

Brain trauma and axonal injury: New models and mechanisms. *Baker AJ, Tian GF, Moulton R*: Ontario Neurotrauma Foundation/National Rick Hansen Neurotrauma Initiative (\$104,000 1999 - 2001).

Cardiac surgery health services research program. *Naylor CD, Keon WJ, Morgan CD, Szalai JP, Christakis GT, Pym J, Knudtson ML, Fremes SE, Anderson GM, McLaughlin JR, David TE, Goldbach MM, Goldman BS, McGlynn E, Scully HE, Shragge W, Gelfand ET, Hux J, Tu J*: Medical Research Council of Canada (\$284,910 1996 - 1999).

Cellular and molecular mechanisms of organ injury. *Levy GA, Gorczyński RM, Issekutz T, Paul L, Phillips MJ, Rotstein OD, Marsden P, Zhang L*: Medical Research Council of Canada (\$2,656,620 1995 - 2000).

Cellular and molecular mechanisms of organ injury. *Levy GA, Cybulsky M, Downey G, Marsden P, Rotstein O, Zhang L*: Canadian Institutes of Health Research (\$587,578 2000 - 2004).

Cerebral protection by insulin for cardiac surgery: A randomized controlled clinical trial. *Weisel RD, Peniston CM, Naylor CD, McLean RF*: Heart and Stroke Foundation (\$192,012 1996 - 1999).

CFRCCS microsatellite instability project. *Lindor NM, Bapat B*: National Institutes of Health (\$2,390,570 1999 - 2001).

Childhood cancer survivor study. *Greenberg ML, Robison L*: National Institutes of Health (\$267,535 1993 - 1999).

Clinical significance of molecular genetic profiles of endometrial cancer. *Bapat B*: Concern Foundation (\$100,000 2000 - 2002).

Clinical trial of raloxifen use in the heart (RUTH). *Cheung A, Stewart DE, Liu P, Abramson B*: Eli Lilly (\$500,000 1998 - 2003).

Comparison of quality of life and economic cost across home and institutional care settings: Pilot study. *Cameron JI, Stewart DE, Cheung AM*: University Health Network (\$5,000 2000 - 2001).

Contemporary management patterns in acute myocardial infarction. *Teo KT, Hinings CR, Naylor CD, Cox JL, Tymchak WJ, Taylor LK, Ashton T, Tremblay JLG*: Medical Research Council of Canada (\$72,780 1997 - 1999).

Co-operative family registry for epidemiologic studies of colon cancer. *Gallinger S, Holowaty E, Andrulis I, Bapat B, Boyd N, Redston M, Darlington G, Kreiger N, Knight J, Theis B, Chart P, Gardner A, Goel V, Malkin D, McKeown-Eyssen G, McLaughlin J*: National Institutes of Health (\$3,200,000 1997 - 2001).

Development of a finite element model for prediction of osseointegration potential of bone interfacing. *Pilliar RM, Meguid SA, Gryn timer MD*: Medical Research Council of Canada (\$198,585 1997 - 2000).

Development of children's powered upper extremity prosthetics. *Milner MM, Naumann S*: Variety Village (\$258,000 1998 - 1999).

Effects of aryl hydrocarbon receptor ligands on osteoporosis and reproductive function. *Casper R, Gryn timer MD, Savouret JF*: Medical Research Council of Canada (\$200,000 1998 - 2003).

Effects of microgravity on bone formation and bone resorption in vitro. *Loomer PM, Tenenbaum HC, Gryn timer MD*: Canadian Space Agency (\$93,760 1997 - 1999).

Epidermal growth factor: Receptor and ligand interaction: The use of organoid cultures as a model for study. *Irish J, Dardick A, Brown D, Gullane P*: American Academy of Otolaryngology/Head and Neck Surgery Foundation (\$15,000 1999).

Error instruction may enhance technical skill evaluation. *Rogers D, Regehr G, Yeh K, Howdieshell T*: Association for Surgical Education (\$7,500 1998 - 1999).

Evaluating the effectiveness of a two-year curriculum in a surgical skills centre: The future of surgical training? *Brown M, Anastakis D, Hutchison C, Reznick R, Regehr G*: Physicians Services Incorporated Foundation (\$82,000 1998 - 2000).

Evaluation of family history characteristics and molecular features for hereditary colorectal cancer. *Gallinger S, Bapat B*: National Cancer Institute of Canada (\$112,500 1997 - 2000).

Factors influencing dietary adherence in women at elevated risk for breast cancer. *Irvine J*: Princess Margaret Hospital Foundation (\$100,000 2000 - 2001).

Familial genetic risk assessment: Psychological adjustment. *Ritvo P, Robinson G, Irvine J, Rosen B, Murphy J, Stewart D, Styra R*: National Cancer Institute of Canada (\$153,577 1996 - 1999).

Functional analysis of mismatch repair gene alterations in colorectal cancer. *Bapat B*: James H. Cummings Foundation (\$17,000 1998 - 1999).

Functional imaging research network. *Kucharczyk W*, Stuss D, Henkelman M, Vaccarino F: Canadian Foundation for Innovation/Ontario Institute for Technology (\$6,200,000 2000 - 2005).

Glomerular procoagulant activity in murine lupus nephritis. *Cole EH*, Levy GA: Kidney Foundation (\$120,000 1998 - 2001).

Guidelines for adjustment to medical conditions. *Abbey S*, Stewart D: Ministry of Health (\$23,000 1999 - 2000).

HN3: Basic science study on the chronobiology of oral cancer. *Jordan R*, Gilbert RW, Bjarnason G: National Cancer Institute of Canada (\$93,524 1999 - 2000).

Identifying barriers and incentives to breast cancer screening behaviors in West Indian immigrant women over age fifty. *Meana M*, Stewart D, Bunston T, Wells L, George U: Canadian Breast Cancer Foundation (\$36,690 1998 - 1999).

IGF-1 and osteoarthritis. *Pritzker KPH*: Chiron Corporation (\$49,362 1998 - 2000).

Immunopathogenesis of viral hepatitis. *Levy GA*, Clark DA: Canadian Institutes of Health Research (\$186,419 2000 - 2005).

Informed medical decision-making in women with cancer. *Stewart D*, Cheung A, Meana M, Bunston T, Dancey J, Velji K: Smith Kline Beecham Pharmaceuticals (\$50,000 1997 - 1999).

Institutional addiction to tobacco. *Cohen J*, Ashley MJ, Terrance R, Stewart D, Kyle K, Wilson E, Schenban C, Schultz P: National Cancer Institute of Canada (\$16,584 1999 - 2000).

Insurance and breast cancer in Canada: Present practices and future directions. *Stewart D*, Lemmens T, Cheung A, Bunston T, Dancey J, Deber R, Ghadarian P, Lowden S, Meana M, Purdy L: Canadian Breast Cancer Foundation (\$160,877 1997 - 2000).

International subarachnoid aneurysm trial. *Willinsky RA, Wallace MC*: Medical Research Council of Canada (\$32,400 1998 - 2001).

Intervention in smoking cessation programming in a peripheral vascular disease population. *Irvine J, Ritvo P, Kalman P, Hotz S, Stewart D, Shaw B*: Heart and Stroke Foundation (\$211,707 1996 - 1999).

Ischemic pre-conditioning of the myocardium: Role of chloride channels. *Wilson GJ, Backx PH*: Heart and Stroke Foundation (\$315,772 1997 - 2002).

Left ventricular mass regression following stentless and stented aortic valve replacement. *Christakis GT, Szalai JP, David TE, Naylor CD*: Heart and Stroke Foundation (\$236,364 1996 - 1999).

Link study. *Fornasier VL, Denaro V*: Link Corporation (\$20,000 1997 - 1999).

Liposomal antibiotic hydrogel coatings for preventing device related infections in trauma patients. *DiCosmo F, Mittelman M, Khoury A, Reid G, Bruce AW*: Defence and Civil Institute of Environmental Medicine (\$28,000 1997 - 1999).

Long-term cancer survivors quality of life. *Stewart D, Wong F, Bunston T, Cheng T, McQuestion M, Purdy L*: Princess Margaret Hospital Foundation (\$10,000 1997 - 1999).

Lymphatic drainage of the central nervous system. *Johnston MG, Hay JB, Flessner M, Schwartz M*: Medical Research Council of Canada (\$275,418 1996 - 1999).

Matrix-mediated mineralization in normal bone and osteogenesis imperfecta. *Hunter GK, Grynepas MD*: Medical Research Council of Canada (\$214,641 1997 - 2000).

Molecular biology approaches in lung transplantation. *Slutsky AS, Keshavjee S*: National Sanitarium Association (\$1,500,000 1996 - 2001).

Multicentre radial artery patency study. *Fremes SE, Higginson LAJ, Carere RG, Myers ML, Lichtenstein SV, Cohen EA, Naylor CD, Masters RG, Watson KR, Adelman AG, Carrier M, Cote G, Almond DG, Errett L, Doyle D, Gleaton O*: Medical Research Council of Canada (\$609,000 1996 - 1999).

Non-collagenous protein binding to crystal surfaces in the theme of cellular and molecular biology of joint tissues. *Goldberg H, Grynepas M, Hunter G, McKee M, Sodek J*: Canadian Arthritis Network (\$27,000 2000 - 2001).

Novel biodegradable implants for anchorage of tissue engineered fibrocartilage to bone. *Pilliar RM, Grynepas MD, Kandel R*: Natural Sciences and Engineering Research Council (\$784,000 1997 - 2001).

Objective structured clinical examination performance evaluations made by standardized patients: Comparing checklist and global rating scales. *Regehr G, Freeman R, Hodges B, Robb A*: Medical Research Council of Canada (\$10,908 1998 - 1999).

Ontario rehabilitation technology consortium. *Milner MM, Fernie GR, Jamieson D, Naumann S, Olney S, Ryan S, Strong G, Shein F*: Ministry of Health (\$15,000,000 1992 - 2002).

POGO operating grant for centre of comprehensive research in childhood cancer. *Greenberg C, Barr R, Greenberg M*: Ministry of Health (\$600,000 1997 - 2003).

Predicting emotional distress in family caregivers: Analysis of the longitudinal national population health survey data. *Cheung AM, Cameron JI, Hyman I, Franche RL, Stewart DE*: National Health Research and Development Program (\$24,020 2000 - 2001).

Predictors of outcome following revision total hip arthroplasty. *Davis AM, Gross AE*: Arthritis Society (\$196,983 1998 - 2001).

Preferences for participation in medical treatment decisions. *Deber R, Bauman A, Stewart D*: Social Sciences and Humanities Research Council of Canada (\$90,000 1997 - 2000).

Preferred role of people with HIV and AIDS in treatment decision making. *Deber R, Halman M, Millson P, Meyers T, Stewart D, Urowitz S, Walmsley S, Bauman A*: Ontario HIV Treatment Network (\$152,000 1999 - 2001).

Preliminary evaluation of a problem-solving intervention for familial caregivers to advanced cancer patients. *Cameron JI, Stewart DE, Higgins MA*: The Toronto Hospital (\$5,000 1999).

Prevention of delayed cardiac xenograft rejection by modulation of the potent fg12 prothrombinase gene. *Grant D, Gorczynski R, Levy G, Phillips MJ*: Heart and Stroke Foundation (\$131,000 2000 - 2002).

Prospective study of p53 in head and neck cancer. *Jordan R, Gilbert RW, MacKenzie R*: Medical Research Council of Canada (\$110,000 1997 - 2000).

Psychological treatment of depression in myocardial infarction/unstable angina patients. *Shnek Z, Irvine J, Abbey S, Stewart D, Ritvo P*: Heart and Stroke Foundation (\$163,038 1999 - 2000).

Psychological treatment of depression in post-myocardial infarction and angina patients. *Schenk Z, Irvine J, Ritvo P, Stewart D, Abbey S, Dorian P*: Heart and Stroke Foundation (\$76,467 1999 - 2000).

Psychosocial impact of predictive genetic risk assessment in patients at risk for familial adenomatous polyposis (FAP). *Ritvo P, Bapat B, Barrera M, Berk T, Brown L, Cunningham A, Gallinger S, Gray R, Irvine J, Mullen M, Madlensky L*: National Cancer Institute of Canada (\$52,250 1998 - 2000).

Quality of acute myocardial infarction care. *Tu JV, Naylor CD*: Medical Research Council of Canada (\$186,196 1998 - 2000).

Recombinant peptides for promotion and inhibition of mineralization in the theme of cellular and molecular biology of joint tissues. *Goldberg H, Grynpas M, Hunter G, McKee M, Sodek J*: Canadian Arthritis Network (\$27,000 2000 - 2001).

Relationship between toxicity and quality of life in ovarian cancer clinical trials. *Butler L, Bezjak A, Carey M, Brundage M, Bacon M, Stewart D*: National Cancer Institute of Canada (\$5,000 1999 - 2000).

Role of glial AMPA/kainate receptors in traumatic CNS white matter injury. *Fehlings MG, Zhang L, Eubanks J, Carlen P, Gurd J, Baker AJ*: Medical Research Council of Canada/Ontario Neurotrauma Foundation (\$279,000 1999 - 2002).

Role of glycolysis in preventing anoxic damage to neuronal function. *Tian GF, Baker AF*: St. Michael's Hospital Health Sciences Research Centre (\$10,000 1999 - 2000).

Selfcare for health professionals. *Abbey S, Stewart DE*: Health Canada (\$10,000 1998 - 1999).

Structure-function analysis of the APC tumor protein. *Bapat B, Hannigan G*: Medical Research Council of Canada (\$301,374 1999 - 2002).

The effect of zoledronate on bone quality in the treatment of aseptic loosening of hip arthroplasty. *Grynepas MD*: Novartis (\$400,000 1998 - 2000).

The effect of zoledronate on bone quality in the treatment of aseptic loosening of hip arthroplasty. *Grynepas MD*: Medical Research Council of Canada (\$100,000 1998 - 2000).

The effects of the HMG-CoA reductase inhibitor, Lavastatin, on recurrent and pre-malignant lesions of the head and neck. *Gullane P, Kamel-Reid S, Dimitroulakos P, Knox C, Siu K, Irish JC, Moore D, Yeger P, MacMillan C*: Princess Margaret Hospital Foundation (\$108,190 1999 - 2000).

The impact of instructions on candidate behavior during an objective structured clinical examination. *Herold J, Hodges B, Regehr G, McNaughton N*: National Board of Medical Examiners (\$37,936 1999 - 2000).

The influence of training instructions on the diagnostic knowledge gained in a visual classification task. *Allen S, Regehr G*: Association of Canadian Medical Colleges (\$8,167 1998 - 1999).

The role of susceptibility genes and dietary risk factors in the etiology of mutator versus suppressor pathway of colon cancer. *Bapat B, Knight J*: American Institute of Cancer Research (\$83,350 2000 - 2002).

The social science of novel biotechnology integration theme of CANVAC. *Irvine J*: Medical Research Council of Canada/Canadian Network for Vaccines and Immunotherapeutics of Cancer and Chronic Viral Diseases (\$482,000 2000 - 2004).

The use of community newspapers to promote breast cancer screening among South Asian women. *Stewart DE, Ahmad F*: Ontario Breast Cancer Foundation (\$34,000 2000 - 2003).

Thromboresistance of acellular matrix vascular prostheses. *Wilson GJ, Courtman DW*: Heart and Stroke Foundation (\$126,790 1998 - 2000).

Women's Health Institute. *Bellam P, Grant K, Stewart D*: Medical Research Council of Canada/Canadian Institutes of Health Research (\$45,000 1999 - 2000).

Women's health services in Ontario. *Ferris L, Williams J, Hyman I, Stewart D, Cohen M, Maher J*: Ministry of Health (\$100,000 1999 - 2000).

HONOURS RECEIVED

Naylor CD: Heart and Stroke Foundation of Canada Lecturer, Canadian Cardiovascular Society, October 1999.

Naylor CD: Kenneth Brown Professorship, Division of Cardiology, University of Toronto, September 1999.

Pritzker KPH: Distinguished Service Award, Department of Laboratory Medicine and Pathobiology, University of Toronto, July 1999.

Stewart DE: Simon Bolivar Gold Medal for contribution and commitment to international women's health, July 1999.